

Final List of Potential EIS Assignments



EIS Class of 2016

April 2016



EIS Assignments	PAGE
Division of Scientific Education and Professional development / EIS Workforce Branch	
• Arizona: Arizona Department of Health Services and Maricopa County Department of Public Health	8
• California: California Health and Human Services/Division of Environmental and Occupational Disease Control	10
• California: California Health and Human Services/Division of Communicable Disease Control	12
• California: Los Angeles County Public Health Department	15
• California: Kaiser Permanente Southern California	17
• Colorado: Colorado Department of Public Health and Environment	18
• Colorado: National Park Service	20
• Connecticut: Connecticut Department of Public Health	22
• Georgia: Georgia Department of Public Health	23
• Illinois: Chicago Department of Public Health	25
• Maryland: Substance Abuse and Mental Health Services Administration	27
• Minnesota: Minnesota Department of Health	29
• New Jersey: New Jersey Department of Health	31
• New York: New York Department of Health	33
• New York: New York City Department of Health and Mental Hygiene	35
• Oregon: Oregon Health Authority	37
• Utah: Utah Department of Health	40
• Virginia: Virginia Department of Health	42
• Washington: Communicable Disease Epidemiology	44
• Wisconsin: Wisconsin Department of Health Services	46
Center for Global Health	48
• Division of Global Health Protection/Emergency Response and Recovery Branch - CGH-DGHP-ERRB-GA-2016-01 (2 Positions)	48
• Division of Global HIV and Tuberculosis/Epidemiology Surveillance Branch/Key Population Surveillance Team - CGH-DGHT-ESB-GA-2016-01	50
• Division of Global HIV and Tuberculosis/Global Tuberculosis Prevention and Control Branch - CGH-DGHT-GTPCB-GA-2016-01 (2 Positions)	51
• Division of Global HIV and Tuberculosis/HIV Care and Treatment Branch/Adult HIV Treatment Team - CGH-DGHT-HCTB-GA-2016-01	54
• Division of Global HIV and Tuberculosis/HIV Prevention Branch/Combination Prevention Program Evaluation - CGH-DGHT-HPB-GA-2016-01	55
• Division of Global HIV and Tuberculosis/International Laboratory Branch - CGH-DGHT-ILB-GA-2016-01	57
• Division of Global HIV and Tuberculosis/Maternal and Child Health Branch - CGH-DGHT-MCHB-GA-2016-01	59



EIS Assignments

PAGE

- Division of Parasitic Diseases and Malaria/Malaria Branch
- CGH-DPDM-MB-GA-2016-01 (2 Positions) 60
- Division of Parasitic Diseases and Malaria/Parasitic Diseases Branch
- CGH-DPDM-PDB-GA-2016-01 62
- Global Immunizations Division/Accelerated Disease Control and VPD Surveillance Branch and
Immunization System Branch 64
- CGH-GID-ACDSB-GA-2016-01
- Global Immunizations Division/Strategic Information and Work Development Branch and
Polio Eradication Branch 67
- CGH-GID-SIWDB-GA-2016-01
- Office of the Director/ CHAMPS Team 69
- CGH-OD-CHAMPS-GA-2016-01

National Center for Chronic Disease Prevention and Health Promotion

71

- Division of Cancer Prevention and Control/Epidemiology and Applied Research
Branch/Epidemiology Team 71
- NCCDPHP-DCPC-EARB-GA-2016-01
- Division of Cancer Prevention and Control/Office of the Director 72
- NCCDPHP-DCPC-OD-GA-2016-01
- Division of Heart Disease and Stroke Prevention/Epidemiology and Surveillance Branch 74
- NCCDPHP-DHDSP-ESB-GA-2016-01
- Division of Nutrition, Physical Activity, and Obesity/Nutrition Branch/International Micronutrient
Malnutrition Prevention and Control Team (IMMPaCt) 76
- NCCDPHP-DNPAO-MCNB-GA-2016-01
- Division Nutrition, Physical Activity, and Obesity/Nutrition Branch/Infant Feeding Team 78
- NCCDPHP-DNPAO-NB-GA-2016-01
- Division of Nutrition, Physical Activity and Obesity/Obesity Prevention and Control Branch/
Epidemiology Surveillance Team 80
- NCCDPHP-DNPAO-OPCB-GA-2016-01
- Division of Nutrition, Physical Activity and Obesity/Obesity Prevention and Control Branch 81
- NCCDPHP-DNPAO-OPCB-GA-2016-02
- Division of Population Health/Arthritis, Epilepsy, and Well-Being Branch 83
- NCCDPHP-DPH-AEWB-GA-2016-01
- Division of Population Health/Epidemiology and Surveillance Branch 85
- NCCDPHP-DPH-ESB-GA-2016-01
- Division of Reproductive Health/Applied Sciences Branch/Adolescent Reproductive Health 86
- NCCDPHP-DRH-ASB-GA-2016-01
- Division of Reproductive Health/Field Support Branch/Global Reproductive Health Evidence
for Action Team 88
- NCCDPHP-DRH-FSB-GA-2016-01



Table of Contents

EIS Assignments	PAGE
• Division of Reproductive Health/Maternal and Infant Health Branch/Maternal Health Team - NCCDPHP-DRH-MIHB-GA-2016-01	90
• Division of Reproductive Health/Women's Health and Fertility Branch/USHIR team - NCCDPHP-DRH-WHFB-GA-2016-01	91
• Division of Reproductive Health/Women's Health and Fertility Branch/Fertility Epidemiology Studies Team - NCCDPHP-DRH-WHFB-GA-2016-02	93
• Office on Smoking and Health/EPI/Research Team - NCCDPHP-OSH-EPB-GA-2016-01	95
• Office on Smoking and Health/Global Tobacco Control Branch - NCCDPHP-OSH-GTCB-GA-2016-01	96
National Center for Emerging and Zoonotic Infectious Diseases	98
• Division of Foodborne, Waterborne and Environmental Diseases/Enteric Diseases Epidemiology Branch - NCEZID-DFWED-EDEB-GA-2016-01	98
• Division of Foodborne, Waterborne and Environmental Diseases/Mycotic Diseases Branch/Epi - NCEZID-DFWED-MDB-GA-2016-01	101
• Division of Foodborne, Waterborne, and Environmental Diseases/Outbreak Response and Prevention Branch - NCEZID-DFWED-ORPB-GA-2016-01	103
• Division of Foodborne, Waterborne, and Environmental Diseases/Waterborne Disease Prevention Branch - NCEZID-DFWED-WDPB-GA-2016-03	105
• Division of Foodborne, Waterborne, and Environmental Diseases/Waterborne Disease Prevention Branch/Global Team - NCEZID-DFWED-WDPB-GA-2016-01	108
- NCEZID-DFWED-WDPB-GA-2016-02	110
• Division of Global Migration Quarantine/Quarantine and Border Health Services Branch - NCEZID-DGMQ-QBHSB-GA-2016-01	112
• Division of High-Consequence Pathogens and Pathology/Poxvirus and Rabies Branch - NCEZID-DHCPP-PRB-GA-2016-01	114
• Division of High-Consequence Pathogens and Pathology/Poxvirus and Rabies Branch/Poxvirus - NCEZID-DHCPP-PRB-GA-2016-02	116
• Division of Healthcare Quality Promotion/Epidemiology Research and Innovations Branch - NCEZID-DHQP-ISO-GA-2016-01	118
• Division of Healthcare Quality Promotion/Immunization Safety Office - NCCDPHP-DRH-FSB-GA-2016-01	120
• Division of Healthcare Quality Promotion / Prevention and Response Branch - NCEZID-DHQP-PRB-GA-2016-01 (2 Positions)	121



EIS Assignments	PAGE
• Division of Preparedness and Emerging Infections/Arctic Investigations Program/Epidemiology Team - NCEZID-DPEI-AIP-AK-2016-01	124
• Division of Vector-borne Diseases/Arboviral Diseases Branch - NCEZID-DVBD-ADB-CO-2016-01	125
• Division of Vector-borne Diseases/Dengue Branch/Epidemiology Team - NCEZID-DVBD-DB-PR-2016-01	127
National Center for Environmental Health	129
• Division of Emergency and Environmental Health Services/Office of the Director - NCEH-ATSDR-DEEHS-OD-GA-2016-01	129
• Division of Environmental Hazards and Health Effects/Air Pollution and Respiratory Health Branch - NCEH-ATSDR-DEHHE-APRHB-GA-2016-01	131
• Division of Environmental Hazards and Health Effects/ Health Studies Branch - NCEH-ATSDR-DEHHE-HSB-GA-2016-01	133
National Center for Health Statistics	135
• Division of Health and Nutrition Examination Surveys/Analysis Branch - NCHS-DHNES-AB-MD-2016-01	135
• Division of Health and Nutrition Examination Surveys/Office of the Director - NCHS-DHNES-OD-MD-2016-01	136
National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention	138
• Division of Adolescent and School Health/School-Based Surveillance Branch - NCHHSTP-DASH-SBSB-GA-2016-01	138
• Division of HIV/AIDS Prevention/Behavioral and Clinical Surveillance Branch/Behavioral Surveillance Team - NCHHSTP-DHAPSE-BCSB-GA-2016-01	139
• Division of HIV/AIDS Prevention/Epidemiology Branch/Epidemiology Research Team - NCHHSTP-DHAPSE-EB-GA-2016-01	141
• Division of HIV/AIDS Prevention/ Epidemiology Branch/ Prevention with Negatives Team - NCHHSTP-DHAPSE-EB-GA-2016-02	143
• Division of STD Prevention/Epidemiology and Statistics Branch/Epidemiology Team 2 - NCHHSTP-DSTD-ESB-GA-2016-01	146
• Division of STD Prevention/Surveillance and Data Management Branch/Surveillance and Special Studies Team - NCHHSTP-DSTD-SDMB-GA-2016-01	147
• Division of Tuberculosis Elimination/Surveillance, Epidemiology, and Outbreak Investigations Branch - NCHHSTP-DTE-SEOIB-GA-2016-01	150
• Division of Viral Hepatitis/Epidemiology and Surveillance Branch - NCHHSTP-DVH-ESB-GA-2016-01	152



Table of Contents

EIS Assignments	PAGE
<ul style="list-style-type: none">• Division of Viral Hepatitis/Prevention Branch-OADGH - NCHHSTP-DVH-PB-GA-2016-02	153
National Center for Immunization and Respiratory Diseases	155
<ul style="list-style-type: none">• Division of Bacterial Diseases/Meningitis and Vaccine Preventable Diseases Branch/Epi Team - NCIRD-DBD-MVPDB-GA-2016-01 (2 Positions)	155
<ul style="list-style-type: none">• Division of Bacterial Diseases/Respiratory Diseases Branch - NCIRD-DBMD-RDB-GA-2016-01 (2 Positions)	157
<ul style="list-style-type: none">• Division of Viral Disease/Epidemiology Branch/Viral Gastroenteritis Team - NCIRD-DVD-EB-GA-2016-01	159
<ul style="list-style-type: none">• Division of Viral Diseases/Epidemiology Branch/HPV Team - NCIRD-DVD-EB-GA-2016-02	161
<ul style="list-style-type: none">• Division of Viral Diseases/Epi/Measles, Mumps, Rubella, Herpesviruses, Polio - NCIRD-DVD-EB-GA-2016-03	163
<ul style="list-style-type: none">• Division of Viral Diseases/Epidemiology Branch/RVP - NCIRD-DVD-EB-GA-2016-04	164
<ul style="list-style-type: none">• Influenza Division/Epidemiology and Prevention Branch - NCIRD-ID-EPB-GA-2016-01 (2 Positions)	166
<ul style="list-style-type: none">• Immunization Services Division/Office of the Director - NCIRD-ISD-OD-GA-2016-01	168
National Center for Injury Prevention and Control	170
<ul style="list-style-type: none">• Division of Unintentional Injury Prevention/Home, Recreation, and Transportation Branch/ Transportation Safety Team and Home and Recreation Team - NCIPC-DUIP-HRTB-GA-2016-01	170
<ul style="list-style-type: none">• Division of Unintentional Injury Prevention/Health Systems and Trauma Systems Branch/PDO/EST - NCIPC-DUIP-HSTSB-GA-2016-01	172
<ul style="list-style-type: none">• Division of Violence Prevention/Research and Evaluation Branch/Youth Violence, Suicide, and Elder Maltreatment Team - NCIPC-DVP-REVB-GA-2016-01	174
<ul style="list-style-type: none">• Division of Violence Prevention/Surveillance Branch/Morbidity and Behavioral Surveillance Team - NCIPC-DVP-SB-GA-2016-01	176
National Center on Birth Defects and Developmental Disabilities	178
<ul style="list-style-type: none">• Division of Congenital and Developmental Disorders/Birth Defects Branch - NCBDDD-DCDD-BDB-GA-2016-01	178
<ul style="list-style-type: none">• Division of Congenital and Developmental Disorders/Birth Defects Branch - NCBDDD-DCDD-BDB-GA-2016-02	180
<ul style="list-style-type: none">• Division of Congenital and Developmental Disorders/Birth Defects Branch - NCBDDD-DCDD-BDB-GA-2016-03 (out of sequence; appears at end)	198



EIS Assignments	PAGE
<ul style="list-style-type: none">• Division of Congenital and Developmental Disorders/Developmental Disabilities Branch/ Epidemiology Team - NCBDDD-DCDD-DDB-GA-2016-01	183
<ul style="list-style-type: none">• Division of Congenital and Developmental Disorders/Prevention Research and Translation Branch /Prevention Research Team - NCBDDD-DCDD-PRTB-GA-2016-01	185
<ul style="list-style-type: none">• Division of Human Development and Disability/Child Preparedness Unit and Child Development Branch/Child Development Studies Team - NCBDDD-DHDD-CDB-GA-2016-01	186
National Institute for Occupational Safety and Health	188
<ul style="list-style-type: none">• Division of Surveillance, Hazard Evaluations & Field Studies/Hazard Evaluations and Technical Assistance Branch - NIOSH-DSHEFS-HETAB-OH-2016-01 (2 Positions)	188
<ul style="list-style-type: none">• Division of Surveillance, Hazard Evaluations & Field Studies/Industrywide Studies Branch/ Epidemiology Team - NIOSH-DSHEFS-ISB-OH-2016-01 (2 Positions)	190
<ul style="list-style-type: none">• Division of Surveillance, Hazard Evaluations & Field Studies/Surveillance Branch - NIOSH-DSHEFS-SB-OH-2016-01 (2 Positions)	191
<ul style="list-style-type: none">• Respiratory Health Division/Field Studies Branch - NIOSH-RHD-FSB-WV-2016-01 (4 Positions)	193
Office of Public Health Preparedness and Response	195
<ul style="list-style-type: none">• Division of State and Local Readiness/Applied Sciences and Evaluation Branch - OPHPR-DSLR-ASEB-GA-2016-01	195

Division of Scientific Education and Professional Development / EIS Workforce Branch

Arizona

DSEPD/EWB-AZ-2016-01

Agency Name: Arizona Department of Health Services and Maricopa County Department of Public Health

Division/Branch/Team/Section: Arizona Department of Health Services/Maricopa County Department of Public Health

Physical Address: 4041 N Central Ave Ste 600 Phoenix, Arizona 85012

Primary Supervisor: Rebecca Sunenshine, MD, (EIS 2004), CDC Career Epidemiology Field Officer, Medical Director, Disease Control Division, RebeccaSunenshine@mail.maricopa.gov

Secondary Supervisor: Ken Komatsu, MPH, State Epidemiologist, Ken.Komatsu@azdhs.gov

Secondary Supervisor: Lisa Villarroel, MD, MPH, Medical Director, ADHS Bureau of Epidemiology and Disease Control, lisa.villarroel@azdhs.gov

Background: The EISO will report to two co-primary supervisors – the State Epidemiologist and the Medical Director/Disease Control Administrator at Maricopa County. This division allows access to all programs at the AZ Department of Health as well as at Maricopa County Department of Public Health. Between the two jurisdictions, an EISO will have the best of both --- a local and state health agency experience, and opportunities in a large urban metropolitan area, as well as in rural, tribal and border settings, optimizing the EISO experience. With almost 200 outbreaks annually in Maricopa County, Arizona's diverse ecology of diseases and long-standing partner relationships with universities, community organizations, and tribes, we offer a unique and fulfilling EIS assignment. We will also assist the EISO in finding an international experience if desired.

Proposed Initial Projects: Choose among initial proposed projects, all with readily-available data: 1) Examine the severity and risk factors for pediatric coccidioidomycosis; 2) Assess declining WIC enrollment in Maricopa County; 3) Determine return on investment for diabetic screening during routine dental examinations; 4) Evaluate compliance with Arizona law regarding school vaccine requirements among Maricopa County schools and reasons for non-compliance; 5) Analyze HIV control using viral load data in AZ post-Affordable Care Act; 6) Analyze pediatric hospitalizations with child abuse ICD-9 and ICD-10 codes and barriers to clinician reporting; 7) Investigate use of phone apps among newly diagnosed syphilis and HIV cases in Maricopa County; 8) Analysis of MCDPH STD media campaigns impact on public awareness, testing numbers and cases in Maricopa County; 9) Evaluate breast cancer treatment among American Indians; 10) Investigate the possible vectors of the nematode parasite *Onchocerca lupi*; 11) Quality improvement study of the MCDPH Medical Counter Measures (MCM) Distribution/Dispensing System to decrease time for dispensing medical countermeasures; 12) Evaluate dengue and chikungunya virus infection prevention messaging and interventions. 13) Assess the presence of chronic diseases among the Maricopa County homeless population; 14) Evaluate partnerships with private community providers to expedite treatment and partner services of syphilis cases in Maricopa County; 15) Evaluate the association between Emergency Department (ED) visits for influenza-like illness and ED diversion status to determine triggers for medical surge capacity; 16) Evaluate policy strategies to reduce obesity in Maricopa County; 17) Evaluate the impacts of the Million Hearts program; 18) Perform an environmental scan of the current conditions and opportunities to integrate chronic disease and access to care work with pharmacists

Proposed Surveillance Projects: There are several surveillance system evaluations to choose from: 1) Comparing incidence of alcohol-related motor vehicle deaths from Fatality Analysis Reporting System database with death certificate data; 2) Evaluate an electronic school-based surveillance system that captures school nurse encounters and nursing diagnoses 3) Evaluate poison control centers as a drug-related suicide surveillance system versus emergency department discharge database; 4) Evaluate statewide microcephaly and fetal death surveillance systems.

Range of Opportunities: Projects ranging from outbreak investigations to large dataset analysis. 2015 St. Louis encephalitis virus and measles outbreaks; 2014 tickborne relapsing fever outbreak; skin infection outbreak in school

wrestlers and mumps in hockey players; 2013 human psittacosis associated with an avian chlamydiosis outbreak among feral peach-faced lovebirds, second human case of *Onchocerca lupi* in the US; Rocky Mountain spotted fever on six reservations, pertussis outbreak in a polygamous community, and a prison-associated botulism outbreak.

Position Strengths: This shared State/Maricopa County position offers the best of both worlds — access to 15 county health departments, 21 American Indian tribes, Indian Health Service, 3 universities, and binational projects with our Mexican counterparts. The diversity of urban/rural, desert/alpine, reservations, and international borders, provide unique epidemiologic challenges. A breadth of “shovel-ready” projects ensure the EISO will meet all CALs and hit the ground running.

Special Skills Useful for this Position: Spanish speaking and writing skills are helpful. Curiosity, flexibility, and strong teamwork skills can enhance an officer’s experience at the state and local level. EISOs with a variety of backgrounds (medical, veterinary, nursing, and PhD/DrPH) could thrive in this position.

Available Data: Immunizations, Hospital/ED discharges, birth/deaths, cancer, birth defects, newborn screening, BRFSS, trauma, National Poison Data system, blood lead, BioSense, school nurse encounters, TB, HIV, STD and other communicable diseases.

Recent Publications: Community-Acquired Invasive GAS Disease among Native Americans, Arizona, 2013. *Emerging Infectious Diseases* 2015.

Rapid Response to Ebola Outbreaks in Remote Areas—Liberia, July–November 2014. *MMWR* 2015.

Risk factors for fatal outcome from Rocky Mountain spotted fever in a highly endemic area: Arizona, 2002-2011 *Clin Infect Dis* 2015.

Factors associated with receipt of 2009 pandemic influenza A (H1N1) monovalent and seasonal influenza vaccination among school-aged children: Maricopa County, Arizona, 2009-2010 influenza season. *J Public Health Manag Pract.* 2013.

Domestic Travel: 5% **International Travel:** 0%

Available Support: EISO receives analytical support from numerous doctoral/master’s level epidemiologists and a health economist; computers/iPhone/software/IT support services at both state and county sites.

Current/Recent EIS Officer: Heather Venkat, DVM, MPH, (EIS 2015), EIS Officer, Heather.Venkat@azdhs.gov

Current/Recent EIS Officer: Jefferson Jones, MD, MPH, (EIS 2014), EIS Officer, JonesJ032@mail.maricopa.gov

Current/Recent EIS Officer: Candice Robinson, MD, MPH, (EIS 2013), Medical Officer, CDC Communication Education Branch, Immunization Services Division, xfp3@cdc.gov

Current/Recent EIS Officer: Laura Adams, DVM, MPH, (EIS 2012), CDC Career Epidemiology Field Officer, ipb2@cdc.gov

Current/Recent EIS Officer: Seema Yasmin, MD, (EIS 2011), Public Health Doctor, Journalist, seemayasmin@gmail.com

Officer Projects: Co-outbreak of West Nile and St. Louis encephalitis viruses; Marijuana-associated injuries from ED and trauma data; Tick-borne relapsing fever among HS students; Cost of pediatric immunization in public clinics; Botulism among prison inmates; Mumps among hockey players; Skin lesions among high school wrestlers.

Officer Recent Publications: *MMWRs:* Concurrent Outbreaks of St. Louis Encephalitis Virus and West Nile Virus Disease-Arizona, 2015.

Lack of Measles Transmission to Susceptible Contacts from a Health Care Worker with Probable Secondary Vaccine Failure - 2015.

Tickborne Relapsing Fever Outbreak at an Outdoor Camp – 2014.

Alcohol Production, Prevention Strategies, and Inmate Knowledge About the Risk for Botulism from Pruno

Consumption in a Correctional Facility — 2013.

Community-Based Control of the Brown Dog Tick in a Region with High Rates of Rocky Mountain Spotted Fever, 2012-2013. *PLoS ONE.*

Factors associated with receipt of 2009 influenza A (H1N1) monovalent and seasonal influenza vaccination among school-aged children: 2009-2010 influenza season. *J Public Health Manag Pract.*

Chryseobacterium indologenes in a woman with metastatic breast cancer, United States. *Journal of Medical Case Reports.*

Use of an Online Survey During an Outbreak of *Clostridium perfringens* in a Retirement Community—Arizona, 2012. *J Public Health Management Practice.*

Completeness of West Nile virus testing in patients with meningitis and encephalitis during an outbreak in Arizona, USA. *Epidemiol Infect.*

Healthcare-Associated Pertussis Outbreak in Arizona: Challenges and Economic Impact, 2011. *J Ped Infect Dis*

Modifiable Risk Factors for West Nile Virus Infection during an Outbreak. *Am. J Trop Med Hyg.*

Consultant: Bob England, MD, MPH, Director, Maricopa County Department of Health, BobEngland@mail.maricopa.gov

Size of Community: 6.6 million statewide; ~4 million in Phoenix/Maricopa County

University Affiliation: The state collaborates with all three state universities and the biomedical research industry. The state and county have several adjunct faculty members of the University of Arizona College of Public Health and College of Medicine.

Living Environment: Phoenix, the sixth largest US city, is cosmopolitan, with sunshine and fine weather year-round.

Cultural and Recreational Assets: Arizona offers endless opportunities for outdoor activities with skiing, hiking, cultural activities and excellent restaurants. National basketball, baseball, football, and hockey teams are based in Phoenix, as well as spring training baseball season. There are 26 National parks/monuments, including the Grand Canyon, and 27 State parks, including Kartchner's Cavern. Phoenix is home to South Mountain Park, the largest municipal park in the US.

Opportunity for Employment: Arizona job growth and availability is increasing.

California

DSEPD/EWB-CA-2016-01

Agency Name: California Health and Human Services/Division of Environmental and Occupational Disease Control

Division/Branch/Team/Section: Division of Environmental and Occupational Disease Control

Physical Address: CA Dept of Public Health 850 Marina Bay Parkway, Bldg P-3 Richmond, California 94805

Primary Supervisor: Gayle Windham, PhD, MScPH, (EIS 1983), Chief, Epidemiological Investigations Unit, EHIB, gayle.windham@cdph.ca.gov

Secondary Supervisor: Barbara Materna, PhD, Chief, Occupational Health Branch, barbara.materna@cdph.ca.gov

Background: The Division of Environmental and Occupational Disease Control (DEODC), the largest state environmental/occupational health division, houses the Environmental Health Investigations Branch (EHIB, www.ehib.org), Occupational Health Branch (OHB, www.cdph.ca.gov/programs/OHB), Childhood Lead Poisoning Prevention Branch (CLPPB), and Environmental Health Laboratory Branch (EHLB), as well as the cross-branch Emergency Preparedness Team (EPT). DEODC has 300 staff representing expertise in chemical, occupational, and environmental hazards, biomonitoring, epi/analytic methods, industrial hygiene, emergency preparedness, health education, and community outreach. Key programs within DEODC/EHIB include (many with CDC funding/partnerships): CA Biomonitoring (laboratory measurement of blood or urine specimens for toxic substances), Environmental Health Tracking (adaptation and linkage of multiple health/exposure datasets), California Center for Autism and Developmental Disabilities Research and Epidemiology (CADDRE), California Breathing (asthma monitoring and other projects), and the Site Assessment Section (health assessments related to hazardous waste sites and industrial facilities). DEODC/OHB has authority to access CA workplaces for investigations, and works closely with Cal/OSHA and CA's Division of Workers' Compensation. Key programs include: Occupational Health Surveillance & Evaluation, funded by NIOSH/CDC for surveillance/prevention of work-related asthma, pesticide illness, and fatal injuries; Hazard Evaluation System & Information Service, which evaluates chemical and other workplace hazards and provides practical information for workers/employers; Occupational Lead Poisoning Prevention Program, with activities in surveillance, case investigation, education, and technical assistance; and the Safe Cosmetics Program, which collects information on products containing carcinogens or reproductive hazards. The EPT conducts surveillance of chemical spills/releases, facilitates 24/7 emergency technical assistance, and investigates selected chemical releases to assess community/worker health. EHLB and other CDPH laboratories provide analytic capacity to support investigations. DEODC participates in multi-agency climate change group that conducts vulnerability assessments and plans adaptive capacity. DEODC work results in changes to state policy and often leads the way in national policy. Numerous opportunities to collaborate with other CDPH divisions; federal, state, and local public health agencies; and academic researchers. The position supervisors have hosted six EISOs since 2004.

Proposed Initial Projects: Work with EPT on secondary analyses of post-disaster community survey data. Staff the Workplace Hazard Helpline to gain immediate experience researching and responding to exposures of concern and conducting worksite investigations. Participate in CA Biomonitoring projects (e.g. community outreach video/materials, exposures of vulnerable sub-populations) to analyze data, report individual results, and recruit new cohorts. Identify occ/env health disparities (low-wage or temp workers) using large, existing databases or investigate

carcinogen/reproductive hazards reported to cosmetics database. Projects flexible to match EISO interests.

Proposed Surveillance Projects: California Work-related Asthma Prevention Program surveillance system (NIOSH cooperative agreement). OR depending on interest, numerous opportunities to design new system or evaluate existing including; asthma, autism, childhood and occupational lead poisoning, pesticide poisoning, workplace fatalities, chemical spills/releases, and biomonitoring. Possible new surveillance systems could address health effects related to climate change or other environmental exposures using available population-based data, or occupational infectious diseases or musculoskeletal disorders utilizing workers' compensation data.

Range of Opportunities: Conduct field investigations of chemical poisonings or exposures from spills/releases, worksite hazards or outbreaks, disease clusters, natural disasters. Assess specific occ/env illness/injury endpoints or hazards, including heat-related illness and climate change effects; participate in hazardous waste site assessment; present results to impacted communities; analyze large datasets from complex research studies, surveys, or surveillance systems; develop outreach materials. Assist with 24/7 chemical incident technical assistance. Other opportunities within CDPH (infectious or chronic disease, injury, laboratories), or assisting local agencies. Participate in CDC-sponsored national/international assignments.

Position Strengths: Obtain wide breadth of epidemiological experience, from applied to research-oriented investigations and emergency response, in largest state EOH division. Lead investigations on diverse populations and important EOH issues; excellent publication track record. Established relationships with numerous government agencies, academic/research institutions, community/labor organizations. Collegial, supportive work environment. Numerous EIS alums at CDPH.

Special Skills Useful for this Position: None are necessary, but some prior analysis experience and quantitative skills can be very helpful. Spanish-speaking ability (or other languages) is a plus. Prior knowledge or experience with chemicals, toxicology, environmental or workplace issues can be helpful but is not necessary. Previous EISOs have had diverse backgrounds (both PhDs and MDs).

Available Data: PH Tracking program (exposure and health databases); hospital discharge; workers' compensation; Medi-Cal; CA health surveys; numerous EOH surveillance systems; biomonitoring program; variety of etiologic epidemiology studies with multi-year data (autism, puberty, pregnancy outcomes).

Recent Publications: Topcis: Biomonitoring — chemical body burdens (young girls, pregnant women, workers, etc.); Respiratory protection programs in hospitals; Occupational coccidioidomycosis; Emergency—Napa Earthquake; Asthma — exposures, work-related; Pesticides — health effects, exposure; Lead poisoning; Climate change, heat waves/illness; Air pollution health effects; Autism — environmental risk factors, etiology, genetics; Occupational injury and illness — surveillance, health and exposures (chemicals, safety hazards, and infectious diseases); Endocrine-disrupting chemicals.

Journals: MMWR, Epidemiology, AJE, J Occup Env Med, Environ Res, Environ Health Perspect, Environ Health, Environ Intl, Am J Ind Med, Environ Pollution, Ped & Perinat Epid, J Autism Dev Disorder, Autism Research.

Domestic Travel: 15% **International Travel:** 0%

Available Support: \$50 million annual DEODC budget, 300+ multi-disciplinary staff. Graphic arts, library, computer, sophisticated statistical/mapping, laboratory.

Current/Recent EIS Officer: Kathleen Attfield, ScD, (EIS 2014), kathleen.attfield@cdph.ca.gov

Current/Recent EIS Officer: Jason Wilken, PhD, (EIS 2012), CDC Career Epidemiology Field Officer, Jason.wilken@cdph.ca.gov

Current/Recent EIS Officer: Jennifer Zipprich, PhD, (EIS 2008), Research Scientist, Jennifer.zipprich@cdph.ca.gov

Current/Recent EIS Officer: Thomas Kim, MD, MPH, (EIS 2006), Thomas.Kim@CRIHB.net

Officer Projects: South Napa Earthquake response, vape shop exposures, anesthetic gas exposures at veterinary hospitals, environmental predictors of pubertal transition, work-associated infectious diseases (coccidioidomycosis, H1N1, Neisseria meningitidis, hantavirus), metals biomonitoring in API populations, climate change health effects, pesticide poisoning surveillance, Epi-Aids outside California (Ebola in Liberia, train derailment chemical release).

Officer Recent Publications: Attfield KR (coauthor): Decreased Ebola transmission after rapid response to outbreaks in remote areas, Liberia, 2014. *Emerg Infect Dis.* 2015;21(10):1800-1807.

Attfield KR (lead author): Injuries and traumatic psychological exposures associated with the South Napa Earthquake — California, 2014. *MMWR.* 2015;64(35):975-978.

Wilken JA (lead author): Coccidioidomycosis among workers constructing solar power farms, California, USA, 2011–2014. *Emerg Infect Dis.* 2015;21(11):1997–2005.

Wilken JA (lead author): Exposures and symptoms among workers after an offsite train derailment and vinyl chloride release. *Am J of Disaster Med.* 2015;10(2):153–165.

Wilken JA, (lead author): Assessing prevention measures and Sin Nombre hantavirus seroprevalence among workers at Yosemite National Park. *Am J Ind Med.* 2015;58(6):658-67.

Zipprich J (coauthor): Evaluation of respiratory protection programs and practices in California hospitals during the 2009-2010 H1N1 influenza pandemic. Am J Infect Control. 2013;41(11):1024-31

Zipprich J (coauthor): Occupational transmission of Neisseria meningitidis — California, 2009. MMWR. 2010;59(45):1480-83

Kim TJ (lead author): Industry-wide medical surveillance of California flavor manufacturing workers: Cross-Sectional Results. Am J Ind Med;2010. 53(9):857-65

Consultant: Jason Wilken, PhD, (EIS 2012), CDC Career Epidemiology Field Officer, jason.wilken@cdph.ca.gov

Consultant: Richard Kreutzer, MD, Chief, DEODC, Rick.Kreutzer@cdph.ca.gov

Size of Community: 7.4 million in San Francisco Bay Area, 38 million statewide

University Affiliation: University of CA Berkeley School of Public Health, UC San Francisco Medical School, UC Davis (Medical and Veterinary Schools, School of Public Health), Stanford University, UCLA, UC Irvine.

Living Environment: Varied living situations from world-renowned city to semi-rural suburbs. Mild climate; scenic setting; multi-ethnic, diverse population.

Cultural and Recreational Assets: Plentiful, including international to local cultural events in theater, dance, music, art, and championship professional sports teams. Excellent, diverse restaurants. Abundant outdoor activities: hiking, bicycling, boating, wind-surfing, whale-watching; easy access to scenic places for climbing, camping, skiing, wine-tasting, beach-combing, and exploring national and state parks.

Opportunity for Employment: Excellent job and educational opportunities in many fields, center of high-tech industry, biotechnology, education/universities, and more.

DSEPD/EWB-CA-2016-02

Agency Name: California Health and Human Services/Division of Communicable Disease Control

Division/Branch/Team/Section: Division of Communicable Disease Control

Physical Address: 850 Marina Bay Pkwy Bldg P-2 Richmond, California 94804

Primary Supervisor: James Watt, MD, MPH, (EIS 1999), Chief, Division of Communicable Disease Control, james.watt@cdph.ca.gov

Secondary Supervisor: Pennan Barry, MD, MPH, (EIS 2005), Chief, Surveillance and Epidemiology Section, Tuberculosis Control Branch, pennan.barry@cdph.ca.gov

Secondary Supervisor: Erin Murray, PhD, MSPH, (EIS 2009), Epidemiologist Supervisor, erin.murray@cdph.ca.gov

Background: This position is located in the Division of Communicable Disease Control (DCDC). DCDC is responsible for monitoring, preventing and controlling communicable diseases in California. DCDC includes programs responsible for all communicable diseases except HIV/AIDS. This position will have an emphasis on tuberculosis, but approximately half the officer's time may be spent on projects related to other diseases. DCDC has approximately 400 professional staff with extensive and diverse scientific experience, including Masters and PhD level epidemiologists, physicians, nurses, disease investigators, health educators, behavioral scientists, and laboratorians. Project opportunities are available in all DCDC programs. In addition, DCDC has close collaborations with many other programs, and opportunities in other areas, such as HIV/AIDS and health care associated infections, may be available. DCDC includes the communicable disease laboratories, and many projects involve significant laboratory partnership. The primary supervisor, James Watt, is the DCDC Chief and is responsible for identifying outstanding project opportunities, linking the officer with experienced leads in programs, overseeing the EIS experience, and providing exposure to high level public health management and policy issues. Each project will also have a specific project supervisor. The secondary supervisor, Pennan Barry, provides tuberculosis subject matter expertise and Erin Murray provides statistical and analytic guidance. This model provides a wide diversity of communicable disease control experiences and the opportunity to work with experts in different disease control programs.

Proposed Initial Projects: -Describe the epidemiology and molecular epidemiology of TB among migrant workers including assessment of case rates using available denominator estimates

-Analyze the predictors of genotype cluster growth in California including the role of foreign birth

-Analyze rate of progression from TB infection to disease among HIV infected persons in California

-Lead a foodborne outbreak investigation (we have many!)

-Evaluate public health responses to identification of patients with Zika, chikungunya and dengue in California

- Assess preconception glycemic control for women with type 1 or type 2 diabetes and its impact on pregnancy outcomes.
- Lead/participate in studies of vaccine safety within the Vaccine Safety Datalink consortium;
- Study coccidioidomycosis treatment and/or risk factors in KPSC hospitals using the largest cocci cohort assembled to date;
- Identify medication risk factors (PPIs, statins, etc.) for *C. difficile* infection;
- Evaluate patterns of pharmacological treatment for type 2 diabetes in children in young adults and associated outcomes.
- Observe and participate in data collection (interviews/measures) for a study of diabetes in children and young adults the SEARCH study).

Proposed Surveillance Projects:

- Evaluate completeness of Reportable Diseases databases compared to information in the EHR;
- Evaluate impact of regional health information exchange and meaningful use incentives on disease reporting;
- Evaluate EHR data quality for childhood diabetes surveillance (incidence and prevalence).
- Compare hospital based vs. public health surveillance systems in collaboration with the LA Health Department.
- Other project in the EISO's area of interest.

Range of Opportunities:

- Lead/participate in writing groups and analyze data from the SEARCH for Diabetes in Youth study.

- Lead/participate in work to operationalize and test the Learning Healthcare Organization model, including: assess new devices, laboratory tests, or other health care innovations prior to clinical application.
- Work with clinician partners to develop and assess interventions for high priority topics.
- Work with Complete Care group to improve panel management by leveraging available innovations and existing data.
- Assess impact of inpatient antibiotic stewardship, design/implement outpatient stewardship.
- Epidemiology studies of coccidioidomycosis and hospital infections.
- Collaboration with LA County Health Department on outbreak investigations and other activities.
- Respond to outbreaks (EpiAids) and deploy for emergency response including domestic and overseas opportunities.

Position Strengths: Excellent opportunity to work at the frontier of healthcare delivery innovation, with high impact research based on a large, ethnically/racially/socioeconomically diverse population. Strong emphasis on epidemiologic and implementation research resulting in presentations and publications.

Special Skills Useful for this Position: SAS programming and experience with statistics (although programming and statistical support is provided for this positions); Research protocol development; Familiarity with clinical health care (inpatient, outpatient, or emergency) environmental/operations; Interest in collaborating with multidisciplinary teams of Researchers and Clinicians; Interest in "big data" also helpful; Spanish language skills helpful but not required; knowledge of human subjects research requirements. Individuals with epidemiology, medical, and social/behavioral science backgrounds are encouraged to apply.

Available Data: Information in EHR and legacy data systems, including demographics, diagnosis and procedure codes from outpatient, inpatient, emergency department; laboratory tests and results, imaging, and prescription data for all members, births and deaths.

Recent Publications: Tartof SY et al. Safety of Seasonal Influenza Vaccination in Hospitalized Surgical Patients: A Cohort Study. *Ann Intern Med.* 2016 Mar 15. Epub.

Lawrence JM, et al Trends in Incidence of Type 1 Diabetes Among non-Hispanic White Youth in the United States, 2002-2009. *Diabetes.* 2014

Lawrence JM, et al Validation of Pediatric Diabetes Case Identification Approaches Using Information in the EHR of a Large Integrated Managed Health Care Organization. *AJE.* 2014

Domestic Travel: 10% **International Travel:** 0%

Available Support: R&E provides programming and biostatistical support, research support staff skilled at data abstraction and in-person data collection, administrative and budget support.

Consultant: Kristi Reynolds, PhD, MPH, Associate Director of Epidemiologic Research

Consultant: Michael Gould, MD, MS, Director, Health Services Research and Implementation Science

Consultant: Michael Kanter, MD, Regional Medical Director, Quality and Clinical Analysis

Size of Community: Pasadena=140,000 people; San Gabriel Valley=2 million (one of the most ethnically diverse regions in the country); LA County=10 million (88 cities).

University Affiliation: Many Research Scientists have adjunct appointments with the University of Southern California (USC) School of Medicine or (UCLA).

Living Environment: Located in Pasadena California, home of Cal Tech, the Jet Propulsion Lab, and the Tournament of Roses Parade. It is part of a large, diverse multicultural metropolitan area; Moderate/high cost of living. Excellent food. Good schools systems. Temperate climate year-round. Public transportation to offices from downtown to San Gabriel Valley.

Cultural and Recreational Assets: Major theater, opera and symphony, world-renowned art museums and gardens. Abundant outdoor recreation with beaches, mountains and deserts. Cutting edge art and music scene.

Opportunity for Employment: Health care management, clinical care delivery (physician, nursing, allied health professionals), etc. The surrounding area has a diverse economy, including tourism, performing arts, biotechnology, military and major universities.

- Examine trends in travel associated measles cases and measles genotypes in California
- Additional projects are available for officers with specific interests

Proposed Surveillance Projects: Several surveillance activities are available for evaluation:

- Evaluate an electronic immunization registry that contains TB testing information as a sentinel surveillance system for latent TB
- Evaluate system for assessing recent transmission of TB using genotype and clinical surveillance data
- Evaluate newly implemented supplemental surveillance for unpasteurized dairy exposure among patients with *M. bovis* infections
- Evaluate the impact of electronic laboratory reporting on infectious disease surveillance in California

Range of Opportunities: This position offers experience with a range of epidemiologic methods (including case-based and population-based surveillance, case-control and cohort studies, aberration detection using molecular, epidemiologic and spatial parameters, geographic analysis, and spatial analysis), partnerships (including correctional facilities, health care providers and community-based organizations), populations (including ethnic, racial and sexual minorities), and public health problems.

Position Strengths: The wide range of scientific opportunities, large and diverse population base, a range of communicable diseases, extensive experience of program staff, and opportunity to work directly with subject matter experts on a variety of projects

Special Skills Useful for this Position: EIS officers in DCDC have had a range of different backgrounds including physicians, veterinarians and PhD epidemiologists. The most important skills for this position are creativity, enthusiasm and the ability to work as part of a team. We have a diverse range of opportunities and are open to officers from different professional backgrounds.

Available Data: All communicable disease surveillance data in California, California Emerging Infections Program data, molecular data from an extensive laboratory collection, data on immunization delivery, program performance data from 61 local health jurisdictions, outbreak data, hospital discharge and cost data, and the list goes on.

Recent Publications: Greninger AL et al. A novel outbreak enterovirus D68 strain associated with acute flaccid myelitis cases in the USA (2012-14): a retrospective cohort study. *Lancet Infect Dis*, epub 2015, March 31.
Shahkarami M, et al. Laboratory Testing for Middle East Respiratory Syndrome Coronavirus, California, USA, 2013-2014. *Emerg Inf Dis* 2015;21(9):epub.

Kong D et al. Timely HIV Diagnosis and HIV/TB Comanagement among California Patients in 2008. *Publ Health Rep* 2014;129:170-7.

Metcalf JZ et al. Tuberculosis and HIV co-infection, California, USA, 1993–2008. *Emerg Infect Dis* 2013; 19:400-6.

Domestic Travel: 5% **International Travel:** 5%

Available Support: Secretarial and computer/programming support, including network/internet, geocoding, SAS, and Microsoft Access are available. Advanced statistical support is available in house. Specialized resources (e.g., cost-benefit analytic support) are available through close ties with UC Berkeley and UCSF.

Current/Recent EIS Officer: Hope Biswas, PhD, (EIS 2015), hope.biswas@cdph.ca.gov

Current/Recent EIS Officer: Jacklyn Wong, PhD, (EIS 2014), jacklyn.wong@cdph.ca.gov

Current/Recent EIS Officer: Patrick Ayscue, PhD, DVM, (EIS 2013)

Current/Recent EIS Officer: Jonathan Nunez, MD, (EIS 2011)

Officer Projects: Analytic: Progression to active TB among immigrants; Risk factors for congenital syphilis;

Characteristics of severe influenza; Incidence of drug resistant gonorrhea.

Surveillance: Outbreaks; Congenital syphilis; TB among immigrants; Influenza.

Outbreak investigations: Bloodstream infections among hemodialysis patients; TB; Acute Flaccid myelitis; Shiga-toxin producing *E.coli*; Mumps; Hantavirus; Gonorrhea; Ebola.

Officer Recent Publications: • Van Haren K, Ayscue P, et al.. Acute Flaccid Myelitis of Unknown Etiology in California, 2012-2015. *JAMA*. 2015 Dec 22-29;314(24):2663-71.

• Ayscue P, et al. Acute flaccid paralysis with anterior myelitis - California, June 2012-June 2014. *MMWR*. 2014 Oct 10;63(40):903-6.

• Matanock A, Arwady MA, Ayscue P, et al; Ebola virus disease cases among health care workers not working in Ebola treatment units--Liberia, June-August, 2014. *MMWR*. 2014 Nov 21;63(46):1077-81.

• Nunez JJ, et al. Hantavirus infections among overnight visitors to Yosemite National Park, California, USA, 2012. *EID*. 2014;20:386–393.

• Ayscue P, Murray E, et al. Influenza-associated intensive-care unit admissions and deaths — California, September 29, 2013–January 18, 2014. *MMWR*. 2014;63:143–147.

• Murray EL, et al. *Neisseria gonorrhoeae* outbreak: Unintended consequences of electronic medical records and use of an out-of-state laboratory — California, July 2009–February 2010. *STD*. 2013;40:556–558.

• Murray EL, et al. What are the most sensitive and specific signs and symptom combinations for influenza among patients hospitalized with acute respiratory illness? Results from Western Kenya, January 2007–July 2010. *Epidemiology and Infection*. 2013;141:212–222.

Consultant: Duc Vugia, MD, MPH, (EIS 1990), Chief, Infectious Disease Branch, duc.vugia@cdph.ca.gov

Size of Community: An extremely diverse population of 38 million persons across a wide range of epidemiologic settings

University Affiliation: UC Berkeley, UC San Francisco, Stanford University, UC Davis

Living Environment: The Richmond campus is a short drive (~15 minutes) from Berkeley/Oakland and is easily accessible by rapid transit and bicycle; staff live all over the San Francisco Bay Area, from the more affordable areas north and east of Berkeley/Oakland to San Francisco.

Cultural and Recreational Assets: The Bay Area is a culturally and ethnically diverse metropolitan center, with the added benefit of a gorgeous, accessible natural environment.

Opportunity for Employment: Good

DSEPD/EWB-CA-2016-03

Agency Name: Los Angeles County Public Health Department

Division/Branch/Team/Section: Acute Communicable Disease Control Program

Physical Address: 313 N. Figueroa Street, rm 212 Los Angeles, California 90012

Primary Supervisor: Benjamin Schwartz, MD, (EIS 1986), Deputy Director, bschwartz@ph.lacounty.gov

Secondary Supervisor: Dawn Terashita, MD, MPH, Team Lead, dterashita@ph.lacounty.gov

Secondary Supervisor: Robert Kim-Farley, MD, MPH, (EIS 1981), Director, rkimfarley@ph.lacounty.gov

Background: The Los Angeles County Department of Public Health is the health agency for >10 million residents, combining the partnerships and access of a local health agency with the opportunities that arise in a population larger than all but 7 states. Over one-third of LAC residents were born outside the US, and with proximity to Mexico and extensive travel links with Latin America and Asia, the County experiences a wide range of emerging diseases and sociocultural challenges. Population, cultural, and socioeconomic diversity also contribute to interesting outbreaks and prevention issues. The EISO will be based in Acute Communicable Disease Control Program (ACDC) focusing on infectious disease surveillance, control and prevention. A strength of the program is relationships with and outreach to over 100 hospitals, 350 skilled nursing facilities, and 400 ambulatory surgery centers. Investigating outbreaks, and preventing healthcare associated infections and the spread of drug resistant organisms are priorities. Challenges from vectorborne infections (West Nile virus, dengue, Chikungunya and Zika), local spread of *Aedes* mosquitos, and strong collaboration with local vector control agencies also create opportunities. Changes in state and national policy resulting from the Disneyland measles outbreak and from three high profile endoscopy outbreaks are recent examples of how the EIS Officer can engage in investigations that have significant impacts.

Proposed Initial Projects: In addition to acute needs and outbreak investigations, potential initial projects for the Officer include but are not limited to: 1) Validate hospital reporting of surgical site infections to the National Healthcare Safety Network (NHSN) and analyze hospital and individual risk factors for infection. 2) Analyze the impact of participation in a Quality Improvement Collaborative on reducing *Clostridium difficile* infections in hospitals and skilled nursing facilities. 3) Evaluate the impact of clinical guidelines and local antibiograms on antimicrobial use practices. 4) Develop and evaluate electronic medical record algorithms to identify healthcare-associated infections. 5) Assess diagnostic practices at community clinics for chronic hepatitis C infection and linkage to care for persons <30 years old. 6) Analyze secondary spread of *Shigella* infections among MSM to develop management and investigation strategies. 7) Analyze County Environmental Health inspection findings for restaurants with/without foodborne outbreaks to identify risk factors. 8) Develop and evaluate a food safety social media outreach program to educate the public about disease prevention and reporting of suspected foodborne illnesses. 9) Assess effectiveness of targeted West Nile virus prevention messages in changing behaviors using a theory based approach. 10) Map geographic overlap between returning travelers with dengue, Chikungunya and Zika, and *Aedes* mosquitos to model the likelihood of local transmission.

Proposed Surveillance Projects: The EISO has an opportunity for cutting-edge evaluations and fieldwork/outreach with local stakeholders and partners. Potential projects include: 1) Analyze the advantages and limitations of Electronic

Laboratory Reporting; 2) Assess the impacts of culture independent diagnostic testing on surveillance for enteric pathogens; 3) Analyze the utility of the National Healthcare Safety Network (NHSN) for surveillance of healthcare associated infections and outbreak detection; and 4) Evaluate West Nile virus surveillance in humans, mosquitos and birds.

Range of Opportunities: ACDC leads surveillance, prevention and control for >80 diseases. Collaborations with other infectious disease programs are encouraged: e.g., with the Division of HIV and STD Programs, the Officer could analyze HIV molecular surveillance data to detect clusters and design interventions to interrupt transmission; or evaluate gonorrhea treatment and develop interventions to improve practices. Chronic disease opportunities exist such as analyzing trends in type 2 diabetes comparing US and foreign born Hispanics, assessing impacts of changing in diets in Latin America. The Officer also could work with Kaiser Permanente, analyzing infectious disease issues from their extensive databases.

Position Strengths: Large diverse population; geographic/demographic risks for rare, emerging, and tropical infections; complete access to all healthcare-associated, foodborne and community outbreaks (>200/year); a top-notch Public Health Laboratory.

Special Skills Useful for this Position: Position and opportunities can be tailored based on the background, experience and interests of the EISO. Infectious disease expertise, data analysis, written and oral presentation skills all are important and will be developed and enhanced through the EIS experience. Spanish fluency helpful but not required. Ability to multitask and work with different teams, programs, and partners is highly valued.

Available Data: Disease and syndromic surveillance; NHSN healthcare associated infection data; LA Survey with population-based health and behavior data; vital records; hospital discharge and emergency department databases; and more.

Recent Publications: Effectiveness of varicella vaccine in preventing community transmission (Perella, Pediatrics 2016). Healthcare-associated outbreaks in outpatient settings, 2000-12 (Oyong, EID 2015). Echovirus 30 aseptic meningitis outbreak among high school football players (Croker, MMWR 2015). Incidence of medically attended influenza during pandemic and post-pandemic seasons 2009-13 (Fowlkes, Lancet Resp Med, 2015). Fungal endophthalmitis and compounded products (Mikosz, EID 2014). Outbreak of bloodstream infections associated with multiuse dialyzers containing O-rings (Oyong, ICHE 2014). Joint infections and MRI arthrograms (Kim, ICHE 2013). Population based Carbapenem-resistant Klebsiella incidence (Marquez, ICHE 2013).

Domestic Travel: 10% **International Travel:** 0%

Available Support: ACDC includes 8 public health physicians, 10 epidemiologists, plus statistical, data management and GIS support. Statistical and economic analysis support also are available from the Office of Health Assessment and Epidemiology. EIS alumni in ACDC and Division leadership positions can be mentors

Current/Recent EIS Officer: Amanda Kamali, MD, (EIS 2014), EIS Officer, akamali@ph.lacounty.gov

Current/Recent EIS Officer: Christina Mikosz, MD, MPH, (EIS 2011), TB Controller, christina.mikosz@acgov.org

Current/Recent EIS Officer: Caitlin Reed, MD, (EIS 2009), Physician Specialist, careed@dhs.lacounty.gov

Current/Recent EIS Officer: Kanta Sircar, PhD, (EIS 2007), Senior Research Science Officer, ddq0@cdc.gov

Officer Projects: Outbreak investigations (plague at Yosemite; carbapenem resistant Enterobacteriaceae and endoscopy; healthcare associated candidemia); Ebola detail, Liberia; antimicrobial resistance/stewardship (LAC advisory committee colead; collaboration with hospital/nursing facilities on antibiotics for asymptomatic bactiuria); survey of restaurant worker practices working while ill and sick leave policies; analysis of childhood obesity trends.

Officer Recent Publications: Kamali A, Bagchi CP, Mendoza E. Measles in a patient with presumed immunity – Los Angeles County, 2015. MMWR 2015 Oct 9;64:1123.

Nyenswah TG, Westercamp M, Kamali AA, Evidence for declining numbers of Ebola cases-Montserrado County, Liberia, June-October 2014. MMWR 2014;63:1072-6.

Padua LT, Kamali A, Kim H, et al. A unique case of disseminated plague with multifocal osteomyelitis (in clearance for submission to New Engl J Med).

Mikosz CA, Smith R, Kim M, et al. Endophthalmitis associated with compounded products, Emerg Infect Dis 2014;20.

Kodagoda D, El Amin AN, Mikosz C. Measles Outbreak Associated with an Arriving Refugee—Los Angeles County, August-September 2011. MMWR 2011;61:385-389.

Sircar KD, Bancroft E, Nguyen DM. Hospitalization of paediatric patients for methicillin-resistant Staphylococcus aureus skin and soft tissue infections, 1998-2006. Epid Infect 2010;138:677-82.

Mascola L, Terashita D, Sircar K. Increased detections and severe neonatal disease associated with coxsackievirus B1 infection - United States 2007. *MMWR* 2008;57:553-56.

Consultant: Laurene Mascola, MD, MPH, (EIS 1982), Director, lmascola@ph.lacounty.gov

Consultant: Douglas Frye, MD, (EIS 1998), Director, dfrye@ph.lacounty.gov

Consultant: Paul Simon, MD, (EIS 1990), Director, psimon@ph.lacounty.gov

Size of Community: Over 10 million with substantial socio-demographic and cultural diversity.

University Affiliation: University of California, Los Angeles (UCLA), and University of Southern California (USC) both have public health schools with opportunities for teaching, collaboration, and student projects.

Living Environment: Southern California is renowned for cultural and ethnic richness. There are a variety of interesting neighborhoods to live in for single people and families, though housing costs are high. Public transport a feasible option from many parts of the city. Great climate.

Cultural and Recreational Assets: World class music, theater, opera, and museums. Numerous running, hiking and mountain biking trails. Amazing geographic diversity – from deserts, to mountains, to beaches. Ski and surf on the same day; swim outside year-round.

Opportunity for Employment: Extensive in all fields.

DSEPD/EWB-CA-2016-04

Agency Name: Kaiser Permanente Southern California

Division/Branch/Team/Section: Department of Research & Evaluation, Division of Epidemiologic Research

Physical Address: 100 S. Los Robles Ave, 4th floor Pasadena, California 91101

Primary Supervisor: Jean M Lawrence, ScD, MPH, MSW, (EIS 1995), Senior Research Scientist, Jean.M.Lawrence@kp.org

Secondary Supervisor: Steven J Jacobsen, MD, PhD, Senior Director of Research, Steven.J.Jacobsen@kp.org

Secondary Supervisor: Sara Y Tartof, PhD, MPH, (EIS 2010), Research Scientist I, Sara.Y.Tartof@kp.org

Background: The mission of Kaiser Permanente Southern California's (KPSC) Department of Research & Evaluation (R&E) is to conduct high quality, public sector, innovative research in the areas of disease surveillance, etiology, natural history, treatment, and prevention as well as approaches to health care delivery. R&E, the primary hub for regional research, has five scientific divisions; epidemiology, health services research and implementation science, biostatistics, behavioral research, and clinical trials. Major areas of study include chronic and infectious disease, cancer, diabetes, drug safety and effectiveness, and maternal and child health. Headquartered in Pasadena, California, we focus on translating research to practice to benefit Kaiser Permanente members and the public. There are more than 350 individuals, including 36 Research Scientists and 5 post-doctoral fellows in the Department. Physicians in the medical centers also conduct research, which is predominantly in the area of Clinical Trials. The research program emphasizes translational research studies that have the potential to improve clinical quality and health care affordability. Federal agencies, foundations, and pharmaceutical companies fund most of the research.

KPSC serves over 4 million members with a team of more than 6,000 physicians, 20,000 nurses, and a cadre of other staff in our 14 medical centers and 209 medical offices across the region. The sociodemographic characteristics of the health plan's membership mirrors that of the overall region. Care for these members focuses on their total health and is guided by their personal physicians, specialists and team of health care providers. Expert and caring medical teams are empowered and supported by industry-leading technology advances and tools for health promotion, disease prevention, state-of-the-art care delivery and world-class chronic disease management. Kaiser Permanente is dedicated to care innovations, clinical research, health education and the support of community health. The electronic health record (EHR), "HealthConnect" was fully implemented in 2007.

Proposed Initial Projects: Acute, chronic and infectious disease projects including primary data collection secondary analysis such as:

- Surveying hospitalized patients and providers to identify reasons for flu vaccine refusal;

Colorado

DSEPD/EWB-CO-2016-01

Agency Name: Colorado Department of Public Health and Environment

Division/Branch/Team/Section: Communicable Disease Branch

Physical Address: 4300 Cherry Creek Drive South Denver, Colorado 80246

Primary Supervisor: Alicia Cronquist, MPH, RN, (EIS 2001), Foodborne Disease Program Manager,
alicia.cronquist@state.co.us

Secondary Supervisor: Wendy Bamberg, MD, (EIS 2005), Healthcare–Associated Infections Medical Epidemiologist,
wendy.bamberg@state.co.us

Secondary Supervisor: Lisa Miller, MD, MPH, State Epidemiologist, lisa.miller@state.co.us

Secondary Supervisor: Jennifer House, DVM, MPH, State Public Health Veterinarian, jennifer.house@state.co.us

Background: This assignment is located in the Communicable Disease Branch (CDB), which is part of the Disease Control and Environmental Epidemiology Division at the Colorado Department of Public Health and Environment. The Communicable Disease Branch conducts disease surveillance, investigation, control, and community outreach activities for a wide range of conditions in the following areas: foodborne, zoonotic, vaccine preventable, invasive bacterial diseases, influenza, and healthcare-associated infections (HAIs). Other programs in the division focus on tuberculosis, STIs/HIV (including hepatitis B and C) and environmental epidemiology, which includes surveillance for health effects of legalized marijuana. The Colorado Department of Public Health and Environment is somewhat unusual because environmental programs and public health programs are in the same department, on the same campus; this proximity facilitates relationships with environmental health partners, particularly in food safety and water quality.

The Communicable Disease Branch has approximately 25 experienced epidemiologists, including two former EIS officers, all of whom provide support to the EIS Officer depending on the project. Colorado is one of ten states that participate in the Emerging Infections Program. In our Branch, we have ongoing EIP projects in foodborne disease (“FoodNet”), invasive bacterial pathogens (“ABCs”), influenza and healthcare-associated infections. In addition, Colorado is one of five Integrated Food Safety Centers of Excellence, designed to identify and evaluate best practices for foodborne disease surveillance and outbreak investigation and then share this knowledge.

This assignment has a solid history of training EIS Officers (7 officers since 2001) and the Branch does not have other CDC trainees or fellows. In part because of our excellent, rapid surveillance and response, Colorado has a history of finding itself in the middle of large, high-profile investigations; our EIS Officers have had good opportunities to participate in and sometimes lead those investigations. Some recent examples include: Typhoid fever associated with a restaurant, a plague outbreak associated with exposure to an infected dog, mucormycosis in a bone marrow transplant unit, and cryptosporidiosis in an animal research laboratory.

The CDPHE laboratory conducts state-of-the-art testing to support epidemiologic investigations and has been nationally recognized for its excellent work. Statistical consultation may be obtained within the disease control division and from the Colorado School of Public Health. SAS programming support is available within CDB.

Proposed Initial Projects: When outbreaks occur, initial projects can include outbreak investigation and response; our EIS Officers very often conduct outbreak investigations as one of their initial projects. Assess trends in *Shigella sonnei* and develop strategy for targeted surveillance and prevention of multidrug resistance. Assess feasibility of establishing a surveillance network to capture, summarize and disseminate results of rapid respiratory panel testing. Analyze data from statewide surveillance for reportable diseases including Legionellosis, Varicella, *E. coli* O157, and WNV. Examine changing rates of hospitalization among reported enteric pathogens.

Proposed Surveillance Projects: Evaluate surveillance for hospitalized influenza, *Hemophilus influenzae* type B (HiB), carbapenem-resistant Enterobacteriaceae, or skunk rabies. Assess the impact of culture-independent diagnostic testing for *Salmonella* and other pathogens.

Range of Opportunities: The EISO is encouraged to work on a wide range of communicable disease projects, including numerous outbreak opportunities, and case investigation of rare diseases (e.g., plague, relapsing fever, hantavirus, Zika, botulism). Opportunities exist to design and conduct formal epidemiologic studies using cohort, case-control, or

cross-sectional designs. The EISO will become very experienced in applied epidemiology through involvement in day-to-day routines and urgent situations. Epidemiologic projects involving non-communicable disease topics can be arranged. We support participation in a CDC-sponsored international assignment.

Position Strengths: Close-knit, highly functioning, fun work unit; breadth of diseases and topics handled by the branch; frequent opportunities for field investigations; very friendly colleagues and mentors; supervisors who promote EIS officer involvement in the most interesting projects with a high likelihood of publication.

Special Skills Useful for this Position: A healthy curiosity about how public health works in the field. Flexibility to adjust plans as investigations evolve. EISOs with a variety of backgrounds (medical, veterinary, nursing, PhD epidemiologists) could thrive in this position.

Available Data: Data from Colorado's web-based surveillance system available from 2000 to present: enhanced surveillance data from EIP for wide range of pathogens including: FoodNet, invasive bacteria, *Clostridium difficile*, multidrug resistant organisms, pertussis, and influenza, all available to the EIS Officer.

Recent Publications: Runfola JK, House J, Miller L, et al. Outbreak of Human Pneumonic Plague with Dog-to-Human and Possible Human-to-Human Transmission--Colorado, June-July 2014. *MMWR Morb Mortal Wkly Rep.* 2015 May 1;64(16):429-34.

AB Cronquist, RK Mody, R Atkinson, et al. Impacts of Culture-Independent Diagnostic Practices on Public Health Surveillance for Bacterial Enteric Pathogens. *Clin Inf Dis* 2012; 54: S432-S439

JT McCollum, AB Cronquist, BJ Silk, et al. Multistate Outbreak of Listeriosis Associated with Cantaloupe, 2013. *N Engl J Med* 2013;369:944-53.

Domestic Travel: 5% **International Travel:** 0%

Available Support: Statistical consultation within the division and the Colorado School of Public Health; SAS programming support within the branch.

Current/Recent EIS Officer: Jessica Hancock-Allen, MPH, MSN, (EIS 2014), EIS Officer, Jessica.Hancock-Allen@state.co.us

Officer Projects: Outbreak investigations including: mucormycosis at a BMT unit, group A *Streptococcus* at a wound clinic, cryptosporidiosis at a research facility, and typhoid fever associated with a restaurant. Assessed catastrophic outcomes related to edible marijuana, and a cluster of multidrug resistant *Shigella* infections. Implemented Ebola infection prevention strategies in West Africa.

Officer Recent Publications: Hancock-Allen JB, et al. Death Following Ingestion of an Edible Marijuana Product—Colorado, 2014. *MMWR* 2015.

Pedati C, House J, Hancock-Allen J, et al. Notes from the Field: Increase in Human Cases of Tularemia — Colorado, Nebraska, South Dakota, and Wyoming, January–September 2015. *MMWR* 2016.

Dantes R, Epton E, et al. Investigation of a cluster of *Clostridium difficile* infections in a pediatric oncology setting. *Am J Infect Control.* 2016.

Epton E et al. Evaluation of an unplanned school closure in a Colorado school district: implications for pandemic influenza preparedness. *Disaster Med Public Health Prep.* 2015.

Epton E, et al. Carbapenem-Resistant *Klebsiella pneumoniae* Producing New Delhi Metallo-Beta-Lactamase at an Acute-Care Hospital, Colorado, 2012. *Infect Control Hosp Epidemiol* 2014 and *MMWR* 2013.

JT McCollum, et al. Tickborne Relapsing Fever in a Mother and Newborn Child — Colorado, 2011. *MMWR*, 2012.

JT McCollum, AB Cronquist, BJ Silk, et al. Multistate Outbreak of Listeriosis Associated with Cantaloupe, 2013. *N Engl J Med* 2013.

JT McCollum, NJ Williams, SW Beam, et al. Multistate Outbreak of *Escherichia coli* O157:H7 Associated with In-Store Sampling of an Aged Raw-Milk Gouda Cheese, 2010. *J Food Protection* 2012. {Winner, 2012 Langmuir Award}

Consultant: Rachel Herlihy, MD, MPH, Director, Disease Control and Environmental Epidemiology Division, rachel.herlihy@state.co.us

Consultant: Daniel Shodell, MD, MPH, Deputy Director, Disease Control and Environmental Epidemiology Division, daniel.shodell@state.co.us

Size of Community: Metropolitan Denver has ~ 2.6 million people.

University Affiliation: Primary and two secondary supervisors (LM and WB) have adjunct faculty appointments in the School of Public Health, in Denver.

Living Environment: Colorado/Denver offers 300 annual days of sunshine; bicycle commuting paths nearby; and numerous and unparalleled beautiful places to hike, ski, mountain climb, bike, camp, and fish. What more can we say? Denver is home to transplants from across the country and is a friendly place to live. Denver is very kid- and family-friendly.

Cultural and Recreational Assets: Denver has many cultural and entertainment assets including professional sports teams, large performing arts center, art and science museums, zoo, botanic garden, plus many independent breweries.

Opportunity for Employment: Very good! The metro area has several major universities/colleges, schools of medicine/public health; ~20 hospitals; and a several large high-tech corporations and other major employers.

DSEPD/EWB-CO-2016-02

Agency Name: National Park Service

Division/Branch/Team/Section: Office of Public Health and Biological Resources/Wildlife Health Branch

Physical Address: 1201 Oakridge Dr ste 200 Fort Collins, Colorado 80524

Primary Supervisor: Danielle Buttke, DVM, MPH, PhD, (EIS 2010), One Health Coordinator, danielle_buttke@nps.gov

Secondary Supervisor: David Wong, MD, (EIS 2002), Epidemiology Branch Chief, david_wong@nps.gov

Secondary Supervisor: Margaret Wild, DVM, PhD, Chief Wildlife Veterinarian, Margaret_Wild@nps.gov

Secondary Supervisor: Sara Newman, DrPH, Director, Office of Public Health, sara_newman@nps.gov

Background: The National Park Service (NPS) hosts over 275 million visitors annually to our 409 park units. The unique park settings and focus on human, animal, and environmental health provides many safety, health promotion, and disease transmission opportunities — a place to truly practice interdisciplinary One Health. This position affords diverse and sometimes unpredictable opportunities in many fields of epidemiology and One Health, from environmental and occupational health to foodborne illness to injury prevention.

Proposed Initial Projects: Leading outbreak investigations on park lands and in park visitors and employees; develop and implement surveys to describe health impacts and value of national parks; partnering with state and county health departments to improve rabies vaccination rates among wildlife biologists; expansion of tick surveillance in 11 eastern parks undergoing deer management programs to include additional species; development of service-wide policy on personal protective equipment use for wildlife biologists; evaluate health benefits of park and green space using national dataset; communication and educational outreach for parks regarding zoonotic disease; development of school-park partnership program to promote One Health education and physical activity in schools using National Park developed curricula

Proposed Surveillance Projects: Evaluate plague surveillance in bears; evaluate wildlife mortality reporting system for zoonotic diseases; evaluate tour bus surveillance system for Yellowstone National Park; evaluate proposed Harmful Algal Bloom Surveillance system

Range of Opportunities: Health promotion and messaging, injury prevention, outbreak investigations, behavioral surveys, occupational safety and health, zoonotic disease surveillance. If a CDC-sponsored opportunity arises, a multiweek international assignment will be supported.

Position Strengths: Variety and breadth of subject matter; ability to work closely with numerous local, state, and federal partners in public health response;

Special Skills Useful for this Position: Self motivator; ability to work on several projects simultaneously and independently; interest and commitment to the One Health concept; excellent communication skills; ability to work with a large variety of people and expertise; interest in and commitment to the NPS mission to protect and preserve national and cultural resources of the National Parks for future generations

Available Data: Plague surveillance data from bears in Yosemite National Park, employee absenteeism data at Yellowstone and Glacier national parks; park clinic data at Yellowstone, Yosemite, and Grand Canyon; national emergency medical services data; wildlife diagnostics database, vehicle crash data, tick surveillance data from eastern parks; law enforcement and search and rescue case investigation reports;

Recent Publications: Human Plague—United States, 2015. MMWR. 2015.

Assessing prevention measures and seroprevalence of hantavirus among workers at Yosemite National Park. Wilken JA, et al. Am J Ind Med. 2015.

The role of One Health in wildlife conservation: a challenge and opportunity. Buttke DE, et al. J Wildl Dis. 2015.

The Human Health Benefits of Biodiversity. Buttke DE, Allen D, Higgins, C. Park Science. 2014.

Zoonotic disease risk and prevention practices among biologists and other wildlife workers--results from a national survey, US National Park Service, 2009.

Bosch SA, et al.
J Wildl Dis. 2013

Domestic Travel: 15% **International Travel:** 5%

Available Support: We work closely with state and local health departments, the US Department of Defense, and CDC for various projects with multiple subject areas. Funding and support varies from project to project. We also have multiple biostatisticians (primarily ecologists) and two social scientists within the Fort Collins office. We have a partnership with Colorado State University and the National Wildlife Health Center for animal diagnostics and laboratory support for zoonotic disease concerns.

Current/Recent EIS Officer: Cara Cherry, DVM, MPH, (EIS 2014), EIS officer, Cara_cherry@nps.gov

Officer Projects: Chikungunya KAP survey visitors of Virgin Islands National Park; analysis of vehicle crashes in national parks; serosurvey of *Francisella tularensis* in employees and prairie dogs of Devils Tower National Monument; tick surveillance in eastern national parks; injuries from bison-human encounters in Yellowstone National Park; tour-bus surveillance at Yellowstone

Officer Recent Publications: 1. Cherry, C., Leong, K., Wallen, R., Buttke, D. Injuries associated with bison encounters—Yellowstone National Park, 2015. MMWR 2016 (in print for 3/24/16).

2. Weinberg, M., Cherry, C., Lipntiz, J., Nienstadt, L., King-Todd, A., et al. Tuberculosis among temporary visa holders working in the tourism industry—United States, 2012–2014. MMWR 2016 (in print for 3/24/16).

3. Cherry, C., Buttke, D., Wong, D., Wild, M. Freshwater harmful algal blooms and cyanotoxin poisoning in domestic dogs. J Am Vet Med Assoc 2015 (247): 1004-1005.

4. Kobayashi, M., Beer, K., Bjork, A., Chatham-Stephens, K., Cherry, C.; et al. Community Knowledge, Attitudes, and Practices Regarding Ebola Virus Disease — Five Counties, Liberia, September–October, 2014. MMWR 2015 64(26); 714-718.

In progress:

Getting too Close to Wildlife: Risk Factors Associated with Injury from Bison Encounters — Yellowstone National Park, 2000–2015.

Knowledge and Use of Prevention Measures for Chikungunya Virus Among Visitors — Virgin Islands National Park, 2015.

Risk Factors Associated with Animal-Vehicle Crashes in National Parks

Francisella tularensis sero-surveillance in wild prairie dogs - Devils Tower National Monument, 2015.

Consultant: Michelle Verant, DVM, MPH, PhD, wildlife veterinarian, michelle_verant@nps.gov

Consultant: Nathan Galloway, PhD, disease ecologist, nathan_galloway@nps.gov

Size of Community: Fort Collins is approx. 150,000; Denver is one hour away

University Affiliation: Colorado State University; Cornell University; programs being developed with University of Florida, Minnesota, and Washington

Living Environment: Fort Collins is a very active, outdoor-centered town with unparalleled hiking, biking, skiing, and recreating opportunities. This college town has consistently been listed as one of the top five cities to live by several consumer magazines; is also one of the most bike-friendly U.S. cities.

Cultural and Recreational Assets: We are 45 minutes from Rocky Mountain National Park, one hour from Denver, and 1-2 hours from multiple winter recreation destinations.

Opportunity for Employment: Fort Collins is home to Colorado State University, the major employer, as well as several federal government offices (USDA, USFS, USGS); Hewlett Packard, Otterbox, Intel, Avago, and Woodford, major tech and robotics manufacturing companies. Local employment can be challenging for certain professions,

however, Denver presents numerous opportunities within an hour drive.

Connecticut

DSEPD/EWB-CT-2016-01

Agency Name: Connecticut Department of Public Health

Division/Branch/Team/Section: Connecticut Infectious Diseases/Public Health Initiatives

Physical Address: 410 Capitol Avenue MS#11 FDS Hartford, Connecticut 06134

Primary Supervisor: Matthew Cartter, (EIS 1983), State Epidemiologist, matt.cartter@ct.gov

Secondary Supervisor: Lynn Sosa, (EIS 2005), Deputy State Epidemiologist, lynn.sosa@ct.gov

Background: This EISO position with the Connecticut Department of Public Health (DPH) provides a broad-based, infectious disease epidemiologic experience that is both practical and research-oriented. The learning environment is dynamic and supportive; the supervisors are readily available. The listed primary and secondary supervisors actually function as co-primary supervisors. Matt Cartter (EIS 1983) has 31 years of experience supervising EISOs and is a Past President of the Council of State and Territorial Epidemiologists (CSTE). Lynn Sosa (EIS 2005, Connecticut) has co-supervised EISOs for the last six years. Public health in the state is administered through 74 local health departments at the town and district level. DPH usually takes the lead role in outbreak investigations and has a long history of collaborating with CDC on a wide variety of projects. The EISO is based in the Epidemiology and Emerging Infections Program, which is responsible for general infectious diseases, emerging infections, bioterrorism surveillance, outbreak investigations, healthcare-associated infections and the Connecticut Emerging Infections Program (EIP) (one of 11 EIP sites). The Epidemiology Program is located within the Infectious Diseases Section, which also includes immunizations, STD, HIV, TB and hepatitis. For our most recent outbreak investigation and surveillance reports, many of which have been written by our EIS Officers, please see the Connecticut Epidemiologist newsletter <http://www.ct.gov/dph/cwp/view.asp?a=3136&q=388262>

Proposed Initial Projects: Use of GIS techniques to assess the role of socioeconomic status as a risk factor for infectious diseases; Analysis of STD clinic medical record database; Integration of long term care facilities into National Health Safety Network (NHSN) data; Linking of immunization registry and vital records data to assess risk factors for low/incomplete vaccination

Proposed Surveillance Projects: Evaluation of a foodborne disease surveillance system (Connecticut participates in the Foodborne Diseases Active Surveillance Network [FoodNet] and is a FoodCORE Center); Evaluation of Hepatitis C surveillance

Range of Opportunities: General infectious diseases, emerging infections, bioterrorism surveillance, outbreak investigations, healthcare associated infections and the Connecticut EIP (one of 11 EIP sites in nation). Noninfectious disease projects can be arranged. Opportunities are available to teach and work with MPH students and to give presentations to professional groups and the public.

Position Strengths: Small but geographically and socioeconomically diverse state; excellent supervision; strong publication record; Emerging Infections Program; strong laboratory support; surge capacity to support labor-intensive investigations; close and active working relationships with nearby medical and public health schools.

Special Skills Useful for this Position: Comfortable working as a member of a team among knowledgeable staff; Clinical experience or familiarity helpful but not required. We are supportive of participation in CDC-sponsored international opportunities.

Available Data: A wide variety of surveillance databases for reportable diseases are immediately available including special projects within the Emerging Infections Program and syndromic surveillance data; cancer registry, immunization registry.

Recent Publications: Hadler JL, Yousey-Hindes K, et al. Influenza related hospitalizations and poverty levels--United States, 2010-2012. *MMWR* 2016 Feb 12; 65(5): 101-5.

Hadler JL, Petit S, Mandour M, Cartter ML. Trends in invasive infection with methicillin-resistant *Staphylococcus aureus*, Connecticut, USA, 2001-2010. *Emerg Infect Dis.* 2012 Jun;18(6):917-24.

Niccolai LM, Julian PJ, Meek JI, McBride V, Hadler JL, Sosa LE. Declining rates of high-grade cervical lesions in young women in Connecticut, 2008-2011. *Cancer Epidemiol Biomarkers Prev* 2013; 22: 1446-50.

Domestic Travel: 10% **International Travel:** 10%

Available Support: Two other EIS alumni work in the Section. DPH has a strong collaborative relationship with the public health and medical schools at Yale University and the University of Connecticut. Yale University School of Public Health is a partner in the Connecticut Emerging Infections Program (EIP) and FoodCORE. Routine statistical consultation and GIS capabilities are available within DPH. The State laboratory provides support for epidemiologic investigation and onsite pulsed-field gel electrophoresis for selected pathogens.

Current/Recent EIS Officer: Jocelyn Mullins, (EIS 2013), jocelyn.mullins@ct.gov

Current/Recent EIS Officer: Tim Styles, (EIS 2011)

Current/Recent EIS Officer: Jessica Kattan, (EIS 2009)

Current/Recent EIS Officer: Alice Guh, (EIS 2007)

Officer Projects: E. coli O157:H7 outbreak with two restaurants; Analysis of varicella trends after implementation of the 2-dose vaccine recommendation; Analysis of neighborhood level socioeconomic risk factors for varicella; Evaluation of babesiosis surveillance before/after surveillance case definition change; Salmonella enteritidis outbreak associated with a restaurant; Spatial analysis of LTBI.

Officer Recent Publications: Mullins J, Kudish K, Sosa L, Hadler J. Continuing decline in varicella incidence after the 2-dose vaccination recommendation, 2009-2014. *Open Forum Infect Dis* 2015;9:1-6.

Styles T, Przysieki P, Archambault G, Sosa L, Toal B, Cartter M. Two storm-related carbon monoxide poisoning outbreaks- Connecticut, October 2011 and October 2012. *Arch Environ Occup Health* 2015;70(5):291-6.

Styles T, Phan Q, Rabatsky-Ehr T, Applewhite C, Sosa L, Cartter M. Salmonella enterica serotype enteritidis outbreak at a long-term care facility, Connecticut, 2012. *Conn Med* 2013;77:587-90.

Kattan J, Sosa LE, Lobato MN. Tuberculosis mortality: death from a curable disease, Connecticut, 2007-2009. *Int J Tuberc Lung Dis* 2012;16:1657-62.

Guh A, Phan Q, Nelson R, Purviance K, Milardo E, Kinney S, Mshar P, Kasacek W, Cartter M. Outbreak of Escherichia coli O157 associated with raw milk, Connecticut, 2008. *Clin Infect Dis* 2010; 51:1411-7.

CDC. Multiple-type Salmonella gastroenteritis outbreak after a reception—Connecticut, 2009. *MMWR* 59(34):1093-7.

Size of Community: Connecticut is the 48th smallest state with approximately 100 miles of shoreline and rolling, forested rural-suburban living areas interspersed with major interstate highways connecting small urban centers. Connecticut is ranked 29th in terms of population size with 3,574,097 residents. Hartford (population 124,775) is the capital and Connecticut's fourth-largest city.

University Affiliation: Yale University, University of Connecticut

Living Environment: Pleasant suburban or rural living environment in nearby communities

Cultural and Recreational Assets: Hartford and New Haven support major regional theater and attract national and international concert groups. Local countryside offers excellent hiking, canoeing, and cross-country skiing. Boston, New York City, Long Island Sound, Rhode Island ocean beaches, and mountains in Massachusetts, Vermont and New Hampshire are within a 1- to 2-hour drive.

Opportunity for Employment: Good. Hartford and New Haven areas include 5 major hospitals, 9 universities and wide range of other professional opportunities.

Georgia

DSEPD/EWB-GA-2016-01

Agency Name: Georgia Department of Public Health

Division/Branch/Team/Section: Acute Disease Epidemiology

Physical Address: Georgia Department of public Health 2 Peachtree Street NW, Suite 14-420 Atlanta, Georgia 30303

Primary Supervisor: Cherie Drenzek, DVM, BS, (EIS 1995), State Epidemiologist, cherie.drenzek@dph.ga.gov

Secondary Supervisor: Laura Edison, DVM, MPH, (EIS 2012), Career Epidemiology Field Officer, laura.edison@dph.ga.gov

Background: The Georgia Department of Public Health (DPH) is the lead agency in preventing disease, injury and

disability; promoting health and well-being; and preparing for and responding to disasters from a health perspective. In 2011, the General Assembly restored DPH to its own state agency after more than 30 years of consolidation with other departments. DPH collaborates with Georgia's 159 county health departments and 18 Public Health Districts. There are ~100 employees in the DPH Epidemiology Program and 18 district epidemiologists working on a wide range of health issues. Georgia is also one of 10 state health departments participating in the CDC Emerging Infections Program (EIP). Previous EIS Officers have participated in diverse projects and outbreak investigations, and were actively involved in the response to the 2014 Ebola epidemic, outbreak of fungal meningitis due to contaminated steroids, and the 2009 H1N1 pandemic.

Proposed Initial Projects: There are opportunities in many areas of Epidemiology depending on the Officer's interests. Examples of projects include: 1) Conduct Georgia-specific epidemiologic analyses for Emerging Infections Program (EIP) datasets, analyze/interpret FoodNet performance measures; 2) Determine reasons certain National TB Indicator goals are not being met by surveillance data analysis and medical record review; 3) Analyze HIV data to examine longitudinal care patterns; conduct a geospatial analysis of new HIV diagnoses and the HIV care continuum by neighborhood poverty level; link longitudinal data from HIV core surveillance to cross-sectional data from the Medical Monitoring Project to examine impact of specific conditions (such as depression); 4) Evaluate the Health Information Exchange Out-of-Care watch list derived from the enhanced HIV/AIDS Reporting System (eHARS) as a surveillance system for Data to Care; analyze HIE data for determinants of re-engagement in care and sustained viral suppression. Both HIE and CAPUS have information technology components, and are a great opportunity to be involved in a project from early implementation through evaluation over the 2 year EIS experience; 5) Evaluate the efficacy of the school-based influenza immunization program; 6) Determine predictors for congenital syphilis by matching congenital syphilis data to vital records and/or Prams data; 7) Conduct geospatial analysis of Georgia antimicrobial resistance data to identify changes over time and key areas of the state requiring response; 8) Develop methods to map patient transfer patterns between healthcare facilities to optimize HAI prevention and response activities; 9) Build database to support data collection for HAI program healthcare facility assessments, analyze/interpret results with corresponding HAI data.

Proposed Surveillance Projects: There are opportunities in many areas of Epidemiology depending on the officer's interests. Examples of possible projects include evaluation of one of the following surveillance systems: 1) Surveillance for pertussis cases and completeness of records including vaccine history and exemptions; 2) Influenza-like illness syndromic surveillance reported by emergency departments; 3) Surveillance for the severe outcomes of Group A Streptococcal including necrotizing fasciitis and toxic-shock syndrome.

Range of Opportunities: EISOs work with staff in many areas of the Epidemiology Program depending on their interests. Officers are involved with frequent outbreak investigations.

Position Strengths: Very experienced epidemiologic leadership, diversity of investigations, opportunity to do short and long-term projects on a wide variety of topics while working with a wide variety of staff, excellent data availability, opportunity to interface with the public and medical providers, and the opportunity to see how public health works at the state and local level. Proximity to CDC allows officers to learn about public health at the state and local level while still having access to CDC scientists and additional resources. The Emerging Infections Program (EIP) offers many analytical and learning resources for Officers.

Special Skills Useful for this Position: The ability to work with the public and people with varying backgrounds from multiple districts and agencies. The flexibility to address a wide range of topics and investigations.

Available Data: Notifiable disease database (SENDSS), immunization database (GRITS), HIV databases (eHARS, MMP, CAREWare, ADAP, NHBS), EIP data, ABC and FoodNet data, HAI database (NHSN), hospital discharge data.

Recent Publications: *Violent Deaths among Georgia Workers: A Look at Suicides and Homicides by Occupation, 2006-2009. American Journal of Preventive Medicine NVDRS supplement (accepted Summer 2016)

*Door to Intravenous Tissue Plasminogen Activator Time and Hospital Length of Stay in Acute Ischemic Stroke Patients, Georgia, 2007-2013. Journal of Stroke & Cardiovascular Disease, 2015.

*Administrative Data Linkage to Evaluate a Quality Improvement Program in Acute Stroke Care, Georgia, 2006-2009. Prev Chronic Dis, 2015

*Enhancing screening and early detection among women transitioning to Medicare from the NBCCEDP in Georgia. Cancer Causes & Control, 2015.

Domestic Travel: 5% **International Travel:** 0%

Available Support: The ADES has 6 doctoral-level epidemiologists (3 MD, 3 DVM – 3 are EIS alumni), 15 masters-level epidemiologists, 1 doctoral-level entomologist, and numerous support staff. Support is also available from epidemiologists in, Tuberculosis, HIV/AIDS, STD, and Chronic Disease Epidemiology Sections.

Current/Recent EIS Officer: Angie Parham, DVM, MPH, (EIS 2014), angie.parham@dph.ga.gov

Current/Recent EIS Officer: Laura Edison, DVM, MPH, (EIS 2012), laura.edison@dph.ga.gov

Current/Recent EIS Officer: Roodly Archer, PhD, (EIS 2008), wea7@cdc.gov

Current/Recent EIS Officer: Petra Wiersma, MD, (EIS 2006), FFG2@cdc.gov

Current/Recent EIS Officer: Carrie Shuler, DVM, MPH, (EIS 2004)

Current/Recent EIS Officer: Martha Iwamoto, MD, MPH, (EIS 2002), MCI5@cdc.gov

Current/Recent EIS Officer: Susan Wootton, MD, (EIS 2000)

Officer Projects: Investigation of fentanyl-related illicit-drug overdoses. predictors of viral suppression among HIV patients, outbreak investigations including group A Streptococcus among nursing home residents, Mycobacteria abscessus infections among children after dental procedures, Ebola active monitoring and potential-case investigations, endophthalmitis from contaminated medications, hotel-associated Legionella.

Officer Recent Publications: Angie Parham

*Ebola Active Monitoring System for Travelers Returning from West Africa — Georgia, 2014. MMWR, 2015.

Laura Edison:

*Scabies among American Samoan children. PLoS ONE, 2015.

*Acute Rheumatic Fever and Rheumatic Heart Disease Among Children in American Samoa, 2011–2012. MMWR, 2015.

*Endophthalmitis outbreak associated with repackaged bevacizumab — 2013. EID, 2015.

*Prevalence and Indicators of Viral Suppression Among Persons with Diagnosed HIV Infection Retained in Care — Georgia, 2010. MMWR, 2014.

*Severe Illness Associated with Synthetic Cannabinoid Use — Georgia, 2013. MMWR, 2013.

*Trace-forward investigation of mice in response to lymphocytic choriomeningitis virus outbreak. EID, 2014.

*Lymphocytic choriomeningitis virus outbreak in employees and mice of a commercial breeding and distribution operation. EID, 2014.

*Mycoplasma pneumoniae outbreak among university students — Georgia, 2012. MMWR, 2013.

*Detection and characterization of Mycoplasma pneumoniae during an outbreak of respiratory illness at a university. J Clin Micro, 2013.

Petra Wiersma

*Catheter-Related Polymicrobial Bloodstream Infections Among Pediatric Bone-Marrow Transplant Outpatients - Atlanta, Georgia, 2007. Infect Control Hosp Epidemiol, 2010.

*International Outbreak of Severe Botulism with Prolonged Toxemia Caused by Commercial Carrot Juice; Clin Infect Dis, 2008.

*Surveillance for severe community associated methicillin resistant Staphylococcus aureus disease in Georgia, USA, 2005–2007. Epidemiol Infect, 2009.

Consultant: Melissa Tobin-D'Angelo, MD, MPH, Medical Epidemiologist, Melissa.Tobin-DAngelo@dph.ga.gov

Consultant: Jessica Tuttle, MD, (EIS 1991), Medical Epidemiologist, jessica.tuttle@dph.ga.gov

Consultant: Julie Gabel, DVM, MPH, Medical Epidemiologist, julie.gabel@dph.ga.gov

Consultant: Kristina Lam, MD, MPH, Medical Epidemiologist, kristina.lam@dph.ga.gov

Consultant: Pascale Wortley, MD, MPH, (EIS 1992), Director of HIV Surveillance, Pascale.Wortley@dph.ga.gov

Size of Community: ~10 million GA residents

University Affiliation: Emory University, Georgia State University, University of Georgia, Georgia Institute of Technology

Living Environment: Urban or suburban

Cultural and Recreational Assets: The Atlanta metropolitan area has a population of over 5.2 million and is a vibrant cosmopolitan area. The area boasts abundant greenspace and urban trails, universities, multiple concert and theater venues, a symphony, a world-class aquarium and zoo, and 5 professional sports franchises. The Appalachian Mountains to the north, islands/beaches on the Atlantic and Gulf coasts, and the Okefenokee Swamp offer year-round adventures.

Opportunity for Employment: Excellent, Atlanta is the economic center of the southeast

Illinois

DSEPD/EWB-IL-2016-01

Agency Name: Chicago Department of Public Health

Division/Branch/Team/Section: Communicable Disease Program

Physical Address: 2160 W Ogden Ave Chicago, Illinois 60612

Primary Supervisor: Sarah Kemble, MD, (EIS 2010), Medical Director, Communicable Disease Program, Chicago Department of Public Health, sarah.kemble@cityofchicago.org

Secondary Supervisor: Stephanie Black, MD, MSc, Medical Director, Communicable Disease Program, Chicago Department of Public Health, stephanie.black@cityofchicago.org

Secondary Supervisor: Allison Arwady, MD, MPH, (EIS 2013), Chief Medical Officer, Chicago Department of Public Health, allison.arwady@cityofchicago.org

Background: This position is located within the Communicable Diseases Program (CDP), which is responsible for surveillance of communicable diseases in Chicago (excluding tuberculosis, some vaccine-preventable diseases, and STI/HIV). The Chicago Department of Public Health (CDPH) mission is to make Chicago a safer and healthier place by working with community partners to promote health, prevent disease, reduce environmental hazards and ensure access to health care for all Chicagoans. CDPH serves a population of 2.7 million, including diverse racial and ethnic communities. O'Hare International Airport is the 3rd busiest airport in the U.S. and is the first point of entry for many international travelers from Africa and the Middle East, leading to involvement of CDPH in evaluation of travelers with suspected emerging infections. CDPH works with a wide range of governmental and non-governmental partners, including health care providers, hospitals, long-term care facilities, the public school system, academic institutions, and community-based advocacy groups.

Primary and secondary supervisors, Sarah Kemble (EIS 2010) and Stephanie Black, serve as co-medical directors of the Communicable Disease Program and will be responsible for identifying projects for the EISO and additional support for specific projects as needed. Secondary supervisor Allison Arwady (EIS 2013) has oversight of other programs within CDPH and can help link the EISO to other projects of interest and resources (advanced statistical support, informatics) outside CDP.

Proposed Initial Projects: -Survey of duodenoscope reprocessing practices in various health care settings in light of recent high-profile multi-drug resistant organism outbreaks linked to duodenoscopes nationally

-Survey to assess infection control practices in long-term care facilities and ambulatory settings

-Evaluate effectiveness of social media outreach to promote health messages around meningococcal disease, HPV, HIV/STI, HCV

-Analyze risk factors for invasive group A streptococcal infection (including analysis of geographic clustering) using data from the Illinois National Electronic Diseases Surveillance System and recent outbreak investigation data

-Lymphogranuloma venereum enhanced surveillance (collaboration with STI/HIV program)

-Potential for collaboration with clinical partner sites to assess carriage of Neisseria meningitidis among patients seen at HIV/STI clinics, relationship of antibody response to MCV4 vaccine to CD4 count among HIV+ persons

-HCV public awareness campaign development, HCV cascade of care

Proposed Surveillance Projects: -Validation of extensively drug-resistant organism (XDRO) registry. Carbapenem-resistant enterobacteriaceae (CRE) are reportable in Illinois since 2013 and are reported by labs and providers into an XDRO registry developed internally at Illinois Department of Public Health. Serial CRE point-prevalence surveys conducted in Chicago facilities by an academic partner provide an independent data source that could be used to validate the registry.

-Campylobacter is newly reportable in Illinois in 2016. EISO would assess numbers of reports from various sources (clinical labs, providers) and laboratory test-types reported, with aim of defining appropriate thresholds for case investigation.

-Acute Flaccid Myelitis (AFM) is newly reportable in Illinois in 2016. In addition to evaluation of the new reporting system, EISO could add value by developing and implementing a provider survey and training materials to promote more robust reporting.

Range of Opportunities: -Opportunities to further develop and improve existing surveillance systems

-Lead investigation of enteric disease outbreaks and other high-profile outbreaks (legionnaire's disease, invasive meningococcal disease)

-Field calls from public and participate in on-call schedule for the department

-Case-control and cohort studies, geographic analysis, social network analysis

-Academic partnerships

-Community-based initiatives and health equity-related projects

Position Strengths: Large city with diverse population and hub for international travel (potential for transmission of infectious pathogens). No shortage of outbreaks. Diverse staff with wide range of experience. Opportunity to participate in cross-cutting projects across programs within CDPH, flexibility for EISO to choose areas of interest.

Close relationships with academic institutions. Dedicated and enthusiastic primary and secondary supervisors committed to mentorship.

Special Skills Useful for this Position: Enthusiasm for public health, open and friendly attitude, experience and/or interest in community outreach would be an asset.

Available Data: All communicable disease surveillance data reported into Illinois National Electronic Diseases Surveillance System (as well as access to datasets from other health department programs), outbreak data, statewide Immunization Information System data, XDRO registry, additional datasets available through academic partners.

Recent Publications: Legionellosis Outbreak Associated with a Hotel Fountain. CID 2015

Outbreak of gastroenteritis in adults due to rotavirus genotype G12P[8]. CID 2015

Multipathogen Waterborne Disease Outbreak Associated with a Dinner Cruise on Lake Michigan. Epidemiology and Infection 2012

Identification, management, and clinical characteristics of hospitalized patients with influenza-like illness during the 2009 H1N1 influenza pandemic, Cook County, IL. ICHE 2011

Clostridium difficile Outbreak Strain BI is Highly Endemic in Chicago Area Hospitals. ICHE 2011

Fatal Laboratory-Acquired Infection with an Attenuated Yersinia pestis strain--Chicago, 2009. MMWR February 25, 2011

Domestic Travel: 0% **International Travel:** 0%

Available Support: 6 medical epidemiologists (4 EISO alumnae, 2 ID physicians); doctoral and master's trained epidemiologists with experience in geocoding and advanced SAS coding; public health nurses; public health school; 4 medical schools. IDPH public health laboratory within walking distance.

Current/Recent EIS Officer: Fadila Serdarevic, MD, (EIS 2008)

Officer Projects: The last EIS cycle during which Chicago hosted an officer was 2008. At that time, EISO projects included investigation of an enteric disease outbreak associated with a party onboard a boat, and involvement in several aspects of the response to the 2009 H1N1 influenza pandemic.

Officer Recent Publications: Serdarevic F, Jones RC, Weaver KN, Black SR, Ritger KA, Guichard F, Dombroski P, Emanuel BP, Miller L, Gerber SI. Multi-pathogen waterborne disease outbreak associated with a dinner cruise on Lake Michigan. Epidemiol Infect. 2012 Apr;140(4):621-5. doi: 10.1017/S0950268811000896. Epub 2011 May 19.

Janusz KB, Cortes JE, Serdarevic F, Jones RC, Jones JD, Ritger KA, Morita JY, Gerber SI, Gallagher L, Biggerstaff BJ, Hicks LA, Swerdlow DL, Fischer M, Staples JE; Chicago H1N1 Epidemiology Team. Influenza-like illness in a community surrounding a school-based outbreak of 2009 pandemic influenza A (H1N1) virus-Chicago, Illinois, 2009. Clin Infect Dis. 2011 Jan 1;52 Suppl 1:S94-101. doi: 10.1093/cid/ciq025.

Consultant: Julie Morita, MD, (EIS 1997), Commissioner of Health, julie.mortia@cityofchicago.org

Consultant: Robert Weinstein, MD, (EIS 1974), Professor of Medicine, Robert_Weinstein@rush.edu

Consultant: Kathleen Ritger, MD, (EIS 2004), Medical Director, Tuberculosis Control Program, kathleen.ritger@cityofchicago.org

Size of Community: 2.7 million

University Affiliation: Primary and secondary supervisors attend weekly ID Grand Rounds for Rush University Medical Center and Cook County Hospital clinical providers; collaborative projects with RUMC, CCH, University of Chicago; proximity to UIC School of Public Health

Living Environment: As the third largest city in the US (first in the Midwest!), Chicago is a great place to live. Whether you prefer a neighborhood vibe, or bustling city life, there are affordable options to choose from. Public transport is easily accessible throughout this very walkable city.

Cultural and Recreational Assets: Chicago has over 500 parks, 31 beaches and plenty of biking/walking trails. It's home to Second City Improv, the Art Institute of Chicago, Shedd Aquarium and six major league sports teams, not to mention endless options for foodies. The city also hosts numerous festivals, concerts and events throughout the year.

Opportunity for Employment: Numerous

Maryland

DSEPD/EWB-MD-2016-01

Agency Name: Substance Abuse and Mental Health Services Administration

Division/Branch/Team/Section: Division of Evaluation, Analysis and Quality at the Center for Behavioral Health Statistics and Quality

Physical Address: 5600 Fisher Lane Room 15E21D Rockville, Maryland 20857

Primary Supervisor: Margaret E. Mattson, PhD, Research Scientist, Margaret.Mattson@samhsa.hhs.gov

Secondary Supervisor: Rob Lyerla, PhD, (EIS 1995), Epidemiologist, Rob.Lyerla@samhsa.hhs.gov

Background: The Substance Abuse and Mental Health Services Administration (SAMHSA) is the agency within the U.S. Department of Health and Human Services (HHS) that leads public health efforts to advance the behavioral health of the nation. Center for Behavioral Health Statistics and Quality (CBHSQ), within SAMHSA, advances SAMHSA's mission to reduce the impact of substance abuse and mental illness on America's communities by providing data to decision-makers, researchers, and the general public. In its role as the Nation's principal source of behavioral health statistics, CBHSQ collects and analyzes data from a variety of sources and disseminates that information to support public health, policy, and programmatic decisions. CBHSQ has four major data collection systems: the National Mental Health Services Survey (N-MHSS), the National Survey on Drug Use and Health (NSDUH), the National Survey on Substance Abuse Treatment Services (N-SSATS), and the Treatment Episode Data Set (TEDS). The Division of Evaluation, Analysis and Quality (DEAQ) at CBHSQ is currently recruiting for an EIS officer (EISO). The EISO will have the opportunity to work on substance abuse related topics within CBHSQ scope of work, and the EISO area of interest. We encourage the EIS class of 2016 to consider this unique opportunity with SAMHSA.

Proposed Initial Projects: Choice of analytic and surveillance project is flexible and depends on the background and interest of the EISO in coordination and approval with the EIS supervisors. Potential projects include:

- 1) Examine the order and timing in which opioid users with and without psychiatric comorbidity adopted use of other drugs (NSDUH).
- 2) Examine prevalence of opioid use among pregnant women by trimester and demographic characteristics (NSDUH).
- 3) Examine the trajectory of use and subsequent use of other substances (e.g. heroin) in relation to duration of use (NSDUH).
- 4) Evaluate the relationship between opioid analgesic prescription patterns and the drug poisoning mortality in New York City.
- 5) Drug-related overdose investigations detected from real-time surveillance, New York City 2015.
- 6) Field Investigations as requested by state partners and other federal agencies.

Proposed Surveillance Projects: 1) Evaluate current drug and alcohol prevalence, morbidity, and mortality surveillance activities in New York City 2) Evaluate the potential usefulness and validity of data from the National Survey on Drug Use and Health (NSDUH) to enhance surveillance activities on substance use.

Range of Opportunities: The EISO at CBHSQ/DEAQ will have the opportunity to choose from a variety of projects from various data sources. The potential for outbreak investigation is always imminent (e.g., Youth Suicide Clusters in Santa Clara County, California 2016). The EISO could have potential project opportunities working with other SAMHSA collaborators at federal, state and local communities regarding substance abuse issues. Upon request the EISO could support the ongoing global effort for Zika response at CDC.

Position Strengths: CBHSQ/DEAQ manages large data sets and provides national leadership in behavioral health statistics and epidemiology. CBHSQ/DEAQ staff is supportive, experienced, approachable and dedicated. Colleagues at CBHSQ/DEAQ are willing to work side by side with the EISO to ensure all projects are completed on schedule. CBHSQ/DEAQ has three EIS alum available for mentoring and collaboration.

Special Skills Useful for this Position: The EISO should come with the willingness to work and learn from a diverse group of colleagues, an interest in behavioral health and substance abuse and ability to take initiative. Background in behavioral health and substance abuse are desirable, but not required. Experience in SPSS, SAS, or other statistical software program is useful, but not required.

Available Data: SAMHSA manages N-MHSS, NSDUH, N-SSATS, and the TEDS survey data sets (<http://www.samhsa.gov/data/>)

Recent Publications: Azofeifa A, Mattson ME, Lyerla R. Driving Under the Influence of Alcohol, Marijuana, and Alcohol and Marijuana Combined Among Persons Aged 16-25 Years - United States, 2002-2014. MMWR 64(48);1325-9

Paone D, Tuazon E, Nolan ML, Mantha S. Unintentional drug poisoning (overdose) deaths involving opioids in New York City, 2000-2014. New York City Department of Health and Mental Hygiene: December 2015.

Paone D, Tuazon E, et al. Farley TA, Kunins HV. Decrease in rate of opioid analgesic overdose deaths-Staten Island, New York City, 2011-2013. MMWR:15;64(18):491-4.

Domestic Travel: 10% **International Travel:** 0%

Available Support: CBHSQ/DEAQ has 20 doctoral-level staff. The CBHSQ/DEAQ has a large number of behavioral scientists, epidemiologists, anthropologists, sociologists, psychologists, toxicologist researchers and surveillance staff to provide epidemiologic support and assist in field investigation. Computer, statistical and clerical support is available on site.

Current/Recent EIS Officer: Julie Odonnell, PhD, (EIS 2015), EISO, Julie.Odonnell@samhsa.hhs.gov

Officer Projects: Surveillance Evaluation: Surveillance for Suicidal Behavior: Evaluation of the NSDUH Epi-Aid-Santa Clara County, California: Undetermined risk factors for suicide among youth, ages 10-24--Santa Clara County, CA 2015

Analytical project: Trends in nonfatal suicidal behaviors among adults aged 18 and older--United States, 2008--2014 (tentative title)

Officer Recent Publications: New assignment since 2015.

Consultant: Denise Paone, EdD, Director of Research and Surveillance, dpaone@health.nyc.gov

Consultant: Ellenie Tuazon, MPH, Epidemiologist, etuazon@health.nyc.gov

Consultant: Alejandro Azofeifa, DDS, MSc, MPH, (EIS 2010), Epidemiologist, Alejandro.Azofeifa@samhsa.hhs.gov

Consultant: Donna Bush, PhD, Forensic Toxicologist Researcher, Donna.Bush@samhsa.hhs.gov

Consultant: Patrick M. High, DrPH, Epidemiologist, Patrick.High@samhsa.hhs.gov

Consultant: Donna F Stroup, PhD, MPH, Epidemiologic Consultant, donnafstroup@dataforsolutions.com

University Affiliation: We have strong collaborative relations American University, George Washington University, and George Mason University.

Living Environment: Rockville forms part of the Baltimore-Washington metropolitan area. It is well connected with the Washington Metro System. You are able to choose different types of living environments: Urban (DC) or suburban (Rockville MD or nearby areas).

Cultural and Recreational Assets: SAMHSA is approximately 20 miles from the Nation's Capital. Attractions include: National Mall, Library of Congress, Smithsonian Museums, Galleries and the National Zoo. Washington DC is a very walkable and bicycle friendly city. You can also enjoy a long weekend getaway to nearby cities such as Baltimore, Annapolis, Wilmington, Philadelphia, and New York City. You can also enjoy the mountains and beaches.

Opportunity for Employment: Generally, there are continuing opportunities within SAMHSA. SAMHSA now shares a new building with HRSA, IHS and ARHQ. Don't forget that HHS headquarters, EPA, and FDA are located in Washington D.C.

Minnesota

DSEPD/EWB-MN-2016-01

Agency Name: Minnesota Department of Health

Division/Branch/Team/Section: Infectious Disease Epidemiology, Prevention, and Control Division

Physical Address: Minnesota Department of Health 625 Robert Street N. St. Paul, Minnesota 55155

Primary Supervisor: Kirk Smith, DVM, MS, PhD, (EIS 1996), Epidemiologist Program Manager, kirk.smith@state.mn.us

Secondary Supervisor: Richard Danila, PhD, MPH, Deputy State Epidemiologist, richard.danila@state.mn.us

Secondary Supervisor: Ruth Lynfield, MD, State Epidemiologist, ruth.lynfield@state.mn.us

Background: The Minnesota Department of Health (MDH) has hosted an EIS officer (EISO) in Infectious Disease Epidemiology continuously since 1978 and has consistently provided diverse, dynamic, and world-class experiences. The EISO is housed in the Infectious Disease Epidemiology, Prevention and Control Division (IDEPC). Much of the EISO work will be done in the Foodborne, Waterborne, Vectorborne, and Zoonotic Diseases Section (FWVZD), but EISOs invariably train in other IDEPC Sections (Emerging Infections; Vaccine Preventable Diseases; Sexually Transmitted Diseases, HIV, and Tuberculosis; and Cross-Cutting Epidemiology [includes Refugee Health]) too. The Primary EISO Supervisor (Dr. Kirk Smith) leads FWVZD. Dr. Richard Danila, Secondary Supervisor, is Emerging Infections Unit Chief and Deputy State Epidemiologist. Dr. Ruth Lynfield, another Secondary Supervisor, is State Epidemiologist. Dr. Smith was the EISO in Minnesota during 1996-1998 and has been Primary Supervisor for EISOs

since 1999. Our Career Epidemiology Field Officer, Stacy Holzbauer (EIS 2006), also mentors EISOs.

The working environment at MDH is relaxed and fun, but the atmosphere is academic and the training top-notch. Three MDH EISOs have won the Langmuir Prize for Best Manuscript (1991, 1996, 2009). Six of our last 10 EISOs have been Mackel Award finalists, with one winner in 2013. Our EISO won the Best Poster Award in 2007. These awards reflect the diverse and meaningful opportunities we give to our EISOs, and the high-quality mentoring and training we provide.

Proposed Initial Projects: The incoming EISO can select from numerous initial projects, including (but not limited to): evaluate antimicrobial treatment practices for acute infectious gastroenteritis; develop a clinical algorithm for the management of acute infectious diarrhea; conduct enhanced surveillance for arboviruses (Powassan, Jamestown Canyon, and Zika viruses); investigate community-associated *Clostridium difficile* infection (molecular data, antidepressants as a risk factor, physician testing and prescribing practices); analyze 16 years of *Neisseria meningitidis* molecular subtype data; examine recurrent multiple infections including *Streptococcus pneumoniae*, Group A streptococcus, and Group B streptococcus; elucidate the epidemiology of invasive *Haemophilus influenzae* type A; investigate the molecular epidemiology of and risk factors for carbapenem-resistant Enterobacteriaceae; conduct a comparative temporal analysis of data from the Unexplained Death and Critical Illness (UNEX), Severe Acute Respiratory Illness, and Influenza Incidence Surveillance projects; and, implement and evaluate antibiotic stewardship protocols in a variety of settings/populations. A variety of acute investigation opportunities and topics for longer-term studies invariably arise early in the EISO's tenure.

Proposed Surveillance Projects: When an EISO arrives in Minnesota, their initial days are spent talking to key staff in all of the different disease areas in IDEPC, and becoming familiar (through reading and discussions with staff) with current surveillance issues of most interest. Through this process, EISOs identify which diseases/surveillance issues are of most interest to them, and the Primary Supervisor helps the EISO select a surveillance evaluation topic that is appropriate and of value to MDH. Surveillance evaluations in the past have included design of entirely new surveillance systems as well as traditional evaluations of existing systems. One initial suggestion is to evaluate our UNEX system.

Range of Opportunities: The EIS officer is encouraged to work on a wide range of projects predominantly involving infectious disease epidemiology (see EISOs' publications). Opportunities to investigate outbreaks frequently arise. MDH is one of 10 CDC-supported Emerging Infection Program sites. The combined MDH epidemiologic and laboratory expertise available provides for an outstanding EIS experience. If a CDC-sponsored opportunity arises, a multi-week international assignment will be supported.

Position Strengths: A dynamic work environment and academic atmosphere; supervisors and staff with extensive experience in epidemiologic investigations; state-of-the art laboratory support; a strong publication history; and, a wide variety of investigative opportunities.

Special Skills Useful for this Position: We don't have any required skills; we mainly would like somebody who is passionate about infectious disease epidemiology, works well as part of a team, and is a willing learner. Clinical experience is useful, but not mandatory. Good scientific writing skills coming in are nice, but if the EISO does not possess them coming in, he/she will possess them coming out!

Available Data: Please see "Proposed Initial Projects;" data exist for some of these. For example, we have a year's worth of data on antimicrobial treatment of gastroenteritis caused by reportable enteric bacteria.

Recent Publications:

Reptile-associated salmonellosis in Minnesota, 1996-2011. *Zoonoses Pub Hlth* 2015;62:199-208.

Two concurrent enteric disease outbreaks among men who have sex with men, Minneapolis-St. Paul area. *Clin Inf Dis* 2014;59:987-9.

An outbreak of measles in an undervaccinated community. *Pediatrics* 2014;134:e220-8.

Investigation of inhalation anthrax case, United States. *Emerg Infect Dis* 2014;20:280-2.

Outbreak of *Trichinella spiralis* infections associated with consumption of wild boar hunted at a game farm in Iowa. *Clin Infect Dis* 2014;59:1750-6.

Domestic Travel: 5% **International Travel:** 0%

Available Support: MDH has a strong supervisory core. IDEPC has numerous additional epidemiologists who can and gladly do work with the EISO and help them with day-to-day administrative or other questions, with navigating

through investigations, and with data management and analysis issues. A clerical support staff person is assigned to assist the EISO. The MDH Public Health Laboratory applies state-of-the art testing technology and readily supports epidemiologic investigations.

Current/Recent EIS Officer: Pam Talley, MD, MPH, (EIS 2014), Medical Epidemiologist, pam.talley@state.mn.us

Officer Projects: Household rodent infestation causing LCMV meningoencephalitis; Multistate case series of parotitis caused by influenza A and other viruses; Analysis of clinical trial data on two year serologic response to influenza vaccines in children; Several foodborne outbreak investigations; Ebola prevention in Nigeria. *Shigella sonnei* with decreased susceptibility to azithromycin in MSM.

Officer Recent Publications: Talley (EIS 2016). Invasive *Pasteurella multocida* Infections - Report of five cases at a Minnesota hospital, 2014. *Zoonoses Pub Hlth* 2016;in press.

Talley et al. Lymphocytic choriomeningoencephalitis from a household rodent infection — Minnesota, 2015. *MMWR* 2016;in press.

Bowen, Eikmeier, Talley, et al. Outbreaks of *Shigella sonnei* Infection with Decreased Susceptibility to Azithromycin Among Men Who Have Sex with Men — Chicago and Metropolitan Minneapolis-St. Paul, 2014. *MMWR* 2015;64;597–9.

Choi (EIS 2012) et al. Live animal markets in Minnesota: A potential source for emergence of novel influenza A viruses and interspecies transmission. *Clin Inf Dis* 2015;61:1355-62. Mackel Award.

Choi et al. Variant influenza associated with live animal markets, Minnesota. *Zoonoses Pub Hlth* 2014;62:326-30.

Choi et al. Multistate outbreak of listeriosis linked to soft-ripened cheese – United States, 2013. *MMWR* 2014;63:294-5.

Kemble (EIS 2010) et al. Fatal *Naegleria fowleri* infection acquired in Minnesota: Possible expanded range of a deadly thermophilic organism. *Clin Infect Dis* 2012;54:805-9.

Holzbauer (EIS 2006) et al. Epidemiologic investigation of immune-mediated polyradiculoneuropathy among abattoir workers exposed to porcine brain. *PLoS One* 2010;5:1-10. Langmuir Award.

Consultant: Stacy Holzbauer, DVM, MPH, (EIS 2006), Career Epidemiology Field Officer, stacy.holzbauer@state.mn.us

Size of Community: Minneapolis-St. Paul metropolitan area, 2.7 million; State, 5.4 million

University Affiliation: Extensive collaborations with the University of Minnesota Medical School, School of Public Health, and College of Veterinary Medicine

Living Environment: The Twin Cities offers high quality urban and suburban living environments, and consistently ranks among the most livable metropolitan areas in the U.S.

Cultural and Recreational Assets: The Twin Cities area offers many cultural and recreational opportunities including: excellent theater, orchestra, and other art venues; all four major professional sports; the largest shopping-entertainment complex in the U.S.; and, numerous parks and trails for biking and walking. Outside the Twin Cities, Minnesota offers its “10,000 Lakes” and forests for fishing, boating, hiking, camping, biking, skiing, and other outdoor activities.

Opportunity for Employment: There are 22 hospitals in the Twin Cities area, more than 20 colleges/universities, several medical corporate headquarters, and numerous other professional opportunities.

New Jersey

DSEPD/EWB-NJ-2016-01

Agency Name: New Jersey Department of Health

Division/Branch/Team/Section: Division of Epidemiology, Environmental and Occupational Health

Physical Address: NJ Department of Health 135 E. State Street Trenton, New Jersey 08625

Primary Supervisor: Christina Tan, MD, MPH, (EIS 2000), State Epidemiologist/Assistant Commissioner,

christina.tan@doh.nj.gov

Secondary Supervisor: Barbara Montana, MD, MPH, Medical Director, barbara.montana@doh.nj.gov

Background: Since 2000, the Division of Epidemiology, Environmental and Occupational Health (EEOH) at the New Jersey Department of Health has hosted eight EISOs who have worked on a range of projects spanning communicable disease, environmental/occupational health, injury, and chronic disease. This division includes the Communicable Disease Service; Consumer, Environmental and Occupational Health Services; and Cancer Epidemiology Services. Additionally, EEOH has a separate informatics unit whose staff provides extensive support for EEOH data applications (e.g., communicable disease reporting system, SEER cancer registry, immunization registry) and has broad knowledge on informatics issues (e.g., Meaningful Use, electronic laboratory reporting). Finally, EEOH has close relationships with other departmental areas (e.g., maternal/child health services; public health preparedness programs; vital statistics) which would provide opportunities for broadening an EISO's experiences.

Proposed Initial Projects: Analysis of hepatitis A post-exposure prophylaxis efforts; analysis of communicable disease reporting associations with syndromic surveillance data; assessment of validity of hospital-reported CRE prevalence and opportunity to work towards an effective state wide reporting system; analysis of associations between bladder cancer and water contaminants; analysis of temporal trends in respiratory illness associated with power plant emissions; analysis of birth defects registry data (e.g., microcephaly in Zika, autism, birth defects, special needs, neural tube defects in context of dietary changes among specific population groups).

Proposed Surveillance Projects: Analysis of existing reportable communicable disease surveillance systems (e.g., influenza, pertussis, human prion disease, vectorborne and food-related diseases, legionellosis); analysis of West Nile virus surveillance

Range of Opportunities: EISO will have opportunities to participate in public health investigations, policy development and program implementation. Collaboration with local health departments and health care partners is integral to these activities (e.g., implementing statewide bioterrorism/emerging infection plans; developing/evaluating surveillance systems; participating in outbreak investigations). NJ offers an excellent mix of long-term analytical projects and short-term public health investigations.

Position Strengths: Supervisors are always available for support, will assist in prioritizing CALs, and have extensive experience with state-based EISOs and CDC programs and can guide EISO in meeting NJ and CDC expectations. Flexibility for EISO to pursue interests/projects related to career goals is highly supported. EISO will have opportunities for cross-jurisdictional collaborations with neighboring EISOs. Finally, NJ is a hub for public health leadership, as host of the 2007 CSTE Conference, 2016 Northeast Regional EIS Conference, and 2015 Northeast Epidemiology Conference.

Special Skills Useful for this Position: Flexibility for statewide travel

Available Data: Reportable communicable disease data; immunization and cancer registries' data

Recent Publications: Taylor L, Greeley R, Dinitz-Sklar J, Mazur N, Swanson J, Wolicki J, Perz J, Tan C, Montana B. Injection safety and vaccine administration errors at an employee influenza vaccination clinic — New Jersey, 2015. *MMWR Morb Mortal Wkly Rep.* 2015;64(49):1363-4.

Domestic Travel: 10% **International Travel:** 10%

Available Support: EEOH staff have expertise in communicable diseases, occupational/environmental health, and cancer epidemiology. EEOH provides secretarial and computer support (laser/plotter printing, secure network storage, current generation computers, high-speed Internet, GIS capabilities, analytic software, Android). Also, EEOH staff can provide high-caliber statistical and informatics support.

Current/Recent EIS Officer: Prathit Kulkarni, MD, (EIS 2014), EISO, prathit.kulkarni@doh.nj.gov

Current/Recent EIS Officer: Alice Shumate, PhD, (EIS 2012), Epidemiologist, wii5@cdc.gov

Current/Recent EIS Officer: Andria Apostolou, PhD, MPH, (EIS 2009), Infectious Dis. Surveillance Coordinator, andria.apostolou@gmail.com

Current/Recent EIS Officer: Adam Langer, DVM, MPH, (EIS 2006), Senior Quarantine Veterinary Medical Officer Lead, ak17@cdc.gov

Current/Recent EIS Officer: Mary Glenshaw, PhD, (EIS 2006), Epidemiologist, fev5@cdc.gov

Current/Recent EIS Officer: Esther Tan, MBBS, MPH, (EIS 2004), Medical Officer, tan2@un.org

Current/Recent EIS Officer: Corey Robertson, MD, MPH, (EIS 2002), Director, Corey.Robertson@sanofipasteur.com

Current/Recent EIS Officer: Christina Tan, MD, MPH, (EIS 2000), State Epidemiologist/Assistant Commissioner, christina.tan@doh.nj.gov

Officer Projects: Surveillance/preparedness for Ebola in Côte d'Ivoire

Preparedness activities/clinical consultation for Ebola

Investigation into methyl bromide release at condominium in U.S. Virgin Islands

Disaster-related mortality surveillance and description of evacuations after Hurricane Sandy

Transmission of hepatitis C virus in dialysis facilities

University meningitis B vaccination campaign

Officer Recent Publications: Kulkarni PA, Duncan MA et al. Severe illness from methyl bromide exposure at a condominium resort — U.S. Virgin Islands, March 2015. *MMWR Morb Mortal Wkly Rep.* 2015;64(28):763-6.

Shumate AM, Yard EE, Casey-Lockyer M, Apostolou A, Chan M, Tan C, Noe RS, Wolkin AF. Effectiveness of using cellular phones to transmit real-time shelter morbidity surveillance data after Hurricane Sandy, New Jersey, October to November, 2012. *Disaster Med Public Health Prep.* 2015 Dec 18:1-4.

McNamara LA, Shumate AM et al. First use of a serogroup B meningococcal vaccine in the US in response to a university outbreak. *Pediatrics.* 2015 May;135(5):798-804.

Wilken JA, Graziano L, Vaouli E, Markiewicz K, Helverson R, Brinker K, Shumate AM, Duncan MA. Exposures and symptoms among workers after an offsite train derailment and vinyl chloride release. *Am J Disaster Med.* 2015;10(2):153-65.

Brinker K, Lumia M, Markiewicz KV, Duncan MA, Dowell C, Rey A, Wilken J, Shumate A, Taylor J, Funk R. Assessment of emergency responders after a vinyl chloride release from a train derailment - New Jersey, 2012. *MMWR Morb Mortal Wkly Rep.* 2015 Jan 9;63(53):1233-7.

Size of Community: 8.9 million (U.S. Census 2014)

University Affiliation: Rutgers, The State University of NJ (including NJ Medical School; School of Public Health)

Living Environment: The work location is in historic Trenton, NJ's capital, which boasts diverse neighborhoods and is convenient to major train stations and the NJ Turnpike. Suburban Trenton areas (e.g., Princeton, Hamilton) have top-notch schools, high-tech companies, and numerous shopping opportunities. Many NJDOH staff also live in nearby Philadelphia.

Cultural and Recreational Assets: NJ, an ethnically-diverse state, hosts numerous cultural events and has excellent areas for outdoor activities. New York City, Philadelphia, and the Jersey Shore are about an hour away by car or train. Princeton University, a world-class academic institution, is nearby and hosts events open to the public.

Opportunity for Employment: NJ and surrounding New York City and Philadelphia have many large employers (e.g., government; pharmaceutical, biotechnology, information technology companies; universities).

New York

DSEPD/EWB-NY-2016-01

Agency Name: New York Department of Health

Division/Branch/Team/Section: Division of Epidemiology

Physical Address: Division of Epidemiology Room 503, Corning Tower Empire State Plaza Albany, New York 12237

Primary Supervisor: Debra Blog, MD, MPH, Director, State Epidemiologist, debra.blog@health.ny.gov

Secondary Supervisor: Alexandra Newman, DVM, MPH, (EIS 2004), State Veterinarian, alexandra.newman@health.ny.gov

Secondary Supervisor: Emily Lutterloh, MD, MPH, (EIS 2008), emily.lutterloh@health.ny.gov

Background: NYSDOH is the public health agency for New York State, with a population of 19 million. In addition, the 57 counties and New York City each have their own health department. NYSDOH has primary responsibility for the

11 million people who live outside of NYC. The Division of Epidemiology oversees disease control and prevention activities for all communicable diseases except for STDs and HIV. The Division has successfully housed an EIS Officer for several decades. The NYSDOH and the EIS Officer encounter a broad range of diseases, conditions and situations. In 2015 NYS received approximately 55,000 reports of communicable diseases. In addition, our 57 counties range from urban to suburban to rural, adding to the diversity of the experience here. The NYSDOH has recently initiated a large scale task force to address antimicrobial resistance, an exciting and important area of ongoing activity. NYS is also the first state to require registration and testing of all cooling towers in the state for legionella. In addition, NYSDOH has been designated as the sixth Center of Excellence in the nation for the prevention and detection of food borne illness, and is working with the 11 Northeast states on improving our response to food related outbreaks.

Proposed Initial Projects: Various analytic projects related to hospital-acquired infections are available using pre-existing National Healthcare Safety Network data for New York State hospitals. Possibilities include analyses of surgical site infections, Clostridium difficile infection, carbapenem-resistant Enterobacteriaceae (large burden in New York), central line-associated bloodstream infections, or catheter-associated urinary tract infections.

Assist with Zika virus disease surveillance

Investigate climate change and communicable disease

Proposed Surveillance Projects: Analysis of PFGE-pattern-based GI illness cluster detection methods

Legionellosis surveillance

Use of whole genome sequencing in bacterial surveillance and outbreak investigation

Surveillance for anti-microbial resistant organism(s)

Range of Opportunities: The opportunity to work on outbreaks of all types exists. The Division includes the Bureaus of TB Control, Immunization, Health Care Associated Infections, and Communicable Disease Control, and a Statistical Unit. EIS officers have also worked in the AIDS, STD Control, and Environmental Health. NYS is ethnically, socially and geographically diverse. Our communities range from urban to rural.

Position Strengths: NYSDOH is a very busy public health agency with many opportunities for applied epidemiology experience. Staff are supportive, experienced, approachable and dedicated. The public health laboratory here is one of the best in the country and is at the forefront of the development of whole genome sequencing use. The Department is one of ten states funded to do enhanced surveillance and special studies through the Emerging Infections Program. Should a CDC-sponsored international outbreak occur, EISO participation would be supported.

Special Skills Useful for this Position: : EIS Officers should come with a willingness to work and learn, an interest in communicable disease and applied epidemiology, and ability to take initiative. Interest in working with a diverse population and geography is important. Ability to work well with a team of professionals is desirable. The ability and flexibility to travel is an important part of field epidemiology

Available Data: NYSDOH is a leader in electronic lab and surveillance systems. As a result, there are robust data on disease surveillance, lab reporting, outbreaks, syndromic surveillance and more.

Recent Publications: Hazamy PA, Lutterloh E, et al. Effect of 2013 National Healthcare Safety Network definition changes on central line bloodstream infection rates: audit results from the New York State Department of Health. Am J Infect Control. 2015;43:280–2.

Yousey-Hinds K, Newman A, Eidson M, et al. Rabid foxes, rabid raccoons, and the odds of a human bite exposure, New York State, 1999–2007. Journal of Wildlife Diseases. 2011;47:228-32.

Barsky, et al. Mumps Outbreak in Orthodox Jewish Communities in the United States. New England Journal of Medicine. 2012; 367 (18);1704.

Domestic Travel: 15% **International Travel:** 0%

Available Support: The Division has many doctoral-level staff (MD, PhD/DrPH, DVM, 5 EIS alumni) and numerous masters-level staff. The Department has an outstanding public health laboratory, strong computer support, and easily accessible statistical consultation.

Current/Recent EIS Officer: Misha Robyn, DVM, MPH, (EIS 2014), misha.robyn@health.ny.gov

Current/Recent EIS Officer: Nina Ahmad, MD, (EIS 2012), nina.ahmad@health.ny.gov

Current/Recent EIS Officer: Angela Maxted, PhD, DVM, (EIS 2010), angela.maxted@health.ny.gov

Current/Recent EIS Officer: Jenifer Jqeger, MA, MD, (EIS 2007)

Current/Recent EIS Officer: Joshua Schaffzin, MD, PhD, (EIS 2005)

Current/Recent EIS Officer: Fatima Coronado, MPH, MD, (EIS 2003)

Officer Projects: Led investigations on E.coli at camp, rural hepatitis A outbreak, Q fever via injection of sheep fetal cells, contaminated simulation IV fluids. Participated in investigations of measles at college, congenital rubella and

suspect Ebola cases, an Epi-Aid on sepsis in NY. Traveled to West Africa, Ebola response.

Officer Recent Publications: Robyn MP, Newman AP, Amato M, Walawander M, Kothe C, Nerone J, et al. Q fever outbreak among travelers to Germany who received live cell therapy - United States and Canada, 2014. *MMWR Morb Mortal Wkly Rep.* 2015; 64:1071-1073; co-published in *Can Commun Dis Rep.* 2015; 41:223-226.

Robyn MP, Hunter JC, Burns A, Newman AP, White J, Clement E, et al. Notes from the field: Adverse events associated with administration of simulation intravenous fluids to patients - United States, 2014. *Morb Mortal Wkly Rep.* 2015;64:226-227.

Purfield A, Ahmad N (co-first authors), Park B, Kuhles D, St. George K, Ginocchio C, Harris JR. Epidemiology of Commercial Rhesus Monkey Kidney (RhMK) cells contaminated with *Coccidioides posadasii*. *J Clin Microbiol.* 2013 Jun;51(6):2005.

Lankau EW, Cohen NJ, Jentes ES, Adams LE, Bell TR, Blanton JD, Buttke D, Galland GG, Maxted AM, Tack DM, Waterman SH, Rupprecht CE, Marano N. Prevention and Control of Rabies in an Age of Global Travel: A Review of Travel- and Trade-Associated Rabies Events - United States, 1986-2012. *Zoonoses Public Health.* 2013 Jul 22. doi: 10.1111/zph.12071.

Size of Community: Population of Albany County is about 259,300 and the cities and surrounding counties approaches one million.

University Affiliation: The Department has affiliation with the SUNY School of Public Health. Many staff are faculty there. Masters and doctoral students do internships frequently in the Division.

Living Environment: Albany is a moderate-sized urban city with beautiful suburban and rural surroundings. The area boasts strong public and private schools. Albany is the state capital and is the center of state government.

Cultural and Recreational Assets: Albany is large enough to offer significant cultural and entertainment activities, yet small enough to be friendly and easy to live in. There is also an abundance of outdoors activities and the Adirondack and Catskill Mountains are close by. Albany is within 3 hours drive of Boston, New York City and Montreal

Opportunity for Employment : Major employers include area hospitals, General Electric, state and local government, universities, and numerous other businesses, including a growing high tech sector.

DSEPD/EWB-NY-2016-02

Agency Name: New York City Department of Health and Mental Hygiene

Division/Branch/Team/Section: Division of Epidemiology

Physical Address: 42-09 28th Street Queens, New York 11101

Primary Supervisor: Hannah Gould, PhD, MS, MBA, (EIS 2005), Assistant Commissioner, hgould@health.nyc.gov

Secondary Supervisor: Charon Gwynn, PhD, (EIS 2000), Deputy Commissioner, cgwynn@health.nyc.gov

Secondary Supervisor: Hannah Jordan, MD, MPH, (EIS 2005), Deputy Medical Director, hjordan1@health.nyc.gov

Background: The New York City Department of Health and Mental Hygiene (DOHMH) is one of the largest and oldest public health agencies in the world. DOHMH strives to protect and promote the health of an ethnically and socio-economically diverse population of >8 million. DOHMH is at the forefront of many ground-breaking public health initiatives, including prohibiting smoking in bars, banning trans fats and requiring calorie labeling and salt warnings in restaurants. A priority for DOHMH is to ensure that conditions for good health – available, sustainable, high-quality health care services and efficient, effective systems – flourish in each and every NYC neighborhood.

The EISO will work within the Division of Epidemiology, which collects, analyzes and disseminates information about New Yorkers' health. The division's cross-cutting and collaborative work helps to inform public health program development and policy decision making. The division's broad goals include strengthening and expanding DOHMH's surveillance efforts, conducting innovative research, making data broadly accessible, and improving public health knowledge and skills.

Multiple citywide health surveys are run by the division, including population-based telephone and examination

surveys. Additionally, the division processes and analyzes vital events in NYC (>700,000 births and deaths/year). Researchers also conduct special studies to evaluate the impact of initiatives, such as supportive housing, on health, and track the long-term mental and physical health effects of the 9/11 disaster in a cohort of over 71,000 people.

Proposed Initial Projects: Multiple projects are available depending on the officer's interests and analytic background, including:

- Examining mortality trends by neighborhood and cause (e.g. asthma-, alcohol-, or work-related deaths). Mortality data can also be linked to hospitalization data to assess healthcare utilization patterns.
- Describing impact of activity patterns on health outcomes (eg obesity, infectious disease spread), using data from a unique population survey that coupled self-reported health conditions and behaviors with GPS data.
- Examining factors associated with poor control of asthma developing after exposure to the September 11, 2001 World Trade Center terrorist attacks.
- Assessing dental health and access to care by income, immigration status as well as other possible covariates using the 2013-14 NYC Health and Nutrition Examination Survey.
- Estimating mortality attributable to sugary-drink consumption using vital event data.
- Understanding factors associated with elective and/or no indicated risk C-sections using data from birth certificates.
- Describing prevalence and trends of smoking in buildings using data from a population-based telephone survey of adults.
- Examining demographic, clinical, and behavioral characteristics of individuals who have been frequently incarcerated in NYC jails.
- Investigating an outbreak among genotypically-clustered tuberculosis (TB) patients to establish potential routes of transmission.
- Evaluating the relationship between co-morbidities (eg HIV, diabetes, hepatitis), on TB treatment and outcomes.

Proposed Surveillance Projects: • Assess use of birth certificate data to quantify and describe abortions in NYC.

- Evaluate use of an emergency department-based syndromic surveillance system to detect children with mental health disorders.
- Evaluate TB registry as a tool to identify frequency and reason for delayed reporting by health care facilities.

Range of Opportunities: Wide range of opportunities in infectious and chronic disease depending on officer's interests and skills. All officers will analyze surveillance data, investigate at least one outbreak, write manuscripts, collaborate across DOHMH and with state and federal partners.

Position Strengths: The Division of Epidemiology maintains several large data sets and has staff with extensive analytic expertise. As part of a large urban health department the Division offers projects across a range of public health fields, working with subject-matter experts. EISOs will have the opportunity to learn and implement various study designs and analytic techniques.

Special Skills Useful for this Position: Ability to collaborate in multi-disciplinary teams, coordinate projects and analyses with large groups of diverse stakeholders.

Available Data: Vital Statistics (births, deaths, pregnancy terminations); Community Health Survey (annual telephone survey of 9,000 adults); Youth Risk Behavior Survey (bi-annual health behavior survey of public high school students); WTC Health Registry; special studies e.g. 2010/11 Physical Activity and Transit Survey and NYC HANES 2013-14; additional data available from other divisions.

Recent Publications: Brown, S et al. Evacuation during Hurricane Sandy Data from a Rapid Community Assessment. PLoS Currents Disasters 2016.

Lim, SW et al. 2015. Defining ethnic enclave and its associations with self-reported health outcomes among Asian-American adults in New York City. J Urban Health 2015.

Belkin, G, et al. A Roadmap for Better Mental Health in New York City. Lancet 2015.

Krieger N et al., Monitoring of health inequities and the Index of Concentration at the Extremes: Jointly assessing privilege and deprivation. AJPH 2015.

Domestic Travel: 0% **International Travel:** 0%

Available Support: Large, multidisciplinary staff with >40 EIS alumni; seasoned field epidemiologists to assist with investigations; computer, clerical, GIS, statistical support; city/ state public health laboratories.

Current/Recent EIS Officer: Christopher Lee, MD, MSc, MPH, (EIS 2015)

Current/Recent EIS Officer: Kari Yacisin, MD, MSc, (EIS 2013)

Current/Recent EIS Officer: Amita Toprani, MD, MPH, (EIS 2011)

Current/Recent EIS Officer: Teeb Al-Samarrai, MD, MS, (EIS 2009)

Current/Recent EIS Officer: Hemanth Nair, PhD, MPH, (EIS 2007)

Current/Recent EIS Officer: Trang Nguyen, PhD, (EIS 2005)

Officer Projects: Surveillance of microcephaly in NYC; impact of supportive housing intervention on HIV incidence; neighborhood- versus individual-level poverty and health outcomes; epidemiology of tuberculosis in Chinese-born New Yorkers; changes in bicycling practices over time; healthcare worker contacts of an NYC Ebola case; Mycobacterium infections associated with fish markets

Officer Recent Publications: Yacisin K et al. Ebola virus disease in a humanitarian aid worker--NYC, October 2014. MMWR 2015.

Toprani A et al. Repeat abortions in NYC, 2010. J Urban Health 2015.

Toprani A et al. Evaluating NYC's abortion reporting system: insights for public health data collection systems. J Public Health Management Practice 2014.

Al-Samarrai T et al. Impact of a hospital-level intervention to reduce heart disease over-reporting on other leading causes of death. Preventing Chronic Disease 2013.

Al-Samarrai T et al. Evaluation of a pilot respiratory virus surveillance system linking electronic health record and diagnostic data. J Public Health Management Practic. 2013.

Al-Samarrai T et al. Clinician acceptance of computerized alerts for public health surveillance. J Health Medical Informatics 2012.

Al-Samarrai T (lead author). HIV transmitted from a living organ donor--NYC, 2009. MMWR 2011.

Nair HP et al. Evaluation of HIV incidence surveillance in NYC. Public Health Rep 2011.

Nair HP (lead author). Methicillin-resistant Staphylococcus aureus among players on a high school football team--New York City, 2007. MMWR 2009.

Nguyen TQ et al. Population prevalence of reported and unreported HIV and related behaviors among the household adult population NYC. AIDS 2008.

Size of Community: 8.1 million

University Affiliation: Columbia University, City University of New York, New York University

Living Environment: One of the world's greatest cities, NYC is an exciting place to live and work, full of challenges and surprises.

Cultural and Recreational Assets: NYC offers remarkable ethnic diversity, incredible food, and a wide array of arts and other cultural events.

Opportunity for Employment: Excellent

Oregon

DSEPD/EWB-OR-2016-01

Agency Name: Oregon Health Authority

Division/Branch/Team/Section: Public Health Division/Center for Public Health Practice/Acute & Communicable Disease Prevention

Physical Address: 800 NE Oregon St., Suite 772 Portland, Oregon 97232

Primary Supervisor: Paul Cieslak, MD, (EIS 1992), Medical Director, Communicable Diseases & Immunizations, paul.r.cieslak@state.or.us

Secondary Supervisor: Richard Leman, MD, (EIS 2000), Chief Medical Officer, Health Security Preparedness & Response Program, richard.f.leman@state.or.us

Secondary Supervisor: Kate Ellingson, MD, PhD, (EIS 2006), Healthcare-Acquired Infections Reporting

Background: This position is housed within the Oregon Public Health Division's Acute & Communicable Disease Prevention (ACDP) section, which is charged with surveillance, identification of risk factors, and prevention and control of communicable diseases in Oregon. It features a robust communicable disease epidemiology capacity, Emerging Infections Program, Preparedness Epidemiology team and Integrated Food Safety Center of Excellence. We have had EIS officers continuously since 1987 and employ 4 former EIS officers. The officer will spend most of his or her time in ACDP, receiving calls and reports from Oregon's 34 local health departments, physicians, and the public, and responding to communicable disease cases and outbreaks in collaboration with a team of epidemiologists, research analysts, public health physicians, and state public health veterinarian. The officer also has opportunities for epidemiologic work throughout the Oregon Public Health Division, including in response to public health emergencies, in which ACDP typically plays a large role. Oregon's track record in healthcare-acquired infection epidemiology, investigation of foodborne disease outbreaks, and immunization program innovations are nationally recognized.

Proposed Initial Projects: • Surveillance and epidemiology of Clostridium difficile-associated disease (CDAD) in Oregon

- Validation of National Healthcare Safety Network (NHSN)-based reporting of catheter-associated urinary tract infections (CAUTI) or CDAD, including assessment of factors associated with under- or over-reporting
- Evaluation of Oregon's unique inter-facility transfer communication rule for patients with diseases requiring isolation (e.g., multidrug-resistant organisms): methods of transfer communication, acceptability, utility for receiving facilities
- Eligibility for hepatitis C treatment among persons in care for HIV infection
- Analysis of nosocomial influenza in an era of increasing vaccination of healthcare personnel, including risk factors for acquisition
- Screening criteria for chlamydia among men
- Economic impact of pertussis in Oregon
- Economic impact of skin and soft tissue infections among injection drug users in Oregon

Proposed Surveillance Projects: • Urine cadmium reporting (implemented 2/18/2016 in response to newly identified high concentrations of heavy metals in Portland)

- Clostridium difficile-associated disease, including assessment of work required, acceptability, and usefulness of data on the part of infection preventionists in reporting facilities.
- Drug-Resistant Organism Prevention and Coordinated Regional Epidemiology (DROP-CRE) Network for rapid detection and containment of multidrug-resistant organisms
- Non-respiratory infection by nontuberculous mycobacteria, made reportable in Oregon in 2014

Range of Opportunities: Oregon is one of CDC's ten Emerging Infections Program sites conducting special surveillance and epidemiologic studies. Oregon is a national leader in foodborne outbreak investigations and healthcare associated infections. Extensive collaboration with Oregon's local public health officials, colleagues in neighboring states, and federal officials. Opportunity for press contact.

Position Strengths: We provide a broad experience, equipping the EIS Officer to address the gamut of communicable diseases. The Officer investigates disease outbreaks, conducts long-term special studies, and responds to day-to-day public health urgencies. Publication encouraged. Excellent soup club; bowling team needs help. Daily lunchtime bridge game. Dragon-boat team.

Special Skills Useful for this Position: • Clinical experience a plus when dealing with physicians and local public health officials.

- Eagerness to work up outbreaks, including field work, desired.
- Skill, or willingness to learn, database design; we believe that getting one's data together is a necessary and overlooked epidemiologic skill.

- Ability to communicate with a variety of people at all levels of government and with the general public.
- Ambition. Ours is a busy shop with plenteous and varied opportunities for those eager to seize them.

Available Data: • Oregon reportable communicable disease data, readily accessible back to 1989

- Oregon Healthcare-associated infections data (NHSN)
- Oregon Immunization Registry, birth and death certificates, hospital discharges, and "All-Payer-All-Claims" databases

Recent Publications: • Abdullah N, Laing RS, Hariri S, et al. Use of claims data to estimate annual cervical cancer screening percentages in Portland metropolitan area. *Cancer Epidemiol* 2016;41:106–12.

• Liko J, Guzman-Cottrill JA, Cieslak PR. Subacute sclerosing panencephalitis death — Oregon, 2015. *MMWR* 2016;65:10–1.

• Liko J, Robison SG, Cieslak PR. Pertussis vaccine performance in an epidemic year — Oregon, 2012. *Clin Infect Dis* 2014;59:261–3.

• Fiala SC, Cieslak PR, DeBess EE, et al. Physician attitudes regarding school-located vaccination clinics. *J Sch Health*. 2013;83:299–305.

Domestic Travel: 10% **International Travel:** 0%

Available Support: ACDP houses 9 epidemiologists, 6 research analysts, 4 public health physicians, a public health veterinarian, 2 public health nurses, 3 informatics personnel, a laboratory surveillance coordinator, 2 public health educators, and support staff of 5. The Oregon State Public Health Laboratory performs culture, speciation, serotyping, and molecular typing for a variety of bacterial pathogens, along with PCR identification and subtyping of respiratory and intestinal pathogens and norovirus sequencing.

Current/Recent EIS Officer: Emily Fisher, MD, (EIS 2014), emily.a.fisher@state.or.us

Current/Recent EIS Officer: Jonas Hines, MD, (EIS 2015), jonas.hines@state.or.us

Current/Recent EIS Officer: Malini DeSilva, MD, MPH, (EIS 2013), Primary Care Physician/Researcher, mailinibdesilva@gmail.com

Current/Recent EIS Officer: Genevieve Buser, MD, MSPH, (EIS 2011), Public Health Physician, Healthcare-Acquired Infections, genevieve.buser@gmail.com

Officer Projects: Assessment of exposures to Arsenic, Cadmium, Chromium, and Nickel in Portland.

Outbreak of serogroup B meningococcal disease at University of Oregon.

Differential rates of hospital- and community-associated *Clostridium difficile* disease.

Assessment of case ascertainment for group A streptococcal necrotizing fasciitis.

Development and analysis of Oregon response to Ebola & Zika.

Officer Recent Publications: Levri KM, et al. Risk factors for pertussis among Hispanic infants -- Metropolitan Portland, Oregon, 2010–2012. *Pediatr Infect Dis J* 2016 [in press].

DeSilva M, et al. Communitywide cryptosporidiosis outbreak associated with a surface water-supplied municipal water system - Baker City, Oregon, 2013. *Epidemiol Infect* 2016; 144:274–84.

DeSilva M., et al. Notes from the field: fatal yellow fever vaccine-associated viscerotropic disease--Oregon, September 2014. *MMWR* 2015; 64:279–81.

Buser GL, et al. Acute kidney injury associated with smoking synthetic cannabinoid. *Clin Toxicol* 2014; 52:663–73.

Laidler MR, Tourdjman M, Buser GL, et al. *Escherichia coli* O157:H7 infections associated with consumption of locally grown strawberries contaminated by deer. *Clin Infect Dis* 2013; 57:1129–34.

Tourdjman M, et al. Duration of shedding and secondary household transmission of Shiga toxin-producing *Escherichia coli* O26 during an outbreak in a childcare center, Oregon, October–December 2010. *J Pediatr Infect Dis Soc* 2012; 1:329–32.

Oh JY, et al. Statewide validation of hospital-reported central line-associated bloodstream infections: Oregon, 2009. *Infect Control Hosp Epidemiol* 2012; 33:439–45.

Consultant: Ann Thomas, MD, MPH, (EIS 1995), Medical Epidemiologist, ann.thomas@state.or.us

Consultant: Emilio DeBess, DVM, MPVM, State Public Health Veterinarian, emilio.e.debess@state.or.us

Consultant: Sean Schafer, MD, MPH, (EIS 2003), Medical Director, HIV/STD/TB, sean.schafer@state.or.us

Consultant: Katrina Hedberg, MD, MPH, (EIS 1986), State Epidemiologist, katrina.hedberg@state.or.us

Consultant: Suzanne Zane, DVM, MPH, (EIS 1997), Senior MCH Epidemiologist / CDC Assignee to the Oregon Health Authority, suzanne.zane@state.or.us

Size of Community: Portland, 619,360; Portland Metropolitan Statistical Area, 2.4 million; State of Oregon, 4.0 million.

University Affiliation: Public Health staff are adjunct faculty within the School of Public Health at Oregon Health & Science University (OHSU). Collaboration with Oregon State University on Integrated Foodborne Disease Center of Excellence.

Living Environment: Portland is known for its coffee, microbreweries, and bicycle-friendly streets; many employees regularly bike to work. Housing available in many neighborhoods within walking distance of the office. Public transportation, including the "MAX" light rail, is excellent.

Cultural and Recreational Assets: Hiking, camping, fishing, windsurfing, river rafting, skiing and mountain climbing, Oregon's scenic coastline and Willamette Valley vineyards are all within a 90-minute radius of Portland. Several museums, as well as theatre, symphony, and ballet. Home of the International Outbreak Museum.

Opportunity for Employment: Portland is home to several academic centers (OHSU, Portland State University), governmental agencies, hospitals, and industries (Nike, Intel), which offer a variety of employment opportunities.

Utah

DSEPD/EWB-UT-2016-01

Agency Name: Utah Department of Health

Division/Branch/Team/Section: Division of Disease Control and Prevention

Physical Address: 288 North 1460 West, P O Box 142104 Salt Lake City, Utah 84114-2104

Primary Supervisor: Allyn K Nakashima, MD, (EIS 1981), State Epidemiologist, anakashima@utah.gov

Secondary Supervisor: Michael Friedrichs, MS, Lead Epidemiologist, Bureau of Health Promotion, mfriedrichs@utah.gov

Secondary Supervisor: Angela Dunn, MD, MPH, (EIS 2014), Deputy State Epidemiologist, adunn@utah.gov

Secondary Supervisor: Melissa Dimond, MS, Team Lead, Disease Response Evaluation Analysis and Management Team, melissastevens@utah.gov

Secondary Supervisor: Sam LeFevre, MS, Team Lead, Environmental Epidemiology Team, slefevre@utah.gov

Background: The Utah Department of Health (UDOH) is located in Salt Lake City and has the mission to protect the public health of the citizens of Utah through preventing avoidable illness, injury, disability and premature death; assuring access to affordable, quality health care; and promoting healthy lifestyles. The EISO position is located in the Division of Disease Control and Prevention, which includes >20 staff epidemiologists (MPH, PhD and MSc levels) and other important public health disciplines (e.g., statisticians, informaticists, public health program experts, health care educators, public information officers, laboratorians and environmental health experts). The position offers a truly diverse applied public health experience with the possibility of conducting projects in many different areas depending on the interests of the EISO. UDOH has mentored ten EISOs since 1996. Following the EIS program, these officers have pursued careers in applied public health and/or academic public health. The current supervisors for the EIS position have a combined experience of over 75 years in applied public health. EISOs have collaborated on projects with many programs within UDOH (e.g., sexually transmitted diseases and HIV, informatics, maternal child health, chronic disease and health promotion, injuries, laboratory, poison control center and toxicology, public health emergency preparedness, environmental health, and office of the medical examiner) and with outside partners (e.g., the

University of Utah Medical School, three nearby schools of public health, the Utah Poison Control Center, and 13 local health districts, hospitals and clinical care providers).

Proposed Initial Projects: (a) Explore the relationship between social support, mental health, and E-cigarette use among adolescents using the Student Health and Risk Prevention (SHARP) Statewide Survey data, which includes 55,000 respondents. Variables could include parental bonding, family environment, and mental health care access. (b) Evaluate the definition of “in-care” for HIV-positive persons in Utah using multiple of data bases and sources (e.g., e-HARS, vital statistics, all payers claims data base, clinical data bases from major HIV care providers). (c) Explore risk factors for recent increases in suicide (Utah’s rate of suicides has doubled over the past three years and currently ranks 5th in the nation.) (d) Analysis of data from the Behavioral Risk Factor Surveillance System (BRFSS) social context module. (e) Evaluate quality of care for stroke and STEMI using pre-hospital, ED, hospital, and death data. (f) Evaluate environmental and health data linkages for assessing potential public impacts of fracking activities in eastern Utah.

Proposed Surveillance Projects: a) Evaluate the usefulness the National Violent Death Reporting System (NVDRS) to assess prescription drug overdoses. b) Evaluate the usefulness of BRFSS data for multiple programs in the State. c) Evaluate the uses of electronically reported negative test data. (Utah recently implemented a requirement to report negative as well as positive tests for selected communicable diseases, e.g., chlamydia, gonorrhea, hepatitis.) (d) Evaluate the data acquired through the Four Corners States Biomonitoring Consortium (Utah is the lead state for the consortium).

Range of Opportunities: The assignment offers a broad range of applied epidemiology experiences: conducting epidemiologic analyses of surveillance data and other public health data bases; conducting outbreak investigations; preparing oral and written reports and manuscripts for journal publications; providing technical expertise to local health departments, the media, etc.; understanding and applying basic ethical and legal principles pertaining to collection, maintenance and dissemination of public health data; and planning and responding to public health emergencies. Most of our past EISOs have worked on several outbreak investigations in communicable diseases and have conducted in-depth analyses of larger data sets on diverse topics, e.g., prescription opioid use, consumption of sugar-sweetened beverages, relationship of particulate air pollution to asthma, etc.

Position Strengths: Position strengths include a broad range of applied epidemiology experiences at the state and local level; great living and working environment.

Special Skills Useful for this Position: Familiarity with a statistical software package (e.g., SAS, R, STATA, etc) or an interest in learning/developing these skills would be useful; we can provide instruction on these if needed. Good interpersonal skills are essential since the EISO will be working with many partners and representing UDOH in a variety of capacities. Intellectual curiosity about a wide variety of public health topics and enthusiasm to solve interesting problems will be viewed favorably. Demonstrated scientific writing and oral presentation experiences are a plus, but we can assist the EISO to develop these skills.

Available Data: The UDOH has numerous databases that will be accessible to the EISO. The UT-NEDSS, vital statistics databases, BRFSS, all-payers claims data, births defects registry, NVDRS, eHARS, etc. are all available for the EISO to analyze.

Recent Publications:

1. CDC. Authors: Watson J, Meinor L, Carlisle J, Evans M, Fratto E, Mietchen M, King M, Nakashima A. Increasing trends in gonorrhea—Utah, 2009-2013. *Morb Mortal Wkly Rep MMWR* (in clearance).
2. CDC. Authors: Gonzales K, Roeber J, Kanny D, Tran A, Saiki C, Johnson H, Yeoman K, Safranek T, Creppage K, Lepp A, Miller T, Tarkhashvili N, Lynch Km Watson JR, Henderson D, Christenson M, Geiger SD. Alcohol-attributable deaths and years of potential life lost — 11 States, 2006–2010. *Morbidity and Mortality Weekly Report* 2014;63:213-216.

Domestic Travel: 10% **International Travel:** 5%

Available Support: The supervisors and collaborators have expertise in epidemiology, infectious diseases, statistics, health services, survey research, informatics, environmental health, program evaluation, laboratory and geospatial analysis methods.

Current/Recent EIS Officer: Angela Dunn, MD, MPH, (EIS 2014), Deputy State Epidemiologist, Utah Department of Health, adunn@utah.gov

Officer Projects: 1) Access to healthcare analysis using BRFSS data; 2) Hepatitis C outbreak in two hospitals due to drug diversion; 3) Developing population health data sources; 4) Nosocomial transmission of Ebola in Sierra Leone; 5) *Campylobacter jejuni* outbreak due to raw milk; 6) Gonorrhea case-control interview study

Officer Recent Publications: 1. CDC. Authors: Dunn A, Friedrichs M, King M, Nakashima A. Defining access to care and determining factors associated with no access to care among Utah adults, 2013-2014. Submitted to the 2016 EIS Conference and the 2016 Conference of State and Territorial Epidemiologists. [Abstract]

2. Eason J, Dunn A, Larson K, Dimond M, Chesler C, Nakashima A. Drug diversion associated hepatitis C

investigation and response, Utah 2015. Submitted to the 2016, CSTE Annual Conference, Anchorage, AK, June 2016. [Abstract]

3. CDC. Authors: Davis K, Dunn A, Burnett C, McCullough L, Dimond M, Wagner J, Smith L, Carter A, Willardson S, Nakashima A. *Campylobacter jejuni* infections associated with raw milk consumption—Utah 2014. (cleared and submitted to Morb Mortal Wkly Rep MMWR).

4. Dunn AC, Walter TA, Redd J, Sugerma D, McFadden J, Singh T, Jasperse J, Kamara BO, Sesay T, McAuley J, Klimarx PH. Nosocomial transmission of Ebola virus on pediatric and maternity wards: Bombali and Tonkolili, Sierra Leone, 2014. *Am J Infect Control*. 2015 doi:10.1016/j.ajic.2015.09.016.

Consultant: Robert T. Rolfs, MD, MPH, (EIS 1986), Deputy Director, Utah Department of Health, rrolfs@utah.gov

Consultant: Andrew Pavia, MD, (EIS 1986), Director, Infectious Diseases, Primary Children's Hospital, Andy.Pavia@hsc.utah.edu

Consultant: Christy Porucznik, PhD, (EIS 2003), Associate Professor, Family and Preventive Medicine, University of Utah, christy.porucznik@utah.edu

Consultant: William Lanier, DVM, MPH, (EIS 2009), Applied Epidemiologist, William.Lanier@fsis.usda.gov

Consultant: Catherine Staes, BSN, MPH, PhD, (EIS 1998), Assistant Professor, Biomedical Informatics, University of Utah, catherine.staes@hsc.utah.edu

Size of Community: 2.9 million

University Affiliation: We regularly work with various groups at the University of Utah and with public health programs in other Utah institutions (Westminster College, Brigham University, and Utah State University)

Living Environment: Salt Lake City is the state capital and is a medium-sized city located at the base of the Wasatch Mountains. The cost of living and the climate are moderate. There are wonderful national parks near by and access to many outdoor sports, e.g., skiing, hiking, climbing.

Cultural and Recreational Assets: Salt Lake City is very family-oriented. Salt Lake hosted the 2002 Winter Olympics and has continued to be a winter sports center of excellence. There are many arts and cultural events throughout the year including some that are national recognized (i.e., Sundance Film Festival)

Opportunity for Employment: Our former EISOs have had no trouble finding excellent employment opportunities either here or at other locations.

Virginia

DSEPD/EWB-VA-2016-01

Agency Name: Virginia Department of Health

Division/Branch/Team/Section: Office of Epidemiology

Physical Address: 109 Governor Street 6th Floor Richmond, Virginia 23219

Primary Supervisor: Laurie Forlano, DO, MPH, State Epidemiologist, laurie.forlano@vdh.virginia.gov

Secondary Supervisor: Diane Woolard, PhD, MPH, Director, Division of Surveillance and Investigation, diane.woolard@vdh.virginia.gov

Background: The EISO is located in the Office of Epidemiology (OEPI), which conducts disease surveillance, outbreak investigation and control, and emergency preparedness and response activities. Colleagues include epidemiologists with expertise in foodborne and respiratory diseases, healthcare associated infections, syndromic surveillance systems, zoonotic diseases and toxic substance associated illness. Collaborations can occur across programs in the central office (chronic diseases, maternal and child health) and with the 35 health districts and the state public health laboratory. The position will contribute to the overall understanding of the impact of selected health conditions, the populations disproportionately affected, risk factors for the conditions, and recommendations that need to be implemented to improve the health of affected populations.

Proposed Initial Projects: The Officer will analyze available data on typhoid fever in Virginia, including data on trends in disease reports and a description of cases and rates by age, race, sex, and region. The Officer would evaluate locations of travel and the use of vaccine among cases. The assessment would also include what proportion of cases work in high risk occupations and the public health management of cases and contacts, i.e., testing of stools for clearance of the organism, proportion that become chronic carriers, the extent to which carriers are excluded from high

risk occupations. Finally, the project would include an evaluation of surveillance data quality, including a comparison of reports submitted on paper and the data available in the Virginia Electronic Disease Surveillance System

Development of an HIV Outbreak Response Plan as a follow-up to recent HIV outbreak preparedness exercise in a rural part of the state (designed to mirror the HIV outbreak in Scott County, IN).

Proposed Surveillance Projects: As an extension of the above initial typhoid fever project, the Officer will evaluate surveillance for paratyphoid fever in Virginia.

Surveillance evaluation of elevated blood lead level data in children in Virginia--this topic has gained interest of state and local policy makers in Virginia. Descriptive analysis would include descriptions of lead levels by age, race, sex, region and locality when available; understanding and describing the local public health response to elevated blood lead, and informing internal procedures for follow-up in light of a pending regulatory action that will lower the reportable lead level in Virginia.

Range of Opportunities: Includes investigating infectious disease outbreaks, epidemiologic studies, assessments, legislative/policy development, and planning. Work on toxic substances, HIV/STD, chronic diseases, and other conditions may occur. Special projects matching the EISO's interests are encouraged.

Position Strengths: An energetic, collaborative team committed to giving the officer a broad experience of all aspects of state-level public health. Opportunities for projects/interaction in other programs and local health departments. A variety of projects that will illustrate activities and operations of various applied public health epidemiology programs.

Special Skills Useful for this Position: Ability to manage and analyze public health data. Ability to quickly assess situations and provide sound advice to help prevent disease spread in communities. Strong communication and interpersonal relationship building skills. A positive attitude and eagerness to learn from many different levels of professional staff. Strong work ethic, systems thinking and creativity are a plus!

Available Data: Reportable disease data (general CD, HIV, STD, TB, Environmental), emergency department/urgent care center data (syndromic surveillance), outbreak data, data on births, deaths, hospitalizations, claims, prescriptions through agency-wide information systems.

Recent Publications: Kurkjian KM, et al. 0 Assessing Emergency Preparedness and Response Capacity Using Community Assessment for Public Health Emergency Response Methodology: Portsmouth, Virginia, 2013. Disaster Med Public Health Prep. 2016 Jan 22:1-6.

Corvese, K, et al. "A Hybrid Strategy for Surveillance of Individuals Potentially Exposed to Contaminated Methylprednisolone Acetate-Virginia, 2012". JPHMP. July/August 2013, Volume 19 (4).

Yang J, et al. Risk for hepatitis B and C virus transmission in nail salons and barbershops and state regulatory requirements to prevent such transmission in the United States. J Public Health Manag Pract 2014; Nov-Dec;20(6):E20-30.

Domestic Travel: 10% **International Travel:** 10%

Available Support: VDH staff include masters, doctoral, and medical epidemiologists. The Division of Surveillance and Investigation (DSI), includes specialists in reportable disease and enhanced surveillance and systems, foodborne disease epidemiology, healthcare-associated infections, influenza surveillance, emerging infections and emergency epidemiologic response. Other divisions include staff specializing in HIV/STD, Immunizations, and Environmental Epidemiology. Administrative/IT support are available. Subject matter experts agency-wide are available for consultation, technical support and collaboration. The State Epidemiologist will seek opportunities agency-wide.

Current/Recent EIS Officer: Brigette Gleason, MD, MPH, (EIS 2014), EIS Officer, brigette.gleason@vdh.virginia.gov

Officer Projects: 3 deployments to Sierra Leone for Ebola; Ebola/Zika preparedness/response activities in Virginia; hepatitis C epidemiologic profile; community and HAI outbreak investigations (i.e., adulterated-heroin, legionellosis, malaria, CRE, SSI's); Epi-Aid for suspected suicide cluster; surveillance during international bike race in Virginia; >10 presentations; wrote 3 manuscripts.

Officer Recent Publications: Establishment of an Ebola Treatment Unit and Laboratory — Bombali District, Sierra Leone, July 2014–January 2015
MMWR, October 9, 2015 / 64(39);1108-11

Collaborative Public Health Investigation of Clenbuterol-Adulterated Heroin Outbreak — Richmond, Virginia, March–April 2015, Journal of Public Health Management and Practice, publication date pending.

Consultant: Katie Kurkjian, VMD, (EIS 2009), Career Epidemiology Field Officer, katie.kurkjian@vdh.virginia.gov

Consultant: Anne Rhodes, PhD, MS, Director, HIV Surveillance, anne.rhodes@vdh.virginia.gov

Size of Community: Virginia has a population of 8.3 million, with about 1 million in the Richmond metropolitan area.

University Affiliation: Virginia Commonwealth University's Medical Center is within walking distance of the state health department office. Strong working relationships with University of Virginia, and Virginia Tech.

Living Environment: Urban housing available close to the office. Within a half hour commute are suburban or semi-rural areas. Reasonable cost of living. Temperate winter climate, summers can be warm.

Cultural and Recreational Assets: Richmond has a great food scene, countless festivals, the James River, Capital Trail bike path, wineries and craft breweries. Cultural events hosted by area universities, World class art museum (VMFA), excellent music, art, history, theater, outdoor entertainment. Two hours to mountains, beaches, major city (DC). Richmond has major 10K and marathon each year. It's big city living with small-town southern charm!

Opportunity for Employment: Plentiful opportunities in healthcare, colleges/universities, and private sector.

Washington

DSEPD/EWB-WA-2016-01

Agency Name: Washington

Division/Branch/Team/Section: Communicable Disease Epidemiology

Physical Address: 1610 NE 150th Street Shoreline, Washington 98155

Primary Supervisor: Scott Lindquist, MD, MPH, State Epidemiologist for Communicable Diseases, scott.lindquist@doh.wa.gov

Secondary Supervisor: Kathy Lofy, MD, (EIS 2002), State Health Officer, kathy.lofy@doh.wa.gov

Secondary Supervisor: Marcia Goldoft, MD, MPH, (EIS 1985), Senior Communicable Diseases Medical Epidemiologist, marcia.goldoft@doh.wa.gov

Background: The Washington State Department of Health works to protect and improve the health of people in the state of Washington. Washington State DOH employs about 1600 persons. This position is in our Communicable Diseases Epidemiology (CDE) section at the state Public Health Lab in North Seattle. We have a team of around 30 persons, and we are responsible for the surveillance of and response to infectious diseases of public health importance.

Proposed Initial Projects: The foremost project will be to lead an outbreak investigation, and while the timing will be difficult to predict, last year the first two weeks for the Seattle-King County EISO was spent responding to a large salmonella outbreak here at DOH.

We are developing a culture independent diagnostic testing (CIDT) tracking database and a description of cost burden and lost cases. Many of the labs in Washington State are getting away from traditional culture methods and we need a system for labs to potentially send us raw specimens (not isolates) and a process to obtain useful public health data.

Develop an approach for systematic monitoring of enteric disease clusters. We have begun a student led outbreak investigation team and will be completing many more exposure interviews done by the student teams. We need to develop a system to quickly pull up percentages, binomial probabilities, etc. when we start seeing clusters.

We are developing a close relationship with the University Of Washington School Of Public Health and will formulate a curriculum and teach a CDE- led course on the epidemiology of infectious diseases. We would expect the officer to assist with this effort. We also have the flexibility to identify areas of interest for the officer and develop individual projects as desired.

Proposed Surveillance Projects: We are developing several infectious disease surveillance systems such as a system for Mycobacterium tuberculosis outbreaks and clusters. We would also like to evaluate the completeness of our current system for TB cases, labs and genotyping. We have recently discovered endemic *Coccidioides immitis* cases in Southcentral Washington and are developing a new surveillance system to better define the extent of this organism in Washington State.

There will also be opportunities for non infectious surveillance projects such as birth defects or opiate overdose surveillance in addition to any officer's specific interests.

Range of Opportunities: Orientation includes a CDE response manual for Washington State infectious diseases. The first weeks in Washington will be spent orienting to each of the following: food-borne/enterics, zoonotic diseases, influenza/legionella, vaccine preventable diseases, refugee health, emergency preparedness, hospital acquired infections, and rabies/miscellaneous. The officer will rotate through the evening/weekend call schedule, serving as the subject matter expert in these areas while on call. We will train the officer to lead a large outbreak investigation while working with Federal, State, and Local Health Jurisdiction partners.

Position Strengths: This is a strong group of infectious disease epidemiologists, including an infectious disease physician. We are developing a deployable outbreak response team and an academic partnership with the University of Washington School of Public Health.

Special Skills Useful for this Position: This position simply needs someone who is a team player, good communicator, and is flexible.

Available Data: The officer will have access to notifiable disease condition data, vital statistics, hospital discharge, cancer registry, Behavioral Risk Factor Surveillance System and Healthy Youth Survey data amongst others..

Recent Publications: Stahre M, Roeber J, Kanny D, Brewer RD, Zhang X. Contribution of excessive alcohol consumption to deaths and years of potential life lost in the United States. *Prev Chronic Dis* 2014;11:E109.

Gallivan MD, Lofy KH, Goldbaum GM. Use of death certificates to identify tuberculosis-related deaths in Washington State. *J Public Health Manag Pract* 2013 Oct 31.

Creanga AA, Sabel JC, Ko JY, Wasserman CR, et al. Maternal drug use and its effect on neonates: a population -based study in Washington State. *Obstet Gynecol* 2012;119(5):924-33.

Domestic Travel: 20% **International Travel:** 0%

Available Support: The state epidemiologist will be the primary support for the officer. Our senior medical epidemiologist and CDE team will be available to support the officer including support with statistics. Should the opportunity for a CDC-sponsored international deployment arise, the department is supportive of the officer having that experience.

Current/Recent EIS Officer: Mandy Stahre, PhD, MPH, (EIS 2012), Epidemiologist, mandy.stahre@doh.wa.gov

Officer Projects: Common officer projects are outbreak investigations of communicable diseases. This includes Chipotle E.coli outbreaks, Salmonella outbreaks in pork, Listeria in ice cream, and E.coli outbreaks in farm animal festivals. We have been involved in 2 Epi-Aids in the last year and expect outbreaks to continue.

Officer Recent Publications: Notes from the Field: Investigation of a Cluster of Neural Tube Defects— Central Washington, 2010–2013. *MMWR* 2013; 62(35):728-728.

Bell B, Goldoft M, Griffin P, et al. A Multistate Outbreak of Escherichia coli O157:H7 - Associated Bloody Diarrhea and Hemolytic Uremic Syndrome from Hamburger: The Washington Experience. *JAMA* 1994;272:1349-1353.

Blythe D, Goldoft M, Lewis J, et al. Salmonella Serotype Montevideo Infections Associated with Chicks. *MMWR* 1997;46:237-239.

Dworkin MS, Shoemaker PC, Goldoft MJ, Kobayashi JM. Reactive arthritis and Reiter's syndrome following an outbreak of gastroenteritis caused by Salmonella enteritidis. *Clin Infect Dis*. 2001 Oct 1;33(7):1010-4.

Kimura AC, Johnson K, Palumbo MS, Hopkins J, Boase JD, Reporter R, Goldoft M, Stefonek KR, Farrar JA, Van Gilder TJ, Vugia DJ. Multistate Shigellosis Outbreak and Commercially Prepared Food, United States. *Emerg Infect Dis* 2004;10(6):1147-9.

Consultant: Beth Mellius, MSN, MPH, (EIS 2004), Lead Foodborne Disease Epidemiologist, beth.mellius@doh.wa.gov

Size of Community: The Seattle Metropolitan area includes Seattle–Tacoma–Bellevue, with an estimated population of 3,610,105, which is more than half of Washington's population, making it the 15th largest Metropolitan Statistical Area in the United States.

University Affiliation: The department has strong ties with the University of Washington School of Public Health providing opportunities for teaching, joint research and clinical faculty status.

Living Environment: The Puget Sound area is a desirable area with a wide array of housing options and an excellent standard of living.

Cultural and Recreational Assets: The Puget Sound area has excellent cultural and outdoor recreational opportunities.

The region offers excellent theater, opera, sports teams, and a progressive film and music scene as well as an extensive state and national park system.

Opportunity for Employment: Excellent

Wisconsin

DSEPD/EWB-WI-2016-01

Agency Name: Wisconsin Department of Health Services

Division/Branch/Team/Section: Division of Public Health / Bureau of Communicable Diseases

Physical Address: 1 W. Wilson St Room 272 Madison, Wisconsin 53703

Primary Supervisor: Jeffrey Davis, MD, (EIS 1973), Chief Medical Officer and State Epidemiologist for Communicable Diseases, jeffrey.davis@wi.gov

Secondary Supervisor: James Kazmierczak, DVM, MS, State Public Health Veterinarian, james.kazmierczak@wi.gov

Background: Wisconsin's Communicable Disease (CD) EISO is housed in the collegial Communicable Disease Epidemiology Section (CDES) within the Bureau of Communicable Diseases (BCD), Wisconsin Division of Public Health (WDPH); offices are located in downtown Madison 2 blocks from the state capital. The BCD has hosted 17 CD EISOs since 1979. The assignment has historically been an extremely productive and highly collaborative one. Officers address a wide range of health events throughout the state with substantial opportunity for in-state travel and work with a wide range of state and federal partners, and work closely with colleagues at the Wisconsin State Laboratory of Hygiene (WSLH), a premier state public health laboratory. Many Wisconsin-based EISOs (all who have wished to) have participated in investigations abroad. The primary supervisor has been the state epidemiologist for communicable diseases since 1978 and has supervised all 17 WI CD EISOs.

These 17 Wisconsin CD EISOs have written >60 peer-reviewed journal publications, and include one Langmuir Prize-winning article and 3 articles nominated for the Charles C. Shepard Science Award, 15 MMWR articles (only documented for EISOs since 2000), 36 EIS Conference presentations, and 35 additional national meeting presentations by the EISOs.

Following their EIS assignments, Wisconsin CD EISOs have pursued successful careers in public health at the CDC and other federal agencies, other national organization and international organizations, state health departments and in academia. Immediate post-EIS positions include: CDC preventive medicine residency (6 of the first 8 CD EISOs), In addition, the WDPH Bureau of Environmental and Occupational Health has hosted 12 EISOs that currently includes a 2015 EISO. Opportunities exist for the CD EISO to collaborate on projects in other WDPH Bureaus.

Proposed Initial Projects: Based on their areas of interest, EISOs have latitude in selection of their projects within the BCD including the AIDS/HIV Program, Communicable Diseases Epidemiology Section, Immunization and STD Control Sections, and with the DPH Office of Emergency Healthcare and Preparedness. Possibilities include (but are not limited to) an evaluation of the effects of non-culture diagnostic techniques on surveillance for enteric pathogens, or a comprehensive analysis of babesiosis in Wisconsin. There is also the possibility of a cooperative project with the USGS National Wildlife Health Center (located in Madison) involving zoonotic diseases of mutual interest.

Proposed Surveillance Projects: Evaluation of Wisconsin's healthcare associated infection surveillance and intervention measures; evaluation of Wisconsin's invasive bacterial diseases surveillance (one or more of group B streptococcus, Haemophilus influenzae, S. pneumoniae, Neisseria meningitidis); or evaluation of Wisconsin's FoodCORE program involving the investigation of disease clusters caused by STEC, Salmonella, and Listeria.

Range of Opportunities: A wide range of opportunities exists including surveillance and epidemiologic investigations of 80 reportable conditions plus emerging non-reportable infectious diseases, and consultation with professional staff in 93 LHD. In-state collaborative opportunities exist with WSLH, UW-Madison, the Medical College of Wisconsin, the Marshfield Clinic Research Foundation, and other agencies. If a CDC-sponsored opportunity arises, a multi-week international assignment will be supported.

Position Strengths: Wisconsin EISOs have consistently had high quality and diverse experiences in applied epidemiology. BCD's strong surveillance and investigation network provide many opportunities for epidemiologic investigations. There is strong supervisor support for publishing in peer-reviewed literature.

Special Skills Useful for this Position: The WICD EISO will address a very broad range of health events. As typical of an EISO, confident, open-minded and curious self-starters who have reasonable flexibility to work long hours during outbreak responses will excel in this position. Having writing skills with experience in manuscript preparation and submission to peer-reviewed journals are helpful, and having a strong interest in developing these skills will be

important.

Available Data: Morbidity data (since 1981) for notifiable conditions are housed within BCD. Hospitalization, mortality, and BRFSS databases are accessible within WDPH.

Recent Publications: Since 1/1/2011, CDES staff have authored or coauthored 28 peer-reviewed articles and 5 articles MMWR published. Space precludes listing all citations; topics include A/H3N2 and A/2009H1N1 influenza, blastomycosis, legionellosis, brucellosis, ehrlichiosis, Lyme disease, human rabies, E. coli O157:H7, norovirus, hepatitis C and listeriosis. The primary supervisor has authored or coauthored 193 peer-reviewed articles (66 since 2000), 25 chapters or reviews, and 62 MMWR articles on a wide range of topics that include emerging infectious diseases, vaccine preventable diseases, foodborne and waterborne enteric diseases, vector-borne diseases and blastomycosis among others.

Domestic Travel: 10% **International Travel:** 0%

Available Support: BCD has an experienced staff of >90 persons, with additional support from other State agencies. There is ready access to public health partners at the UW-Madison, local health departments (LHD), the WSLH, and a statewide network of infection preventionists. Electronic disease/laboratory reporting is well established. BCD staff routinely use SAS, EpiInfo, and ArcGIS and provide experienced support in the design, execution, analysis, and written reporting of disease investigations and other health-related events.

Current/Recent EIS Officer: Lina Elbadawi, MD, (EIS 2014), EISO

Current/Recent EIS Officer: AbbeyCanon, DVM, (EIS 2012)

Current/Recent EIS Officer: Michael Bartholomew, MD, (EIS 2010)

Officer Projects: Current: Non-mumps-related parotitis (EpiAID), external validation CRE surveillance, Ebola-related deployment Côte d'Ivoire, pediatric respiratory disease hospitalization surveillance, blastomycosis investigation, healthcare-related Elizabethkingia outbreak (EpiAID).

Recent: MDR Salmonella investigation, MDR TB (EpiAID), E. coli O157:H7 associated with raw beef, epidemiologic features Bordetella parapertussis infections

Officer Recent Publications: Current EISO: manuscripts in preparation:

- Human Anaplasmosis Wisconsin 2009–2013: Epidemiologic Update (EIS Conference 2015)
- Hospital-based Quarantine for Ebola Contact Tracing at Fousseyni Daou Hospital, Kayes, Mali, 2014 (poster ICEID 2015)
- External Validation Surveillance and Reporting of Carbapenem-Resistant Enterobacteriaceae to the National Healthcare Safety Network (NHSN) —Wisconsin, January 1—December 31, 2015
- Multidrug-Resistant Salmonella serovar I 4,[5],12:i:- Associated with Pork Consumption —Wisconsin, 2015 (oral EIS conference 2016)
- Use and Interpretation of a Rapid Respiratory Syncytial Virus Antigen Detection Test Among Infants Hospitalized in a Neonatal Intensive Care Unit — March 2015. MMWR 2015.

Previous EISO:

• Bartholomew ML, et al. Multistate outbreak of Salmonella enterica Serotype Enteritidis infection associated with pet guinea pigs. Vectorborne Zoonotic Dis 2014.

• Koepke R, Bartholomew ML, et al. Widespread Bordetella parapertussis infections — Wisconsin, 2011–2012: Clinical and epidemiologic features and antibiotic use for treatment and prevention. Clin Infect Dis 2015.

MMWR articles:

- Human rabies—Wisconsin, 2010. MMWR 2011.
- Rabies risk assessment of exposures to a bat on a commercial airliner. MMWR 2012.
- Escherichia coli O157:H7 outbreak associated with seasonal consumption of raw ground beef – Wisconsin. MMWR 2013.
- Healthcare-associated transmission of hepatitis C virus associated with surgical procedures. MMWR 2015.

Size of Community: Madison population is ~240,000; metro area population is ~550,000

University Affiliation: All present/past CD EISOs have had adjunct faculty appointments in the UW School of Medicine and Public Health. Close relationships exist between BCD staff and UW faculty in entomology, medicine, population health, pediatrics, family medicine and veterinary medicine.

Living Environment: Madison consistently ranks among America's top communities in which to live. Built along lakes and surrounded by farmland, it has an extensive bike trail system, excellent mass transit, health care, educational system, cultural opportunities, and housing options.

Cultural and Recreational Assets: Excellent. Madison is an active, outdoors-oriented city with a world class University and is the State Capital. Varied cultural opportunities exist, enhanced by proximity to Milwaukee (1 hr), Chicago (2.5 hrs) and Minneapolis (4.5 hrs). Recreational opportunities abound, particularly for biking, water, and winter sports

enthusiasts.

Opportunity for Employment: Good in most service professional occupations, dependent on experience and training.

Center for Global Health

CDC's Center for Global Health (CGH), with 1700 staff in more than 85 countries, coordinates and manages the agency's resources and expertise to address global challenges such as HIV/AIDS, tuberculosis, vaccine-preventable diseases, malaria, emergency and refugee health, infectious diseases, non-communicable diseases, injuries, and more. There are exceptional training opportunities in each of the four CGH divisions: Division of Global Health Protection, Division of Global HIV/AIDS and Tuberculosis, Division of Parasitic Diseases and Malaria, and the Global Immunization Division. Explore the opportunities in CGH and learn how we leverage CDC's core strengths to advance four overarching global health goals: 1) improving the health and well-being of people around the world, 2) improving capabilities for preparing for and responding to infectious diseases and emerging health threats, 3) building country public health capacity, and 4) maximizing organizational capacity.

Division of Global Health Protection/Emergency Response and Recovery Branch

CGH-DGHP-ERRB-GA-2016-01 Positions: 2

Agency Name: CDC

Division/Branch/Team/Section: Division of Global Health Protection/Emergency Response and Recovery Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Eugene Lam, MD, MSPH, MSc, (EIS 2011), Epidemiologist, vif4@cdc.gov

Primary Supervisor: Mark Anderson, MD, MPH, (EIS 1996), Medical Officer, mea6@cdc.gov

Secondary Supervisor: Farah Husain, DDS, MPH, (EIS 2008), Epidemiologist, hgk6@cdc.gov

Secondary Supervisor: Sharmila Shetty, MD, (EIS 2002), Epidemiologist, acq1@cdc.gov

Background: The officers will be assigned to the Emergency Response and Recovery Branch (ERRB) in the Division of Global Health Protection (DGHP) in the Center for Global Health. ERRB is responsible for directly responding to, and strengthening global capacity to respond to and recover from complex humanitarian emergencies (CHE's). ERRB is a multidisciplinary team of public health professionals responsible for coordinating CDC's response to CHE's. The branch is a major provider of technical assistance to the international community. In all activities, the branch works with organizations such as the UN High Commissioner for Refugees (UNHCR), UNICEF, WHO, World Food Program (WFP), UN Population Fund (UNFPA), US Office of Foreign Disaster Assistance (OFDA), US State Department Bureau for Population, Refugees and Migration (PRM), and various international non-governmental organizations.

Proposed Initial Projects: The officers will be able to choose among several possible projects including: 1) Longitudinal evaluation of the Minimum Initial Services Package for Reproductive Health in a protracted Emergency, Democratic Republic of Congo 2) Epidemiological and environmental investigation of Hepatitis E among displaced populations, location TBD 3) Analysis of Pregnancy Outcome Surveillance program in Haiti 4) Evaluation of a digital Microfluidics-powered Immunoassay for the detection of measles infection and immunity among displaced populations, 5) Analysis of neonatal care study among displaced and local populations in Somalia, 6) Analysis of strategies for rapid detection of viral hemorrhagic fevers in post-Ebola Sierra Leone; 7) Investigation of multidrug-resistant tuberculosis cases in a prison, Liberia. 8) Implementation of a mortality survey and support for strengthening vital registration in Liberia. Officers placed in ERRB will also have access to opportunities in the Global Health Security Branch (GHSB), the Global Disease Detection Operations Center, the Ebola Affected Countries Office (EACO) and the Global Disease Detection Branch (GDDB).

Proposed Surveillance Projects: 1) Evaluation of laboratory-based surveillance system in Haiti 2) Evaluation of the Maternal Death Surveillance and Response system implemented in Haiti 3) Evaluation of Acute Flaccid Paralysis (AFP) surveillance within an Early Warning and Response Surveillance System, Syria and Somalia. 4) Evaluation of measles surveillance in the Integrated Disease Surveillance and Response (IDSR) system in post-Ebola Sierra Leone;

5) Assessing routine and event-based surveillance of cholera and other priority diseases in Liberia.

Range of Opportunities: The officers in this assignment will use epidemiologic principles to address public health issues related to complex humanitarian emergencies and health systems reconstruction following emergencies. This may include providing technical assistance by: 1) carrying out rapid assessments of health, water/sanitation, and nutrition status; 2) conducting emergency mortality and nutrition surveys; 3) establishing and evaluating disease and injury surveillance systems; 4) investigating communicable disease outbreaks; 5) evaluating the effectiveness of various emergency and post-emergency programs

Position Strengths: The branch focus is on a population rather than a specific health condition. This provides the officer with a broad range of experiences encompassing both communicable and non-communicable diseases as they impact a highly vulnerable population. The Health Systems Recovery Team has a range of activities in Haiti, Liberia, Sierra Leone and Guinea.

Special Skills Useful for this Position: In order of priority: 1) Willingness to travel internationally, 2) previous international experience, particularly in emergency or post-emergency settings, 3) conversational in French

Available Data: 1) Injury surveillance data from Iraq, 2) Pregnancy outcome surveillance data set from Haiti 3) National HIV database, Haiti 4) Data from the landmine knowledge, attitudes and practices (KAP) survey in Colombia

Recent Publications:) Navarro-Colorado C, ... Cookson S, et al. Measles outbreak response among adolescent and adult Somali refugees displaced by famine in Kenya and Ethiopia, 2011. *J Infect Dis* 2014 2) Gargano LM, ... Cookson ST. Comparison of impact and cost-effectiveness of rotavirus supplementary and routine immunization in a complex humanitarian emergency, Somali case study. *Conflict and Health* 2015, 9:5 3) Morof DF, Blanton C, Lopes Cardozo B, Tomczyk B. A cross-sectional survey on gender-based violence and mental health among female urban refugees and asylum seekers in Kampala Uganda. *Int J of Gyn and Obstet* 2014. 127(2):138

Domestic Travel: 10% **International Travel:** 30%

Available Support: Branch statistician, branch language tutor (French/Spanish), secretarial/admin support

Current/Recent EIS Officer: Kevin Clarke, (EIS 2011)

Current/Recent EIS Officer: Rachel Idowu, (EIS 2012)

Current/Recent EIS Officer: Miriam Shiferaw, (EIS 2012)

Current/Recent EIS Officer: Cyrus Shahpar, (EIS 2010)

Current/Recent EIS Officer: Sudhir Bunga, (EIS 2010)

Current/Recent EIS Officer: Lara Jacobson, (EIS 2010)

Current/Recent EIS Officer: Max Nerlander, MBBS, (EIS 2014)

Current/Recent EIS Officer: Aimee Summers, PhD, (EIS 2014)

Current/Recent EIS Officer: Andy Boyd, MD, (EIS 2015)

Current/Recent EIS Officer: Elaine Knipes, PhD, (EIS 2015)

Current/Recent EIS Officer: Michelle Dynes, PhD, MSN, MPH, (EIS 2013), Dynes

Current/Recent EIS Officer: Raina Philips, MD, (EIS 2013)

Officer Projects: 1) Evaluation of early warning surveillance, Iraq 2) Contact tracing and Ebola surveillance, Liberia, Sierra Leone; 3) Nutrition survey, Ukraine; 4) lymphatic filariasis coverage survey, Haiti; 5) Evaluation of Maternal/Newborn Surveillance, DRC; 6) Field validation of digital microfluidics (DMF)-powered immunoassays for the detection of measles and rubella, DRC

Officer Recent Publications: 1) Dynes M, Perceptions of the Risk for Ebola and Health Facility Use Among Health Workers and Pregnant and Lactating Women – Kenema District, Sierra Leone, September 2014. *MMWR* 2015; 63(51-52):1226-1227 2) Summers A, Challenges in responding to the Ebola epidemic – four rural counties, Liberia, August-November 2014. *MMWR* 2014. 63:1202-4 3) Salyer S, Dengue virus infections among Haitian and expatriate non-governmental organization workers – Leogane and Port-au-Prince Haiti, 2012. *PLOS Neglected Tropical Diseases* 2014. 8(10):e3269 4) Shiferaw M, Hepatitis E Outbreak Following Mass Population Displacement — South Sudan, July 2012-January 2013. *MMWR* 2013; 62(29):581-586 5) Morof D, et al. Neonatal survival in complex humanitarian emergencies: setting an evidence-based research agenda. *Conflict and Health* 2014. 8:8. 6) Bamrah S, The impact of Post-election violence on HIV and other clinical services and on Mental Health-Kenya, 2008. *Prehosp Disaster Med* 2013; 88(4):645-650 7) Morof D, Community Mortality from Cholera: Urban and rural districts in Zimbabwe. *Am J Trop Med Hyg* 2013; 88(4):645-650

Consultant: Oleg Bilukha, (EIS 2002)

Consultant: Muireann Brennan, (EIS 1996)

Consultant: Barbara Lopes Cardozo

Consultant: Carlos Navarro-Colorado
Consultant: Richard Garfield
Consultant: Michael Gerber
Consultant: Thomas Handzel, (EIS 2000)
Consultant: Colleen Hardy
Consultant: Kashef Ijaz
Consultant: Leisel Talley
Consultant: Cyrus Shahpar, (EIS 2010)
Consultant: Barb Marston, MD, (EIS 1992)
Consultant: Fred Angulo, DVM, (EIS 1993)
Consultant: David Fitter, MD, (EIS 2011)
Consultant: Emily Kainne Dokubo, MD, MPH, (EIS 2011)
Consultant: Sarah Bennett, MD, (EIS 2010)
Consultant: John Redd, MD, MPH, (EIS 2000)
Consultant: Jordan Tappero, MD, MPH, (EIS 1992)
Consultant: Susan Cookson, MD, MPH, (EIS 1995)
Consultant: Rick Gelting, PhD, MS
Consultant: Ashley Greiner, MD, MPH, (EIS 2014)
Consultant: Kpandia Djawe, PhD, (EIS 2014)
Consultant: Colleen Hardy, MPH
Consultant: Michelle Hynes, PhD
Consultant: Leigh Ann Miller, PhD, (EIS 2014)
Consultant: Tasha Stehling-Ariza, PhD, (EIS 2014)
Consultant: Endang Widiastuti, MD, MPH

Division of Global HIV and Tuberculosis/Epidemiology Surveillance Branch/Key Population Surveillance Team

CGH-DGHT-ESB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Global HIV and Tuberculosis/Epidemiology Surveillance Branch/Key Population Surveillance Team

Physical Address: Atlanta, Georgia

Primary Supervisor: Wolfgang Hladik, MD, PhD, (EIS 1999), Team Lead, wfh3@cdc.gov

Secondary Supervisor: Anne McIntyre, PhD, (EIS 2007)

Background: The Key Population Surveillance Team (7 members) in DGHT's Epidemiology and Surveillance Branch provides technical assistance for CDC's HIV programs in Africa, Asia, and Latin America for data collection activities related to biobehavioral surveys, population size estimation, and HIV-related estimation among populations at high risk for HIV. Further, we review or develop protocols, review and write manuscripts, provide training in key population related HIV surveillance and promote operational research to improve data quality and accuracy. In collaboration with UN agencies, we set standards and guidance related to key population HIV surveillance activities, develop training materials, and facilitate training workshops.

Proposed Initial Projects: Develop and/or implement a protocol for a biobehavioral survey; implement or analyze an operational research project (key population size estimation) in Uganda, China, or Ethiopia. Collaborate in survey-related data collection and lead data analysis and write-up of a key population (men who have sex with men, sex workers, and/or people who inject drugs) related survey data set. As part of the team, facilitate training workshops for data analysis and key population survey planning and conduct.

Proposed Surveillance Projects: The EISO will have an opportunity to select from a number of projects. Concrete

options include 1) Evaluation of a key population-focused HIV surveillance system in a resource-limited country (e.g., Vietnam, Uganda, Ukraine); 2) Evaluation of an Integrated Disease, Surveillance and Response (IDSR) system in Uganda, 3) Evaluation of the utility of Prevention of Mother To Child Transmission program data or specimens for HIV surveillance (e.g., DR Congo).

Range of Opportunities: Numerous links to field programs, supporting key population surveys, e.g., Uganda, South Sudan, Central America, Thailand, or Vietnam. Opportunities include (e.g., survey) protocol development, implementation, data analysis/write-up, population size estimation. Operational research opportunities exist for survey methods, key population size estimation. Other opportunities: training workshops on survey planning/ conduct, complex survey data analysis; analysis of key population survey data; population size estimation; estimation of HIV incidence using mathematical models and/or laboratory data. Team works closely with its sister surveillance teams focusing on General Population and Clinic-based Surveillance in same Branch.

Position Strengths: Key population related surveillance activities are complex and challenging. The team has a strong focus on improving field data quality, and shortening the time line from survey concept to dissemination. The position has the opportunity to develop the EISO into an international subject matter expert in key population surveys.

Special Skills Useful for this Position: Familiarity with statistical software is a plus. Strong verbal and written skills, including in communicating with foreign government officials. Ready to travel internationally and work independently or under long-distance supervision. Flexibility and ability to work with diverse and multicultural groups.

Available Data: Biobehavioral survey data or operational research data are available for data analysis and write up (Uganda).

Recent Publications: Kim EJ, Hladik W, Barker J, Lubwama G, Sendagala S, Ssenkusu JM, Opio A, Serwadda D; Crane Survey Group. Sexually transmitted infections associated with alcohol use and HIV infection among men who have sex with men in Kampala, Uganda. *Sex Transm Infect.* 2015 Sep 30.

Hladik W, Banech I, Bateganya M, Hakim AJ. The utility of population-based surveys to describe the continuum of HIV services for key and general populations. *Int J STD AIDS.* 2016 Jan;27(1):5-12.

Domestic Travel: 5% **International Travel:** 25%

Available Support: Team epidemiologists have strong epi skills, provide support to EISO both in office and field setting. Statistical support provided through DGHT's Statistics Team. Additional support through Key Population Prevention Team (Prevention Branch) and International Laboratory Branch (DGHT).

Current/Recent EIS Officer: Ugonna Ijeoma, MBBS, (EIS 2015)

Current/Recent EIS Officer: Hammad Ali, PhD, (EIS 2015)

Officer Projects: This team did not have a recent EISO. Wolfgang Hladik is secondary supervisor for Hammad Ali and Ugonna Ijeoma (both DGHT). Hammad Ali is engaged in HIV-related mortality and general population surveillance project in this Branch. Wolfgang Hladik supervised/mentored EISO Ijeoma in her HIV-related surveillance evaluation.

Officer Recent Publications: Wolfgang Hladik mentored EISO Schwitters in a survey related data analysis and manuscript writing (Prevalence of rape and client-initiated gender-based violence among female sex workers: Kampala, Uganda, 2012. Schwitters A, Swaminathan M, Serwadda D, Muyonga M, Shiraiishi RW, Banech I, Mital S, Bosa R, Lubwama G, Hladik W. *AIDS Behav.* 2015 Feb;19 Suppl 1:S68-76. doi: 10.1007/s10461-014-0957-y.). The two EISO mentioned above both work on manuscripts facilitated by their primary supervisors' teams.

Consultant: Mark Berry, PhD

Consultant: Avi Hakim, MPH

Consultant: Anindya De, PhD

Consultant: Bharat Parekh, PhD

Consultant: Trista Bingham, PhD

Division of Global HIV and Tuberculosis/Global Tuberculosis Prevention and Control Branch

CGH-DGHT-GTPCB-GA-2016-01 Positions: 2

Agency Name: CDC

Division/Branch/Team/Section: Division of Global HIV and Tuberculosis/Global Tuberculosis Prevention and Control Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Ekaterina Kurbatova, MD, PhD, MPH, Epidemiologist, ies3@cdc.gov

Primary Supervisor: Sarita Shah, MD, MPH, (EIS 2004), Medical Officer, bwg2@cdc.gov

Secondary Supervisor: Anand Date, MD, MBBS, (EIS 2004), Associate Branch Chief, bvz7@cdc.gov

Secondary Supervisor: Eric Pevzner, PhD, MPH, (EIS 2005), Team Lead: High Risk and Vulnerable Populations, ecp9@cdc.gov

Background: Nearly a third of the world's population is infected M. tuberculosis, and TB disease is the leading infectious disease killer across the globe, responsible for over 1.5 million deaths in 2014. The Global TB Prevention and Control Branch (GTB) is committed to reducing the burden of TB in the world by conducting innovative, impactful and programmatically relevant research and by providing direct technical assistance to national TB programs across the globe, and to international agencies such as the World Health Organization. Our Division plays an essential role in the unified U.S. Government's plan to implement the President's Emergency Plan for AIDS Relief (PEPFAR). Our branch is structured as three teams, reflecting the focus of our work: TB Prevention, Care and Treatment; High Risk and Vulnerable Populations; Surveillance, Epidemiology, and Impact Measurement.

Our branch staff, which includes 12 former and 3 current EISOs, is dedicated to ensuring well-rounded training and support for our EISOs. To ensure that their learning goals are met, EISOs will have a choice of projects from across all teams, and they will be involved in all stages of project implementation, from study concept and design, to data collection and analysis, to dissemination of results. For field-based international projects, this will involve close collaboration with CDC country offices and international Ministries of Health. In addition to field-based epidemiology experiences, officers will have the opportunity to analyze data from existing large datasets, attend a formal clinical TB training course, and collaborate on projects with other Branches in the Division. The majority of GTB's work occurs in foreign countries with high burdens of TB. Examples of countries in which projects may occur include, but are not limited to, Botswana, Cambodia, India, Kenya, Lesotho, Mozambique, Myanmar, Nigeria, the Philippines, South Africa, Thailand, Uganda, Vietnam, Zambia.

Proposed Initial Projects: • Assessing the quality of care for MDR TB patients.

- Determine the prevalence of and risk factors for anti-TB drug resistance, including MDR TB and XDR TB, in large, population-based studies.
- Develop and test clinical algorithms to improve screening, diagnosis, treatment, and prevention of TB disease among persons living with HIV.
- Describe the epidemiology of drug-resistant TB among specific demographics (e.g., children and adolescents, HIV-infected persons).
- Use molecular epidemiology to describe TB transmission dynamics among those with HIV.
- Conduct inventory study to determine the completeness and fidelity of data reporting.
- Evaluate the health and economic impact of TB infection control interventions in institutional settings and communities.
- Evaluate the impact of the roll-out of GeneXpert (a rapid, molecular TB diagnostic) on TB case finding, treatment strategies and outcomes.
- Analysis of genotyping results, identify clusters of transmission and investigate outbreaks.
- Evaluation of integrated TB/HIV services in multiple countries in Africa.

Proposed Surveillance Projects: Evaluation of the TB surveillance system in various countries (Ethiopia, India, Mozambique, Nigeria, Vietnam). Evaluation of MDR TB surveillance in Mumbai, India. Evaluation of pediatric TB surveillance in various countries (China, Uganda, Mozambique). Evaluation of TB surveillance system in Kisumu County, Kenya.

Range of Opportunities: Research question framing and development. Protocol writing. Survey development. Data collection, entry and analysis. International field experience and project management. Presentations at domestic and international conferences. Manuscript writing and dissemination. Assistance with policy development. Teaching TB-related research and implementation courses.

Position Strengths: Diverse projects with different staff in the Branch/Division that directly inform policy and strengthen TB control efforts internationally. Emphasis on learning and applying complex epidemiologic methods to develop impactful projects, which officers are encouraged to develop. International travel and collaboration with partners in Ministries of Health, WHO, USAID, and non-governmental agencies. Working with PEPFAR, the single largest financial contribution to AIDS programming in the world. An opportunity to work with some of the most fun people at CDC.

Special Skills Useful for this Position: No special skills are required.

Available Data: National Tuberculosis Surveillance System (US); National Tuberculosis Genotyping System.

Tuberculosis Clinical Research Database (Texas, US); Intensified TB Case-Finding Database (Kenya); Preserving Effective TB Treatment Study Database (multinational); Loss to Follow-up Study Database (the Philippines).

Recent Publications: A list of publications will be provided at the time of EIS conference. GTB staff published 37 peer-reviewed articles in 2015.

Domestic Travel: 5% **International Travel:** 30%

Available Support: DGHT has a team of statisticians who are invested in training junior staff. Officers will be offered statistical consultation, as well as SAS and/or STATA and/or R software training, and a formal clinical TB training course.

Current/Recent EIS Officer: Colleen Scott, DrPH, (EIS 2014), ibk9@cdc.gov

Current/Recent EIS Officer: Hannah Kirking, MD, (EIS 2015), hrj7@cdc.gov

Current/Recent EIS Officer: Ishani Pathmanathan, MD, (EIS 2014), ydi6@cdc.gov

Current/Recent EIS Officer: Diya Surie, MD, (EIS 2015), kbz2@cdc.gov

Officer Projects: Evaluation of TB surveillance systems in Kenya/Botswana/Georgia. Evaluation of collaborative TB/HIV activities in Namibia/Nigeria/Swaziland/Tanzania. Investigation of a cluster of TB cases in Botswana. Analysis of *M. bovis* in the U.S. Evaluation of minimally invasive autopsy for mortality surveillance in Kenya.

Officer Recent Publications: (Sharma) Tuberculosis Caused by *Mycobacterium africanum*, United States, 2004-2013. *Emerg Infect Dis.* 2016

(Pathmanathan) Insights from the Ebola Response to Address HIV and TB. *Lancet Infect Dis.* 2016 (Volkman) Tuberculosis and excess alcohol use in the United States, 1997-2012. *Int J Tuberc Lung Dis.* 2015.

(Sharma) Assessing the effect of decentralisation of laboratory diagnosis for drug-resistant tuberculosis in Kenya. *Int J Tuberc Lung Dis.* 2015.

(Alami) Evaluation of Community-Based Treatment for Drug-Resistant Tuberculosis in Bangladesh. *Trop Med Int Health.* 2015.

(Sharma) A review of data quality of an electronic tuberculosis surveillance system for case-based reporting in Kenya. *Eur J Public Health.* 2015.

(Yuen) Association between Regimen Composition and Treatment Response in Patients with Multidrug-Resistant Tuberculosis: A Prospective Cohort Study. *PLoS Med* 2015.

(Scott, Kirking). Trends in tuberculosis - United States, 2014. *MMWR*, 2015.

(Nnadi) Tuberculosis and latent tuberculosis infection among healthcare workers in Kisumu, Kenya. *Trop Med Int Health* 2015.

(Sharma) Evidence for a Decrease in Transmission of Ebola Virus – Lofa County, Liberia, June 8– November 1, 2014. *MMWR.* 2014.

(Pathmanathan) Rapid Assessment of Infection Prevention and Control Needs – Six Districts, Sierra Leone, *MMWR Morb Mortal Wkly Rep* 2014.

Consultant: Susan Maloney, MD, MPH, (EIS 1992), Branch Chief, szm7@cdc.gov

Consultant: Joseph Cavanaugh, MD, (EIS 2008), Medical Officer, hgi7@cdc.gov

Consultant: Patrick Moonan, DrPH, Epidemiologist, bng3@cdc.gov

Consultant: Emily Bloss, PhD, (EIS 2007), Team lead: Surveillance Epidemiology and Impact Measurement, dpu2@cdc.gov

Consultant: John Oeltmann, PhD, (EIS 2003), Epidemiologist, jeo3@cdc.gov

Consultant: Laura Podewils, PhD, (EIS 2003), Epidemiologist, lpp8@cdc.gov

Consultant: Kevin Cain, MD, (EIS 2004), Medical Officer, Kisumu, Kenya, bvz1@cdc.gov

Consultant: Paul Jensen, PhD, Engineer, pej4@cdc.gov

Consultant: Michele Pearson, MD, (EIS 1990), Medical Officer, mxp8@cdc.gov

Consultant: Peter Cegielski, MD, MPH, Team lead: TB Prevention, Care and Treatment, gzc2@cdc.gov

Consultant: Julia Ershova, PhD, MPH, Epidemiologist, jhe3@cdc.gov

Consultant: Gail Starks, MPH, Public Health Advisor, lts4@cdc.gov

Consultant: Jacek Skarbinski, MD, (EIS 2005), Medical Officer, New Delhi, India, dvo5@cdc.gov

Consultant: Ray Shiraiishi, PhD, Statistician Health, fnf3@cdc.gov

Consultant: Heather Alexander, PhD, drz5@cdc.gov

Consultant: William Coggin, MS, wlc1@cdc.gov

Division of Global HIV and TB/HIV Care and Treatment Branch/Adult HIV Treatment Team

CGH-DGHT-HCTB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Global HIV and TB/HIV Care and Treatment Branch/Adult HIV Treatment Team

Physical Address: Atlanta, Georgia

Primary Supervisor: Spencer Lloyd, MD, MPH, (EIS 2012), Medical Officer, wid6@cdc.gov

Secondary Supervisor: Tedd Ellerbrock, MD, Team Lead, tvel@cdc.gov

Background: The Adult HIV Treatment Team in the HIV Care and Treatment Branch (HCTB) provides technical assistance for public health programs delivering antiretroviral therapy (ART) to HIV-infected people living in resource-limited countries. The Team is responsible for supporting HIV care and treatment programs in the 24 countries that receive direct support from the President's Emergency Plan for AIDS Relief (PEPFAR). This assignment offers the opportunity to become an expert in international HIV care and treatment programs and gain experience of working closely with multiple partners, including other US government agencies, non-government organizations, academic centers, and ministries of health.

Proposed Initial Projects: The EIS officer will be able to choose from a number of projects including: (1) Evaluation of HIV treatment program outcomes and determinants in seven countries (Côte d'Ivoire, Ethiopia, Haiti, Kenya, Nigeria, Vietnam, and Zambia). For multiple countries, the opportunity will involve protocol development, study implementation, database development, data analysis, and interpretation of findings. Information generated by these evaluations will be used to improve the quality of patient care; (2) Implementation and evaluation of HIV viral load scale-up activities in six priority countries (Uganda, Kenya, Mozambique, Swaziland, Tanzania, and Malawi); (3) Implementation and evaluation of district- and community-level HIV test-and-start ART programs in countries supported by PEPFAR (Botswana, Democratic Republic of the Congo, Kenya, Lesotho, Malawi, Mozambique, Namibia, Nigeria, Rwanda, Uganda, Vietnam, and Zambia); (4) Surveillance of emergence of HIV drug resistance (HIVDR) in HIV-infected populations from 12 countries (Botswana, Cameroon, Kenya, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Uganda, Zambia, and Zimbabwe). We anticipate having the drug resistance testing completed and ready for data analysis from at least 3 countries by October 1, 2016. Opportunities for involvement in implementation of surveys from protocol development to data analysis will also be available for several other countries; (5) Surveillance of clinical outcomes (e.g., mortality) of ART enrollees in 12 countries (Swaziland, Mozambique, Botswana, Namibia, Zimbabwe, Zambia, Tanzania, Uganda, Nigeria, Côte d'Ivoire, Haiti, and Vietnam). For these countries data are currently available for analysis.

Proposed Surveillance Projects: The EIS officer will have the opportunity to work on one of the following potential surveillance evaluation projects: (1) HIV/AIDS surveillance system in Haiti; (2) Pediatric HIV surveillance systems in various African countries; (3) Antenatal HIV-related care or prevention of mother-to-child HIV transmission surveillance systems in various African countries; (4) TB/HIV co-infection surveillance systems in various African countries.

Range of Opportunities: The EIS officer will have opportunities to participate in activities addressing epidemic control including: HIV test-and-start ART programs, scaling up access to ART, ART as prevention, differentiated models of HIV/AIDS service delivery, HIV viral load scale-up, and HIVDR.

Position Strengths: This assignment offers the opportunity to understand the collaborations needed between US government agencies, ministries of health, and in-country implementing partners to develop and sustain high-quality HIV care and treatment programs in resource-limited settings. In addition, high-quality data are essential for continual evaluation of program success, therefore developing data management and analysis skills are key components of this position.

Special Skills Useful for this Position: International experience with health care program development /implementation, especially in resource-limited settings; clinical medicine/HIV care and treatment; basic working knowledge of data management and analysis.

Available Data: DGHT has developed a database for HIVDR surveys performed in CDC-supported countries. Datasets will be used for both analysis of country surveys and multi-country analysis. DGHT has supported development of a multi-country ART program evaluation data warehouse.

Recent Publications: Phillips AN, Cambiano V, Miners A, Revill P, Pillay C, Lundgren JD, Bennett D, Raizes E, Nakagawa F, De Luca A, Vitoria M, Barcarolo J, Perriens J, Jordan MR, Bertagnolio S. Effectiveness and cost-

effectiveness of potential responses to future high levels of transmitted HIV drug resistance in antiretroviral drug-naive populations beginning treatment: modelling study and economic analysis. *Lancet HIV* 2014; 1:e85–93.

Working Group on Modelling of Antiretroviral Therapy Monitoring Strategies in Sub-Saharan Africa. Sustainable HIV treatment in Africa through viral-load-informed differentiated care. *Nature* 528, S68-S76 (3 December 2015), Co-Author: Elliot Raizes.

Domestic Travel: 5% **International Travel:** 35%

Available Support: The Adult HIV Treatment Team works closely with the Priority Populations Treatment Team in HCTB, as well as with other DGHT units, including prevention of mother-to-child transmission and pediatrics, TB/HIV, prevention, laboratory, and monitoring and evaluation. All DGHT EIS officers will have a dedicated EIS assigned statistician.

Current/Recent EIS Officer: Spencer Lloyd, MD, MPH, (EIS 2012), Medical Officer, wid6@cdc.gov

Current/Recent EIS Officer: Simon Agolory, MD, (EIS 2009), Program Director -- Namibia, ifz6@cdc.gov

Current/Recent EIS Officer: Andrew Auld, MD, MPH, (EIS 2007), Senior Service Fellow, gg4@cdc.gov

Officer Projects: Epi-Aid investigating the prevalence of and risk factors for a chronic lung disease among HIV-infected youth in Malawi.

Rapid Data Quality/Service Quality Assessment of PEPFAR-supported HIV care and treatment clinics in Kenya.

Epi-Aid investigating a cluster of *Cryptococcus neoformans* infections in an ICU in Arkansas.

Officer Recent Publications: 1) Lloyd S, Taylor NK, Koumans E, Gutreuter S, Alexander H, Hatcher C, Singer D, Gupta S, Modi S. Prevalence of and Risk Factors for Chronic Lung Disease among HIV-Infected Children. Poster session presented at 8th IAS Conference on HIV Pathogenesis, Treatment, and Prevention in Vancouver, Canada, July 2015.

2) Vallabhaneni S, Haselow D, Lloyd S, Lockhart S, Moulton-Meissner H, Lester L, Wheeler G, Gladden L, Garner K, Derado G, Park B, Harris JR. Cluster of *Cryptococcus neoformans* Infections in Intensive Care Unit, Arkansas, USA, 2013. *Emerging Infectious Diseases* 2015; 21(10):1719-1724.

3) Lloyd S, Mbofana F, Auld A, Alfredo C, Nelson L, Shiraishi R, Jobarteh K, Agolory S, Spira T, Ellerbrock T. Incidence and Determinants of Adverse Events Following Initiation of First-Line Antiretroviral Therapy in HIV-Infected Adults -- Mozambique, 2004-2007; Oral presentation given at 62nd Annual EIS Conference.

Consultant: Thomas Spira, MD, Medical Officer, tjs1@cdc.gov

Consultant: Elliot Raizes, MD, Medical Officer, gwq0@cdc.gov

Consultant: Josef Amann, MD, Health Scientist, jua6@cdc.gov

Consultant: Andrew Auld, MD, MPH, (EIS 2007), Senior Service Fellow, gg4@cdc.gov

Consultant: Isaac Zulu, MD, Medical Officer, wxo8@cdc.gov

Consultant: Carla Johnson, RN, BSN, Nurse Consultant, jju5@cdc.gov

Consultant: Rituparna Pati, MD, Medical Officer, rpa7@cdc.gov

Consultant: Kiren Mitruka, MD, Medical Officer, duu6@cdc.gov

Consultant: Moses Bateganya, MD, Medical Officer, vqz5@cdc.gov

Consultant: Rubina Imtiaz, MD, Medical Officer, rxi0@cdc.gov

Division of Global HIV and Tuberculosis/HIV Prevention Branch/Combination Prevention Program Evaluation

CGH-DGHT-HPB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Global HIV and Tuberculosis/HIV Prevention Branch/
Combination Prevention Program Evaluation

Physical Address: Atlanta, Georgia

Primary Supervisor: Duncan MacKellar, MA, MPH, DrPH, Health Scientist, Team Lead, dym4@cdc.gov

Secondary Supervisor: Andrew Auld, MD, MSc, (EIS 2007), Medical Epidemiologist

Background: Assigned to the Combination Prevention Program Evaluation (CPPE) team, the incoming EIS Officer will have the opportunity to develop expertise in HIV prevention, care, and treatment, and contribute to combating one of the world's most important public health challenges. The CPPE team mission is to support ministries of health, implementing partners, and CDC-country offices design, implement, analyze, and disseminate the results of combination prevention program evaluations. Combination prevention is the implementation of evidence-based interventions at a scale and quality expected to reduce HIV incidence within defined populations. The EIS officer is expected to help support two combination-prevention evaluations conducted in Southern Mozambique and Swaziland, locations in which reported HIV prevalence and incidence is among the highest in the world. In Mozambique, the CPPE team supports HIV prevention and surveillance components of the Chókwe Health Demographic Surveillance System (CHDSS). CHDSS conducts annual census updates including vital events on 95,000 residents of Chókwe district. Beginning in 2014, home-based HIV testing and counseling (HTC) was integrated within annual rounds of health-demographic surveillance; in 2015, CHDSS was approved to implement HIV clinical surveillance of residents who tested HIV-positive. In Swaziland, the combination prevention team supports an integrated community-based HTC, HIV care, and linkage-case-management program (CommLink). CommLink has been implemented since June 2015 to improve early enrollment and retention in HIV care among persons diagnosed in community settings.

Proposed Initial Projects: The EIS Officer will be provided with a CHDSS dataset to begin training on epidemiologic data analysis. In addition, the EIS Officer will help staff:

Development, Implementation, & Monitoring

- Design, craft, and obtain Swaziland Ministry of Health and CDC approval of a protocol to evaluate the effectiveness of CommLink to improve early enrollment and retention in HIV care in Swaziland.
- Write manuals of standard operating procedures (SOP) for the CommLink protocol and CHDSS HIV clinical surveillance.
- Train local staff on SOP manuals, and help oversee data abstractions at HIV care and treatment sites in Swaziland and Mozambique.
- Conduct monitoring visits to help ensure that programs and evaluations are conducted in accordance with protocols and standard operating procedures.

Data Analyses and Dissemination of Findings

- Analyze data on linkage, retention in HIV care, and HIV clinical outcomes on > 4,000 Chókwe District residents newly HIV diagnosed in the first three rounds of CHDSS.
- Analyze linkage and retention data collected as part of the CommLink program-evaluation protocol.
- Prepare abstracts and present findings at meetings and conferences.
- Prepare reports to the Ministry of Health and manuscripts intended for peer-reviewed publication.

Scaling-up Delivery of Evidence-based Interventions

- Prepare concept notes, presentations, and reports to help change policies or programs to support delivery and scale-up of evidence-based HIV-care linkage and retention interventions.

Proposed Surveillance Projects: The EIS officer will conduct an evaluation of CHDSS HIV clinical surveillance. The EIS officer will evaluate the completeness and validity of data recorded on follow-up linkage program registers and electronic HIV medical records in one or more CHDSS HIV care and treatment sites.

Range of Opportunities: HIV prevention and care and treatment branches offer a well-rounded experience in designing, implementing, and analyzing data and disseminating findings from combination-prevention program evaluations involving HTC, linkage-to-care, and retention interventions. The EIS officer will have extensive opportunities to develop technical expertise in HIV prevention, care, and treatment, and program-evaluation protocol design, research implementation, and data management, analysis, and dissemination.

Position Strengths: This position will provide meaningful international experience in designing and implementing combined HIV prevention, care, and treatment program evaluations, and analyzing data from large community-based HTC, linkage-to-care, and HIV care and treatment programs implemented in Swaziland and Southern Mozambique.

Special Skills Useful for this Position: This position requires excellent skills in verbal and written communication and interest in helping conceive and write epidemiologic protocols, standard operating procedures, abstracts, and manuscripts, and conducting data analyses using SAS, SPSS, STATA, or R. EIS officers must be available to travel and live in resource-limited settings for extended periods, and work effectively with diverse and multicultural groups.

Available Data: Demographic, behavioral, laboratory, and clinical data are anticipated to be available on over 4,000 newly HIV diagnosed persons participating in cross-sectional, serial cross-sectional, and longitudinal observation cohort research designs.

Recent Publications: MacKellar DA, Williams D, Storer N, et al. Enrollment in HIV care two years after HIV diagnosis in the Kingdom of Swaziland: An evaluation of a national program of new linkage procedures. PLoS ONE 11(2): doi:10.1371/journal.pone.0150086.

Auld AF, Shiraishi RW, Mbofana F, et al. Lower levels of antiretroviral therapy enrollment among men with HIV compared with women – 12 countries, 2002-2013. MMWR. 2015;64:1281-1286.

Domestic Travel: 0% **International Travel:** 30%

Available Support: The EIS officer will work with a multi-disciplinary team of epidemiologists, medical officers, health scientists, and laboratorians based within HIV prevention, care and treatment, and international laboratory branches at DGHT. DGHT offers additional support across a range of technical areas, including biostatistics, maternal and child health, and health economics.

Consultant: Robert Nelson, MPH, Health Scientist

Division of Global HIV and Tuberculosis/International Laboratory Branch

CGH-DGHT-ILB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Global HIV and Tuberculosis/International Laboratory Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Andrea Kim, PhD, MPH, (EIS 2004), Deputy Chief of Science, aakim@cdc.gov

Secondary Supervisor: Heather Alexander, PhD, Team Lead, drz5@cdc.gov

Secondary Supervisor: Bharat Parekh, PhD, Team Lead, bsp1@cdc.gov

Background: Core to CDC's role is to detect and respond to new and emerging health threats, tackle the biggest public health problems that cause significant morbidity and mortality, and translate science into action to prevent and treat disease. For three decades, HIV has threatened the lives of individuals across the globe. In 2014, there were 37 million people living with HIV (PLHIV), and since 2000, 25 million people had died from the disease. Access to life-saving treatment for HIV has increased substantially over the last few years resulting in millions of lives saved, yet the public health impact has been limited given that only 40% of PLHIV were receiving treatment in 2015. In efforts to control the HIV pandemic, the Joint United Nations Program on HIV/AIDS (UNAIDS) has called for countries to reach the following 90-90-90 metrics by 2020: 90% of PLHIV to know their HIV status, 90% of PLHIV who know their status to receive life-saving treatment, and 90% of PLHIV on treatment to have suppressed viral load.

Clinical laboratory services are an essential component of disease prevention and control, contributing to diagnosis, management, and surveillance. Understanding the interdependence between laboratory medicine and HIV surveillance is critical to ensuring maximum public health impact of global initiatives to reverse the HIV pandemic. This EIS position will provide a unique experience to be trained on a core strength of CDC, the epidemiological intersection between surveillance and laboratory medicine, in efforts to achieve the UNAIDS 90-90-90 targets for epidemic control.

Proposed Initial Projects: As countries scale-up HIV testing and treatment programs to reach universal awareness of HIV serostatus and treatment, laboratory systems to monitor the "treatment cascade" from HIV diagnosis, linkage to care, treatment, and viral suppression offer a unique alternative to monitoring the cascade via overwhelmed provider-based systems. The officer will develop protocols and analyze data from lab-based HIV case-reporting systems to evaluate the cascade in the Caribbean, Zanzibar, and/or Kenya.

In 2015, up to 70,000 persons may have been misdiagnosed with or without HIV infection, highlighting an important public health challenge to the global response to HIV. To address this issue, the officer will lead a multi-country evaluation of the prevalence of HIV misdiagnosis in clinical settings, the results of which will be used to directly improve HIV services.

The rate of new HIV infections in a population provides a direct measure of the impact of interventions to prevent HIV transmission, yet it is difficult to measure. The officer will evaluate and publish on laboratory approaches for estimating HIV incidence in the population.

A number of HIV drug resistance (HIVDR) surveillance activities are underway in treated populations to inform progress towards suppression of HIV in the population. The officer will develop protocols, analyze, and publish data on HIVDR in one country.

Proposed Surveillance Projects: Evaluation of a national HIV surveillance system to monitor the treatment cascade through laboratory reporting of sentinel events from HIV diagnosis, linkage to care, treatment, and viral suppression.

Range of Opportunities: The EISO will have the opportunity to work closely with other DGHT Branches, including Epidemiology and Surveillance, Prevention, Maternal and Child Health, and Care and Treatment. ILB also has strong partnerships with other Divisions, providing additional opportunities for collaboration, including the Division of Global Health Protection, Division of STD Prevention, and Division of Foodborne, Waterborne, and Environmental Diseases.

Position Strengths: The EISO will become an expert in HIV surveillance and epidemiology in the context of laboratory systems, their linkages to electronic medical records, and to other national surveillance systems. This position will contribute directly to combating one of the world's most important public health challenges, HIV.

Special Skills Useful for this Position: This position requires excellent verbal and written communication skills, the ability to work with diverse and multicultural groups, and flexibility. Experience in data analysis is recommended but not required.

Available Data: Multiple databases from countries exist for the EIS officer to analyze. Examples include clinical laboratory data from Malawi, viral load and HIV drug resistance data from various countries in sub-Saharan Africa, recent infection data from various countries in sub-Saharan Africa and South East Asia. All available data have received approval for secondary analysis from the Center for Global Health Associate Director for Science.

Recent Publications: Progress in reversing the HIV epidemic through intensified access to ART: results from a nationally representative survey in Kenya. PLoS One. 2016

Scale-up of HIV Viral Load Monitoring - Seven Sub-Saharan African Countries. MMWR Morb Mortal Wkly Rep. 2015

Access and Quality of HIV-Related Point-of-Care Diagnostic Testing in Global Health Programs. Clin Infect Dis. 2015

Prevalence of transmitted HIV-1 drug resistance among young adults attending HIV testing clinics in Kigali, Rwanda. Antivir Ther. 2015

A Comparison of South African National HIV Incidence Estimates: A Critical Appraisal of Different Methods. PLoS One. 2015

Domestic Travel: 0% **International Travel:** 20%

Available Support: The EISO will work with a multi-disciplinary team of health scientists, clinicians, microbiologists, and epidemiologists. The EISO will also have access to statisticians.

Officer Projects: NA

Officer Recent Publications: NA

Consultant: John Nkengasong, PhD, Branch Chief, jcn5@cdc.gov

Consultant: Chunfu Yang, PhD, Team lead, cxy0@cdc.gov

Consultant: Peter Minchella, PhD, LLS fellow

Consultant: Hammad Ali, MD, (EIS 2015), EIS Officer

Consultant: Joyce Neal, PhD, (EIS 1992), Epidemiologist

Consultant: Andrew Voetsch, PhD, (EIS 2005), Team Lead

Consultant: Mahesh Swaminathan, MD, (EIS 2010), Team Lead

Consultant: Wolfgang Hladik, MD, (EIS 1999), Team Lead

Consultant: Dita Broz, PhD, (EIS 2009), Epidemiologist

Consultant: Neha Shah, MD, (EIS 2007), Medical Officer

Consultant: Christine Mattson, PhD, (EIS 2007), Epidemiologist

Consultant: Anne McIntyre, PhD, (EIS 2007), Epidemiologist

Consultant: Kimberly Marsh, PhD, UNAIDS Technical Advisor, marshk@unaids.org

Consultant: Txema Calleja, MD, WHO Technical Advisor

Consultant: Kevin De Cock, MD, (EIS 1986), Country Director

Consultant: RJ Simonds, MD, (EIS 1990), Regional Associate Director

Division of Global HIV and Tuberculosis/Maternal and Child Health Branch

CGH-DGHT-MCHB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Global HIV and Tuberculosis/Maternal and Child Health Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Sara Forhan, MD, MPH, (EIS 2007), Medical Officer, sforhan@cdc.gov

Secondary Supervisor: Kelsey Mirkovic, PhD, (EIS 2013), Health Scientist

Secondary Supervisor: Monita Patel, PhD, (EIS 2014), Epidemiologist

Background: The Maternal and Child Health (MCH) Branch was established in 2010 to focus on the unique health needs of HIV-infected pregnant and breastfeeding women, their infants, and HIV-infected children. The MCH Branch has two teams (Maternal and Infant HIV [MIH] team and Pediatric and Adolescent HIV [PAH] team); team members collaborate to support the implementation of effective HIV programs for HIV-infected maternal and pediatric populations in resource-limited settings—primarily in sub-Saharan Africa—under the President’s Emergency Plan for AIDS Relief (PEPFAR). This branch-level assignment offers an EIS Officer the opportunity to work with both teams to develop expertise in technical and programmatic issues related to international prevention of mother-to-child transmission (PMTCT) of HIV and pediatric/adolescent HIV care and treatment. The EIS Officer’s MCH Branch experiences will provide him/her with in-depth understanding of HIV surveillance, testing and counseling, antiretroviral therapy, viral load (VL) monitoring, operations research, and program monitoring and evaluation.

Proposed Initial Projects: (1) Analysis of data collected in the Pediatric Enhanced Surveillance Study in South Africa; (2) Participation in a retrospective study of HIV-infected children in Rwanda.

Multiple opportunities for future projects exist depending on the interests of the EIS Officer and discussions with his/her supervisors. Among the options are to: (1) Assess VL testing implementation and outcomes among children and pregnant women—Kenya; (2) Assess roll-out of universal ART for pregnant/breastfeeding women (Option B+)—Cameroon and Cote d’Ivoire; (3) Evaluate impact of a “test and start” approach to antiretroviral provision for all HIV-infected children—Zambia, Uganda, and Ethiopia; (4) Assess HIV drug resistance among children; (5) Support implementation of provider-initiated testing and counseling in select sites—Namibia; (6) Analyze data collected in the Pediatric Enhanced Surveillance Study—South Africa; (7) Develop standardized assessment for evaluation of causes of virologic failure in children—Uganda; (8) Analyze electronic programmatic data, including HIV testing, TB, and care and treatment data—Botswana; (9) Assessment of PMTCT M&E systems for cohort monitoring and development of clinical cascade—selected PEPFAR countries.

Proposed Surveillance Projects: Surveillance evaluation on one of the following systems: (1) Evaluation of pediatric HIV case surveillance in Swaziland; (2) Evaluation of the utility of routine PMTCT data for sentinel surveillance in a selected PEPFAR-supported country.

Range of Opportunities: The EIS Officer will have opportunities to develop protocols, implement studies, collect and analyze data, and present and publish findings; actively collaborate with other DGHT branches; obtain health diplomacy experience through interactions with in-country public health leaders, ministries of health, and global public health agencies; and participate in both domestic and international Epi-Aids.

Position Strengths: Strengths include opportunities to gain public health experience working in urban and rural international settings, to interface with in-country public health leaders and ministries of health, and to work on an array of activities that impact the health and quality of life of HIV-infected women and children in resource-limited settings.

Special Skills Useful for this Position: This position requires flexibility, excellent verbal and written communication skills, and the ability to work with diverse and multicultural groups in resource-limited international settings. Patience and a well-developed sense of humor are must-have attributes. Fluency in other languages, particularly French, Portuguese, and Spanish, is invaluable, but not necessary.

Available Data: PEPFAR program data including monitoring, evaluation, and reported indicator data, site quality assessment data, and expenditure analysis data. Additional enhanced monitoring data and HIV Impact Assessment

surveillance datasets may be available.

Recent Publications: • Dinh TH, et al. Impact of Maternal HIV Seroconversion during Pregnancy on Early Mother to Child Transmission of HIV (MTCT) Measured at 4-8 Weeks Postpartum in South Africa 2011-2012: A National Population-Based Evaluation. PLoS ONE 2015

• Date A, Modi S. TB Screening Among People Living With HIV/AIDS in Resource-Limited Settings. J Acquir Immune Defic Syndr 2015

• Briggs MA, Emerson C, Modi S, et al. Use of Isoniazid Preventive Therapy for Tuberculosis Prophylaxis Among People Living With HIV/AIDS: A Review of the Literature. J Acquir Immune Defic Syndr 2015

Domestic Travel: 0% **International Travel:** 30%

Available Support: The EIS Officer will work with MCH Branch members--experienced public health physicians, doctoral-level epidemiologists, pharmacologist/laboratorians, and health scientists who have a wide range of domestic and international experience, including public health program implementation, epidemiology, clinical practice, and field investigations. Our MCH Branch EIS Officer will have strong support from DGHT statisticians and strategic information experts.

Current/Recent EIS Officer: James Houston, MD, MPH, (EIS 2011), Medical Officer

Officer Projects: • Evaluation of outcomes of TB preventive therapy in HIV-infected children—Nairobi, Kenya;

• Evaluation of HIV viral load outcomes and prevalence of HIV drug resistance in children taking antiretroviral medications—Mozambique;

• Investigation of risk factors for death and diarrheal disease—Botswana;

• Evaluation of Antenatal Care Sentinel Surveillance system—Angola.

Officer Recent Publications: Houston JC, et al. Impact of an innovative approach to prevent mother-to-child transmission of HIV — Malawi, July 2011– September 2012. MMWR; March 1 2013.

Presentations:

• “Performance of HIV viral load with dried blood spots in children on ART in Mozambique”. CROI, Seattle, WA, February 23-26, 2015.

• “Tuberculosis burden is a barrier to starting isoniazid preventive therapy in HIV-infected children enrolled in care”. International AIDS (IAS) Conference, Kuala Lumpur, 2013. (IAS TB/HIV Research Prize: Award for young or established researchers--best abstract related to TB/HIV co-infection or operational effectiveness of implementing core TB/HIV collaborative services).

• “Isoniazid Preventive Therapy in HIV-infected Children in Nairobi, Kenya”. 43rd Annual Union World Conference on Lung Health, Kuala Lumpur, November 13-17, 2012.

• “Linked Testing Using Rapid HIV Tests for Antenatal Care Sentinel Surveillance in Resource-Limited Settings: Evidence from Angola’s Experience in 2009”. 61st Annual EIS Conference, Atlanta, GA, April 16-20, 2012.

Consultant: Surbhi Modi, MD, MPH, (EIS 2008), Medical Officer

Consultant: Emilia "Molly" Rivadeneira, MD, Medical Officer

Consultant: R.J. Simonds, MD, (EIS 1990), Medical Officer

Division of Parasitic Diseases and Malaria/Malaria Branch

CGH-DPDM-MB-GA-2016-01 Positions: 2

Agency Name: CDC

Division/Branch/Team/Section: Division of Parasitic Diseases and Malaria/Malaria Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Michael Lynch, MD, MPH, (EIS 2002), medical officer, mlynch1@cdc.gov

Primary Supervisor: Lauren Lewis, MD, MPH, (EIS 1999), medical officer, lwb6@cdc.gov

Secondary Supervisor: Meghna Desai, PhD, MPH, epidemiologist, mud8@cdc.gov

Secondary Supervisor: Eric Halsey, MD, medical officer, ycw8@cdc.gov

Background: CDC’s Malaria Branch is at the forefront of global malaria control efforts, working collaboratively with domestic, other US Government, and international organizations. The Malaria Branch has four units: the Program Implementation, Strategic Applied Sciences, Laboratory Research and Development, and Domestic Response Units.

Units have a diverse set of public health professionals: epidemiologists, medical officers, and laboratory scientists, and program services officers, who work on projects that often bridge across units, and across other branches at CDC including the Entomology Branch. As key implementers of the President's Malaria Initiative (PMI), the branch leads evaluations to monitor antimalarial drug efficacy, develop and evaluate new malaria diagnostics, and to design strategies to assist in the roll-out of malaria interventions such as community-based malaria case management and intermittent preventive treatment of malaria in pregnancy. Malaria Branch research focuses on the development of new tools to control malaria and to progress to elimination, new strategies to reduce malaria in pregnancy, new diagnostics, malaria vaccine and treatment of malaria, testing the RTS,S malaria vaccine, strategies to reduce malaria transmission, and strategies to improve health worker performance. The Branch also develops US guidelines for malaria prophylaxis and case management, and does surveillance, including molecular surveillance for drug resistance, among malaria cases diagnosed in the US.

Major initiatives to control malaria, such as the PMI in Africa and Asia, and the Amazon Malaria Initiative (AMI) in South and Central America, offer unique opportunities for EIS officers to monitor intervention uptake, develop new policies, improve public health programs, and assess impact in different regions of the world. Our long-standing collaboration with research institutions in malaria endemic countries (Kenya, Malawi, Tanzania, Uganda), likewise offer unique overseas research experiences. Opportunities to work on malaria elimination activities are available through our work in Hispaniola.

Proposed Initial Projects: Analysis of Demographic and Health Survey data to look at seasonal malaria trends, Senegal. Analysis pairing entomological data and epidemiological data from 20 surveillance sites, Senegal. Evaluation of molecular methods for malaria diagnosis, Brazil.

Evaluation of the prevalence of artemisinin-resistance genes, Latin America.

Evaluation of malaria specific, health facility level surveillance training and supportive supervision to improve data quality, Kenya

Longitudinal analysis of cross-sectional bednet datasets to assess the impact of bednets over time

Proposed Surveillance Projects: (a) US National Malaria Surveillance System with the purpose of providing recommendations to improve the usefulness of the data it collects; (b) Evaluation of routine malaria surveillance and epidemic surveillance sites in Senegal; (c) Evaluate utility of routine surveillance to monitor the impact of vector control activities in Uganda; (d) Use fever study data to evaluate routine surveillance systems in Kenya

Range of Opportunities: Short and long-term projects are available with topics ranging from domestic malaria to international implementation, surveillance/monitoring/evaluation, and operational research. The Malaria Branch has activities in Africa, the Americas, and Asia. We offer experience in general epidemiology, and its interaction with laboratory sciences and entomology. Opportunities frequently arise to coauthor book chapters and write review articles and other short communications. Officers have the opportunity to respond to public inquiries regarding malaria prevention and case management in the US, including investigation of malaria outbreaks.

Position Strengths: The Malaria Branch staff has solid subject matter expertise in malaria. A majority of the epidemiologists are EIS alumni familiar with the educational objectives of EIS. The Branch has a long history of successfully supervising EIS officers, and values the contribution of its officers. The diversity of projects and international settings allows flexibility in shaping this position to meet the interests of the incoming EISOs.

Special Skills Useful for this Position: Knowledge of foreign languages (e.g., French, Portuguese, and Spanish) while not required, is an asset for this position, as it will allow the EIS officer to work in some international settings with more confidence.

Available Data: (a) Demographic and Health Survey data in Senegal and other countries, (b) US National Malaria Surveillance System Data, (d) US Health Care Utilization Program Data

Recent Publications: Desai, M et al. Impact of Sulfadoxine-Pyrimethamine Resistance on Effectiveness of Intermittent Preventive Therapy for Malaria in Pregnancy. *Clin Infect Dis.* 2016;62(3):323-33.

Bhatt S...Lynch M, et al. The effect of malaria control on Plasmodium falciparum in Africa, 2000-2015. *Nature.* 2015;8;526(7572):207-11.

The RTS,S Clinical Trials Partnership. Efficacy and safety of RTS,S/AS01 malaria vaccine with or without booster dose in children in Africa. *Lancet* 2015;386(9988):31-45.

Domestic Travel: 10% **International Travel:** 30%

Available Support: Statistical support is available through biostatisticians in the Data Management Group of the Division of Parasitic Diseases and Malaria

Current/Recent EIS Officer: Ruth Namuyinga, MD, MPH, (EIS 2014)

Current/Recent EIS Officer: Nelli Westercamp, PhD, MPH, MBA, (EIS 2014)

Current/Recent EIS Officer: Anna Minta, MD, MPH, (EIS 2015)

Current/Recent EIS Officer: Megumi Itoh, MD, (EIS 2015)

Officer Projects: Monitoring chloroquine resistance, Haiti

Evaluate malaria surveillance, Uganda, Guinea Bissau, Malawi, Rwanda

Treatment efficacy studies, Kenya, Ethiopia, Brazil

Assessment of nutritional status on RTS,S vaccine effectiveness

Evaluate different regimens for intermittent preventive treatment of malaria in pregnancy, Malawi

Update CDC guidelines for treatment of malaria in the US

Officer Recent Publications: Plucinski MM, Halsey ES, McElroy PD, Kachur SP, et al. Effect of the Ebola-virus-disease epidemic on malaria case management in Guinea. *Lancet Infect Dis.* 2015;15(9):1017-23Westercamp N and P. Arguin. Malaria chemoprophylaxis: a proven public health intervention for international travelers. *Travel Med Infect Dis* 2015 Jan-Feb; 13(1): 8-9.Landman KZ, et al. Adherence to malaria prophylaxis among Peace Corps Volunteers in Africa, 2013. *Travel Med Infect Dis* 2015 Jan-Feb; 13(1):61-8.Paczkowski MM, et al. Update on delayed hemolysis after parenteral artesunate therapy for malaria — United States, 2008 and 2013. *MMWR* 2014 Aug 29;83(34):753-5.Novel Mutation in Cytochrome B of Plasmodium falciparum in One of Two Atovaquone-Proguanil Treatment Failures in Travelers Returning From Same Site in Nigeria. Plucinski MM, et al. *Open Forum Infect Dis.* 2014 Aug 5;1(2):ofu059. doi: 10.1093/ofid/ofu059.Evaluation of a universal coverage bed net distribution campaign in four districts in Mozambique. Plucinski MM, et al. *J. Malar J.* 2014 Nov 5;13:427. doi: 10.1186/1475-2875-13-427**Consultant:** Paul Arguin, MD, (EIS 1997)**Consultant:** Patrick Kachur, MD, (EIS 1993)**Consultant:** Mary Hamel, MD, (EIS 1995)**Consultant:** Peter McElroy, PhD, MPH, (EIS 1999)**Consultant:** Micheal Aidoo, PhD**Consultant:** Achuyt Bhattarai, MD, (EIS 2008)**Consultant:** Michelle Chang, MD, (EIS 2003)**Consultant:** Jimmie Hwang, MD, MPH, (EIS 2007)**Consultant:** Kimberly Mace, PhD, (EIS 2009)**Consultant:** John Painter, DVM, MS, (EIS 1999)**Consultant:** Mateusz Plucinski, PhD, MPH, (EIS 2012)**Consultant:** Alex Rowe, MD, MPH, (EIS 1994)**Consultant:** Aaron Samuels, MD, (EIS 2010)**Consultant:** Laura Steinhardt, PhD, (EIS 2010)**Consultant:** Timothy Styles, MD, MPH, (EIS 2011)**Consultant:** Steve Yoon, ScD, MPH, (EIS 1996)**Consultant:** Alexandre Macedo de Oliveira, MD, PhD, (EIS 2002)**Consultant:** Julie Gutman, MD, MPH**Consultant:** Katherine Tan, MD, MPH, (EIS 2003)**Division of Parasitic Diseases and Malaria/Parasitic Diseases Branch****CGH-DPDM-PDB-GA-2016-01****Agency Name:** CDC**Division/Branch/Team/Section:** Division of Parasitic Diseases and Malaria/Parasitic Diseases Branch**Physical Address:** Atlanta, Georgia**Primary Supervisor:** Francisca Abanyie, MD, MPH, (EIS 2012), Medical Epidemiologist, why6@cdc.gov**Secondary Supervisor:** LeAnne Fox, MD, MPH, (EIS 2002), Medical Officer, lff4@cdc.gov**Secondary Supervisor:** Kimberly Won, MPH, Health Scientist, kfw7@cdc.gov

Background: EIS officers in this Branch have a wide range of opportunities to conduct studies in a supportive atmosphere, both in the United States and overseas. Branch staff members have interests in onchocerciasis, lymphatic filariasis, soil-transmitted helminth infections, schistosomiasis, American trypanosomiasis, babesiosis, cyclosporiasis, toxoplasmosis, leishmaniasis, cysticercosis, and various emerging and zoonotic parasitic infections. Branch members also work on trachoma elimination programs since these programs have features in common with programs to eliminate and control neglected tropical diseases (NTDs). Trichinella, Babesia, and Cyclospora infections are nationally notifiable diseases for which the branch conducts surveillance. Telephone consultations with clinicians and public health officials and the CDC Drug Service provide officers opportunities to develop expertise in the diagnosis and treatment of diseases only rarely encountered in clinical practice in the United States. The Branch works with the CDC field station in Kenya, and EIS officers are encouraged to participate in studies there. Opportunities exist to work closely with a wide variety of scientists, including statisticians, epidemiologists, laboratory scientists, and entomologists, as well as medical officers and veterinary officers.

Proposed Initial Projects: Assist WHO and country neglected tropical disease (NTD) programs with development and piloting of tools to assess the quality of lymphatic filariasis morbidity management and disability prevention (MMDP) services. Evaluation of impact for implementation for onchocerciasis elimination in Africa: Assessment of tools in hypoendemic settings. Develop survey or on-going surveillance method for confirming that MDA is not needed in areas considered non-endemic for LF in initial mapping. Develop a stop-MDA survey that will allow the coordinated evaluation of both onchocerciasis and lymphatic filariasis (LF) in Africa. Conduct survey of obstetricians about trichomoniasis.

Proposed Surveillance Projects: Evaluate US surveillance system for Babesiosis using National Notifiable Disease Surveillance System.

Range of Opportunities: The officer can expect to work in both the domestic and international setting on a wide range of diseases. They can be involved in projects that involve laboratory and epidemiologic monitoring tool development for disease elimination programs, the integration of NTD programs, the improvement of our understanding of neglected parasitic diseases in the United States, and communicating with clinicians and public health officials about the epidemiology and diagnosis of parasitic diseases. They can also be involved in the investigation of transplant and transfusion-transmitted parasitic infections as well as outbreaks of parasitic diseases.

Position Strengths: The position provides the opportunity to interact with experts on a wide variety of diseases in both international and domestic settings and the ability to select projects that will meet one's individualized educational goals and all of the EIS core activities of learning.

Special Skills Useful for this Position: The following skills would be useful, though not required, for this position: 1) ability to work in a foreign language, particularly French, 2) previous experience (work, study, volunteer) in an international setting, and 3) previous experience with statistical analysis software.

Available Data: Data are readily available for analysis of antigen and antibody responses in lymphatic filariasis endemic and non-endemic districts in Bangladesh. NHANES Toxocara serologic testing performed in our laboratory.

Recent Publications: 2013 Multistate Outbreaks of Cyclospora cayetanensis Infections Associated with Fresh Produce: Focus on the Texas Investigations (Epidemiology and Infection); Donor-derived Strongyloides stercoralis infection in solid organ transplant recipients in the United States, 2009-2013 in AJT; Ascariasis in humans and pigs on small-scale farms, Maine, USA, 2010-2013. Emerg Infect Dis; Case Report: Evidence of Autochthonous Chagas Disease in Southeastern Texas. Am J Trop Med Hyg; The Effect of a Health Communication Campaign on Compliance with Mass Drug Administration for Schistosomiasis Control in Western Kenya – the SCORE Project. Am J Trop Med Hyg.

Domestic Travel: 5% **International Travel:** 20%

Available Support: The EIS officer can expect to work with statisticians, epidemiologists, laboratory scientists, entomologists and health communications personnel in addition to medical and veterinary officers.

Current/Recent EIS Officer: Heather Paulin, (EIS 2014), Medical Officer

Current/Recent EIS Officer: Anita Sircar, MD, MPH, (EIS 2015), EIS Officer, yxi6@cdc.gov

Officer Projects: Officers have designed, analyzed data, or led implementation of post-mass-drug-administration surveillance and xenomonitoring for lymphatic filariasis (LF), effects of onchocerciasis treatment on LF, assessment of Toxoplasma infection in HSCT recipients, evaluations of schistosomiasis and STH-related morbidity, outbreak investigations of cyclosporiasis, strongyloidiasis, Chagas disease, and babesiosis

Officer Recent Publications: Ocular Toxocariasis: Epidemiologic, Anatomic, and Therapeutic Variations Based in a Survey of Ophthalmic Subspecialists in Ophthalmology; Impact of community-based lymphedema management on perceived disability among patients with lymphatic filariasis in Orissa State, India in PLOSNTDs; Schistosoma mansoni morbidity among school-aged children: a SCORE project in Kenya in American Journal of Tropical Medicine and Hygiene (AJTMH); Primary amebic meningoencephalitis in Florida: a case report and epidemiological review of

Florida cases in Journal of Environmental Health; Balamuthia mandrillaris transmitted through organ transplantation—Mississippi, 2009 in MMWR; A laboratory-based surveillance system for W. bancrofti in Togo: a practical model for resource-poor settings in AJTMH; Ocular Toxocariasis -United States, 2009-2010 in MMWR; The United States Trypanosoma cruzi Infection Study: Evidence for vector-borne transmission of the parasite that causes Chagas disease among United States blood donors in Transfusion; Transmission of Strongyloides stercoralis Through Transplantation of Solid Organs — Pennsylvania, 2012 in MMWR; Outbreaks of Cyclosporiasis — United States, June–August 2013 in MMWR; Strongyloidiasis in Kentucky and Florida, MMWR; Single Donor-Derived Strongyloidiasis in Three Solid Organ Transplant Recipients: Case Series and Review of the Literature in American Journal of Transplantation (AJT); Trichinellosis Surveillance — United States, 2008–2012 in MMWR.

Consultant: Paul Cantey, (EIS 2007), Medical Officer

Consultant: Julie Harris, (EIS 2007), Epidemiologist

Consultant: Susan Montgomery, (EIS 2002), Team Lead

Consultant: Barbara Herwaldt, (EIS 1989), Medical Officer

Consultant: Jeffrey Jones, (EIS 1987), Medical Officer

Consultant: Caitlin Worrell, Public Health Advisor

Consultant: Elizabeth Gray, Public Health Advisor

Consultant: Christine Dubray, MD, MSc, (EIS 2006), Medical Epidemiologist, ffg5@cdc.gov

Global Immunization Division/Accelerated Disease Control and VPD Surveillance Branch and Immunization System Branch

CGH-GID-ACDSB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Global Immunization Division/Accelerated Disease Control and VPD Surveillance Branch and Immunization System Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Rania Tohme, MD, MPH, (EIS 2009), Team Lead, ihb1@cdc.gov

Secondary Supervisor: Lee Hampton, MD, MSc, (EIS 2009), Medical Officer, euf0@cdc.gov

Background: GID focuses on addressing key global immunization opportunities and challenges, including controlling, eliminating, and eradicating vaccine preventable diseases (VPDs); strengthening country ownership, policy development, and partnership initiatives; strengthening VPD surveillance and immunization information; ensuring quality of vaccination delivery to achieve high and equitable coverage, and conducting and promoting research, innovation and evaluation to provide evidence for optimal policy and program implementation. GID leads CDC's efforts on the global eradication of polio and elimination of measles, rubella and neonatal tetanus; and supports global control of hepatitis B through immunization.

GID has 4 branches: Polio Eradication Branch (PEB), Accelerated Disease Control and VPD Surveillance Branch (ADCBSB), Immunization Systems Branch (ISB), and Strategic Information and Workforce Development Branch (SIWDB). It has >230 staff, including 200 full-time staff based in Atlanta; 3 EIS officers; and a network of field assignees in multiple countries.

The EIS Officer will have a primary supervisor in ADCBSB and a secondary supervisor in ISB. Supervisors will ensure that the Officer will have support throughout the division in identifying investigations and developing projects that are tailored to the Officer's area of interest, and provide experience and develop skills in the full range of global immunization activities. International travel will be required to assist in surveillance, outbreak investigation, disease control activities, and research projects.

For more information about GID's work and the unique opportunities available for EIS officers, please visit: <http://www.cdc.gov/globalhealth/immunization/>

Proposed Initial Projects: - Investigate a VPD (measles, rubella, diphtheria) outbreak in an international setting
- Conduct hepatitis B serosurveys to establish burden of perinatal transmission (3 African countries)
- Analyze measles, rubella, tetanus and diphtheria serologic data from integrated serosurveillance using multiplex bead

assay (Mozambique, Haiti or Solomon Islands)

- Evaluate the impact of oral cholera vaccine use in endemic and outbreak settings
- Analyze 2015 global immunization coverage estimates (MMWR article)
- Conduct an early rapid assessment of a vaccine introduction in the 2nd year of life (Malawi)
- Conduct survey on acceptability of vaccination against Ebola viral disease (Ebola at-risk countries)
- Assess vaccine hesitancy (Kenya)
- Analyze household-level survey on vaccine administration, missed opportunities for vaccine co-administration, and catch-up vaccination opportunities (DRC)
- Evaluate role of private sector in delivery of immunizations in developing countries
- Participate in country evaluation of impact of wide-age range MR campaigns on measles and rubella.
- Evaluate regional MenAfriVac campaign impact on non-neonatal tetanus burden: medical records review and comparison to surveillance reporting (Uganda)
- Economic evaluation of introducing tetanus booster doses into school immunization programs vs. sustaining TT campaigns for women and cost of tetanus disease in men and older children (Eastern or Southern Africa country)
- Immunological study of kinetics of tetanus booster response in persons aged 10-49 years with varied infant vaccination history (Eastern or Southern Africa country)

Proposed Surveillance Projects: - Conduct an evaluation of existing VPD surveillance systems (low to middle income countries)

- Evaluate enteric fever (typhoid and paratyphoid) surveillance systems in endemic countries (Nepal, Bangladesh, Pakistan, India)
- Establish a congenital rubella syndrome surveillance system (priority country)

Range of Opportunities: This position offers a unique opportunity to gain extensive international experience and conduct research and program evaluations with significant public health impact. Opportunities include assisting with VPD surveillance and outbreak response; evaluating new vaccine introduction; monitoring vaccination campaigns; evaluating routine immunization systems; conducting operational research to improve vaccination coverage and decrease the burden of VPDs; and building health system capacity. The EIS officer will also have the opportunity to support the immunization portfolio in the Global Health Security Agenda.

Position Strengths: The position offers a friendly and supportive environment, unique opportunities to develop expertise in the field of VPDs, and chance to work with WHO, UNICEF, and other global partners in important activities such as polio eradication, measles, rubella, and neonatal tetanus elimination, and hepatitis B control. Position includes a wide range of projects in a variety of VPDs and leads to a well-rounded training experience with skills translatable to work in other areas of public health.

Special Skills Useful for this Position: Language skills in French or other foreign languages; flexibility for traveling for up to 6-8 weeks at a time; ability to acclimate to foreign cultures/countries quickly and withstand hardships of the field; work well with others.

Available Data: National immunization coverage surveys, VPD surveillance, seroprevalence studies, and research studies.

Recent Publications: - Combining global elimination of measles and rubella with strengthening of health systems in developing countries. Health Aff. 2016.

- Hepatitis B virus infection among pregnant women in Haiti. J Clin Virol 2016
- Global progress toward rubella and congenital rubella syndrome control and elimination — 2000–2014. MMWR 2015.
- Oral cholera vaccine coverage, barriers to vaccination, and adverse events following vaccination, Haiti, 2013. Emerg Infect Dis. 2015.
- Overview of global, regional, and national routine vaccination coverage trends and growth patterns from 1980 to 2009: implications for vaccine-preventable disease eradication and elimination initiatives. J Infect Dis. 2014

Domestic Travel: 0% **International Travel:** 30%

Available Support: Staff with extensive experience in VPD surveillance, outbreak response, operations research, and health system capacity building. Three statisticians will provide study design and statistical support.

Current/Recent EIS Officer: Michelle Morales, MD, (EIS 2015), yxm5@cdc.gov

Current/Recent EIS Officer: Saleena Subaiya, MD, (EIS 2015), yzv3@cdc.gov

Current/Recent EIS Officer: Jose Hagan, MD, MS, (EIS 2014), esp3@cdc.gov

Current/Recent EIS Officer: Jennifer Harris, PhD, MPH, (EIS 2013), xdd4@cdc.gov

Current/Recent EIS Officer: Carolyn Sein, MD, (EIS 2012), seinc@who.int

Current/Recent EIS Officer: Heather Scobie, PhD, MPH, (EIS 2011), Epidemiologist, vih8@cdc.gov

Officer Projects: - Established congenital rubella syndrome surveillance system (Sudan)

- Assessed private practitioner vaccination practices (India)
- Evaluated hepatitis B birth dose introduction (Sao Tome and Principe, Botswana)
- Investigated measles outbreak (Mongolia)
- Cluster survey after a national vaccination campaign (Kenya)
- Use of mobile-phone messages to improve vaccination coverage (Kenya)

Officer Recent Publications: - Circulating Vaccine-Derived Poliovirus Outbreaks — Five Countries, 2014–2015. MMWR 2016.

- Progress toward polio eradication — worldwide, 2014-2015. MMWR 2015.
- Global Routine Vaccination Coverage, 2014. MMWR 2015.
- Measles Outbreak Associated with Vaccine Failure in Adults — Federated States of Micronesia, February-August 2014. MMWR 2015.
- Implementation of Ebola case-finding using a village chieftaincy taskforce in a remote outbreak — Liberia, 2014. MMWR 2015.
- Development of a District-Level Programmatic Assessment Tool for Risk of Measles Virus Transmission. Risk Analysis 2015.
- Application of the World Health Organization Programmatic Assessment Tool for Risk of Measles Virus Transmission: Lessons Learned from Measles Outbreak in Senegal. Risk Analysis 2015.
- Cluster survey evaluation of measles vaccination campaign — Jharkhand, India, 2012. PLoS One 2015.
- Antecedent causes of a measles resurgence in the Democratic Republic of the Congo. Pan African Medical Journal 2015.
- Needle-free jet injector intradermal delivery of fractional dose inactivated poliovirus vaccine: Association between injection quality and immunogenicity. Vaccine 2015.
- Impact of a targeted typhoid vaccination campaign following cyclone Tomas — Republic of Fiji, 2010. Am Journal of Tropical Medicine Hygiene 2014.
- Maternal, fetal, and neonatal outcomes associated with measles during pregnancy: Namibia, 2009-2010. Clinical Infectious Diseases 2014.

Consultant: Robb Linkins, PhD, MPH, (EIS 1988), Branch Chief, ADCSB, rxl3@cdc.gov

Consultant: Kim Fox, MD, MPH, Branch Chief, ISB, kfox@cdc.gov

Consultant: Eric Mast, MD, MPH, (EIS 1987), Associate Director for Science, GID, eem1@cdc.gov

Consultant: Jim Alexander, MD, MA, (EIS 1989), Science, policy and research coordinator, ADCSB, axj1@cdc.gov

Consultant: Abigail Shefer, MD, MPH, (EIS 1994), Science, policy and research coordinator, ISB, ashefer@cdc.gov

Consultant: David Sniadack, MD, MPH, (EIS 1991), Medical Officer, dhs0@cdc.gov

Consultant: Susan Wang, MD, MPH, (EIS 1996), Medical Officer, sjw8@cdc.gov

Consultant: Ben Dahl, PhD, MPH, Team Lead, bid5@cdc.gov

Consultant: Susan Reef, MD, (EIS 1992), Team Lead, ser2@cdc.gov

Consultant: Terri Hyde, MD, MPH, (EIS 1999), Team Lead, thyde@cdc.gov

Consultant: Laura Conklin, MD, MPH, (EIS 2005), Team Lead, lconklin@cdc.gov

Consultant: Brent Wolff, PhD, Team Lead, brent.wolff@cdc.gov

Consultant: James Goodson, BSN, MPH, (EIS 2006), Epidemiologist, fez9@cdc.gov

Consultant: Heather Scobie, PhD, MPH, (EIS 2011), Epidemiologist, vih8@cdc.gov

Consultant: Christopher Murrill, PhD, MPH, Epidemiologist, csm5@cdc.gov

Consultant: Kashmira Date, MD, MPH, (EIS 2008), Medical Epidemiologist, kdate@cdc.gov

Consultant: Jennie Harris, PhD, (EIS 2013), Epidemiologist, jbharris@cdc.gov

Consultant: Anagha Loharikar, MD, (EIS 2009), Medical Officer, aloharikar@cdc.gov

Consultant: Nandini Sreenivasan, MD, (EIS 2012), Medical Epidemiologist, nsreenivasan@cdc.gov

Consultant: Jenny Walldorf, MD, MSc, (EIS 2009), Medical Officer, jwalldorf@cdc.gov

Consultant: Aaron Wallace, MPH, Epidemiologist, awallace@cdc.gov

Consultant: Lucy Breakwell, PhD, MPH, (EIS 2013), Epidemiologist, xdc3@cdc.gov

Consultant: Margaret Watkins, BSN, MPH, (EIS 1992), Epidemiologist, mwatkins@cdc.gov

Consultant: Kathleen Wannemuehler, PhD, Statistician, kpw9@cdc.gov

Consultant: Howard Gary, PhD, Statistician, hxg1@cdc.gov

Consultant: Jodi Vanden Eng, PhD, Statistician, jev8@cdc.gov

Global Immunization Division/Strategic Information and Work Development Branch and Polio Eradication Branch

CGH-GID-SIWDB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Global Immunization Division/Strategic Information and Work Development Branch and Polio Eradication Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Kristie Clarke, MD, MSc, (EIS 2011), Medical Epidemiologist, vhz9@cdc.gov

Secondary Supervisor: Noha Farag, MD, PhD, (EIS 2010), Medical Epidemiologist

Secondary Supervisor: Chimeremma Nnadi, MD, PhD, (EIS 2012), Medical Epidemiologist

Background: The EISO placed in GID will have the unique opportunity to work on one of the most effective global health missions: vaccination against deadly diseases. The assignment will include opportunities for field work in numerous countries where he/she will collaborate with Ministries of Health and international partners to assist in surveillance, outbreak investigation, disease control activities, and research projects.

GID is focused on addressing key global immunization opportunities and challenges, including controlling, eliminating, and eradicating vaccine preventable diseases (VPDs); strengthening country ownership, policy development, and partnership initiatives for prevention of VPDs; strengthening surveillance and immunization information to prevent, detect and respond to VPDs; and ensuring quality of vaccination delivery to achieve high and equitable coverage. In addition, a foundation of GID's work is to conduct and promote research, innovation and evaluation to provide evidence for optimal policy and program implementation. GID leads CDC's efforts on the global eradication of polio and elimination of measles, rubella and neonatal tetanus; and works jointly with the Division of Viral Hepatitis on global control of hepatitis B through immunization.

GID has 4 branches: Polio Eradication Branch (PEB), Accelerated Disease Control and VPD Surveillance Branch (ADCSB), Immunization Systems Branch (ISB), and Strategic Information and Workforce Development Branch (SIWDB). It has >230 staff, including 200 full-time staff based in Atlanta; 3 EIS officers; and a network of field assignees in multiple countries.

The supervisors will ensure that the Officer has support and opportunities to develop projects that are tailored to the Officer's areas of interest, and provide guidance and skill development in the full range of global immunization activities. For further information: <http://www.cdc.gov/globalhealth/immunization/default.htm>

Proposed Initial Projects: -Conduct immunization data quality assessments in Moldova, Ecuador, or Cambodia

-Assist in projects linking electronic vaccination records to civil registration systems in Kenya and Zambia

-Analyze data collected in a clinical trial of poliovirus immunization

-Evaluate post-campaign monitoring methods for polio supplementary immunization activities

-Evaluate the impact of a microplanning exercise in Cameroon on polio vaccine campaign coverage

-Serve as lead author on an MMWR article on the polio eradication initiative

-Analyze data from a national serosurvey in Lebanon

-Investigate VPD (measles, rubella, diphtheria) outbreaks in an international setting

-Analyze data from a project on tracking missed children in Pakistan

-Identify risk factors affecting seroconversion after measles vaccination in children

-Analyze data from a project on increasing vaccine acceptance in Afghanistan

-Investigate factors leading to improvement of childhood vaccination rates in Madagascar

-Develop complex linked household/ health facility survey methodology to study immunization operations

-Participate in vaccination campaign planning and monitoring

-Design surveys to evaluate vaccination campaigns for polio, measles, and rubella

Proposed Surveillance Projects: -Evaluate polio surveillance systems in endemic, outbreak, and at-risk countries

-Evaluate case-based surveillance for pertussis, diphtheria, and tetanus in India

-Evaluate VPD case reporting and the routine collection of immunization data at health facilities in a priority country in Africa, Europe or Asia

-Evaluate a reporting system for adverse events following immunization

Range of Opportunities: -Be a part of polio eradication!

-Gain significant global health experience, including working with Ministries of Public Health and international

partners

- Assist with VPD surveillance and outbreak responses
- Build immunization system capacity and strengthen immunization workforces globally
- Conduct research activities and programmatic evaluations with significant public health impact
- Monitor vaccination campaigns
- Evaluate routine immunization systems
- Conduct operational research aimed at improving vaccination coverage and decreasing the burden of VPDs

Position Strengths: Supportive environment with great opportunities to be part of polio eradication and strengthening immunization systems around the world. Develop expertise in the field of vaccine preventable diseases and help implement a wide range of projects in a variety of vaccines/diseases leading to a well-rounded training experience as well as skills that are translatable to other areas of public health.

Special Skills Useful for this Position: Analytical skills, including familiarity with statistical software; language skills in French, Spanish, Portuguese or Arabic; ability to work well with others; able to travel for up to 6-8 weeks at a time; able to acclimate to foreign cultures/countries quickly -- be diplomatic and politically sensitive, and able to withstand hardships of the field including remote locations and limited creature comforts.

Available Data: Data are available from vaccine preventable disease surveillance systems, seroprevalence studies, national coverage surveys, national immunization programs, and research studies.

Recent Publications: -Combining Global Elimination Of Measles And Rubella With Strengthening Of Health Systems In Developing Countries. Health Aff. 2016.

-The Global Polio Eradication Initiative: Progress, Lessons Learned, And Polio Legacy Transition Planning. Health Aff. 2016.

-The Challenge of Global Poliomyelitis Eradication. Infect Dis Clin North Am. 2015.

-An economic analysis of poliovirus risk management policy options. BMC Infect Dis. 2015.

-Polio eradication in the World Health Organization African Region, 2008-2012. J Infect Dis. 2014.

-Progress Toward Poliomyelitis Eradication - Pakistan, January 2014-September 2015. MMWR 2015.

Domestic Travel: 5% **International Travel:** 30%

Available Support: GID staff have a wide range of experience in surveillance, outbreak response, operations research, and health system strengthening. Statistical support can be provided by three full-time statisticians in the Division as needed.

Current/Recent EIS Officer: Michelle Morales, MD, (EIS 2015), yxm5@cdc.gov

Current/Recent EIS Officer: Saleena Subaiya, MD, (EIS 2015), yzv3@cdc.gov

Current/Recent EIS Officer: Jose Hagen, MD, MS, (EIS 2014), esp3@cdc.gov

Current/Recent EIS Officer: Edna Moturi, MBChB, MPH, (EIS 2013), moturi@unhcr.org

Current/Recent EIS Officer: Jennie Harris, PhD, (EIS 2013), xdd4@cdc.gov

Officer Projects: -Analysis of time for poliovirus immunization response (Bangladesh)

-Evaluation of VPD surveillance systems (Jordan, India, Lao)

-Establishment of congenital rubella syndrome surveillance system (Sudan)

-Evaluation of Hepatitis B birth vaccination practices (Brazil)

-Measles outbreak investigation (Mongolia)

-Evaluation of text-messaging to improve vaccination coverage (Kenya)

Officer Recent Publications: -Contribution of Contact Sampling in Increasing Sensitivity of Poliovirus Detection during a Polio Outbreak- Somalia, 2013. Under review.

-Diphtheria outbreak in Lao People's Democratic Republic, 2012-2013. In clearance

-Circulating Vaccine-Derived Poliovirus Outbreaks- Five Countries, 2014-2015. MMWR 2016.

-Global Routine Vaccination Coverage, 2014. MMWR 2015.

-Progress Towards Polio Eradication- Worldwide, 2014-2015. MMWR 2015.

-Implementation of Ebola Case-Finding Using a Village Chieftaincy Taskforce in a Remote Outbreak— Liberia, 2014. MMWR 2015.

-Multistate Outbreak of Severe Respiratory Infections among Unaccompanied Children, 2014. Under review.

-Measles Outbreak Associated with Vaccine Failure in Adults--Micronesia, 2014. MMWR 2015.

-Hospitalizations for Respiratory Disease among Unaccompanied Children from Central America, 2014. MMWR 2014.

-Impact of a targeted typhoid vaccination campaign following cyclone Tomas, Fiji, 2010. Am J Trop Med Hyg. 2014.

-Forewarning of poliovirus outbreaks in the Horn of Africa: an assessment of AFP surveillance and routine immunization systems in Kenya. J Infect Dis, 2014.

-Cholera epidemic associated with consumption of unsafe drinking water and street-vended water—Eastern Freetown, Sierra Leone, 2012. Am J Trop Med Hyg. 2014.

-Poliovirus immunity among pregnant females aged 15-44 years, Namibia, 2010. J Infect Dis. 2014.

Consultant: Steve Wassilak, MD, (EIS 1980), SPARC, swg1@cdc.gov

Consultant: Peter Bloland, DVM, MPVM, (EIS 1989), Acting Division Director, pbb1@cdc.gov

Consultant: Gabriel Anaya, MPH, Acting Branch Chief, SIWD, gda1@cdc.gov

Consultant: Ed Maes, PhD, MS, (EIS 1985), Deputy Team Lead, efm1@cdc.gov

Consultant: Adam MacNeil, PhD, MPH, (EIS 2007), Team Lead, aho3@cdc.gov

Consultant: Hardeep Sandhu, MD, MPH, (EIS 2001), Team Lead, hjs3@cdc.gov

Consultant: Yinka Kerr, MSPH, Team Lead, yak2@cdc.gov

Consultant: Abhijeet Anand, MPH, MBBS, (EIS 2005), Team Lead, dvi5@cdc.gov

Consultant: Deblina Datta, MD, (EIS 1999), Medical Officer, skd2@cdc.gov

Consultant: Eric Mast, MD, MPH, (EIS 1987), Associate Director for Science, eem1@cdc.gov

Consultant: Susan Wang, MD, MPH, (EIS 1996), Medical Officer, sjw8@cdc.gov

Consultant: Kathleen Wannemuehler, PhD, Statistician, kpw9@cdc.gov

Consultant: Derek Ehrhardt, MPH, MSN, RN, (EIS 2006), Team Lead, fev1@cdc.gov

Consultant: Allen Craig, MD, (EIS 1995), Team Lead, afc0@cdc.gov

Consultant: John Vertefeuille, PhD, Branch Chief PEB, ski4@cdc.gov

Consultant: Heather Scobie, PhD, (EIS 2011), Epidemiologist, vih8@cdc.gov

Consultant: Louie Rosencrans, MPH, PhD, Epidemiologist, lor1@cdc.gov

Consultant: Jude Tuma, MPH, PhD, Epidemiologist, jut0@cdc.gov

Consultant: Chukwuma (Chuma) Mbaeyi, DDS, MPH, (EIS 2010), Epidemiologist, iyo1@cdc.gov

Consultant: Roodly Archer, PhD, (EIS 2008), Epidemiologist, wea7@cdc.gov

Consultant: Mary Alleman, PhD, Epidemiologist, mea4@cdc.gov

Office of the Director/CHAMPS Team

CGH-OD-CHAMPS-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Office of the Director/CHAMPS Team

Physical Address: Atlanta, Georgia

Primary Supervisor: Dianna Blau, DVM, PhD, (EIS 2008), Science Officer, dblau@cdc.gov

Secondary Supervisor: Pratima Raghunathan, PhD, MPH, (EIS 2000), Deputy Director for Science, pgr4@cdc.gov

Secondary Supervisor: Allan Taylor, MD, MPH, (EIS 2003), Epidemiologist, avt0@cdc.gov

Background: Every year, approximately 5.9 million children under the age of five die, mostly from preventable illnesses including diarrhea, malaria, measles and pneumonia. Currently, South Asia and Sub-Saharan Africa account for 82 percent of under-five child deaths. However, the exact causes are not often clearly understood. The new Child Health and Mortality Prevention Surveillance (CHAMPS) program, funded by the Bill & Melinda Gates Foundation, aims to increase understanding of how, where and why children become ill and die, enabling scientists and public health leaders around the world to take action.

CHAMPS is envisioned to be a long-term surveillance program that will ultimately take place in up to 20 sites throughout South Asia and Sub-Saharan Africa that have high childhood mortality rates (>50 deaths in children under five years of age per 1,000 live births). During the first three years (through June 2018), the CHAMPS program office will be focused primarily on establishing scientific protocols and standard operating procedures for six surveillance sites in sub-Saharan Africa and South Asia.

The CHAMPS Program Office will directly collaborate with government ministries and local stakeholders, providing technical and financial assistance. Cause of death determination will be enhanced through a post-mortem procedure called minimally invasive tissue sampling (MITS). CHAMPS will use social and behavioral science methods to work with communities to ensure cultural sensitivity and buy-in. CHAMPS aims to collect data, facilitate the flow of

information locally and globally to inform public health action, and help improve health outcomes while strengthening public health capacity in developing countries.

The CHAMPS EIS officer will work in a stimulating, multidisciplinary collegial atmosphere within the CHAMPS Program Office based in the Emory Global Health Institute in Atlanta, across the street from the main CDC campus. The CHAMPS EIS officer will have extensive contact and support from a multitude of public health professionals from across the entire agency, including epidemiologists, pediatricians, obstetricians/gynecologists, laboratory scientists, pathologists, behavioral scientists, demographers, maternal and child health specialists, and global health experts.

Proposed Initial Projects: The EIS officer will have the unique opportunity to be involved in multiple aspects of initiating a groundbreaking surveillance program. Ideas for potential projects or activities include: 1) Analysis of cause of death data from pilot study using minimally invasive tissue sampling (MITS) from South Africa; 2) Review, analysis and assessment of existing perinatal death data and pregnancy surveillance in Mozambique; 3) Develop and implement child mortality surveillance standard operating procedures and training for health facilities and communities in CHAMPS sites in Mozambique and South Africa; 4) Analysis of molecular diagnostics (Taqman Array Card) data and contributions to cause of death determinations; 5) Design and conduct CHAMPS Program evaluations based on CHAMPS logic model; and 6) analyze CHAMPS program monitoring indicators and design display of online CHAMPS data display dashboards.

Proposed Surveillance Projects: 1) Evaluation of existing Demographic Surveillance System (DSS) data in Mozambique; 2) Evaluation of proposed CHAMPS under-5 mortality surveillance; 3) Evaluation of proposed CHAMPS pregnancy surveillance.

Range of Opportunities: Our position is unique in that it provides an unparalleled opportunity to be involved during the early stages of a high-profile, multidisciplinary surveillance program, yielding a variety of field experiences, interactions with public health leaders and researchers, and opportunities for analyses and dissemination of findings.

Position Strengths: This dynamic new program offers the opportunity to build an important new global surveillance system while being mentored by renowned public health professionals including Dr. Rob Breiman (EIS 1987, 26 years with CDC and now Emory faculty) and Dr. Jeff Koplan (EIS 1972, former CDC Director, now Emory faculty). This position gives an EIS officer a distinctive, challenging and great learning experience in many aspects of global public health.

Special Skills Useful for this Position: We welcome EISOs who are interested in any aspect of global public health and preventing childhood mortality, regardless of previous experience or background. Global health experience and additional language skills are a plus but not required. EISOs who are flexible, eager to learn, willing to work hard and have a good sense of humor will get the most out of the unique opportunities we provide.

Available Data: During the course of the EIS Officer's tenure, data from mortality surveillance, demographic surveillance, diagnostic and cause of death data from at least two CHAMPS sites will be available. Additionally, through the extensive collaborations with several groups at CDC and Emory, access to a variety of other databases (e.g. NCHS Multiple Cause of Death Database) will be available.

Recent Publications: As this is a new program the EISO will help us draft the high profile and highly anticipated first CHAMPS Program Office publications.

Domestic Travel: 5% **International Travel:** 40%

Available Support: Statistical support through both CDC and Emory statisticians and administrative support is provided by CHAMPS Program Office and CGH Office of the Director.

Officer Projects: This is a new program and new EIS position (but not new EIS supervisor)

Officer Recent Publications: This is a new program and new EIS position

Consultant: Rebecca Levine, PhD, (EIS 2014)

Consultant: LizO'Mara, MPH

Consultant: Rob Breiman, MD, (EIS 1987)

Consultant: Jeff Koplan, MD, (EIS 1972)

Consultant: Diane Morof, MD, (EIS 2009)

Consultant: Florina Serbanescu, MD, (EIS 1992)

Consultant: Michelle Dynes, RN, PhD, (EIS 2013)

Consultant: Howie Goldberg, PhD

Consultant: Sherif Zaki, MD

National Center for Chronic Disease Prevention and Health Promotion

Chronic diseases, such as heart disease, stroke, cancer, diabetes, and arthritis, are the nation's leading causes of death and disability; 86% of our healthcare dollars goes to treatment of chronic diseases. CDC's National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP) is at the forefront of the nation's efforts to prevent and control chronic diseases. NCCDPHP's nine divisions support efforts to prevent chronic diseases and promote health by targeting four key action areas: epidemiology and surveillance; environmental approaches that promote health and support and reinforce healthful behaviors in schools, worksites, and communities; health system interventions to improve the effective delivery and use of clinical and other preventive services; strategies to link community programs to clinical services so that communities support and clinics refer patients to programs that improve management of chronic conditions.

Division of Cancer Prevention and Control/Epidemiology and Applied Research Branch/Epidemiology Team

NCCDPHP-DCPC-EARB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Cancer Prevention and Control/Epidemiology and Applied Research Branch/Epidemiology Team

Physical Address: Atlanta, Georgia

Primary Supervisor: Jun Li, MD, PhD, MPH, (EIS 2006), Epidemiologist, ffa2@cdc.gov

Secondary Supervisor: Loria Pollack, MD, MPH, (EIS 2002)

Secondary Supervisor: Arica White, PhD, MPH, (EIS 2009)

Background: The Division of Cancer Prevention and Control (DCPC) is a leader in nationwide efforts to develop, implement, and promote effective strategies for preventing and controlling cancer. This unique position bridges the Epidemiology and Applied Research Branch's (EARB) multidisciplinary research program with the Cancer Surveillance Branch's (CSB) well-established population-based national cancer registry. Combined efforts of EARB and CSB generate data, evidence and tools essential to public health efforts in cancer prevention and control. We describe and address national and state-specific cancer burden, prevention strategies, disparities, and cancer survivorship. DCPC's teams include epidemiologists, economists, behavioral scientists, medical officers, and communicators who synthesize scientific evidence and evaluate interventions, programs, policy and practice; and provide subject matter expertise to translate research into practice. CSB's National Program of Cancer Registries (NPCR) receives data on more than 1 million cancer cases and produces the U.S. Cancer Statistics annually. EARB does independent and innovative research and provides technical, scientific and translational services to other initiatives within the Division, including DCPC's National Breast and Cervical Cancer Early Detection Program and Colorectal Cancer Control Program, the largest cancer screening programs in the country serving medically underserved, low-income population. DCPC produced 184 publications in 2014-2015, with many receiving considerable media attention. We provide a great experience for EIS officer looking to learn or advance analytic skills and understanding population health. For further information: www.cdc.gov/cancer/dcpc.htm.

Proposed Initial Projects: (a) Descriptive and multivariate modeling analyses on cancer screening rates and groups at risk of not receiving screening, or cancer-related behavioral risk factors reported through CDC's Behavioral Risk Factor Surveillance System (BRFSS) and National Health Interview Survey (NHIS).
(b) Analyze internal population-based cancer registry data to investigate the relation of body mass index, smoking, and comorbidities to breast or colorectal cancer incidence, stage at diagnosis, histologic variation, treatment and/or survival.
(c) Childhood cancer incidence and survival study using NPCR/SEER and NPCR survival data.
(d) Descriptive and multivariate modeling analyses to examine health behaviors and/or screening use among cancer survivors using NHIS or BRFSS data.

Proposed Surveillance Projects: EIS officers will have the opportunity to evaluate a specific aspect of NPCR, DCPC's population-based cancer registries in 45 states, 3 territories, and the District of Columbia. Available projects include focusing on the direct capture of biomarker data from pathology laboratories; exploring different approaches to

defining recurrence using data from a multi-state Patient Centered Outcomes Research study, proposing an approach to capture cancer screening prior to diagnosis or NPCR's Pediatric Early Case Capture project. EIS officer will get inputs from stakeholders such as state health departments and experts in the field.

Range of Opportunities: Our current research includes updating cancer screening and diagnosis statistics focusing on disparities, patterns, and risk factors; assessing the impact of our cancer screening programs; understanding cancer-related health behaviors, and cancer survivorship issues. The Division fully supports participation in Division, CDC, or external field investigations and Epi-Aids. All projects will be tailored to meet the interests, skills, and learning goals of EIS officers.

Position Strengths: Officers will develop skills in quantitative data analysis and using SEER*Stat, SAS and SUDAAN. Our branches work collaboratively with all programs within the division. Colleagues are knowledgeable, friendly, accessible and willing to work with the officer. EIS officers may have opportunities to collaborate with other CDC divisions and centers, federal partners, and non-governmental organizations.

Special Skills Useful for this Position: Communication (written and oral) skills, data analysis skills are desirable but not required.

Available Data: BRFSS, NHIS, national cancer registry data, national screening program data

Recent Publications: Li J, et al. Pre-screening Discussions and Prostate-Specific Antigen Testing for Prostate Cancer Screening. *Am J Prev Med.* 2015 Aug;49(2):259-63.

Hawkins NA, (other DCPC co-authors inc. Pollack LA.) Examining Adherence With Recommendations for Follow-Up in the Prevention Among Colorectal Cancer Survivors Study. *Oncol Nurs Forum.* 2015 May;42(3):233-40.

White A, et al. Clinical outcomes of mammography in the National Breast and Cervical Cancer Early Detection Program, 2009-2012. *Cancer Causes Control.* 2015 May;26 (5):723-32.

Domestic Travel: 10% **International Travel:** 0%

Available Support: EIS officers have the opportunity to work in a collaborative, multidisciplinary environment with staff having expertise in epidemiology, biostatistics, health services research, applied economics, and behavioral science. We encourage and assist officers in developing research ideas based on their interests and goals. Statistical support is available.

Current/Recent EIS Officer: Keisha Houston, DrPH, (EIS 2011)

Officer Projects: Our most recent officer led analyses characterizing trends in cervical cancer screening among young women, and in lung cancer incidence by histology. She also assisted with data collection for the Fulton County Health Department, and evaluated Los Angeles county cancer registry data to improve surveillance of pre-cervical cancer lesions.

Officer Recent Publications: Houston KA, Henley SJ, Li J, White MC, Richards TB. Patterns in lung cancer incidence rates and trends by histologic type in the United States, 2004-2009. *Lung Cancer* 2014;86(1):22-8.

Centers for Disease Control and Prevention: Houston, KA (corresponding contributor); Saraiya, M and Li, J (other EARB contributor) Cervical Cancer Screening Among Women Aged 18–30 Years — United States, 2000–2010. *Morb Mortal Wkly Rep.* 2013; 61(51):1038-1042.

King SC, Pollack L, Li J, King JB, Master VA. Continued Increase in Incidence of Renal Cell Carcinoma, Especially in Young Patients and High-Grade Disease: US 2001 to 2010. *J Urol* 2014;191(6):1665-70.

Centers for Disease Control and Prevention: King, SC (corresponding contributor); White, MC (other EARB contributor) Cancer Screening — United States, 2010. *Morb Mortal Wkly Rep.* 2012; 61(03):41-45

Consultant: Vicki Benard, PhD

Consultant: Mary White, ScD

Consultant: Blythe Ryerson, PhD

Consultant: Zahava Berkowitz, MSPH, MSc

Consultant: Trevor Thompson, BS

Division of Cancer Prevention and Control/Office of the Director

NCCDPHP-DCPC-OD-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Cancer Prevention and Control/Office of the Director

Physical Address: Atlanta, Georgia

Primary Supervisor: Mona Saraiya, MD, MPH, (EIS 1995), CAPT, Medical Officer, Associate Director of Office of International Cancer Control, msaraiya@cdc.gov

Secondary Supervisor: Denise Duran, MPH, Epidemiologist, LDR, dne0@cdc.gov

Background: The Office of International Cancer Control (OICC) provides technical assistance to DCPC staff conducting work in low- and middle-income countries as well as in low- resource settings, such as the US-Mexico border region, US Affiliated Pacific Islands, and US territories in the Caribbean, which could benefit from a global health approach. OICC also works with cancer organizations, ministries of health and key international agencies to promote and implement effective strategies for preventing and controlling cancer. Major areas of focus include strengthening organized cancer screening programs, improving cancer surveillance systems and standardized tools, translating research into evidence-based policy, and building public health capacity for cancer control. OICC staff respond to public inquiries related to international cancer control, and requests for technical assistance in low- and middle-income countries. The office also coordinates division-wide efforts related to global health and other cross-cutting issues, such as HPV vaccination, and collaborates with DCPC researchers in other branches to conduct and publish high-quality research on globally relevant issues.

As a member of OICC, the EIS Officer (EISO) will have ample opportunities to gain experience in cancer epidemiology, surveillance, cancer control strategies, and program evaluation. The officer will have access to ongoing research projects and international datasets. Depending on interest and expertise, the EISO will also have opportunities to participate in domestic cancer control activities within CDC, and collaborations with federal/state/tribal/territorial health agencies and organizations (such as the US National Cancer Institute (NCI), North American Association of Central Cancer Registries (NAACCR), International Association of Cancer Registries (IACR) and International Agency for Research on Cancer (IARC).

Proposed Initial Projects: 1) Analyze data, and assess data quality, from a variety of international cancer registries for select cancers - survival and trend analyses for incidence/mortality data; 2) Analyze population-based behavioral and risk factor survey data about cancer screening in international settings- including binomial and logistic regression analyses; 3) Develop case studies and field exercises for Field Epidemiology Training Programs on cancer epidemiology, prevention and control; 4) Collect and/or analyze data regarding the cost to operate population-based cancer registries in low- and middle-income countries; 5) Analyze data collected in a study to assess the prevalence of HPV genotypes in HPV-associated cancers in U.S - including proportional weighting attribution analyses.

Proposed Surveillance Projects: Surveillance projects include the evaluation of one or more cancer registries in the Caribbean or US Pacific regions, including assessment of key indicators of data quality. This work would contribute to on-going multi-agency initiatives to improve cancer surveillance in the Caribbean and US Pacific. The EISO will travel to Caribbean or Pacific registry to meet registrars and other stakeholders on these projects including representatives from the Caribbean Public Health Agency (CARPHA), NAACCR, NCI, University of Hawaii and/ or the Pacific Island Health Officer's Association (PIHOA). The EISO will maintain day-to-day communication with registrars and key representatives who are on-site at registries, and also attend Caribbean/Pacific regional registry meetings to present surveillance results.

Range of Opportunities: Projects could include primary data collection and analyses, and secondary data analyses. The Division fully supports CDC-sponsored training and participation in Division, CDC, or external field investigations and Epi-Aids.

Position Strengths: OICC collaborates with various organizations, other DCPC branches and Center for Global Health, which provides a broad range of experience. OICC also works closely with the CDC-HPV lab, NCIRD, and NCHHSTP. Publication is highly encouraged (at least one 1st author publication/year expected). The position could include travel to focus countries depending on EISO interest and opportunities that arise.

Special Skills Useful for this Position: Knowledge of qualitative and quantitative analytic methods is desired but not required for this position. Training appropriate to the skills and projects of the EISO can be provided. An interest in international public health issues is important; however, extensive travel will not be required.

Available Data: In addition to opportunities for primary data collection, the EISO will have access to population-based cancer registry data (21 Caribbean countries, 6 US Pacific territories), international GLOBOCAN datasets (access to collective 2002,2008,2012 data for trend analyses) and cancer registry cost assessment data (5 countries). OICC has data from population-based surveys on cancer screening in US Pacific, India and Thailand. Projects using the U.S. National Program of Cancer Registries data can also be explored.

Recent Publications: -Saraiya, M. et al 2015. US assessment of HPV types in cancers: implications for current and 9-valent HPV vaccines. JNCI, 107(6), p.djv086.
-Joseph, R. ..., Senkomago, V. and Saraiya, M., 2015. Assessing Cervical Cancer Screening Coverage Using a Population-Based Behavioral Risk Factor Survey—Thailand, 2010. JWH, 24(12), pp.966-968.
-Saraiya M, Senkomago V, A door-to-door approach to cervical cancer screening. The Lancet Global Health. 2015; 3(2) e63-e64.
-Joseph R, Glenn J and Saraiya M. Chapter 24: Leveraging Existing Resources. The Cancer Atlas, 2nd edn. Atlanta, GA: The American Cancer Society, 2014.

Domestic Travel: 10% **International Travel:** 10%

Available Support: OICC has close collaborations with cancer experts in other DCPC branches, US NCI, NAACCR and IARC. The office has administrative staff and access to analysis support from statisticians in DMAST group.

Current/Recent EIS Officer: Hilda Razzaghi, PhD, MPH, (EIS 2015), EIS Officer, hir2@cdc.gov

Officer Projects: The current EIS officer has led three analytic studies examining cancer registry data from India, the Caribbean and 27 US cancer registries. She conducted her surveillance project and had field experience at Tata Memorial Cancer Center in India. Her work was accepted for an oral presentation at EIS 2016 conference.

Officer Recent Publications: Razzaghi H. The Global Challenge of Cancer. Global Health Stories, Centers for Disease Control (CDC) Website. Published Jan 30, 2016. Available at <http://blogs.cdc.gov/cancer/2016/02/02/the-global-challenge-of-cancer/>

Razzaghi H, Thompson T, Wilson R, Saraiya M. Five-year relative survival with Human papillomavirus-associated cancers in US (Oral Presentation). To be presented at 65th EIS conference, Atlanta, 2016 (Manuscript in progress)

Razzaghi H, Quesnel-Crooks S, Sherman R, Joseph R, Kohler B, Ivey M, Andall-Brereton G, Edwards B, Mery, Saraiya M. Leading causes of cancer-specific mortality in the English and Dutch-Speaking Caribbean Region. To be presented at WHO IARC 50th anniversary conference, Lyon, France, June 2016 (Manuscript in Progress)

Consultant: Florence Tangka, PhD, Health Economist, fbt9@cdc.gov

Consultant: Natasha Buchanan, PhD, Behavioral Scientist, iqo3@cdc.gov

Consultant: Virginia Senkomago, PhD, MPH, ORISE Research Fellow, vsenkomago@cdc.gov

Division of Heart Disease and Stroke Prevention/Epidemiology and Surveillance Branch

NCCDPHP-DHDSP-ESB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Heart Disease and Stroke Prevention/Epidemiology and Surveillance Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Molly Cogswell, DrPH, RN, (EIS 1992), Senior Scientist, MCogswell@cdc.gov

Secondary Supervisor: Angela Thompson-Paul, PhD, MSPH, (EIS 2012), Epidemiologist, AThompsonPaul@cdc.gov

Background: DHDSP serves as the nation's public health leader for achieving cardiovascular health for all and eliminating disparities in heart disease and stroke, the first and fifth leading causes of death in the United States. ESB conducts surveillance, epidemiologic research, and health services research on cardiovascular disease (CVD) outcomes and risk factors and supports Million Hearts® and CDC's Winnable Battles. Million Hearts® is a national initiative to prevent one million heart attacks, strokes and other CVD events by 2017. DHDSP also is the agency lead for sodium reduction, part of CDC's nutrition Winnable Battle. Division supported activities include the Paul Coverdell National Acute Stroke Registry (PCNASR), WISEWOMAN (Well-Integrated Screening and Evaluation for WOMen Across the Nation), and the Sodium Reduction in Communities Programs. The PCNASR aims to measure and track acute stroke care to improve the quality of that care and was recently expanded to include pre-hospital care (emergency medical systems or EMS) and post-hospital care (care transitions). The WISEWOMAN program provides low-income, under-insured or uninsured women aged 40–64 years with chronic disease risk factor screening, lifestyle programs, and referral services to prevent CVD. The Sodium Reduction in Communities Program aims to build practice-based evidence among populations in local communities about effective strategies to lower sodium intake, one of the primary risk factors for hypertension. In addition, ESB is a leader in the use of geographic information systems for monitoring CVD risk and outcomes at national, state and local levels and collaborates with international organizations on research related to sodium reduction, including, for example, a randomized controlled trial in China.

For further information, see <http://www.cdc.gov/dhdsp/>.

Proposed Initial Projects: (a) Determine whether higher fruit and vegetable consumption is associated with lower sodium intake, using measurement error models and data on four 24-hour dietary recalls among 450 adults, in four race-ethnic groups (Salt Sources Study); (b) Describe recent temporal trends in blood pressure among U.S. children (NHANES data) and their relationship to nutritional factors (e.g., lower body mass index and lower sodium intake); (c) Assess the associations between self-reported sodium intake and sodium-reduction attitudes and behaviors using logistic regression (Styles 2016 data); (d) Describe changes over time in incidence and prevalence of coronary heart disease, stroke, heart failure, hypertension, and end-stage renal disease among participants in the Jackson Heart Study.

Choice of projects is flexible, dependent upon the interests of the officer in discussion with his/her supervisors. The EISO will use appropriate analytic techniques which may include multiple logistic regression, modeling, and/or other analyses as supervisor and EISO will determine together.

Proposed Surveillance Projects: (a) Evaluate the Sentinel Sodium Surveillance System (USDA-CDC collaborative project); or (b) Evaluate national surveillance of blood pressure among children and adolescents aged ≤ 18 years. Choice of projects is flexible and depends on interests of the officer in discussion with his/her supervisors.

Range of Opportunities: The incoming EIS officer has the opportunity to become familiar with cardiovascular outcomes and risk factors, develop strong analytic skills, and network with a wide range of federal, state, international, academic, and non-profit partners through short- and long-term projects. The Division fully supports participation in Division, CDC, or external field investigations and Epi-Aids; potential opportunities include responses to requests from communities or states involved in sodium reduction policy changes.

Position Strengths: Ability to impact public health and prevention of cardiovascular diseases through activities affecting policies and programs locally, nationally, and globally. Experienced and enthusiastic mentors and staff who enjoy helping EISOs succeed.

Special Skills Useful for this Position: Previous clinical training or public health experience is useful. Interest and/or experience in nutrition and/or cardiovascular disease desired. Excellent oral and written communication skills desired. Strong quantitative skills and/or desire to learn and apply quantitative skills to public health problems (ESB statistical and analytic assistance are available to the EIS officer).

Available Data: National, state, or local health surveys (e.g., NHANES, BRFSS, Cardiovascular Health Examination Surveys), mortality data, national sales and nutrient data on packaged foods, medical claims data (e.g., Market Scan), national consumer surveys (Consumer Styles), case registries (PCNASR), and longitudinal cohort studies (e.g., Jackson Heart Study).

Recent Publications: Yang Q et al. Vital Signs: Predicted heart age and racial disparities in heart age among US adults at the state level. *MMWR* 2015; 64:950-8.

Cogswell ME et al. Use of urine biomarkers to assess sodium intake: challenges and opportunities. *Annu Rev Nutr* 2015;35:349-87.

Ritchey MD et al. Trends in mortality rates by subtypes of heart disease in the United States, 2000-2010. *JAMA* 2014;312:2037-9.

Yang Q et al., Trends in high blood pressure among United States Adolescents across body weight category between 1988 and 2012. *J Pediatr* 2016;169:166-173.

Domestic Travel: 10% **International Travel:** 5%

Available Support: The ESB environment is uniquely positioned to support an incoming EIS officer, with eight former EISOs (Commissioned Corps and Civil Service), access to a statistical unit for developing or advancing analytic skills, and mentorship from senior-level epidemiologists and medical officers. Computer and clerical help also are readily available.

Current/Recent EIS Officer: Sandra Jackson, PhD, MPH, (EIS 2014), Current EISO, SLJackson@cdc.gov

Current/Recent EIS Officer: Carla Mercado, PhD, MS, (EIS 2012), Senior Service Fellow, CMercado@cdc.gov

Current/Recent EIS Officer: Niu Tian, PhD, (EIS 2010)

Officer Projects: Analyzed association between advice and action to reduce sodium intake. Estimated prevalence of excess sodium intake among the U.S. population (see *MMWR*). Investigated availability, pricing, and promotion of lower sodium foods in Guam, (Epi Aid, 2015). Currently examining association between 24-hour sodium excretion and blood pressure in NHANES.

Officer Recent Publications: Jackson SL, King SM, Zhao L, Cogswell ME. Prevalence of excess sodium intake in the United States – NHANES 2009-12. *MMWR* 2016;64:1393-7.

Jackson SL, Coleman-King SM, Park S, Fang J, Odom EC, Cogswell ME. Health professional advice and action to reduce sodium intake. *Am J Prev Med* 2016;50:30-9.

Fang J, Cogswell ME, Park S, Jackson SL, Odom EC. Sodium intake among US adults – 26 states, the District of Columbia, and Puerto Rico, 2013. *MMWR* 2015;64:1393-7.

Mercado CI, Cogswell ME, Valderamma AL, Wang CY, Loria CM, Moshfegh AJ, Rhodes DG, Carriquiry AL. Difference between 24-h diet recall and urine excretion for assessing population sodium and potassium intake in adults aged 18-39 y. *Am J Clin Nutr* 2015;101:376-86.

Mercado CI, Yang Q, Ford ES, Gregg E, Valderrama AL. Gender- and race-specific metabolic score and cardiovascular disease mortality in adults: a structural equation modeling approach – United States 1988-2006. *Obesity (Silver Spring)* 2015;23:1911-9.

Valderrama AL, Gillespie C, Mercado C. Racial/ethnic disparities in the awareness, treatment, and control of hypertension — United States, 2003–2010. *MMWR* 2013; 62(18):351-353.

Consultant: Sallyann Coleman King, MD, (EIS 2010), Medical Officer, SColemanKing@cdc.gov

Consultant: Erika Odom, PhD, (EIS 2010), Research Scientist Officer, ECOdom@cdc.gov

Consultant: Fleetwood Loustalot, PhD, MN, (EIS 2008), Team Lead, ESB, FLoustalot@cdc.gov

Consultant: Matt Ritchey, MPH, DPT, (EIS 2008), Senior Scientist, MRitchey@cdc.gov

Consultant: Quanhe Yang, PhD, MA, (EIS 1995), Epidemiologist, QYang@cdc.gov

Consultant: Carma Ayala, PhD, MPH, (EIS 1999), Research Epidemiologist, CAyala@cdc.gov

Consultant: Robert Merritt, MA, Branch Chief, ESB, RMerritt@cdc.gov

Division of Nutrition, Physical Activity, and Obesity/Nutrition Branch/International Micronutrient Malnutrition Prevention and Control Team (IMMPaCt)

NCCDPHP-DNPAO-MCNB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Nutrition, Physical Activity, and Obesity/Nutrition Branch/International Micronutrient Malnutrition Prevention and Control Team (IMMPaCt)

Physical Address: Atlanta, Georgia

Primary Supervisor: Maria Elena Jefferds, PhD, (EIS 2001), Behavioral Scientist, mnj5@cdc.gov

Secondary Supervisor: Mary Serdula, (EIS 1978), Medical Epidemiologist

Secondary Supervisor: Rafael Flores-Ayala, Biostatistician/Team Lead

Background: The International Micronutrient Malnutrition Prevention and Control Team (IMMPaCt) works with global partners to contribute CDC skills and resources to eliminate vitamin and mineral deficiencies among vulnerable populations throughout the world. By helping countries to develop and operate appropriate assessment, monitoring and evaluation systems, IMMPaCt and its global partners work to enable national governments, food industries and civic organizations to successfully implement interventions, such as mass food fortification, supplementation, and home fortification in order to eliminate vitamin and mineral deficiencies. IMMPaCt focuses on iodine, vitamin A, zinc, folic acid and iron deficiencies throughout the developing world. Collaboration is ongoing with developing countries, UNICEF, WHO, USAID, World Food Programme, Micronutrient Initiative, and the Global Alliance for Improved Nutrition (GAIN).

Proposed Initial Projects: 1) Develop monitoring, evaluation or surveillance systems for micronutrient programs in one or more African countries; 2) develop micronutrient assessment surveys or coverage surveys in various countries; 3) provide technical assistance for the monitoring of micronutrient powder programs; 4) complete secondary analysis of micronutrient status surveys; 5) examine factors influencing coverage and intake adherence to micronutrient interventions in multiple countries; 6) analyze Geographic Information System (GIS) monitoring and survey data from multiple countries. The initial project depends on the interests of the officer.

Proposed Surveillance Projects: Select among several options, including proposed surveillance system design for

countries in Africa or the micronutrient powder component of the health management information system (HMIS) in Nepal.

Range of Opportunities: Depending on the project, country work involves the design through dissemination/publication phase. Develop epidemiology, monitoring and evaluation skills, as well as experience with global coordination/negotiation and collaboration. International travel is expected 10-20%. In addition, IMMPaCt has multiple headquarters activities with UNICEF and WHO involving the development of global policy and guidance documents, evaluation, and strengthening of global surveillance systems, and training workshops. EISOs are encouraged to participate in Epi Aids and collaborate with other units in the division and CDC, if desired.

Position Strengths: Opportunities for country work, analytic work, publishing, and developing key skillsets transferable to other content areas. Weekly one hour meetings with supervisors. Strong collaboration, support, and supervision in the team and branch. Epi, biostats, behavioral, and other technical support and consultation available as needed. Long, good history working with EISOs. We're a very experienced and supportive group, and fun!

Special Skills Useful for this Position: Skills in designing, implementing, and analyzing complex surveys; experience with biological data collection; intervention monitoring and evaluation experience; nutrition/micronutrient content; Portuguese, French, Spanish, or potentially other languages; quantitative data management and analysis -- all these skills would be great but are not required.

Available Data: Plenty immediately available. 20+ country micronutrient surveys, intervention monitoring, surveillance and other datasets on hand.

Recent Publications: The IMMPaCt team publishes widely in nutrition and medical journals on micronutrient deficiencies, status, and interpretation of micronutrient indicators; micronutrient and nutrition interventions; and policies. The team also publishes micronutrient survey and surveillance reports, Cochrane systematic reviews, technical reports, and guidance documents, global policy documents, and contributes to WHO guidelines documents.

Domestic Travel: 0% **International Travel:** 20%

Available Support: For all projects, collaborate and consult with multidisciplinary IMMPaCt and Nutrition Branch staff, including epidemiologists, MDs, health scientists, biostatisticians, and behavioral scientists. History of strong collaboration with the Nutrition Branch staff on analytic projects involving domestic datasets. Training as needed.

Current/Recent EIS Officer: Bernadette Ng'eno, (EIS 2014)

Current/Recent EIS Officer: Becky Merrill, (EIS 2013)

Current/Recent EIS Officer: Rajni Gunnala, (EIS 2012)

Current/Recent EIS Officer: Kristie Applegren, (EIS 2011)

Current/Recent EIS Officer: Heather Clayton, (EIS 2010)

Current/Recent EIS Officer: Erin Nichols, (EIS 2009)

Current/Recent EIS Officer: Cria Perrine, (EIS 2008)

Current/Recent EIS Officer: Nancy Aburto, (EIS 2007)

Officer Projects: Provide technical assistance to design and implement national micronutrient surveys; intervention monitoring and evaluation systems; and national surveillance systems, including recently Tanzania, Mozambique, Uganda, Guatemala, Nepal, Nigeria, South Africa, Ethiopia, and Kyrgyzstan. Work with global and country partners to successfully implement micronutrient interventions, including mass fortification, supplementation, and home fortification.

Officer Recent Publications: Ng'eno: High prevalence of vitamin B12 deficiency and normal folate status in young children in Nepal

Ng'eno: Relationship of maternal reported consumption of Micronutrient Powders (MNP) and observed MNP sachets in the household

Merrill: Response on ferritin concentration from nutrition-specific and nutrition-sensitive interventions in children and women of reproductive age: an overview of reviews

Merrill: Prevalence of inflammation varies among preschool children across 12 countries.

Gunnala: Identifying acceptability and price points for purchasing micronutrient powders for children 2 to 5 years old in Nepal (and additional manuscripts with TB group)

Mirkovic: Infant and young child feeding practices after an integrated micronutrient powder/infant and young child feeding pilot program in Nepal

Mirkovic: Predictors of micronutrient powder intake adherence in a pilot programme in Nepal

Applegren: Effect of decision rules for Lot Quality Assurance Sampling on an assessment of micronutrient program coverage

Clayton: Prevalence and reasons for introducing infants early to solid foods: variations by milk feeding type
Nichols: Vitamin D status and determinants of deficiency among non-pregnant Jordanian women of reproductive age
Consultant: Bernadette Ng'eno, (EIS 2014), EISO
Consultant: Becky Merrill, PhD, (EIS 2013)
Consultant: Rajni Gunnala, (EIS 2012)
Consultant: Kristie Applegren, (EIS 2011)
Consultant: Cria Perrine, (EIS 2008)
Consultant: Kelsey Mirkovic, (EIS 2013)

Division Nutrition, Physical Activity, and Obesity/Nutrition Branch/Infant Feeding Team

NCCDPHP-DNPAO-NB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division Nutrition, Physical Activity, and Obesity/Nutrition Branch/Infant Feeding Team

Physical Address: Atlanta, Georgia

Primary Supervisor: Heather Hamner, PhD, Senior Scientist, hfc2@cdc.gov

Secondary Supervisor: Cria Perrine, PhD, (EIS 2008), Team Lead, hgk3@cdc.gov

Background: The goal of the Nutrition Branch at CDC is to improve those aspects of dietary quality most related to the population burden of obesity, chronic disease, and suboptimal child development. To meet this goal we conduct surveillance, research, translation, and guideline development on topics such as infant feeding, child growth and development, dietary quality, micronutrient deficiencies, and healthier food access. Major activities related to child nutrition include: 1) assessing maternity care practices and policies related to breastfeeding in the US; 2) identifying environmental and policy determinants of infant and child nutrition; 3) assessing the effects of infant feeding practices on child development, including obesity and chronic diseases; 4) synthesizing evidence, developing recommendations, and disseminating information on best practices to promote healthy behaviors; 5) facilitating the implementation of policies and environmental changes that support optimal infant and toddler feeding practices in hospitals, workplaces, child care centers, and the community.

Recent epidemiologic projects by EISOs and staff include maternity leave and breastfeeding outcomes; labor pain medication and delayed onset of lactation; breastfeeding and children's psychosocial development; early infant feeding predictors for childhood obesity; reasons why women introduce solid foods earlier than recommended and why mothers could not breastfeed as long as they wanted; risk of bottle feeding and rapid infant weight gain; effectiveness of breastfeeding support in the hospitals and child care centers; development of children's self-regulation of food intake and mothers' responsive feeding styles; and association of maternity leave and infant feeding practices in the United States.

Data sources available for analyses include the Maternity Practices in Infant Nutrition and Care (mPINC) survey, Infant Feeding Practices Study II (IFPS II) and its Year 6 Follow-Up Study (Y6FU), National Immunization Survey (NIS), National Health and Nutrition Examination Survey (NHANES), National Survey of Children's Health (NSCH), National Survey of Family Growth, HealthStyles, among others.

Proposed Initial Projects: 1) Assessment of dietary patterns of infants and toddlers, 2) Model changes in food supply of key nutrients for infants and toddlers and potential public health impact, 3) Assessment of knowledge, attitudes, and behaviors of parents and health care providers on early child feeding issues, 4) Trends in breastfeeding related maternity care practices in the US; 5) Association of child care arrangement and breastfeeding; 6) Link between length of breastfeeding and benefits on children's health and development. Officers will have the opportunity to do analyses using a variety of statistical techniques (i.e., multiple logistic regression or modeling). Opportunities exist for involvement in other collaborative projects that are of interest to the incoming EIS officer with other CDC topic area experts and external partners.

Proposed Surveillance Projects: Options include: 1) evaluation of proposed revisions to CDC's Maternity Practices in Infant Nutrition and Care (mPINC) survey that monitors breastfeeding-related hospital practices among all the birth facilities in the US; 2) evaluation of surveillance on breastfeeding and/or toddler feeding practices and behaviors using

NHANES. Officers will gather input from appropriate stakeholders and partners (i.e., national organizations, state health departments, hospitals, professional clinical organizations).

Range of Opportunities: The officer will have opportunities for epidemiologic analysis and writing and public health application. We are also fully supportive of the EISO being involved in field investigations in our Center as well as other Centers.

Position Strengths: Strong epidemiologic guidance and support from supervisors, epidemiology staff, and Branch Chief. Experienced EISO supervisors and consultants who are EIS alumni. Branch commitment to translation of epidemiologic research for public health action. Strong support for participation in Agency and EIS outbreak responses.

Special Skills Useful for this Position: Statistical knowledge and SAS and/or SPSS programming skills.

Available Data: EISO will also have access to all the national data sets. In addition, the branch hosts the data from Maternity Practices in Infant Nutrition and Care (mPINC) survey, the Infant Feeding Practices Study II (longitudinal study from late pregnancy through first year of life) and Year 6 Follow-Up Study (Children who participated IFPS II were re-contacted at 6 years of age) and breastfeeding data collected via HealthStyles survey. Analyses of country data from our International Micronutrient team are also available.

Recent Publications: Tinker SC, Hamner HC, Qi YP, et al. US women of childbearing age who are at possible increased risk of a neural tube defect-affected pregnancy due to suboptimal red blood cell folate concentrations, NHANES, 2007–2012. *Birth Defects Res A Clin Mol Teratol.* 2015.

Perrine CG, Galuska DA, Dohack J, et al. Vital Signs: Improvements in maternity care policies and practices that support breastfeeding — United States, 2007–2013. *MMWR.* 2015;64:1112-17.

Perrine CG, Galuska DL, Thompson FE, Scanlon KS. Breastfeeding duration is associated with child diet at 6 years. *Pediatrics.* 2014;134:S50-55.

Domestic Travel: 10% **International Travel:** 10%

Available Support: The Nutrition Branch will provide epidemiologic support and guidance and mentoring from the EISO supervisors as well as staff epidemiologists and health scientists that include EIS alumni. We also have a Branch SAS programmer to provide SAS support.

Current/Recent EIS Officer: Jennifer Nelson, MD, (EIS 2014), EIS Officer, JMNelson@cdc.gov

Current/Recent EIS Officer: Kelsey Mirkovic, PhD, (EIS 2013), Health Scientist, KMirkovic@cdc.gov

Current/Recent EIS Officer: Jennifer Lind, PharmD, (EIS 2012), Epidemiologist/Pharmacist, JLind@cdc.gov

Officer Projects: Officers have conducted multiple epidemiologic analyses on hospital practices that support breastfeeding, maternity leave and breastfeeding outcomes, predictors of coverage and intake of micronutrient powders, and public perceptions of breastfeeding. Officers have participated in investigations of Neonatal Abstinence Syndrome, a meningococcal outbreak, and the Ebola and Zika virus responses.

Officer Recent Publications: Nelson JM, Li R, Perrine CG. Trends of U.S. hospitals distributing infant formula packs to breastfeeding mothers, 2007 to 2013. *Pediatrics.* 2015;135:1051-56.

Nelson JM, Griese SE, Goodman AB, et al. Live neonates born to mothers with Ebola virus disease: a review of the literature. *J Perinatol.* 2015 Epub ahead of print.

Mirkovic KR, Perrine CG, Subedi GR, et al. Predictors of micronutrient powder intake adherence in a pilot programme in Nepal. *Public Health Nutr.* 2015 Epub ahead of print.

Mirkovic KR, Perrine CG, Scanlon KS, et al. Maternity leave duration and full-time/part-time work status are associated with US mothers' ability to meet breastfeeding intentions. *J Hum Lact.* 2014;30:416-9.

Mirkovic K, Thwing J, Diack PA et al. Importation and containment of Ebola virus disease — Senegal, August–September 2014. *MMWR.* 2015;63:873-4.

Lind JL, Petersen EE, Lederer PA, et al. Infant and maternal characteristics in Neonatal Abstinence Syndrome (NAS) — Selected hospitals in Florida, 2010–2011. *MMWR.* 2015.64:213-16.

Lind JL, Perrine CG, Li R, et al. Racial disparities in access to maternity care practices that support breastfeeding — United States, 2011. *MMWR.* 2014;63:725-28.

Consultant: Kelley Scanlon, PhD, (EIS 1990), Branch Chief, kscanlon@cdc.gov

Consultant: Ruowei (Rosie) Li, MD, PhD, (EIS 1997), Senior Epidemiologist, ril6@cdc.gov

Division of Nutrition, Physical Activity and Obesity/Obesity Prevention and Control Branch/Epidemiology and Surveillance Team

NCCDPHP-DNPAO-OPCB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Nutrition, Physical Activity and Obesity/Obesity Prevention and Control Branch/Epidemiology and Surveillance Team

Physical Address: Atlanta, Georgia

Primary Supervisor: Sohyun Park, PhD, (EIS 2007), Epidemiologist, spark3@cdc.gov

Secondary Supervisor: Liping Pan, MD, MPH, Epidemiologist, lmp6@cdc.gov

Secondary Supervisor: Stephen Onufrak, PhD, Epidemiologist, seo5@cdc.gov

Background: Poor diet and physical inactivity are contributors to obesity. Preventing and reducing the prevalence of obesity is a CDC Winnable Battle. The officer will undertake epidemiologic studies of behavioral risk factors and systems/environmental supports related to diet quality, physical activity, and obesity. High priorities for the branch include monitoring weight status and dietary behaviors including fruits and vegetables and sugar-sweetened beverages/added sugars, identifying policy and environmental supports for healthy eating and active living in childcare, schools, hospitals, and community venues, developing surveillance measures, identifying effective practice-tested interventions, identifying opportunities to improve health equity, and translating research evidence into guidelines/recommendations.

The incoming EISO will enjoy a wide variety of opportunities for surveillance, research, and evaluation and should be flexible to respond to agency, state, territorial, tribal and community requests for assistance. Opportunities will be available to explore national and longitudinal data sets and assist on national priorities including those identified in HealthyPeople 2020, the National Prevention Strategy, and President's Childhood Obesity Task Force Report.

Recent epidemiologic analyses and field investigations by the Obesity Prevention and Control Branch (OPCB) staff include: (a) factors associated with added sugar intake among adults; (2) estimating the percentage of the population meeting fruit and vegetable Intake recommendations; (3) worksite supports for healthy eating reported by employed adults; (4) written nutrition standards for foods served or sold in municipal government worksites; (5) tracking obesity prevalence in adults and children; (6) assessing the retail food environment in Guam, American Samoa, Navajo Nation, and national parks; (7) assessing the current Electronic Health Record (EHR) capacity to promote obesity-related care. For more information, <http://www.cdc.gov/obesity>.

Proposed Initial Projects: Examining behaviors, attitudes, and perceptions related to diet quality and priority obesity prevention areas: (1) differences in the prevalence of self-reported obesity by race/ethnicity and survey language among adults; (2) characteristics of high consumers of sugar-sweetened beverages among Hispanic adults; (3) food and beverage preferences and intake among parent-teen dyads; (4) prevalence of municipal policies to improve community access to healthy foods within a national sample of US municipalities; (5) association of food insecurity with fruits and vegetable intake, weight status, and chronic disease. Other projects of interest to the incoming EIS officer will also be considered. EISO will have opportunities to conduct survey data analyses, multivariable logistic regression, and modeling and to translate research findings into guidelines and best practices.

Proposed Surveillance Projects: (1) Evaluate reliability and validity of novel dietary intake methods among children and adolescents including new technology efforts (online surveys such as Styles); (2) evaluate adding nutrition standards to regular municipal assessments for example the Community Based Obesity Supports survey (CBOS); (3) evaluate inclusion of obesity and chronic disease nutrition survey items into international surveillance for example the Guam National Health Survey. The officer will have opportunities to get input from stakeholders such as state health departments.

Range of Opportunities: Short- and long-term projects related to improvements in food systems, diet quality, and obesity prevention and control exist and the EISO will have the opportunity to collaborate across CDC. The Division fully supports participation in Division, CDC, or external field investigations and Epi-Aids.

Position Strengths: From 2011–2015, EISOs in OPCB have led 4 Epi-Aids (National parks, Navajo Nation, American Samoa, Guam) and participated in CDC Epi-Aids (Zika, Ebola, Hepatitis C). OPCB EISOs completed their CALs

within the 1st year and averaged 4 publications and 3 national presentations. Energetic, responsive, and knowledgeable colleagues are willing to work with the officer to get projects done and help the officer to develop.

Special Skills Useful for this Position: - Scientific writing or desire to improve writing skills.

- Interest in chronic disease epidemiology, food systems, and health equity.

- Statistical analysis experience or strong desire to increase statistical skills.

Available Data: BRFSS, NHANES, NHIS, Styles surveys, NCI's Family Life, Activity, Sun, Health, and Eating (FLASHE) study, National Survey of Community-based Policy and Environmental Supports for Healthy Eating and Active Living (CBS), FoodApps, and other. Opportunities exist for collaborative projects with internal/external partners.

Recent Publications: -Park S, Xu F, Town M, Blanck HM. Prevalence of sugar-sweetened beverage intake among adults — 23 States and the District of Columbia, 2013. *MMWR*.2016;65:169–174.

-Pan L, McGuire LC, Blanck HM, May-Murriel AL, Grummer-Strawn LM. Racial/ethnic differences in obesity trends among young low-income children. *Am J Prev Med* 2015;48(5):570–4.

-Onufrak S, Park S, Sharkey J, Sherry B, Blanck HM. Perceptions of tap water and school water fountains and association with intake of plain water and sugar-sweetened beverages. *J Sch Health*. 2014; 84(3):195-204.

Domestic Travel: 10% **International Travel:** 10%

Available Support: OPCB is comprised of numerous doctoral level epidemiologists, physicians, and EIS Alumni. Experienced EISO supervisors and mentors provide epidemiologic and statistical training to assist EISOs with projects and core activities of learning (CALs).

Current/Recent EIS Officer: Elizabeth Lundeen, PhD, (EIS 2015)

Current/Recent EIS Officer: Brenna VanFrank, MD, MSPH, (EIS 2014)

Current/Recent EIS Officer: Seung Hee Lee-Kwan, PhD, (EIS 2013)

Current/Recent EIS Officer: Gayathri Kumar, MD, (EIS 2012)

Officer Projects: (1) Evaluation of sugar-sweetened beverage questions; (2) youth access to school salad bars; (3) physicians' SSB intake and counseling practices; (4) factors associated with menu-labeling usage; (5) Epi-Aids on food environment in Guam, American Samoa, Navajo Nation, National parks.

Officer Recent Publications: 1. VanFrank B, Onufrak S, Harris D. Youth Access to School Salad Bars in the United States – 2011 to 2014. Under review by *Am J Health Promot*.

2. VanFrank B, Park S, Foltz J, McGuire LC, Harris DM. Physician characteristics associated with sugar-sweetened beverage counseling practices. Under review by *Preventive Medicine*.

3. Lee-Kwan SH, Pan L, Maynard LM, McGuire LC, Park S. Factors associated with self-reported menu-labeling usage among US adults. *J Acad Nutr Diet*. doi: 10.1016/j.jand.2015.12.015

4. Lee-Kwan SH, Pan L, Kimmons J, Foltz J, Park S. Support for food and beverage worksite wellness strategies and sugar-sweetened beverage intake among employed U.S. adults. *Am J Health Promot*. doi: <http://dx.doi.org/10.4278/ajhp.141113-QUAN-575>

5. Lee-Kwan SH, Kumar G, Ayscue P, Santos M, McGuire LC, Blanck HM, Nua MT. Healthful food availability in stores and restaurants--American Samoa, 2014. *MMWR Morb Mortal Wkly Rep*. 2015 Mar 20;64(10):276-8.

6. Kumar G, Onufrak S, Zytnick D, Kingsley B, Park S. Self-reported advertising exposure to sugar-sweetened beverages among US youth. *Public Health Nutr*. 2015;18(7):1173-9.

Consultant: Heidi Blanck, PhD, (EIS 1999), Branch Chief

Consultant: Carrie Dooyema, RN, MPH, (EIS 2009)

Consultant: David Freedman, PhD

Consultant: Latetia Moore Freeman, PhD, (EIS 2007)

Consultant: Alyson Goodman, MD, MPH, (EIS 2010)

Consultant: Diane Harris, PhD

Consultant: Sonia Kim, PhD

Consultant: Ashleigh May, PhD, (EIS 2008)

Consultant: Meredith Reynolds, PhD, (EIS 1999)

Division of Nutrition, Physical Activity and Obesity/Obesity Prevention and Control Branch

NCCDPHP-DNPAO-OPCB-GA-2016-02

Agency Name: CDC

Division/Branch/Team/Section: Division of Nutrition, Physical Activity and Obesity/Obesity Prevention and Control Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Alyson Goodman, MD, MPH, (EIS 2010), Medical Epidemiologist, Lead for Healthcare Research, Obesity Prevention & Control Branch, agoodman@cdc.gov

Secondary Supervisor: Carrie Dooyema, MSN, MPH, RN, (EIS 2009), Behavioral Scientist, Nurse Epidemiologist, igb7@cdc.gov

Secondary Supervisor: Heidi Blanck, PhD, (EIS 1999), Chief & Senior Epidemiologist, Obesity Prevention & Control Branch, hcb3@cdc.gov

Background: Preventing and reducing the prevalence of obesity is a public health priority and a CDC “Winnable Battle”; population-based approaches are needed to promote healthy eating and active living to reduce the burden of chronic disease in children and adults. The officer will undertake epidemiologic studies of population-based systems/environmental approaches in various settings (health care, early care and education (ECE), community) to improve health and prevent and manage obesity. The officer may also undertake epidemiologic studies of behavioral risk factors for obesity, such as poor diet and lack of physical activity. High priorities for the branch include identifying effective practice-tested interventions for child obesity in clinical or community settings, improving coverage and uptake of evidence-based clinical strategies for prevention & treatment of child obesity, monitoring weight status and dietary behaviors including fruits and vegetables and SSBs/added sugars, identifying opportunities to improve health equity, and translating research evidence into policy/guidelines/recommendations.

The incoming EISO will enjoy a wide variety of opportunities for surveillance, research, and evaluation and should be flexible to respond to agency, state, territorial, tribal and community requests for assistance. Opportunities will be available to explore national and longitudinal data sets and assist on national priorities including those identified in HealthyPeople 2020, the National Prevention Strategy, and the President’s Childhood Obesity Task Force Report.

Recent epidemiologic analyses and field investigations by the Obesity Prevention and Control Branch (OPCB) staff include: (1) factors associated with added sugar intake; (2) estimating the percentage of the population meeting recommendations for fruit and vegetable intake; (3) perceived worksite supports for healthy eating; (4) nutrition standards for foods sold/served in worksites; (5) physician perceptions of health-promoting environments in U.S. medical facilities; (6) tracking obesity prevalence in adults and children; For more information, <http://www.cdc.gov/obesity>.

Proposed Initial Projects: (1) Use of electronic health records (EHRs) to evaluate integration of parent-reported healthy weight behavior questions into primary care practices (descriptive, modeling); (2) Analyze results of the American Academy of Pediatrics Periodic Survey on obesity-related pediatric care (descriptive, modeling); (3) Examine the prevalence of obesity related Quality Improvement (QI) measures in US community health centers (descriptive, modeling); (4) Analyze data from the 2015 Doc Styles Survey on use of EHRs or Motivational Interviewing (MI) for obesity (multiple logistic regression); (5) Assessment of evidence-based strategies to improve physical activity in child care settings. Other projects of interest to the incoming EIS officer will also be considered. EISO will have opportunities to translate research findings into guidelines and best practices.

Proposed Surveillance Projects: (1) Compare EHR-derived child BMI data to local/regional/national survey data (engaging with local health departments, EHR consortia and pediatric healthcare systems); (2) Compare obesity prevalence among children in Head Start to other data sources such as the WIC Participant & Program Characteristic (WIC PC) data (engage Head Start & WIC organizations & providers); (3) Assess questions on child obesity-related behaviors for use in clinical information systems (engage healthcare providers, health depts.).

Range of Opportunities: Short- and long-term projects related to improvements in diet quality, clinical quality care for healthy weight, and obesity prevention and control exist and the EISO will have the opportunity to collaborate across CDC. The Division fully supports participation in Division, CDC, or external field investigations and Epi-Aids

Position Strengths: From 2011–2015, EISOs in OPCB have led 4 Epi-Aids (National parks, Navajo Nation, American Samoa, Guam) and participated in CDC Epi-Aids (Zika, Ebola, Hepatitis C). OPCB EISOs completed their CALs within the 1st year and averaged 4 publications and 3 national presentations. Energetic, responsive, and knowledgeable colleagues are willing to work with the officer.

Special Skills Useful for this Position: Statistical analysis experience or strong desire to improve statistical & epidemiologic skills.

Scientific writing or desire to improve writing skills.

Desire to improve linkages between clinical care and public health

Desire to improve uptake and payment for appropriate screening, counseling and weight management programs

Interest in chronic disease epidemiology, population health, and health equity.

Available Data: EHR data, American Academy of Pediatrics Periodic Survey of Fellows data, National Survey of Community-based Policy and Environmental Supports for Healthy Eating and Active Living (CBS), FoodApps, and WIC PC, and other national data sets including BRFSS, NHANES, NHIS, Styles surveys, NCI's FLASHE study. Opportunities exist for collaborative projects with internal/external partners.

Recent Publications: 1) Bronder KL, Dooyema CA, et al. Electronic health records to support obesity-related patient care: Results from a survey of United States physicians. *Prev Med*; 2015.

2) Pan P, Grummer-Strawn LM, et al. Trends in state/territorial obesity prevalence by race/ethnicity among U.S. low- income, preschool-aged children, 2008-2011. *Pediatric Obesity*. 2015.

3) Goodman AB, Meites E, et al. Pediatric Clinical Inquiries Received by CDC Regarding Ebola Virus Disease — United States. *MMWR* 2015.

4) Goldstein IM, Foltz JL, Onufrak S, Belay B. Health-promoting environments in U.S. medical facilities: physician perceptions. *Prev Med*. 2014.

Domestic Travel: 10% **International Travel:** 10%

Available Support: OPCB is comprised of numerous doctoral level epidemiologists, physicians, and EIS Alumni. Experienced EISO supervisors and mentors provide epidemiologic and statistical training to assist EISOs with projects and core activities of learning (CALs).

Current/Recent EIS Officer: Elizabeth Lundeen, PhD, (EIS 2015), EIS Officer, yxj4@cdc.gov

Current/Recent EIS Officer: Brenna VanFrank, MD, MSPH, (EIS 2014), EIS Officer, ydj5@cdc.gov

Current/Recent EIS Officer: Seung Hee Lee-Kwan, PhD, (EIS 2013), Epidemiologist, xde4@cdc.gov

Current/Recent EIS Officer: Gayathri Kumar, MD, (EIS 2012), Medical Officer, wiz3@cdc.gov

Officer Projects: (1) Physicians' intake and counseling practices regarding sugar-sweetened beverages; (2) Evaluating healthcare interventions addressing food insecurity; (3) Evaluating sugar-sweetened beverage questions on surveys; (4) Evaluating Pediatric Healthy Weight Surveillance using Electronic Health Records; (5) Epi-Aids assessing food environment in Guam, American Samoa, Navajo Nation, National Parks

Officer Recent Publications: 1. VanFrank B, Park S, Foltz J, McGuire LC, Harris DM. Physician characteristics associated with sugar-sweetened beverage counseling practices. Under review by *Preventive Medicine*.

2. VanFrank B, Onufrak S, Harris D. Youth Access to School Salad Bars in the United States – 2011 to 2014. Under review by *Am J Health Promot*.

3. Lee-Kwan SH, Pan L, Maynard LM, McGuire LC, Park S. Factors associated with self-reported menu-labeling usage among US adults. *J Acad Nutr Diet*. doi: 10.1016/j.jand.2015.12.015

4. Lee-Kwan SH, Pan L, Kimmons J, Foltz J, Park S. Support for food and beverage worksite wellness strategies and sugar-sweetened beverage intake among employed U.S. adults. *Am J Health Promot*. doi: <http://dx.doi.org/10.4278/ajhp.141113-QUAN-575>

5. Kumar G, Onufrak S, Zytneck D, Kingsley B, Park S. Self-reported advertising exposure to sugar-sweetened beverages among US youth. *Public Health Nutr*. 2015;18(7):1173-9.

Consultant: Sohyun Park, PhD, (EIS 2007), Team Lead, Epi & Surveillance, geo7@cdc.gov

Consultant: Seung Hee Lee-Kwan, PhD, (EIS 2013), Epidemiologist, xde5@cdc.gov

Consultant: Stephen Onufrak, PhD, Epidemiologist, seo5@cdc.gov

Consultant: David Freedman, PhD, Epidemiologist, dxfl@cdc.gov

Consultant: Latetia Moore Freeman, PhD, (EIS 2007), ggi9@cdc.gov

Consultant: Liping Pan, MD, MPH, Epidemiologist, lmp6@cdc.gov

Consultant: Brook Belay, MD, MPH, hup1@cdc.gov

Consultant: Diane Harris, PhD, Team Lead, Healthy Food Environments, hva6@cdc.gov

Consultant: Ashleigh May, PhD, (EIS 2008), Behavioral Scientist, xiy8@cdc.gov

Division of Population Health/Arthritis, Epilepsy, and Well-Being Branch

NCCDPHP-DPH-AEWB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Population Health/Arthritis, Epilepsy, and Well-Being Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Kamil Barbour, (EIS 2010), Epidemiologist, iyk1@cdc.gov

Secondary Supervisor: Charles Helmick, (EIS 1979), Medical Epidemiologist, cgh1@cdc.gov

Background: Doctor-diagnosed arthritis affects 52.5 million American adults (22.7%), costs more than \$128 billion/year, and remains the most common cause of disability. This work has direct application to public health practice and actions relevant to arthritis. The EIS officer will have an excellent chance to publish in MMWR and high impact journals, and present at prestigious conferences. Our analytic capacity allows EISOs to contend and win EIS awards; prior two officers were finalists for the Peavy Award (2014 EISO Jin Qin won the award), which recognizes effective epidemiological and statistical methods in an investigation. We provide the opportunity to become an expert in SAS, STATA and SUDAAN.

Proposed Initial Projects: The choice depends on the interests of the officer and the program, and could include: 1) analyzing the natural history and risk factors for the outcomes of knee and hip osteoarthritis using data from the CDC funded Johnston County Osteoarthritis Project, or other longitudinal OA studies using various modeling techniques such as log binomial regression, logistic regression, GEE, and Weibull Parametric Regression 2) analyzing descriptive epidemiological data for arthritis using the National Health Interview Survey (NHIS) or the Behavioral Risk Factor Surveillance System (BRFSS). To analyze these data the EIS officer would and logistic regression of log binomial regression.

Proposed Surveillance Projects: There are several arthritis or arthritis-related questions that are asked regularly for surveillance purposes; therefore, the choice of project would depend on the interests of the EISO and the program. One surveillance project that would be important for the arthritis program is evaluating the arthritis surveillance question on arthritis attributable activity limitations (AAAL) using either the NHIS or BRFSS surveys. Currently, almost 10% of all adults in the U.S. have AAAL (22.7million) and nearly half of adults with arthritis have AAAL. In addition to AAAL, severe joint pain and no leisure-time physical activity are surveillance measures regularly used by the arthritis team that can be evaluated. The EISO would be tasked with evaluating various components (e.g., data quality, acceptability, timeliness, stability, flexibility) of a surveillance system. The EIS officer can engage with the arthritis stakeholders as a part of their evaluation by receiving input from our 12-funded state health departments and our funded national partners such as the Arthritis Foundation, YMCA, and the National Recreation and Park Association.

Range of Opportunities: The Division fully supports participation in Division, CDC, or external investigations and Epi-Aids. International public health work in Haiti, Guinea, Liberia, China, and Jordan, and domestic infectious disease outbreak investigations in West Virginia and the Virgin Islands were just some of the activities of our prior EISOs.

Position Strengths: We fund the Johnston County Osteoarthritis Project, which allows a rare opportunity to conduct longitudinal analyses and use advanced statistical modeling (e.g., Generalized Estimating Equations, Parametric Survival Regression, and discrete survival analysis). We allow the EISO to be independent, do their own projects, and collaborate with other programs.

Special Skills Useful for this Position: Motivated, analytic, strong desire to learn, works well in a team, independent, passion for epidemiology.

Available Data: Johnston County Osteoarthritis Study; National Health Interview Survey; Behavioral Risk Factor Surveillance Study; National Health and Nutrition Examination Survey

Recent Publications: 1.1. Impact of Arthritis and Multiple Chronic Conditions on Selected Life Domains — United States, 2013. MMWR Morb Mortal Wkly Rep. 2015 June 5, 2015 / 64(21);578-582

2. Falls and Fall Injuries Among Adults with Arthritis — United States, 2012. 2014 May; 63(17);379-383.

3. Meeting Physical Activity Guidelines and the Risk of Incident Knee Osteoarthritis. Arthritis Care & Research. 2014 Jan;66 (1):139–146.

4. Prevalence of doctor-diagnosed arthritis and arthritis-attributable activity limitation-United States, 2010-2012. MMWR. 2013 Nov 8;62 (44):869-873.

Domestic Travel: 10% **International Travel:** 10%

Available Support: The incoming EISO will have the opportunity to work with highly experienced epidemiologists. Support is provided for analyses of longitudinal data on osteoarthritis, and for arthritis questions in national and state surveys.

Current/Recent EIS Officer: Jin Qin, (EIS 2014), EIS Officer, wyv0@cdc.gov

Current/Recent EIS Officer: Kamil Barbour, (EIS 2010), Epidemiologist, iyk1@cdc.gov

Officer Projects: 1. Lifetime risk of symptomatic hand osteoarthritis. 2. The effects of objectively measured physical activity on incident knee osteoarthritis. 3. Impact of Arthritis and Multiple Chronic Conditions on Selected Life Domains. 4. Arthritis as a barrier to physical activity among obese adults.

- Officer Recent Publications:** 1. Impact of Arthritis and Multiple Chronic Conditions on Selected Life Domains — United States, 2013. MMWR Morb Mortal Wkly Rep. 2015 June 5, 2015 / 64(21);578-582
2. Arthritis Among Veterans — United States, 2011–2013. MMWR Morb Mortal Wkly Rep. 2014 November 7; 63(44);999-1003.
3. Evidence for Declining Numbers of Ebola Cases — Montserrado County, Liberia, June–October 2014. November, 2014 / 63(46);1072-1076
4. Meeting Physical Activity Guidelines and the Risk of Incident Knee Osteoarthritis: A Population-Based Prospective Cohort Study. Arthritis Care & Research. 2014 Jan;66 (1):139–146
5. Mycoplasma pneumoniae respiratory illness - two rural counties, West Virginia, 2011. MMWR Morb Mortal Wkly Rep. 2012 Oct 19;61(41):834-8.
6. State-specific Prevalence of No Leisure-time Physical Activity Among Adults with and Without Arthritis, Behavioral Risk Factor Surveillance System, 2009. MMWR 2011 December;60(48):1641-1645
7. Survey of Knowledge, Attitudes, and Practices Related to Cholera Treatment and Prevention — Haiti, 2010. Emerging Infectious Diseases. 2011 Nov;17(11):2158-61
8. Arthritis as a potential barrier to physical activity among adults with obesity --- United States, 2007 and 2009. MMWR Morb Mortal Wkly Rep. 2011 May 20; 60(19):614

Consultant: Jin Qin, (EIS 2014), EIS Officer, wyv0@cdc.gov

Consultant: Matt Zack, (EIS 1974), Medical Epidemiologist, mmz1@cdc.gov

Consultant: Louise Murphy, Epidemiologist, alx2@cdc.gov

Division of Population Health/Epidemiology and Surveillance Branch

NCCDPHP-DPH-ESB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Population Health/Epidemiology and Surveillance Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Timothy Cunningham, ScM, ScD, (EIS 2010), Team Lead, tsc2@cdc.gov

Secondary Supervisor: James B. Holt, MPA, PhD, Team Lead, jgh4@cdc.gov

Background: Chronic diseases are among the most common, costly, and preventable of all US health problems. The Epidemiology and Surveillance Branch (ESB) supports improved surveillance and conducts innovative scientific research on emerging and cross-cutting chronic disease issues in CDC's National Center for Chronic Disease Prevention and Health Promotion. ESB also provides oversight and training to state chronic disease epidemiology assignees, and state alcohol epidemiologists on methods for measuring, reporting, and disseminating epidemiologic research findings to build a skilled public health workforce for addressing leading chronic diseases and related risk factors. ESB also serves as the cornerstone for development of new approaches to conceptualizing and analyzing chronic disease prevention programs and data. As a member of ESB, the EISO will have ample opportunities to gain experience in applied epidemiology. This position is uniquely designed to offer access to short-term state health department field investigations and Epi-Aids via the State Chronic Disease Epidemiology Assignee Program and training in innovative mapping and geospatial analysis techniques via the Analytic Methods Team.

Proposed Initial Projects: Projects are flexible and will be tailored to meet the interests of the EISO within the scope of ESB's priorities. Projects include a variety of designs, including cross-sectional surveys with nationally representative data and geospatial modeling. Analytic datasets available for the EISO include the Behavioral Risk Factor Surveillance System, National Health and Nutrition Examination Survey, National Health Interview Survey, Medical Expenditure Panel Survey, American Time Use Survey, and MarketScan Commercial Databases. Specific possibilities include: (a) utility of a health information exchange for population health surveillance in Nevada; (b) association between sleep duration and commuting time; (c) evaluation of Health e-Moms and the Marijuana and Tobacco Attitudes and Behaviors internet panel surveys in Colorado; (d) short sleep duration and associated chronic diseases among US non-veterans and veterans; (e) evaluation of diabetes self-management education classes in rural areas using video conferencing; (f) impact of interstitial cystitis on health medical utilization among the privately insured women and men.

Proposed Surveillance Projects: The surveillance project is flexible and will be tailored to meet the interests of the EISO within the scope of ESB's priorities. Particular opportunities for the surveillance evaluation project include the inadequate sleep module in the Behavioral Risk Factor Surveillance System (BRFSS). BRFSS is administered and

supported by CDC's Population Health Surveillance Branch, under the Division of Population Health. The EISO will be able to engage with key stakeholders involved in sampling and on-going data collection. Other systems related to enhancing surveillance of several low-prevalence chronic diseases can be considered also.

Range of Opportunities: Opportunities include the ability to analyze nationally representative data, apply innovative geospatial modeling techniques, and assist on state and national priorities. Furthermore, the EISO will have opportunities to travel for field investigations and Epi-Aids with state health department via the State Chronic Disease Epidemiology Assignee Program. The program currently has 7 assignees working to reduce the risk factors associated with obesity, diabetes, heart disease, and stroke in following states: Alabama, Arizona, Colorado, Illinois, Indiana, Nevada, and New Hampshire. The Division of Population Health will also fully support participation in field investigations and Epi-Aids with other divisions or centers across CDC.

Position Strengths: This position will advance the EISO's analytic skills, critical thinking, and expertise in chronic disease epidemiology and provide opportunities to present epidemiologic findings at national scientific meetings and in peer-reviewed publications.

Special Skills Useful for this Position: Analytic, enthusiastic, diligent, self-motivated, team player, and passion for public health and vulnerable populations

Available Data: Analytic datasets available for the EISO include the Behavioral Risk Factor Surveillance System, National Health and Nutrition Examination Survey, National Health Interview Survey, Medical Expenditure Panel Survey, American Time Use Survey, and MarketScan Commercial Databases.

Recent Publications: (a) Prevalence of Healthy Sleep Duration among Adults-United States, 2014. *MMWR*. 2016Feb19; 65(6):137-141.

(b) Trends in Self-Reported Sleep Duration among US Adults from 1985 to 2012. *Sleep*. 2015May1;38(5):829-32

(c) Inflammatory markers and mortality among US adults with obstructive lung function. *Respirology*. 2015May; 20(4):587-93.

(d) Population-based geographic access to endocrinologists in the United States, 2012. *BMC Health Serv Res*. 2015Dec7;15(1):541.

(e) Airport noise and self-reported sleep insufficiency, United States, 2008 and 2009. *Prev Chronic Dis*. 2015Apr16;12:E49.

Domestic Travel: 10% **International Travel:** 0%

Available Support: The incoming EISO will have support from several ESB staff members, including epidemiologists, geographers, medical officers, and statisticians.

Consultant: Janet Croft, PhD, Branch Chief, jbc0@cdc.gov

Consultant: Anne Wheaton, PhD, ipo9@cdc.gov

Consultant: Jin Qin, MS, ScD, (EIS 2014), EIS Officer, wyv0@cdc.gov

Consultant: Yong Liu, BMed, MS, ikd8@cdc.gov

Consultant: Renee Calanan, PhD, (EIS 2007), renee.calanan@state.co.us

Consultant: Kevin Matthews, MS, yrp4@cdc.gov

Consultant: Michael Lowe, MSPH, PhD, (EIS 2012), flk4@cdc.gov

Consultant: Hua Lu, MS, hgl6@cdc.gov

Division of Reproductive Health/Applied Sciences Branch/Adolescent Reproductive Health

NCCDPHP-DRH-ASB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Reproductive Health/Applied Sciences Branch/Adolescent Reproductive Health

Physical Address: Atlanta, Georgia

Primary Supervisor: Emily Koumans, MD, MPH, (EIS 1994), Team Lead, Med Epidemiol, exk0@cdc.gov

Secondary Supervisor: Lee Warner, PhD, MPH, ASB Branch Chief, Epidemiologist, dlw7@cdc.gov

Secondary Supervisor: Deborah Dee, PhD, MPH, (EIS 2007), Senior Scientist ASB, gdq7@cdc.gov

Background: ASB contains two teams: Pregnancy Risk Assessment Monitoring System (PRAMS) team and

Adolescent Reproductive Health (ARH) team. PRAMS is an ongoing surveillance system implemented by CDC and state health departments. PRAMS uniquely collects population-based data on maternal attitudes and experiences before, during, and shortly after pregnancy; with 40 states and New York city, it currently covers ~78% of all births. PRAMS identifies groups of women and infants at high risk, monitors changes, and measures progress towards health-related goals. There is considerable interest using PRAMS to explore behaviors and exposures related to Zika. The ARH team works on projects that inform policies and programs to improve US teens' sexual and reproductive health, focusing largely on teen pregnancy prevention. Teen pregnancy is a "Winnable Battle" and Director's priority for CDC. The team's research is focused on three new randomized trials evaluating interventions to reduce teen pregnancy aimed specifically at young men. Program evaluation efforts are focused on three communities recently funded to increase access to and use of reproductive health services by high-risk and vulnerable youth in areas with greatest need (Teens, Access, Quality [TAQ]). The EIS officer will work with both teams.

Proposed Initial Projects: 1) Since 1970, the Office of Population Affairs (OPA), through Title X, has administered family planning services to low income and uninsured people, but in the last few years experienced a significant decline in attendance by young women and teens. ARH conducted large Community Wide Initiatives (CWI) to reduce teen pregnancy in 10 communities from 2010-2015, and collected implementation and outcome measures to assess and monitor performance among local organizations and both Title X and non-Title X clinics. Clinic data with characteristics of organizational efforts, improvements, and patients, by year, are available for analysis. The EIS officer's first analysis will be to assess factors related to clinic performance, attendance, and volume of contraceptive services provided, comparing the two types of clinics, using CWI data to assess whether CWI activities impacted attendance, using multivariate analysis and regression modeling. 2) Analysis of PRAMS data on one or more topics based on interest: experiences around stillbirth, new fathers; potentially Zika virus prevention, or Zika-related health- and birth-related effects. 3) Teens attending clinics in the new TAQ project will be asked questions about their sexual and reproductive health care and whether it was "teen-friendly." Data will be collected quarterly while interventions to improve clinic friendliness occur, and will be ready for analysis in fall 2016. 4) Analyses of the National Survey of Family Growth or other survey, to examine topics such as experiences of reproductive-aged males, or pregnancies among teens that are reported as intended. Epidemiologists, statisticians, and stakeholders will inform analyses and products.

Proposed Surveillance Projects: Assessment of response rates in the PRAMS Surveillance System by mode of administration (mail, phone, Web) and by state, or possible evaluation of Zika-related questions comprising PRAMS supplemental module; both will include stakeholder involvement

Range of Opportunities: the opportunity to explore/analyze small and large datasets in detail, evaluate a large surveillance system, participate in field investigations with other divisions or centers including Epi-Aids, and be involved in other projects as interested, including randomized trials, individual surveys, nationally representative surveys such as NSFG

Position Strengths: A combination of experienced epidemiologic, clinical evaluation, behavioral research at CDC and with local and state partners, with flexibility depending on the incoming officer's interests. Very friendly, knowledgeable, and supportive staff who value EIS officers. Working on 2 flagship programs for the Division of Reproductive Health, CDC, and HHS – teen pregnancy and PRAMS

Special Skills Useful for this Position: Interest in surveillance and reproductive health

Available Data: CWIs collected data from 2011-2015 from more than 80 clinics that worked to improve sexual and reproductive health services to teens. Aggregated data on services included in performance monitoring is proposed as the first project, focusing on differences between Title X-funded clinics and non-Title X-funded clinics. Additional data that are available include multiple years of PRAMS, NSFG, and other national surveys

Recent Publications: Kathrine R. Tan, MD; Karen A. Cullen, PhD; Emilia H. Koumans, MD; et al. Inadequate Diagnosis and Treatment of Malaria Among Travelers Returning from Africa During the Ebola Epidemic — United States, 2014–2015 *MMWR Morb Mortal Wkly Rep* 2016;65:27–9.

Anne CC Lee, et al. Screening and treatment of maternal genitourinary tract infections in early pregnancy to prevent preterm birth in rural Sylhet, Bangladesh: A cluster randomized trial. *BMC Pregnancy and Childbirth* (in press).

Ford CA, et al. Minor Consent and Delivery of Adolescent Vaccines. *Journal of Adolescent Health* 2014 Feb;54(2):183-9.

Domestic Travel: 10% **International Travel:** 10%

Available Support: The EIS officer will be fully supported to conduct analyses, evaluations, field work, and prepare manuscripts for publication. ASB has full-time statisticians, epidemiologists, health scientists, data managers, programmers, and support staff to assist.

Consultant: Rueben Smith, PhD, Mathematical Statistician

Division of Reproductive Health/Field Support Branch/Global Reproductive Health Evidence for Action Team

NCCDPHP-DRH-FSB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Reproductive Health/Field Support Branch/Global Reproductive Health Evidence for Action Team

Physical Address: Atlanta, Georgia

Primary Supervisor: Diane Morof, MD, MSc, (EIS 2009), Medical Officer , igd6@cdc.gov

Secondary Supervisor: Florina Serbanescu, MD, MPH, (EIS 1992), Team Lead, fxs6@cdc.gov

Background: The Division of Reproductive Health (DRH) conducts surveillance, research, and program evaluation to improve reproductive, maternal, and infant health, and provide evidence-based data for public health action at the state, regional, tribal, and global level. DRH, is a WHO Collaborating Centre in Reproductive Health: ties with WHO and its regional offices enhance DRH's ability to collaborate on global RH research and programs.

The Global Reproductive Health Evidence for Action Team (GREAT) conducts maternal, newborn and child health (MNCH)-related population-based and facility-based surveys and surveillance in international settings. GREAT provides technical assistance for programs and activities designed to reduce maternal and perinatal mortality in high mortality countries, through improved surveillance systems and capacity-building. GREAT collaborates with WHO to create and implement technical guidance on maternal and perinatal health. GREAT team members led the development of Maternal Death Surveillance and Response (MDSR) Technical Guidance (see publications) and work closely with WHO to implement MDSR globally. GREAT team members with WHO are developing and piloting Perinatal Death Review and Response guidance. GREAT team, with Emory/CDC scientists, are initiating pregnancy surveillance as part of the new Child Health and Mortality Prevention Surveillance (CHAMPS) program, funded by the Bill & Melinda Gates Foundation, which aims to increase understanding of how, where and why children become ill and die, enabling scientists and public health leaders around the world to take action.

This position is a unique opportunity to design, conduct, monitor and evaluate programs and studies in global MNCH toward reduced child and maternal mortality, improved maternal health, and progress toward sustainable development goals. Activities include primary data collection at facilities and communities; data analysis; program design and evaluation; capacity-building; monitoring and evaluating of maternal and perinatal health programs; and investigation of family planning use in low-resource settings. The EISO will have the opportunity to lead collaborations with other CDC entities and external partners.

Proposed Initial Projects: Numerous MNCH global opportunities exist, depending on the interests of the incoming EISO. Ongoing projects include 1) to evaluate maternal (and facility-based perinatal) mortality surveillance systems in Uganda, Cameroon, Zambia and Tanzania; 2) to lead fieldwork, training, data capture, and analysis of data from health care facilities and communities participating in programs to rapidly reduce maternal and neonatal mortality in Tanzania 3) to utilize GIS software for creating visual graphics to best understand access to Emergency obstetric and neonatal care services, 4) to implement MNCH-related epidemiology training courses, and 5) conduct data analysis of population data to improve uptake of long acting contraceptive methods (LARC) through improved family planning programs in Tanzania. Opportunities for domestic projects may include: 1) analyses of vital records data on preterm birth and infant mortality; 2) mapping of maternity resources for emergency preparedness; 3) evaluation of DRH's Pregnancy Mortality Surveillance System; and 4) outbreak investigations. Analytic opportunities including descriptive, multiple logistic regression, modeling, and GIS mapping

Proposed Surveillance Projects: Perinatal death surveillance as part of Saving Mothers Giving Life in Uganda. Evaluation of proposed CHAMPS pregnancy surveillance (above).

Range of Opportunities: Opportunities available can be adapted to the EIS officer's interests. Options include original data collection including design of instruments and training interviewers; analysis of facility and population-based data; evaluation of maternal/perinatal death surveillance systems; collaborating with international partners (WHO, non-profits); presenting at conferences. The Division fully supports participation in Division, CDC, or external field investigations and Epi-Aids

Position Strengths: A GREAT EIS Officer will have a unique opportunity to advance his/her analytic/investigative skills, critical thinking, subject matter expertise and leadership in global MNCH while gaining practical experience in

surveillance, program evaluation, policy, and MNCH-related research. The EISO will gain valuable skills in quantitative and/or qualitative research methods. The EISO will have opportunities to present research and public health findings in several scientific seminars, and in peer-reviewed journals.

Special Skills Useful for this Position: EISOs who are motivated and enthusiastic about global public health and maternal child health would be ideal. We welcome individuals with varied backgrounds and someone eager to learn and who is team player would fit well on this team. Sense of humor is a bonus! Additional desirable skills include some analytic and programmatic experience, good scientific writing and communication skills, travel flexibility, and the ability to adapt to foreign cultures and work effectively in low resource settings.

Available Data: Pregnancy and facility outcome data from Uganda and Tanzania, population-based maternal mortality data from 4 districts in Uganda, household reproductive health survey data from Tanzania; opportunities for comparative analysis of multicounty nationally representative data

Recent Publications: Reports: Monitoring/Evaluation work in Kigoma, Tanzania:Reducing Maternal Mortality in Tanzania: Health Facility Assessment of Emergency Obstetric & Neonatal Care Services, 2014 Reproductive Health Survey Kigoma

Phase I of Saving Mothers, Giving Life Initiative Uganda Zambia [www. savingmothersgivinglife. org](http://www.savingmothersgivinglife.org)

Maternal Death Surveillance and Response - information for action to prevent maternal death 2013 (with World Health Organization) Isabella Danel, Diane Morof, Florina Serbanescu [www. who. int/ maternal_ child_ adolescent/ documents/ maternal_ death_ surveillance/ en/](http://www.who.int/maternal_child_adolescent/documents/maternal_death_surveillance/en/)

Serbanescu,Florina, Paul Stupp, Charles Westoff 2010. “Contraception matters: two approaches to analyzing evidence of the abortion decline in Georgia”. International Perspectives on Sexual and Reproductive Health.36(2):99-110

Domestic Travel: 5% **International Travel:** 20%

Available Support: GREAT is an interdisciplinary group: 1 EIS officer, 2 medical epidemiologists, 1 nurse epidemiologist, 1 health scientist, 1 senior statistician/demographer, 1 health analyst, 1 computer scientist and 1 programmer.

Current/Recent EIS Officer: Emily Petersen, (EIS 2013), EIS Officer, fmd9@cdc.gov

Current/Recent EIS Officer: Evelyn Twentyman, (EIS 2014), EIS Officer, ydj2@cdc.gov

Officer Projects: Evaluated Maternal Death Surveillance and Response (MDSR) in Cameroon and Tanzania. Designed interventions to enhance Cameroon MDSR. Designed and conducted facility-based maternal mortality investigation in Cameroon. Identified predictors of, and barriers to, facility-based delivery in Tanzania. Designed WHO pilot of international perinatal death review guidance; led Uganda iteration.

Officer Recent Publications: Update: Interim Guidelines for Health Care Providers Caring for Pregnant Women and Women of Reproductive Age with Possible Zika Virus Exposure - United States, 2016. Oduyebo T, Petersen EE, et al. MMWR Morb Mortal Wkly Rep. 2016 Feb 12;65(5):122-7

Interim Guidelines for Pregnant Women During a Zika Virus Outbreak - United States, 2016. Petersen EE, Staples JE, Meaney-Delman D, Fischer M et al. MMWR Morb Mortal Wkly Rep. 2016 Jan 22;65(2):30-3

Regan JJ, Junderman R, Montiel SH, Newsome K, Objio T, Washburn F, Roland E, Petersen E, Twentyman E, Olaiya O, et al. Public health response to commercial airline travel of a person with Ebola virus infection — United States, 2014. MMWR 2015 Jan;64;1–4.

Petersen EE, Serbanescu F, Obiero W, Stupp P, McCracken S. Reduction in maternal mortality following the Saving Mothers, Giving Life Initiative— Uganda, 2011-2013. Oral presentation at the 63rd Annual Epidemic Intelligence Service Conference; 2014 May; Atlanta, GA.

Twentyman: 2014 Reproductive Health Survey Kigoma, Tanzania. Chapter author: Introduction and Demographic Characteristics.

Twentyman: Contributor to Making Every Baby Count: International Guidance toward Perinatal Death Review and Response. Chapter author: Community-based perinatal death surveillance and response (in development).

Consultant: Thomas Clark, MD, MPH, (EIS 2001), Branch Chief, tnc4@cdc.gov

Consultant: Howard Goldberg, PhD, Senior Scientist, hgoldberg@cdc.gov

Consultant: Mary Goodwin, MA, MPA, Deputy Branch Chief, mmg2@cdc.gov

Consultant: Evelyn Twentyman, MD, MPH, (EIS 2014), EIS officer, ydj2@cdc.gov

Consultant: Michelle Dynes, PhD, MPH, MSN, RN, (EIS 2013), Nurse Epidemiologist, WVU8@cdc.gov

Division of Reproductive Health/Maternal and Infant Health Branch/Maternal Health Team

NCCDPHP-DRH-MIHB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Reproductive Health/Maternal and Infant Health Branch/Maternal Health Team

Physical Address: Atlanta, Georgia

Primary Supervisor: Cheryl Robbins, PhD, (EIS 2007), Epidemiologist, ggf9@cdc.gov

Secondary Supervisor: Jean Ko, PhD, (EIS 2010), Epidemiologist, fob1@cdc.gov

Secondary Supervisor: Van Tong, MPH, Epidemiologist, vct2@cdc.gov

Background: The Maternal Health Team (MHT) in the Division of Reproductive Health (DRH) conducts a broad range of surveillance, research and programmatic activities to develop evidence that can be used to improve maternal and infant health in the United States. The MHT's scientific research and surveillance relates to maternal health, preconception health, cardiovascular disease, hypertension, diabetes, obesity, physical inactivity, smoking and other substance use, and poor mental health. The MHT has a strong reputation for mentoring and producing first rate science.

Proposed Initial Projects: The initial project can be flexible based on the officer's interests. It will provide the officer an opportunity to strengthen analytic skills using large population-based survey data such as Pregnancy Risk Assessment Monitoring System (PRAMS), Behavioral Risk Factor Surveillance System (BRFSS), and National Survey on Drug Use and Health (NSDUH), as well as administrative data such as Healthcare Cost and Utilization Project (HCUP). The initial analytic project will increase subject matter knowledge of preconception, maternal, and interconception health. All proposed analytic projects entail descriptive analyses, examination of confounding and potential effect modification, and multivariable modeling:

- Describe contraceptive methods used pre-pregnancy (by level of effectiveness), examine changes in methods used postpartum among women with recent live births that resulted from unintended pregnancies, and examine characteristics associated with change to more effective methods (PRAMS)
- Describe contraceptive method choices (by level of effectiveness) among non-pregnant women of reproductive age who report heavy alcohol use/binge drinking before pregnancy and examine characteristics associated with non-use of a more effective contraceptive method (BRFSS)
- Examine the prevalence and risk factors associated with co-occurring substance use (e.g., alcohol, marijuana, and illicit drugs) and mental health disorders among women of reproductive age (NSDUH)
- Examine knowledge, attitudes, and practices of obstetricians/gynecologists for screening and management of pregnant and postpartum women who abuse opioids. Assess characteristics associated with screening and management (American Congress of Obstetrics and Gynecologists survey [ACOG])
- Examine contraceptive use among women of reproductive age who use substances (e.g., alcohol, tobacco, marijuana, cocaine, injecting drug use) and predictors of using more effective methods (National Survey on Family Growth)
- Describe postpartum use of a most effective (sterilization or LARC) or moderately effective (pill, patch, ring, depo, or diaphragm) contraceptive method overall and by state, and examine characteristics associated with non-use of a most- or moderately-effective contraceptive method (PRAMS)

Proposed Surveillance Projects: The officer will get input from stakeholders during the evaluation process (as noted in parentheses).

- Evaluate HCUP as a surveillance system to monitor trends in and characteristics associated with neonatal abstinence syndrome (American Academy of Pediatrics)
- Evaluate reliability of self-reported postpartum depression using Oregon PRAMS/PRAMS2 among women with Medicaid paid deliveries by comparing estimates with Oregon Medicaid claims and hospital discharge records (Oregon Medicaid Agency)
- Evaluate postpartum depression screener questions in PRAMS, which collects state-specific, population-based data on maternal attitudes and experiences before, during, and shortly after pregnancy (ACOG, Massachusetts Department of Public Health)

Range of Opportunities: Travel may include attendance at scientific conferences, project site visits and/or EPIAIDs, depending on the officer's projects and interests. The Division fully supports participation in Division, CDC, or

external field investigations and Epi-Aid. The officer's particular interests and strengths will be strongly considered in determining project selection.

Position Strengths: The team has a reputation for scientific excellence and strong mentoring. This position provides a breadth of topics in which the EISO can strengthen analytic skills and increase subject matter knowledge about maternal health, preconception health, cardiovascular disease, hypertension, diabetes, obesity, physical inactivity, smoking and other substance use, and poor mental health.

Special Skills Useful for this Position: Skills in conducting quantitative analyses; previous experience with SAS/STATA; strong oral and written communication skills

Available Data: Pregnancy Risk Assessment Monitoring System (PRAMS), Behavioral Risk Factor Surveillance System (BRFSS), National Survey on Drug Use and Health (NSDUH), Healthcare Cost and Utilization Project (HCUP), National Health and Nutrition Examination Survey (NHANES), National Health Interview Survey (NHIS)

Recent Publications: • Robbins CL, et al. Preconception care in publicly-funded clinics that provide family planning services. *AJPM*, 2016

• Robbins CL, et al. Postpartum contraceptive use among women with a recent preterm birth. *AJOG*, 2015

• Ko J, et al. Prevalence and Patterns of Marijuana Use among Pregnant and Non-Pregnant Women of Reproductive Age. *AJOG*, 2015

• Tong VT, et al. Accuracy of self-reported smoking cessation during pregnancy. *Acta Obstet Gynecol Scand*. 2015

• Tong VT, et al. Clinicians' awareness of the Affordable Care Act mandate to provide comprehensive tobacco cessation treatment for pregnant women covered by Medicaid. *Prev Med Rep*, 2015

Domestic Travel: 20% **International Travel:** 0%

Available Support: Technical support available from epidemiologists, behavioral scientists, and statisticians.

Current/Recent EIS Officer: Jonetta Johnson, PhD, MPH, (EIS 2012), Epidemiologist, wgp8@cdc.gov

Current/Recent EIS Officer: Jean Ko, PhD, (EIS 2010), Epidemiologist, fob1@cdc.gov

Officer Projects: • Investigated effects of secondhand smoke from airport smoking rooms in eight large-hub U.S. airports (EPI-AID)

• Examined social and economic impacts of school closures due to Hurricane Isaac in Gulfport and Biloxi, MS (EPI-AID)

• Assessed maternal morbidity, mortality, and infant health outcomes in Kigoma, Tanzania (Field Investigation)

Officer Recent Publications: • Johnson JL. Bodies don't sleep, neither do babies: experiences at the only maternity hospital isolation unit in Sierra Leone during the 2014 Ebola epidemic. *AJOG*, 2015

• Johnson JL, et al. Trends in gestational weight gain: The Pregnancy Risk Assessment Monitoring System, 2000–2009. *AJOG*, 2015

• Ko J, et al. Prevalence and Patterns of Marijuana Use among Pregnant and Non-Pregnant Women of Reproductive Age. *AJOG*, 2015.

• Ko JY, Tong VT, Callaghan WM. Reply to Letter Number E15-032AR1, entitled "Screening women for marijuana use does more harm than good". *AJOG*, 2015

• Farr SL, Ko JY, Burley K, Gupta S. Provider communication on perinatal depression: a population-based study. *Arch Womens Ment Health*. 2015

• Rodgers L, Conrey EJ, Wapner A, Ko JY, Dietz PM, Oza-Frank R. Ohio primary health care providers' practices and attitudes regarding screening women with prior gestational diabetes for type 2 diabetes mellitus. *Prev Chronic Dis*. 2014

• Ko JY, et al. Gestational Diabetes Mellitus and Postpartum Care Practices of Nurse-Midwives. *J Midwifery Womens Health*. 2013

• King B, Tynan M, Promoff G, Babb S, Johnson JL, Agaku I. Indoor Air Quality at Nine Large-Hub Airports with and without Designated Smoking Areas- United States, *MMWR*, 2012

Consultant: Jonetta Johnson, PhD, MPH, (EIS 2012), Epidemiologist, wgp8@cdc.gov

Division of Reproductive Health/Women's Health and Fertility Branch/USHIR team

NCCDPHP-DRH-WHFB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Reproductive Health/Women's Health and Fertility Branch/USHIR team

Physical Address: Atlanta, Georgia

Primary Supervisor: Athena Kourtis, MD, PhD, MPH, Medical Officer, Team Lead, apk3@cdc.gov

Secondary Supervisor: Caroline King, PhD, Epidemiologist

Background: Women's Health and Fertility Branch (WHFB), Division of Reproductive Health (DRH), NCCDPHP, CDC, Atlanta. The incoming EIS officer will have outstanding opportunities to conduct epidemiologic investigations on unintended pregnancy, STD, and HIV prevention and reproductive health. The USHIR Team works both domestically and internationally and is comprised of medical officers, epidemiologists, statisticians, and behavioral scientists. The EIS Officer will have the opportunity to conduct a variety of epidemiologic analyses using data from surveys, qualitative studies, surveillance systems, cohort studies and randomized clinical trials (RCT). He/she will have substantive roles in the planning and implementation of new research protocols related to these topics. Travel may include attendance at scientific conferences, project site visits, and participation in an Epi-Aid depending on the officer's projects and interests and the availability of funding. The team is also actively involved in emergency preparedness as it relates to maternal/infant health and has substantially contributed to the Ebola and Zika responses.

The EIS Officer will also be invited to become involved in the conduct of three clinical trials: an ongoing international trial to assess whether and how the use of progestin-based contraception affects transmission of HIV; a domestic trial of a behavioral intervention to increase dual protection (from pregnancy and STD) among minority teen girls; and, a trial of a smart phone app developed to target and address teen pregnancy prevention among 15-17 year-old U.S. girls. The EIS Officer will also have opportunities to respond to public inquiries and participate in field investigations and/or Epi-AIDS inside and outside of the Division of Reproductive Health.

Proposed Initial Projects: Initial analytic projects (using bivariate and multivariate analysis, logistic regression, Cox proportional hazards, and mixed models) may include the following: 1) An analysis of factors affecting the health of breastfed HIV-exposed infants in Malawi and the effect of antiretroviral drugs, antibiotics or nutritional supplementation (from the Breastfeeding, Antiretrovirals and Nutrition-BAN Study); 2) studying the interaction of hormonal contraception and antiretroviral therapy in women enrolled in our clinical trial in Malawi; 3) an analysis of STD testing practices among African American teen girls (including HIV-infected and uninfected) seeking family planning services in Atlanta (this could also be a qualitative or mixed-methods study); 4) analyses of the Healthcare Cost and Utilization Project (HCUP) or the National Survey of Family Growth (NSFG). An example of an HCUP analysis could be to assess trends in gynecologic/obstetric conditions or procedures in the U.S. using a large, nationally representative hospital database. An example of a NSFG analysis could be to assess prevalence of use of long-acting reversible contraception among students in states with and without Medicaid family planning expansions. Additionally, analyses of national databases will provide opportunity to examine the social context of contraceptive and risk taking behaviors.

Proposed Surveillance Projects: Surveillance evaluation may be done on either of the branch's surveillance systems: the national abortion surveillance system and the national assisted reproductive technology system.

Range of Opportunities: The position offers the opportunity to develop analytic skills, critical thinking, and expertise in the epidemiology of reproductive health and HIV/STD and prevention through the analysis of unique datasets, including large clinical trials. Participation in CDC-sponsored training, field investigations, foreign travel, and emergency response activities is encouraged and supported.

Position Strengths: The EISO will work with a friendly, energetic, and supportive team of medical officers, epidemiologists, statisticians, and behavioral scientists. The team's work includes high-profile projects that have had global public health impact, influencing WHO guidance, and high-profile publications that have received prestigious awards.

Special Skills Useful for this Position: Clinical skills, quantitative analytical skills, and flexibility for travel would be helpful (but not required). Analytic skills will be developed during the course of the assignment. Travel may be required, particularly for epidemiologic investigations.

Available Data: Several data sources are available, including: a) a randomized clinical trial of HIV-infected women and infants in Malawi, b) a trial in Jamaica addressing whether contraceptive implant insertion affects condom use, c) two domestic surveys of contraceptive use, knowledge and attitudes among HIV-infected and HIV-uninfected young women. In addition, we have access to national databases (e.g. HCUP, NSFG, YRBS, PRAMS).

Recent Publications: 1. Effectiveness of hormonal contraception in HIV-infected women using antiretroviral therapy. *AIDS* 2015;29(17):2353-9.

2. Use of dual methods for protection from unintended pregnancy and STI in adolescent African American women. *J Pediatr Adolesc Gynecol* 2015;28(6):543-8

3. Delayed HIV detection among infants exposed to postnatal antiretroviral prophylaxis during breastfeeding. *AIDS* 2015;29:1953-61.

4. Impact of Daily Cotrimoxazole on Clinical Malaria and Asymptomatic Parasitemias in HIV-Exposed, Uninfected

Infants. *Clinical Infectious Diseases* (2015): civ309.

Domestic Travel: 10% **International Travel:** 5%

Available Support: The EISO will have the opportunity to work closely with a team of scientists well versed in conducting clinical research in both the domestic and international setting, providing advanced epidemiologic and statistical support and medical and behavioral science guidance.

Current/Recent EIS Officer: Michelle Chevalier, MD, MPH, (EIS 2015)

Officer Projects: Analysis of peripartum complications of HIV-infected mothers in the Breastfeeding, Antiretrovirals, and Nutrition (BAN) randomized clinical trial we completed in Malawi, to evaluate approaches to prevent HIV transmission to the infant through breastfeeding; analysis of contraceptive implant utilization in Jamaica; and, epidemiologic investigation of first U.S. Ebola outbreak.

Officer Recent Publications: 1. Chevalier MS, Chung W, Smith J, Weil LM, Hughes SM, Joyner SN, Hall E, Srinath D, Ritch J, Thathiah P, Threadgill H, Cervantes D, Lakey DL; Centers for Disease Control and Prevention (CDC). Ebola virus disease cluster in the United States--Dallas County, Texas, 2014. *MMWR Morb Mortal Wkly Rep.* 2014 Nov 21;63(46):1087-8

2. Kourtis AP, Appelgren K, Chevalier MS, McElroy A. Ebola Virus Disease: Focus on Children. *Pediatr Infect Dis J* 2015;34(8):893-7.

3. Chevalier M, King C, Jarrett S, Sutherland S, Williams D, Hill S, Kourtis AP. Contraceptive Implant Availability, Safety, and Effectiveness in Jamaica, Manuscript submitted.

4. Chevalier M, King C, Ellington S, Wiener J, Kayira D, Chasela C, Jamieson DJ, Kourtis AP. Maternal and neonatal outcomes among HIV-infected women in Malawi: the Breastfeeding, Antiretrovirals, and Nutrition (BAN) Study. Manuscript submitted.

Consultant: Denise Jamieson, MD, MPH, (EIS 1997)

Consultant: Joan Kraft, PhD

Consultant: Jeffrey Wiener, PhD

Consultant: Margaret Christine Snead, PhD

Consultant: Nicole Davis, PhD

Consultant: Karen Pazol, PhD

Division of Reproductive Health/Women's Health and Fertility Branch/Fertility Epidemiology Studies Team

NCCDPHP-DRH-WHFB-GA-2016-02

Agency Name: CDC

Division/Branch/Team/Section: Division of Reproductive Health/Women's Health and Fertility Branch/Fertility Epidemiology Studies Team

Physical Address: Chamblee, Georgia

Primary Supervisor: Lauren Zapata, PhD, MSPH, (EIS 2005), Epidemiologist/Behavioral scientist, lzapata@cdc.gov

Secondary Supervisor: Maura Whiteman, PhD, (EIS 2002), Team Lead/Epidemiologist, acq5@cdc.gov

Secondary Supervisor: Naomi Tepper, MD, MPH, (EIS 2007), Medical epidemiologist/OB-GYN, gdq2@cdc.gov

Background: The Fertility Epidemiology Studies (FES) Team of the Women's Health and Fertility Branch (WHFB) conducts research and surveillance related to the epidemiology of fertility, including the safety, effectiveness and non-contraceptive benefits of contraceptive methods; risk factors for/consequences of unintended pregnancy; and surveillance of abortion in the United States. Major work of the team involves the removal of barriers to safe and effective contraceptive use through development and dissemination of national guidance for health care providers on contraceptive use and related research on contraceptive use, safety, and barriers to use of effective contraception. The position emphasizes analytic epidemiology and will be good for officers who would like to learn women's health and contraceptive topics in depth and expand their epidemiologic skills to benefit the health of women, men, and families. The team has a long history of supporting EIS officers.

Proposed Initial Projects: The position is flexible so that the EIS experience can be tailored to the needs and goals of the officer. A variety of possible analytic topics with data to address them are available. Examples include: (1) use of 2013 Behavioral Risk Factor Surveillance System (BRFSS) data to assess contraceptive use among older women or women with certain medical conditions that are associated with increased risk for adverse health events as a result of

an unintended pregnancy (e.g., hypertension, diabetes); (2) use of 2015 Youth Risk Behavior Surveillance System (YRBSS) data to assess adolescent sexual and contraceptive use behaviors including use of long-acting reversible contraception (LARC) among in-school youth; and (3) use of the most recently available Pregnancy Risk Assessment Monitoring System (PRAMS) data to examine type of pregnancy unintendedness (i.e., mistimed or unwanted) and associated maternal characteristics and behaviors. The FES team has also collected primary data to monitor changes in attitudes and practices among U.S. family planning providers after the release of national contraceptive guidance to improve delivery of services in the United States. A variety of topics are available from these data including health care provider attitudes and practices related to combined oral contraceptives for breastfeeding women. Proposed topics and data sources will allow officers to learn or advance a variety of analytic skills (e.g., how to handle missing data, model building for multivariable regression, examining effect modification). Supervisors can discuss possible projects in more detail.

Proposed Surveillance Projects: Depending on the interest of the officer, several surveillance system evaluation projects are possible. Examples include CDC's Abortion Surveillance System, BRFSS (e.g., contraceptive use among older women or those with specific medical conditions), YRBSS (e.g., LARC use or sexual behaviors among in-school youth), or PRAMS (e.g., pregnancy intentions among women with a recent live birth). Officers are encouraged to engage with system stakeholders (e.g., state health departments, program planners, policy makers, professional organizations) to obtain input, learn unique aspects of system operations, and develop valuable recommendations to improve system performance. Officers can often integrate a selected analytic project with the surveillance evaluation.

Range of Opportunities: The position offers opportunities to design/conduct epidemiologic analyses, disseminate findings via presentations and manuscripts, and respond to public inquiries. Other possible opportunities include participating in activities (e.g., conducting systematic reviews) to contribute to national contraceptive guidance. The Division fully supports the officer participating in Division, Agency, or external field investigations and Epi-Aids.

Position Strengths: The position is flexible and can be tailored to meet the needs and goals of the officer. The FES team has strong epidemiologic capacity and subject matter expertise in a wide range of reproductive health topics. The officer is encouraged to explore current and new areas of interest.

Special Skills Useful for this Position: analytic skills, writing skills, interest in reproductive health. Experience analyzing complex survey data would be helpful but not necessary.

Available Data: PRAMS, BRFSS, YRBSS, National Survey of Family Growth, CDC's Abortion Surveillance System, primary data collected to monitor changes in attitudes and practices among U.S. family planning providers. Other data immediately available include administrative datasets (Healthcare Cost and Utilization Project, MarketScan), which could be used to examine a variety of research questions on contraception and women's health.

Recent Publications: The supervisors for this position have collectively published over 70 articles since January 2010 on a wide variety of topics including contraception, dual protection, pregnancy and sexually transmitted diseases among teens, gynecologic cancers and surgeries, HIV testing in obstetric settings, obstetric morbidity, assisted reproductive technology, preconception health, HIV among street youth, and influenza related to pregnancy and women's health.

Domestic Travel: 5% **International Travel:** 0%

Available Support: The primary and secondary supervisors, as well as others on the FES team and in WHFB, are fully committed to supporting the growth and development of the officer. Statisticians are also available for programming support and consultation.

Current/Recent EIS Officer: Titilope Oduyabo, MD, MPH, (EIS 2014), Medical epidemiologist/OB-GYN, ydk7@cdc.gov

Current/Recent EIS Officer: Michael Lowe, PhD, (EIS 2012), flk4@cdc.gov

Current/Recent EIS Officer: Crystal Tyler, PhD, (EIS 2009), ctyler@mphi.org

Current/Recent EIS Officer: Cheryl Robbins, PhD, (EIS 2007), Epidemiologist, ggf9@cdc.gov

Officer Projects: Conducting analyses to identify factors associated with highly effective postpartum contraceptive use; conducting project on dissemination processes of global family planning guidance; conducted investigation for and published case report on a pregnant patient infected with Ebola virus disease (EVD); and other emergency response activities related to EVD and Zika virus.

Officer Recent Publications: -Factors associated with postpartum use of long-acting reversible contraception (in progress).

-Update: Interim guidelines for health care providers caring for pregnant women and women of reproductive age with possible Zika virus exposure - United States, 2016 (2016). MMWR 65(5): 122-127.

-A pregnant patient with Ebola virus disease (2015). Obstet Gynecol 126(6): 1273-1275.

-Dual use of condoms with other contraceptive methods among adolescents and young women in the US (2014). J Adolesc Health 54(2): 169-175.

-Health care provider attitudes and practices related to intrauterine devices for nulliparous women (2012). *Obstet Gynecol* 119(4): 762-771.
-The effect of body mass index and weight change on epithelial ovarian cancer survival in younger women: a long-term follow-up study (2012). *J Womens Health (Larchmt)* 21(8): 865-871.
-Contraceptive methods available to patients of office-based physicians and Title X clinics – United States, 2009-2010 (2011). *MMWR* 60(1): 1-4.
-Influence of reproductive factors on mortality after epithelial ovarian cancer diagnosis (2009). *Cancer Epidemiol Biomarkers Prev* 18(7): 2035-2041.
-Contraceptive use among postpartum women – 12 states and New York City, 2004-2006 (2009). *MMWR* 58(30): 821-826.

Consultant: Kate Curtis, PhD, (EIS 1996), Epidemiologist, kmc6@cdc.gov

Consultant: Tara Jatlaoui, MD, Medical epidemiologist/OB-GYN, kgz4@cdc.gov

Consultant: Suzanne Folger, PhD, Senior Scientist, Epidemiologist, sxg1@cdc.gov

Consultant: Denise Jamieson, MD, (EIS 1997), Branch Chief, Medical epidemiologist/OB-GYN, djj0@cdc.gov

Office on Smoking and Health/EPI/Research Team

NCCDPHP-OSH-EPB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Office on Smoking and Health/EPI/Research Team

Physical Address: Atlanta, Georgia

Primary Supervisor: Israel Agaku, DMD, MPH, (EIS 2012), Acting Deputy Associate Director for Science, OSH, wgn9@cdc.gov

Secondary Supervisor: Linda Neff, PhD, Surveillance Team Lead, len2@cdc.gov

Background: Smoking continues to be the leading cause of preventable disease, disability, and death in the U.S., accounting for nearly one of every five deaths per year. The Office on Smoking and Health (OSH) is the lead federal agency for tobacco prevention and control and continues to serve an important role in informing the U.S. Food and Drug Administration's (FDA) ongoing efforts to regulate tobacco. OSH activities address various emerging issues in tobacco control, such as electronic cigarettes, hookahs, and marijuana. CDC has identified reducing tobacco use as a Winnable Battle. With additional effort and support for evidence-based, cost-effective strategies that can be implemented now, a significant impact can be made on our nation's health.

Proposed Initial Projects: Descriptive and multivariate analyses comparing levels of toxicants and carcinogens among exclusive cigarette smokers and users of emerging tobacco products such as hookahs/water-pipes and e-cigarettes; analysis of the use of flavored tobacco products among U.S. adolescents; analysis of trends in e-cigarette advertising on social media and the relationship with current use; analyses evaluating the effectiveness of CDC's national anti-smoking campaign "Tips from former smokers" (Tips); and participation in a proposed qualitative study designed to understand e-cigarette use among youth. EISO also has the opportunity to focus on disparity research by investigating determinants of tobacco use among groups with disproportionately higher tobacco use, such as active duty military personnel; persons who are lesbians, gay, bisexual, or transgender; persons with mental illness; and those of low socioeconomic status. Data available for epidemiologic studies in this position are rich and varied and include cross-sectional data of both US civilian and military populations, cohort data, as well as taxable removal (actual sales) data for different tobacco products. EISO will have opportunity to gain hands-on experience in programming in R, SAS or STATA, as well as learn advanced multivariate methods including generalized estimating equation models, linear and logistic regression, structural equation modeling, decomposition analyses, and methods for causal inferences (e.g., g estimation).

Proposed Surveillance Projects: Evaluation of the National Fire Incident Reporting System (NFIR) in monitoring smoking-related fires in the US; evaluation of the impact of including "rarely" as a response option on estimates of current smoking prevalence and a characterization of these "rarely" users; impact of revised weighting methods to the Behavioral Risk Factor Surveillance System on estimates of state-specific current tobacco use among adults. EIS officers have the opportunity to develop the chosen evaluation project into a manuscript for publication. EISO will have multiple opportunities to interact with some of our stakeholders, including the FDA Center for Tobacco Products. Ongoing efforts are in place to have an EISO lead a rapid public health evaluation of betel nut use in Palau. This might involve travel to Palau to assess patterns of betel nut use, and also potentially, an evaluation of the surveillance

system for betel nut use in Palau.

Range of Opportunities: EIS Officers will develop their own projects, collaborate on projects of interest with staff throughout OSH, present at national meetings and develop manuscripts for submission to peer-reviewed journals and the Mortality and Morbidity Weekly Report (MMWR). The Division fully supports participation in Division, CDC, or external field investigations and Epi-Aids

Position Strengths: EIS Officers are encouraged to develop in-depth expertise in one or more areas of tobacco prevention and control and to participate in policy decisions relevant to these areas. OSH's EIS supervisors have great experience with recruiting almost every year since 1991. Our EIS officers have always met their CALs prior to the end of the 2-year program.

Special Skills Useful for this Position: Skills that are desired include: good data analysis skills (R, SAS, SUDAAN or STATA), the ability to work in a high pace office, and good writing skills (manuscripts).

Available Data: Secondary datasets available include: the National Health Interview Survey, the National Survey on Drug Use and Health, the Behavioral Risk Factor Surveillance System, the National Youth Tobacco Survey, the Youth Risk Behavior Survey, Health Information National Trends Survey, the National Adult Tobacco Survey, the National Quitline Data Warehouse, the OSH web-panel cohort; and Health Related Behaviors Survey of Active Duty Military Personnel

Recent Publications: (1). Singh T, Marynak K, Arrazola RA, Cox S, Rolle IV, King BA. Vital Signs: Exposure to Electronic Cigarette Advertising Among Middle School and High School Students - United States, 2014. MMWR Morb Mortal Wkly Rep. 2016 Jan 8;64(52):1403-8.

(2). Singh T, Agaku IT, et al. Exposure to Advertisements and Electronic Cigarette Use among U.S. Middle and High School Students. Pediatrics (In press).

(3). Agaku IT, Singh T, Rolle I, Olalekan AY, King BA. Prevalence and Determinants of Secondhand Smoke Exposure Among Middle and High School Students. Pediatrics. 2016 Feb;137(2):1-9.

Domestic Travel: 10% **International Travel:** 0%

Available Support: Resources for EIS Officers include software training, computer support, expert statistical (in house and external) and epidemiologic advice, and tobacco control content expertise.

Current/Recent EIS Officer: Tushar Singh, MD, PhD, (EIS 2014), EIS officer, YDL1@cdc.gov

Current/Recent EIS Officer: Teresa Wang, PhD, (EIS 2015), EIS officer, YXN7@cdc.gov

Officer Projects: Assessment of emerging tobacco and marijuana products; prevalence and impact of youth e-cigarette advertising exposure; monitoring air pollution from secondhand smoke in U.S. airports, and in bars and restaurants in U.S. territories; evaluation of facilitators and barriers to implementing smoking cessation interventions in Ohio public health clinics

Officer Recent Publications: Publications written by recent OSH EIS Officers include: "Vital Signs: Exposure to Electronic Cigarette Advertising Among Middle School and High School Students - United States, 2014" (MMWR); "Exposure to Advertisements and Electronic Cigarette Use among U.S. Middle and High School Students (Pediatrics); "Validation of self-reported smokeless tobacco use by measurement of serum cotinine concentration among U.S. adults" (American Journal of Epidemiology), "A Mixed-Methods Assessment of a Brief Smoking Cessation intervention Implemented in Ohio Public Health Clinics, 2013" (Maternal and Child Health Journal); "Current Tobacco Use among Adults in the United States: Findings from the National Adult Tobacco Survey" (American Journal of Public Health), and "A cross country comparison of secondhand smoke exposure among adults: findings from the Global Adult Tobacco Survey" (Tobacco Control).

Consultant: Brian King, PhD, (EIS 2010), Deputy Director for Research Translation, OSH, baking@cdc.gov

Consultant: David Homa, PhD, Epidemiology, Senior Advisor, DGH3@cdc.gov

Consultant: Ralph Caraballo, PhD, (EIS 1995), Epidemiology Branch Chief, rfc8@cdc.gov

Consultant: Diane Beistle, BA, Health Communications Branch Chief, ZGV1@cdc.gov

Office on Smoking and Health/Global Tobacco Control Branch

NCCDPHP-OSH-GTCB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Office on Smoking and Health/Global Tobacco Control Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Indu Ahluwalia, PhD, (EIS 1995), Chief, Global Tobacco Control Branch, iaa2@cdc.gov

Secondary Supervisor: Krishna Palipudi, PhD, Global Tobacco Surveillance System Team Lead, GOU8@cdc.gov

Background: The Global Tobacco Control Program in the Office on Smoking and Health works with partners to strengthen Global Tobacco Surveillance Systems (GTSS) to monitor the global tobacco epidemic; advance research to promote effective tobacco control programs; translate data to action and increase country and regional capacity to plan, develop, implement, and evaluate comprehensive tobacco control efforts; and strengthen partnerships to leverage resources for efficient and sustainable tobacco control initiatives. Initiated in 1999 by CDC, WHO and partners, GTSS aims to enhance country capacity to design, implement and evaluate tobacco control interventions, while monitoring key articles of WHO Framework Convention on Tobacco Control (FCTC) and WHO MPOWER measures. GTSS is comprised of the Global Youth Tobacco Survey (GYTS), the Global Adult Tobacco Survey (GATS), and Tobacco Questions for Surveys (TQS). For details, access: www.cdc.gov/tobacco/global. The Global Tobacco Control Branch provides direction in the following areas:

(1) Surveillance: Provides technical assistance to over 187 countries and sites

(2) Policy and Research Translation: Generates policy relevant research and prepares evidence based reports in collaboration with partners.

(3) Training Capacity: In 2015, approximately 255 participants from 23 countries were trained in data use and prevention interventions.

Proposed Initial Projects: (1) Surveillance Evaluation of the Global Youth Tobacco Survey and one Global Adult Tobacco Survey country; (2) MMWR topics may include: purchase patterns across countries, or access to tobacco by minors; (3) Present at the following conferences: 2017 EIS Conference and 2018 World Conference on Tobacco and Health in South Africa.

Several opportunities are available for the incoming EISO to explore secondary data analyses using data from the Global Tobacco Surveillance System. EISO can perform descriptive and multivariate analyses assessing prevalence and impact of exposure to health warnings on cigarette packages and desire to quit smoking among youth smokers. This analysis will use data from multiple countries and can examine the predictors of quitting behaviors using multivariable regression techniques. EISO can also perform an ecologic study to determine the relationship between country-level policies and quitting behaviors from countries that have multiple year of data. The EISO will further have opportunities to initiate research projects that involve collaboration with other international partners.

Proposed Surveillance Projects: EISO will have opportunity to engage in evaluation of the Global Adult Tobacco Survey or the Global Youth Tobacco Survey. The global tobacco branch holds a number of workshops with country Ministries of Health, WHO and other organizations working in various countries to initiate and field surveys targeted at both youth and adults. The incoming EISO can interview stakeholders who attend these workshops as part of the surveillance evaluation. The incoming EISO will also have opportunities to participate in a country level survey pretest; this will help the EISO to have a more nuanced understanding of the various aspects of tobacco surveillance and survey implantation.

Range of Opportunities: Officers will have opportunity to develop their own research, collaborate on projects of interest throughout OSH, work with countries on surveillance and data-related activities, and conduct research by analyzing and disseminating GTSS data. The Division fully supports participation in Division, CDC, or external field investigations and Epi-Aids

Position Strengths: In addition to data analysis and publication, EIS officers are encouraged to develop in-depth expertise in one or more areas of tobacco prevention and control and participate in policy and partnership dialogue and decisions.

Special Skills Useful for this Position: Skills that are desired include: good data analysis skills (R, SAS, SUDAAN or STATA), the ability to work in a high pace office, and good writing skills (manuscripts).

Available Data: (1) Global Youth Tobacco Survey (GYTS): Active in 114 countries. In 2015, 23 countries completed GYTS.

(2) Global Adult Tobacco Survey (GATS): Active in 36 countries. As of 2015, five countries (Turkey, Thailand, Mexico, Philippines, and Viet Nam) completed Wave 2. Mexico, Philippines, and Viet Nam will release results in 2016.

(3) Tobacco Questions for Surveys (TQS): To date, 54 countries have completed surveys with TQS integration and 4 additional countries are in progress.

Recent Publications: (1). Mbulo L, Palipudi KM, Andes L et al. Secondhand smoke exposure at home among one

billion children in 21 countries: findings from the Global Adult Tobacco Survey (GATS). *Tob Control*. 2016 Feb 11. (2). Chandora R, Song Y, Chaussard M, et al. Youth access to cigarettes in six sub-Saharan African countries. *Prev Med*. 2016 Feb 2.

(3). Zhao L, Palipudi KM, Ramanandraibe N, Asma S. Cigarette smoking and cigarette marketing exposure among students in selected African countries: Findings from the Global Youth Tobacco Survey. *Prev Med*. 2015 Dec 30

Domestic Travel: 10% **International Travel:** 10%

Available Support: Resources for officers include training in statistical programs, excellent statistical and computer support, expert statistical, demographic and epidemiologic advice, and national and international content expertise.

Current/Recent EIS Officer: Eugene Lam, MD, (EIS 2011), Epidemiologist, vif4@cdc.gov

Officer Projects: Recent Officer projects have included an evaluation of the Global Youth Tobacco Survey (GYTS); and assessment of relationship between frequency and intensity of cigarette smoking and time to first cigarette among students of the GYTS in select countries

Officer Recent Publications: 1. Lam E, Giovino GA, Shin M, Lee KA, Rolle I, Asma S. Relationship between frequency and intensity of cigarette smoking and TTFC/C among students of the GYTS in select countries, 2007-2009. *J Sch Health*. 2014 Sep;84(9):549-58.

2. Lam E, Rolle I, Shin M, Lee KA. Impact of data editing methods on estimates of smoking prevalence, Global Youth Tobacco Survey, 2007-2009. *Prev Chronic Dis*. 2013;10:E38. doi: 10.5888/pcd10.120202.

Consultant: Brian King, (EIS 2010), Deputy Director for Research Translation, OSH, baking@cdc.gov

Consultant: Ralph Caraballo, (EIS 1995), Epidemiology Branch Chief, rfc8@cdc.gov

Consultant: Krishna Palipudi, PhD, Team Lead, Global Tobacco Surveillance System, GOU8@cdc.gov

Consultant: Lazarous Mbulo, MPH, Survey Statistician, VYP7@cdc.gov

Consultant: Jason Hsia, PhD, Senior Statistician, ZXX1@cdc.gov

Consultant: Israel Agaku, DMD, MPH, (EIS 2012), Acting Deputy Associate Director for Science, iagaku@cdc.gov

National Center for Emerging and Zoonotic Infectious Diseases

The National Center for Emerging and Zoonotic Infectious Diseases (NCEZID) works to prevent illness, disability and death caused by infectious diseases. We focus on known diseases, emerging infections, and zoonoses. Our work is guided by a "One Health" strategy, which recognizes the interconnectedness of microbes and the environment.

Through a comprehensive approach, we can attain better health for humans and animals and improve our environment. NCEZID's divisions include broad expertise, so we are able to identify mysterious, and sometimes very lethal, illnesses; contain outbreaks that span many states or countries; and save lives. Six divisions within NCEZID are currently recruiting EISOs: Division of Foodborne, Waterborne, and Environmental Diseases; Division of Global Migration and Quarantine; Division of Healthcare Quality Promotion; Division of High-Consequence Pathogens and Pathology; Division of Preparedness and Emerging Infections; and Division of Vector-Borne Diseases.

Division of Foodborne, Waterborne and Environmental Diseases/Enteric Diseases Epidemiology Branch

NCEZID-DFWED-EDEB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Foodborne, Waterborne and Environmental Diseases/Enteric Diseases Epidemiology Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Kevin Chatham-Stephens, MD, MPH, (EIS 2013), Medical Officer, xdc4@cdc.gov

Secondary Supervisor: Louise Francois Watkins, MD, MPH, (EIS 2013), Medical Officer, hvu9@cdc.gov

public health nationally and internationally through the prevention and control of disease, disability, and death caused by foodborne, waterborne, and environmentally-transmitted pathogens. EISOs located in branches of DFWED enjoy several advantages resulting from the synergy between the various groups comprising the division. DFWED's Biostatistics and Information Management Activity provides statistical and IT support. DFWED provides extensive laboratory support. EISOs may undertake select projects in branches other than their own in the division; the division conducts journal club and other didactic activities for EISOs, as well as a monthly seminar; resident liaisons from USDA and FDA facilitate interactions with these regulatory agencies, which are important partners in foodborne disease outbreak investigations.

EDEB is recruiting for 1 officer. EDEB maintains 9 active and passive national surveillance systems covering pathogens and syndromes including botulism, Campylobacter, hemolytic uremic syndrome, Listeria, Salmonella, Shiga toxin-producing *E. coli* (O157 and others), Shigella, Yersinia, and Vibrio. We design and conduct case-control and cohort studies; some projects offer the chance to learn and apply advanced statistical techniques. We use these activities to estimate the burden of foodborne illnesses, assess trends, detect outbreaks, and evaluate prevention efforts. We also track emerging antimicrobial resistance in enteric pathogens and are examining ways to use whole genome sequencing to detect and investigate outbreaks and attribute illnesses to specific sources. We conduct studies to identify risk factors, attribute sources of infection, monitor antimicrobial resistance, and provide clinical and epidemiologic consultation and bioterrorism preparedness for botulism. DFWED EIS officers will be trained to conduct free-living amoeba and botulism case consultations and provide rapid drug and antitoxin release. EDEB EIS officers may work with the Outbreak Response and Prevention Branch (ORPB) on multistate outbreak investigations. Domestic travel on short notice is possible but uncommon. International opportunities will likely be available but will typically not exceed 8 weeks over 2 years.

Proposed Initial Projects: Multiple projects available, assignment determined by EIS officer interests and analytic background and public health importance. Immediately available analytic projects include: 1) Describe the sources and characteristics of outbreaks associated with consumption of ground turkey, and current prevention efforts by industry; 2) Explore the causes and outcomes of Listeria pneumonia and Listeria in atypical body sites; 3) Analyze trends in geographic variation among Listeria infections that may provide clues to food sources; 4) Describe outbreaks and morbidity of Campylobacter and other infections linked to consumption of undercooked chicken liver and propose control measures; 5) Determine the US burden of foodborne vibriosis in disability-adjusted life years (DALYs); 6) Characterize the pathogens, foods, patients, and other characteristics of foodborne outbreaks in hospitals.

Proposed Surveillance Projects: Multiple projects available, assignment determined by EIS officer interests and public health importance: 1) Assess how clinician uptake of culture independent diagnostic tests may affect case detection and disease surveillance activities; 2) Evaluate proposed major expansion of Salmonella surveillance on ability to determine likely sources of and risk factors for infections, and for antibiotic resistance infections in particular.

Range of Opportunities: Every officer's experience will be different, but all will investigate outbreaks, analyze surveillance data, write manuscripts, and collaborate with state and federal agencies. Officers may have international opportunities in EDEB and in the Waterborne Diseases Prevention Branch (WDPB).

Position Strengths: EDEB is CDC's lead group for tracking and identifying sources for a variety of bacterial enteric infections transmitted by food and other routes. Officers will be exposed to a wide variety of surveillance and analytic approaches, in close collaboration with many partners (local, state, federal, and international). Opportunities to work on urgent problems and long-term scientific projects abound! Training EIS officers is a core part of EDEB's mission. Officers are invited to weekly seminars and trainings in biostatistics, SAS, scientific writing, etc. You will work in a group of dedicated colleagues who are excited about their work, and also value a balanced life.

Special Skills Useful for this Position: Anyone with the skills to become an EIS officer has the skills needed for this position. Our work is broad enough that we can tailor the experience to the officer's needs and interests, from those who are just learning about p values to those who have done complex statistical modeling. Physicians, veterinarians, PhD scientists, and nurses have all thrived and done outstanding work with us. EISOs who are flexible, eager to learn, willing to work hard, and able to work in teams in a fast-paced and busy environment will get the most out of the opportunities we provide.

Available Data: Numerous datasets are available for analysis in EDEB.

Recent Publications: EDEB values scientific writing and has a distinguished reputation of publishing many excellent papers in high-profile peer-reviewed journals. During 2011–2015, we produced 152 peer-reviewed publications and 31 MMWRs. Our work is frequently published in the New England Journal of Medicine, JAMA, Emerging Infectious Diseases, and Clinical Infectious Diseases, among others. These papers—including one cited nearly 2,000 times since publication in January, 2011—have made important contributions to our knowledge about foodborne disease, including estimating the number of people who get sick each year and the foods that make them sick.

Domestic Travel: 10% **International Travel:** 10%

Available Support: EDEB is a multidisciplinary branch with a history of excellent EISO mentorship and training.

EISOs have access to a broad range of projects and mentorship by doctoral epidemiologists who work closely with surveillance epidemiologists, social scientists, statisticians, communicators, and microbiologists.

Current/Recent EIS Officer: Mariel Marlow, PhD, MPH, (EIS 2015)

Current/Recent EIS Officer: Julie Self, PhD, MPH, (EIS 2015)

Current/Recent EIS Officer: Sam Crowe, PhD, MPH, (EIS 2014)

Current/Recent EIS Officer: Reid Harvey, DVM, MPH, (EIS 2013)

Current/Recent EIS Officer: Ulzii Luvsansharav, MD, PhD, (EIS 2013)

Current/Recent EIS Officer: Jolene Nakao, MD, MPH, (EIS 2012)

Current/Recent EIS Officer: Vuong (Von) Nguyen, MD, MPH, (EIS 2012)

Current/Recent EIS Officer: Alison Laufer, PhD, (EIS 2011)

Current/Recent EIS Officer: Sarah Bennett, MD, MPH, (EIS 2010)

Current/Recent EIS Officer: Brendan Jackson, MD, (EIS 2010)

Current/Recent EIS Officer: Katie O'Connor, BSN, MPH, (EIS 2010)

Officer Projects: Toxigenic *Vibrio cholerae* non-O1, non-O139 infections in the US; *Salmonella* Heidelberg infections associated with chicken consumption; *Campylobacter* infections in children; Listeriosis outbreak linked to packaged salads; Pork-associated outbreaks in the US; Nontyphoidal *Salmonella* meningitis, bacteremia, and gastroenteritis among infants; Characteristics of foodborne outbreaks in prisons.

Officer Recent Publications: EISO first-author, peer-reviewed: Prognostic Indicators for Ebola Patient Survival (EID, 2016); Binational Outbreak of Guillain-Barré Syndrome Associated with *Campylobacter jejuni* Infection, Mexico and United States, 2011 (Epi Infect, 2014); Clam-Associated Vibriosis, USA, 1988-2010 (Epi Infect, 2014); Factors Contributing to Decline in Foodborne Disease Outbreak Reports, United States (Emerg Infect Dis, 2014); Outbreak of *Salmonella* Enterica Serotype I 4,5,12:I- Infections: The Challenges of Hypothesis Generation and Microwave Cooking (Epi Infect, 2014); Multistate Outbreak of Listeriosis Associated with Cantaloupe (NEJM, 2013); Listeriosis Outbreaks and Associated Food Vehicles, United States, 1998–2008 (EID, 2013); National Outbreak of Foodborne Botulism Associated with a Widely Distributed Commercially Canned Hot Dog Chili Sauce (CID, 2013); *Listeria monocytogenes* in Donated Platelets—A Potential Transfusion Transmitted Pathogen Intercepted through Screening (Transfusion, 2013); Outbreak-associated *Salmonella enterica* Serotypes and Food Commodities, USA, 1998–2008 (EID, 2013).

EISO first-author, MMWR: Vital Signs: Multistate Foodborne Outbreaks — United States, 2010–2014; A Plan for Community Event-Based Surveillance to Reduce Ebola Transmission — Sierra Leone, 2014–2015; Notes from the Field: Outbreaks of Cyclosporiasis—United States, June–August, 2013; Botulism From Drinking Prison-Made Illicit Alcohol—Arizona, 2013.

Consultant: Patricia Griffin, MD, (EIS 1985)

Consultant: Robert (Rob) Tauxe, MD, MPH, (EIS 1983)

Consultant: Tom Chiller, MD, MPH, (EIS 2001)

Consultant: Dale Morse, MD, (EIS 1976)

Consultant: Cindy Friedman, MD, MPH, (EIS 1995)

Consultant: Aimee Geissler, PhD, MPH, (EIS 2009)

Consultant: Weidong Gu, MD, PhD

Consultant: Olga Henao, PhD, MPH

Consultant: Robert (Mike) Hoekstra, PhD

Consultant: Martha Iwamoto, MD, MPH, (EIS 2002)

Consultant: Beth Karp, DVM, MPH

Consultant: Neil Lin, MD, MPH

Consultant: Cita Medalla, MD, MS

Consultant: Agam Rao, MD, (EIS 2009)

Consultant: Allison Brown, PhD, MPH, (EIS 2010)

Consultant: Antonio Vieira, DVM, PhD, MPH

Consultant: Karen Wong, MD, MPH, (EIS 2011)

Consultant: Jennifer (Jenn) Hunter, DrPH, MPH, (EIS 2013)

Consultant: Sam Crowe, PhD, MPH, (EIS 2014)

Consultant: Ian Williams, PhD, MS, (EIS 1994)

Consultant: Matthew (Matt) Wise, PhD, MPH, (EIS 2008)

Consultant: Michael Beach, PhD, (EIS 1995)

Consultant: Jennifer Cope, MD, (EIS 2009)

Division of Foodborne, Waterborne and Environmental Diseases/Mycotic Diseases Branch/Epi

NCEZID-DFWED-MDB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Foodborne, Waterborne and Environmental Diseases/Mycotic Diseases Branch/Epi

Physical Address: Atlanta, Georgia

Primary Supervisor: Snigdha Vallabhaneni, MD, MPH, (EIS 2013), Medical Officer, fco6@cdc.gov

Secondary Supervisor: Brendan Jackson, MD, MPH, (EIS 2010), Medical officer, iyn0@cdc.gov

Secondary Supervisor: Tom Chiller, MD, MPH, (EIS 2001), Medical Officer, Deputy Branch Chief, tnc3@cdc.gov

Background: MDB's mission is to prevent and control domestic and international fungal infections. MDB addresses (i) opportunistic infections in immune compromised hosts, including HIV/AIDS patients (*Cryptococcus*, *Pneumocystis*, histoplasmosis, penicilliosis), and transplant/cancer patients (*Aspergillus*, *Mucormycetes*, *Candida*); (ii) healthcare-associated infections (*Candida*, invasive molds); and (iii) community-acquired infections (*Cryptococcus gattii*, histoplasmosis, coccidioidomycosis, and blastomycosis). We conduct outbreak investigations, coordinate novel surveillance for fungal infections, conduct analyses to identify risk factors for disease in specific settings, monitor and evaluate the implementation of large-scale public health programs internationally, and develop and promote disease prevention efforts.

As one of the only fungal public health groups in the world, MDB works with collaborators internationally in many areas. Our EIS officers have assisted in the onsite development, execution, analysis, and publication of numerous epidemiological studies all over the globe, including in Africa (South Africa, Lesotho, Namibia, Zimbabwe, Mozambique, Kenya), Asia (Vietnam and Bangladesh), and the Americas (Guatemala, Dominican Republic, Chile and Argentina). MDB has a broad domestic program providing opportunities for a variety of studies including population-based candidemia surveillance, emerging *Cryptococcus gattii* infections, and coccidioidomycosis. Officers apply their field and analytic experiences to policy development for prevention of fungal infections, such as WHO guidelines, USPHS/IDSA guidelines, the Yellow Book for travelers' health, and the Control of Communicable Diseases Manual.

MDB is part of The Division of Foodborne, Waterborne, and Environmental Diseases (DFWED). DFWED strives to improve public health nationally and internationally through the prevention and control of disease, disability, and death caused by foodborne, waterborne, and environmentally-transmitted pathogens. EISOs located in branches of DFWED enjoy several advantages resulting from the synergy between the various groups comprising the division. DFWED's Biostatistics and Information Management Activity provides statistical and IT support. DFWED provides extensive laboratory support. EISOs may undertake select projects in branches other than their own in the division; the division conducts journal club and other didactic activities for EISOs, as well as a monthly seminar; resident liaisons from USDA and FDA facilitate interactions with these regulatory agencies, which are important partners in disease outbreak investigations.

Proposed Initial Projects: Assess the association between hospital-level factors (e.g., bed size, presence of antimicrobial stewardship policy, etc.) and incidence of candidemia, distribution of *Candida* species, and antifungal resistance.

Describe global epidemiology of illness caused by *Candida auris*, an emerging pathogen that is highly resistant to antifungal drugs.

Assess test characteristics of a rapid dipstick test for cryptococcal antigen when used on fingerstick point-of-care samples vs. whole blood and serum in Tanzania.

Determine the source of a long-term outbreak of serious mucormycosis infections among patients undergoing orthopedic surgery in Argentina.

Design and implement a study to assess clinical provider testing practices for coccidioidomycosis in newly endemic

areas in the US.

Describe donor-derived fungal infections in solid organ transplant patients.

Proposed Surveillance Projects: Evaluate national surveillance for Coccidioidomycosis in the US.

Evaluate whether histoplasmosis should be made nationally notifiable.

Evaluate previous surveillance of invasive mold infections in the US to inform plans for new surveillance.

Range of Opportunities: MDB's work touches nearly every aspect of public health including hospital-associated infections, global HIV/AIDS, respiratory diseases, environmental health, climatology, and transplant infectious diseases; we work closely with public health departments, ministries of health, other US Government agencies, and academic physicians.

Position Strengths: MDB is one of the only groups in the world addressing fungal epidemiology; we deal with many fungal pathogens in a wide range of patients and environments. EIS officers are introduced to a broad range of issues, both domestic and international and opportunities for collaboration and project development both within and outside of CDC abound. EIS officers participate in outbreak investigations, analytic projects, surveillance programs, implementation science projects, monitoring and evaluation, and policy development in domestic and international settings. Staff has strong analytic, writing, and presentation skills and promote the same in their officers. The small size of our branch means a high degree of individual attention and support.

Special Skills Useful for this Position: Because MDB is involved in so many aspects of public health, we can easily tailor our EIS officer's experience to the skills and background from which they will benefit the most. We are looking for EIS officers who are scientifically inquisitive, flexible, and eager to learn; EIS officers should be able to work both independently and closely within a team. Fluency in another language, especially Spanish, French, or Portuguese is helpful, but not required.

Available Data: Numerous large surveillance datasets are available for analysis within our branch and through our many intra/inter-agency collaborations. Projects may also lead to primary data collection opportunities.

Recent Publications: MDB's work has been published in the New England Journal of Medicine, the Journal of the American Medical Association, Clinical Infectious Diseases, Open Forum Infectious Diseases, Emerging Infectious Diseases, Journal of Clinical Microbiology, AIDS, JAIDS, MBio, Transplant Infectious Diseases, and PLoS One, among other journals.

Domestic Travel: 10% **International Travel:** 20%

Available Support: Close communication with superb, easily-accessible staff, including PhD-level biostatisticians, epidemiologists, laboratorians, and health communicators.

Current/Recent EIS Officer: Paige Armstrong, MD, MSc, (EIS 2015), EIS Officer, yzu9@cdc.gov

Current/Recent EIS Officer: Tiffany Walker, MD, (EIS 2014), EIS Officer, ydj7@cdc.gov

Current/Recent EIS Officer: Snigdha Vallabhaneni, MD, MPH, (EIS 2013), Medical Officer, fco6@cdc.gov

Current/Recent EIS Officer: Anne Purfield, PhD, (EIS 2012), Epidemiologist, aip4@cdc.gov

Current/Recent EIS Officer: Rachel Smith, MD, MPH, (EIS 2011), Medical officer, vih9@cdc.gov

Current/Recent EIS Officer: Robyn Neblett-Fanfair, MD, (EIS 2010), Medical Officer, iyo5@cdc.gov

Current/Recent EIS Officer: Monika Roy, MD, (EIS 2009), Infectious Diseases Fellow, monika.roy@gmail.com

Officer Projects: Outbreaks of mucormycosis in hospitals (Kansas, Colorado, Pennsylvania)

Outbreak of Rhizopus surgical site infections (Argentina)

Outbreak of histoplasmosis (Dominican Republic)

Epidemiological description of histoplasmosis in the US

Risk factors for antifungal-resistant candidemia

Geospatial analysis of candidemia cases to assess health disparities

Cryptococcal antigen screening effectiveness (South Africa and Lesotho)

Officer Recent Publications: 1. Vallabhaneni et al. Evaluation of Provider-initiated Cryptococcal Antigen Screening, South Africa. JAIDS 2016.

2. Vallabhaneni et al. Epidemiology and Risk Factors for Echinocandin-Nonsusceptible-Candida glabrata Infections. OFID 2015.

3. Vallabhaneni et al. Epidemiology and factors associated with candidaemia following Clostridium difficile infection. Epidemiol Infect 2015.

4. Vallabhaneni et al. Cluster of Cryptococcus Infections in an ICU, Arkansas. EID 2015.

5. Vallabhaneni et al. Fatal Gastrointestinal Mucormycosis in a Premature Infant Associated with Contaminated Dietary Supplement. MMWR 2015.

6. Walker (co-first author), et al. Nosocomial Transmission of Ebola Virus Disease on Pediatric and Maternity Wards, Sierra Leone. AJIC 2014.

7. Duffy et al. Mucormycosis Outbreak Associated with Hospital Linens . Ped ID 2014.
8. Smith et al. Prevalence of cryptococcal antigenemia and cost-effectiveness of a cryptococcal antigen screening – Vietnam. PLoS One 2013.
9. Roy et al. A community outbreak of blastomycosis in Wisconsin with ethnic clustering. CID 2013.
10. Purfield et al. Epidemiology of commercial rhesus monkey kidney cells contaminated with *Coccidioides posadasii*. JCM 2013.
11. Smith et al. Fungal infections associated with contaminated methylprednisolone injections. NEJM 2013.
12. Fanfair et al. A Large Outbreak of Necrotizing Cutaneous Mucormycosis Following a Tornado, Joplin, Missouri. NEJM 2012.

Consultant: Kaitlin Benedict, MPH, Epidemiologist, jsy8@cdc.gov

Consultant: Orion McCotter, MPH, Epidemiologist, yim4@cdc.gov

Consultant: Gordana Derado, PhD, Biostatistician, uwx8@cdc.gov

Consultant: Shawn Lockhart, PhD, Team Lead, Fungal Reference Laboratory, gyi2@cdc.gov

Consultant: Ana Litvintseva, PhD, Team Lead, Fungal Research Unit, frq8@cdc.gov

Consultant: Rob Tauxe, MD, (EIS 1983), Division Director, DFWED, RTauxe@cdc.gov

Division of Foodborne, Waterborne, and Environmental Diseases/Outbreak Response and Prevention Branch

NCEZID-DFWED-ORPB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Foodborne, Waterborne, and Environmental Diseases/Outbreak Response and Prevention Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Colin Basler, DVM, MPH, (EIS 2013), Veterinary Epidemiologist, CBasler@cdc.gov

Secondary Supervisor: Laura Gieraltowski, PhD, MPH, (EIS 2009), Doctoral Epidemiologist, lax2@cdc.gov

Background: The Division of Foodborne, Waterborne, and Environmental Diseases (DFWED) strives to improve public health nationally and internationally through the prevention and control of disease, disability, and death caused by foodborne, waterborne, and environmentally-transmitted pathogens. EISOs located in branches of DFWED enjoy several advantages resulting from the synergy between the various groups comprising the division. EISOs may undertake select projects in other branches within the division; the division conducts journal club and other didactic activities for EISOs, as well as a monthly seminar.

The Outbreak Response and Prevention Branch (ORPB) is responsible for outbreak investigations involving a variety of organisms/syndromes transmitted by food, animal contact, or other routes. Detecting and investigating outbreaks is exciting and often requires shoe-leather epidemiology, conducting epidemiologic studies, and close collaboration with a diverse group of investigators. Our work drives enactment of policies and regulations that improve food safety and leads to changes in the animal production/pet industries to better protect animal and human health. ORPB typically monitors 20-60 potential clusters of illness/week and conducts >200 multistate investigations annually. Identification of contaminated sources in recent investigations resulted in prompt actions to stop outbreaks, including recalls of millions of pounds of food products (apples, nut butters, ice cream, cucumbers, sprouts, prepackaged salads, poultry, frozen foods, and cheese). A One Health approach (integrating multiple disciplines to attain optimal health for people, animals and the environment) is an increasingly important part of ORPB's strategy to decrease human illness from animal sources. Recent zoonotic outbreak investigations linked illnesses to bearded dragons, backyard poultry flocks, small turtles, and hedgehogs. For more information on ORPB investigations, see <http://www.cdc.gov/outbreaknet/outbreaks.html>.

ORPB is a key leader in the national network of public health officials who investigate enteric illness outbreaks by facilitating rapid exchange of information and coordinating multistate investigations. We collaborate with the Enteric Diseases Laboratory Branch, the Enteric Diseases Epidemiology Branch, and other groups across DFWED. We provide guidance and support to state, local, and territorial agencies to improve outbreak surveillance, detection, and response and routinely collaborate with regulatory agencies such as FDA and USDA. New challenges include incorporating the use of whole genome sequencing and antimicrobial resistance testing into outbreak investigations

and the impact of culture independent diagnostic tests on molecular surveillance. EISOs will also conduct free-living ameba and botulism case consultations in collaboration with DFWED subject matter experts to provide rapid drug and antitoxin release.

Proposed Initial Projects: 1) Investigate outbreaks of a variety of organisms/syndromes transmitted by food, animal contact, or other routes; 2) Assess whether outbreaks caused by specific foods have unique epidemiologic or demographic characteristics which can assist hypothesis generation; 3) Analyze national outbreak reporting data to characterize the epidemiology of pediatric outbreaks; 4) Develop health promotion projects to prevent future illnesses; 5) Identify and characterize epidemiologic features of recent outbreaks linked to sprouted products.

Proposed Surveillance Projects: 1) Evaluate the recent incorporation of whole genome sequencing into Listeria surveillance; 2) Evaluate timeliness and completeness of reporting STEC infections to PulseNet.

Range of Opportunities: Each EISO will have a unique experience, but will gain skills in study design, data analysis, cluster management, leading outbreak investigations, analyzing surveillance data, writing and presenting, and collaborating with public health, agriculture, and regulatory officials. International opportunities might be available to interested EISOs, but will typically not exceed 8 weeks over 2 years.

Position Strengths: ORPB offers an exciting EIS experience, where EISOs can lead outbreak investigations from start to finish. Detecting and investigating these outbreaks is exciting and often requires shoe-leather epidemiology. Our collaboration with USDA and FDA drives enactment of regulations that increase the safety of food, water, and contact with animals. New and unexpected challenges during outbreak investigations are the norm. EISOs will work in a wonderful team environment in a branch that values work-life balance. Officers are invited to weekly seminars and trainings including biostatistics, scientific writing, and media/communications. Your work as an ORPB EISO will have a public health impact!

Special Skills Useful for this Position: EISOs from all backgrounds including physicians, veterinarians, doctoral scientists, and nurses have made major public health impacts with ORPB. Your EIS experience is tailored to your specific needs and goals. EISOs who are flexible, eager to learn, willing to work hard, and able to work in teams in a fast-paced environment will get the most out of their EIS experience. Other useful skills include the ability to be diplomatic, to work on multiple projects concurrently, to work both independently and as part of a team, and excellent communication skills. Data analysis skills are a plus, but not required.

Available Data: Numerous datasets available for analysis within DFWED and through intra/inter-agency collaborations such as NORS and PulseNet databases.

Recent Publications: Nationwide outbreak of multidrug-resistant Salmonella Heidelberg infections associated with ground turkey: United States, 2011. *Epidemiol. Infect.*, 2015.

Backyard poultry flocks and salmonellosis: a recurring, yet preventable public health challenge. *Clin Infect Dis*, 2014.

Foodborne Illness Outbreaks from Microbial Contaminants in Spices, 1973-2010. *Food Microbiol*, 2013.

Outbreak of Salmonellosis Linked to Live Poultry from a Mail-Order Hatchery. *NEJM*, 2012.

Nationwide outbreak of Salmonella infections associated with contaminated imported black and red pepper: Warehouse membership cards provide critical clues to identify the source. *Epidemiology & Infection*, 2012.

Salmonella Typhimurium infections associated with peanut products. *NEJM*, 2011.

Domestic Travel: 10% **International Travel:** 10%

Available Support: ORPB provides excellent EISO training and mentorship. EISOs work closely with epidemiologists with diverse backgrounds, statisticians, health communicators, microbiologists, and regulatory officials.

Current/Recent EIS Officer: Mark Laughlin, DVM, MPH, (EIS 2015)

Current/Recent EIS Officer: Kelly Gambino-Shirely, DVM, MPH, (EIS 2015)

Current/Recent EIS Officer: Mariel Marlow, PhD, MPH, (EIS 2015)

Current/Recent EIS Officer: Julie Self, PhD, MPH, (EIS 2015)

Current/Recent EIS Officer: Kristina Angelo, DO, MPA, (EIS 2014)

Current/Recent EIS Officer: Samuel Crowe, PhD, MPH, (EIS 2014)

Current/Recent EIS Officer: Colin Basler, DVM, MPA, (EIS 2013)

Current/Recent EIS Officer: Craig Kiebler, DVM, MPH, (EIS 2013)

Current/Recent EIS Officer: Kara Jacobs Slifka, MD, MPH, (EIS 2013)

Current/Recent EIS Officer: Ulzi Luvsansharav, MD, PhD, (EIS 2013)

Current/Recent EIS Officer: Reid Harvey, DVM, MPH, (EIS 2013)

Current/Recent EIS Officer: Tara Anderson, DVM, PhD, MPH, (EIS 2012)

Current/Recent EIS Officer: Jamae Morris, MA, PhD, (EIS 2012)

Current/Recent EIS Officer: Jolene Nakao, MD, MPH, (EIS 2012)

Current/Recent EIS Officer: Von Nguyen, MD, MPH, (EIS 2012)

Officer Projects: Lead multistate foodborne/zoonotic outbreak investigations. Recent Salmonella, STEC, and Listeria outbreaks were linked to sprouted nut butters, cucumbers, ice cream, caramel apples, and animal contact (e.g., backyard flocks, petting zoos). Conduct analytic/prevention projects to prevent future outbreaks. Learn a One Health team approach for investigations.

Officer Recent Publications: Notes from the Field: Outbreak of Escherichia coli O157:H7 Infections Associated with Dairy Education Event Attendance – Whatcom County, Washington, 2015. MMWR, 2015.

Notes from the Field: Large Outbreak of Botulism Associated with a Church Potluck Meal – Ohio, 2015. MMWR, 2015.

Vital Signs: Multistate Foodborne Outbreaks – United States, 2010-2014. MMWR, 2015.

Salmonellosis and meat purchased at live-bird and animal-slaughter markets, United States, 2007-2012. Emerg Infect Dis, 2014.

Outbreak of Salmonella Newport Infections Linked to Cucumbers — United States, 2014. MMWR, 2014.

Outbreak of Salmonella enterica serotype Infantis Infections in Humans Linked to Dry Dog Food in the United States and Canada, 2012. JAVMA, 2014.

Outbreak of Escherichia coli O104:H4 infections associated with sprout consumption - Europe and North America, May-July 2011. MMWR, 2013.

Notes from the Field: Outbreaks of Cyclosporiasis — United States, June–August 2013. MMWR, 2013.

Multistate Outbreak of Escherichia coli O145 Infections Associated with Romaine Lettuce Consumption. Journal of Food Protection, 2013.

US Outbreak of Human Salmonella Infections Associated with Aquatic Frogs, 2008-2011. Pediatrics, 2013.

Multistate Outbreak of Salmonella enterica serotype Heidelberg Infections Linked to a Single Poultry Producer --- United States, 2012–2013. MMWR, 2013.

Consultant: Matthew Wise, PhD, MPH, (EIS 2008), Team Lead

Consultant: Ian Williams, PhD, (EIS 1994), Branch Chief

Consultant: Megin Nichols, DVM, MPH, (EIS 2008), Veterinary Epidemiologist

Consultant: Karen Neil, MD, MSPH, (EIS 2008), Doctoral Epidemiologist

Consultant: Kevin Chatham-Stevens, MD, MPH, (EIS 2013)

Consultant: Jennifer Hunter, DrPH, MPH, (EIS 2013)

Consultant: Allison Brown, PhD, MPH, (EIS 2010)

Consultant: Patricia Griffin, MD, (EIS 1985), Branch Chief

Consultant: Robert Tauxe, MD, MPH, (EIS 1983), Division Director

Division of Foodborne, Waterborne, and Environmental Diseases/Waterborne Disease Prevention Branch

NCEZID-DFWED-WDPB-GA-2016-03

Agency Name: CDC

Division/Branch/Team/Section: Division of Foodborne, Waterborne, and Environmental Diseases/Waterborne Disease Prevention Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Jennifer Cope, MD, MPH, (EIS 2009), Medical Epidemiologist, bjt9@cdc.gov

Secondary Supervisor: Michele Hlavsa, (EIS 2005), Epidemiologist

Background: The Division of Foodborne, Waterborne, and Environmental Diseases (DFWED) strives to improve public health nationally and internationally through the prevention and control of disease, disability, and death caused by foodborne, waterborne, and environmentally-transmitted pathogens. EISOs in DFWED enjoy several advantages resulting from the synergy between the various groups comprising the division. DFWED's Biostatistics Unit provides statistical support; the Enteric Disease Laboratory Branch and the Waterborne Diseases Laboratory Team provide laboratory expertise; EISOs may undertake select projects in branches other than their own in the division; the division conducts journal club and other didactic activities for EISOs, as well as a monthly seminar; resident liaisons from USDA and FDA facilitate interactions with these regulatory agencies, which are important partners in disease outbreak investigations. The Waterborne Disease Prevention Branch (WDPB; www.cdc.gov/ncezid/dfwed/waterborne/index.html) offers one position with the Domestic Epidemiology Team and two positions with the Global Epidemiology Team. The Domestic Epidemiology Team EISO will have the option of doing one WDPB international project.

WDPB leads coordination and response for domestic and global water, sanitation, and hygiene (WASH)-related disease within the Center and for specific pathogens that include amebiasis, cryptosporidiosis, giardiasis, cholera, shigellosis, and infections caused by *Cronobacter*, enterotoxigenic *E. coli*, and the free-living amebae *Acanthamoeba*, *Balamuthia*, and *Naegleria* (recent outbreak investigations are listed at www.cdc.gov/ncezid/dfwed/waterborne/investigations.html). Domestically, WDPB focuses on public health issues related to drinking and recreational (e.g., pools) water; hygiene issues pertaining to contact lens use; operates multiple national surveillance systems (cryptosporidiosis, giardiasis, shigellosis, NORS); provides diagnostic services and clinical consults; is developing estimates of the burden of waterborne disease; works on climate change; and health communications and policy development.

Proposed Initial Projects: 1) Characterize the epidemiology and clinical features of *Acanthamoeba* spp. infections in the U.S.; 2) Review of U.S. outbreaks caused by *Cryptosporidium* reported to CDC or in the literature for 1976–2014; 3) Work with the water preparedness coordinator to define what water preparedness capacity is and conduct a national survey of state health departments to characterize this capacity; 4) Use syndromic surveillance data from Louisiana to review reports of acute gastrointestinal and respiratory illnesses before and after an emergency rule increasing the required level of chlorine disinfectant in all state public water systems was put into place; 5) Review of U.S. outbreaks associated with untreated recreational water venues (e.g., lakes, rivers, and oceans); and 6) Other potential opportunities include investigating domestic or international waterborne disease outbreaks.

Proposed Surveillance Projects: Evaluate

- 1) U.S. National Outbreak Reporting System (NORS): review reports received at CDC and survey reporting states to evaluate the causes for incomplete reporting of outbreaks
- 2) U.S. National Aquatic Facility Inspection Surveillance System (NAFISS)
- 3) U.S. One Health Harmful Algal Bloom Surveillance System (OHHABS)
- 4) Develop a surveillance strategy for identifying drinking water advisories that occur in the United States

Range of Opportunities: A broad range of opportunities is typically available for EISOs in WDPB, allowing us to tailor projects to meet the EISOs learning objectives and interests. Opportunities include investigations of domestic and international waterborne disease outbreaks, designing and conducting epidemiologic studies, analyzing data, and summarizing and interpreting findings in scientific manuscripts and oral presentations. We collaborate with colleagues across CDC and external partners, including state and local health departments, EPA, and FDA.

Position Strengths: Solid grounding in the essentials of waterborne diseases, applied public health, and epidemiology while working with experienced, dedicated, and caring epidemiologists, microbiologists, and statisticians. Learning opportunities include weekly biostatistics and Division seminars, and trainings in SAS, EpiInfo, scientific writing, etc.

Special Skills Useful for this Position: We welcome EISOs from diverse backgrounds who are interested in addressing fundamental issues in waterborne disease and infections caused by free-living amebae and learning epidemiologic, presentation, and scientific writing skills. Opportunities for learning include weekly Biostatistics and Division seminars and training in SAS, EpiInfo, scientific writing, etc. EISOs who are flexible, eager to learn, willing to work hard, and able to work in teams in a fast-paced and busy environment will get the most out of the opportunities we provide.

Available Data: Multiple national datasets are available for analysis within WDPB's Domestic Epidemiology Team, including Nationwide Inpatient Sample, Nationwide Emergency Department Sample, National Notifiable Diseases Surveillance System (cryptosporidiosis, giardiasis, and shigellosis), NORS, MarketScan, and national data on free-living amebae infections. Projects might also lead to primary data collection.

Recent Publications: WDPB values scientific writing, and has a distinguished reputation of publishing many excellent papers in high-profile peer-reviewed journals. From 2013–2015, WDPB published over 250 peer-reviewed journal articles, MMWR articles, and book chapters. Recent WDPB publications have appeared in the New England Journal of Medicine, JAMA, JAMA-Pediatrics, the Journal of Infectious Diseases, Clinical Infectious Diseases, Emerging Infectious Diseases, Epidemiology and Infection, PLoS Medicine, and the American Journal of Tropical Medicine and Hygiene among others. A complete list of recent Branch publications is at www.cdc.gov/ncezid/dfwed/waterborne/publications/.

Domestic Travel: 10% **International Travel:** 10%

Available Support: EISOs have access to 9 EIS alumni staff in WDPB, Division statisticians, laboratory scientists (WDPB Laboratory Team and in Enteric Diseases Laboratory Branch), and administrative and communications support (WDPB Health Promotion Team).

Current/Recent EIS Officer: Julia Painter, PhD, (EIS 2013)

Current/Recent EIS Officer: Almea Matanock, (EIS 2013)

Current/Recent EIS Officer: Allison Taylor Walker, (EIS 2013)

Current/Recent EIS Officer: Katharine Benedict, (EIS 2015)

Current/Recent EIS Officer: Sae-Rom Chae, (EIS 2015)

Current/Recent EIS Officer: Lindsey McCrickard, (EIS 2015)

Current/Recent EIS Officer: Karlyn Beer, (EIS 2014)

Current/Recent EIS Officer: Katie Curran, (EIS 2014)

Current/Recent EIS Officer: Rupa Narra, (EIS 2014)

Current/Recent EIS Officer: Craig Kiebler, (EIS 2013)

Current/Recent EIS Officer: Kara Jacobs Slifka, (EIS 2013)

Current/Recent EIS Officer: Reid Harvey, (EIS 2013)

Current/Recent EIS Officer: Ulzii Luvsansharav, (EIS 2013)

Officer Projects: Elizabethkingia outbreak in Wisconsin, Shigellosis outbreak in American Samoa, Drinking water-associated cryptosporidiosis outbreak, National giardiasis and cryptosporidiosis case surveillance data analysis, Camp-associated cryptosporidiosis outbreak, Multistate Acanthamoeba keratitis outbreak, Extended community-wide water service interruption, Naegleria fowleri case investigations, Balamuthia transplant-associated cluster investigations, Longitudinal study of giardiasis sequelae

Officer Recent Publications: Selection of recent EISO first-author WDPB publications:

Domestic: Surveillance for waterborne disease outbreaks associated with drinking water - United States, 2011-2012 (MMWR 2015); Surveillance for waterborne disease outbreaks associated with drinking water - United States, 2011-2012 (MMWR 2015); Investigation of diarrheal illness caused by Shigella flexneri — American Samoa, 2014 (MMWR, 2015); Assessment of Ebola virus disease, health care infrastructure, and preparedness — Southeastern Liberia, 2014 (MMWR, 2014); Serologic survey for exposure following fatal Balamuthia mandrillaris infection (Parasitol Res, 2014); Primary amebic meningoencephalitis associated with ritual nasal rinsing — St. Thomas, U.S. Virgin islands, 2012 (MMWR, 2013); ; Acute gastrointestinal illness following a prolonged community-wide water emergency (Epi & Infect, 2015)

International: A cluster randomized controlled evaluation of the health impact of a novel antimicrobial hand towel on the health of children under 2 years old in rural communities in Nyanza Province, Kenya (Am J Trop Med Hyg 2016); Effects of community-based sales of micronutrient powders on morbidity episodes in preschool children in western Kenya (Am J Clin Nutr 2016); Acceptability and use of portable drinking water and hand washing stations in health care facilities and their impact on patient hygiene practices, Western Kenya (PLoS One 2015)

Consultant: Michael Beach, (EIS 1995), Branch Chief

Consultant: Anna Bowen, (EIS 2003), Medical Epidemiologist

Consultant: Joan Brunkard, (EIS 2006), Epidemiologist

Consultant: Sarah Collier, Epidemiologist

Consultant: Eric Mintz, (EIS 1989), Team Lead

Consultant: Ciara O'Reilly, (EIS 2004), Epidemiologist

Consultant: Sharon Roy, (EIS 2001), Medical Epidemiologist

Consultant: Rob Quick, (EIS 1990), Medical Epidemiologist

Consultant: Virginia Roberts, Epidemiologist
Consultant: Jonathan Yoder, Team Lead
Consultant: Katie Fullerton, Domestic Team Lead
Consultant: Jacqui Hurd, MPH, Surveillance Epidemiologist

Division of Foodborne, Waterborne, and Environmental Diseases/Waterborne Disease Prevention Branch/Global Team

NCEZID-DFWED-WDPB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Foodborne, Waterborne, and Environmental Diseases/Waterborne Disease Prevention Branch/Global Team

Physical Address: Atlanta, Georgia

Primary Supervisor: Joan Brunkard, PhD, (EIS 2006), Epidemiologist, feu4@cdc.gov

Secondary Supervisor: Eric Mintz, MD, MPH, (EIS 1989), Team Lead, Global Team

Background: The Division of Foodborne, Waterborne, and Environmental Diseases (DFWED) strives to improve public health nationally and internationally through the prevention and control of disease, disability, and death caused by foodborne, waterborne, and environmentally transmitted pathogens. EISOs in DFWED enjoy several advantages resulting from the synergy between the various groups comprising the division. DFWED's Biostatistics Unit provides statistical support; the Enteric Disease Laboratory Branch and the Waterborne Diseases Laboratory Team provide laboratory expertise; EISOs may undertake select projects in branches other than their own in the division; the division conducts journal club and other didactic activities for EISOs, as well as a monthly seminar; resident liaisons from USDA and FDA facilitate interactions with these regulatory agencies, which are important partners in foodborne disease outbreak investigations. The Waterborne Disease Prevention Branch (WDPB; www.cdc.gov/ncezid/dfwed/waterborne/index.html) offers two positions with the Global Epidemiology Team and one position with the Domestic Epidemiology Team.

WDPB leads coordination and response for domestic and global water, sanitation, and hygiene (WASH)-related disease within the Center, and for specific diseases and outbreak investigations that include amebiasis, cryptosporidiosis, giardiasis, cholera, shigellosis, and infections caused by *Cronobacter*, enterotoxigenic *E. coli*, and the free-living amoebae *Acanthamoeba*, *Balamuthia*, and *Naegleria* (recent outbreak investigations are listed at www.cdc.gov/ncezid/dfwed/waterborne/investigations.html). WDPB works globally on: evaluating and promoting WASH interventions, including CDC's Safe Water System (www.cdc.gov/SAFEWATER/); documenting the health and developmental benefits of handwashing; integrating safe water and hygiene into school and healthcare settings, integrating WASH into neglected tropical disease programs; building capacity within Ministries of Health for epidemic cholera and typhoid response; and participating in a global initiative to implement WASH infrastructure into health facilities in developing countries. Domestically, WDPB focuses on public health issues related to drinking and recreational water; operates multiple national surveillance systems (cryptosporidiosis, giardiasis, shigellosis, NORS); provides diagnostic services and clinical consults; works on climate change; and health communications and policy development.

Proposed Initial Projects: 1) Investigate and help respond to outbreaks of waterborne diseases in foreign countries and domestically; 2) Evaluate data from the GEMS Kenya case-control study of pediatric diarrhea in children <5 years old; 3) Contribute to surveillance and evaluation of the health and economic impacts of waterborne diseases in communities in Lusaka, Zambia; 4) Implement and evaluate impact of portable handwashing and drinking water stations in health facilities in developing countries; 5) Evaluate impact of improved water supply and sanitary infrastructure in rural health facilities in Mali; 6) Participate in a Global Health Security (GHS) project to enhance cholera prevention, detection and response in Cameroon; 7) Participate in a GHS project to examine the burden of acute febrile illness caused by typhoid fever and non-Typhi salmonellosis in Uganda.

Proposed Surveillance Projects: 1) Review incomplete reporting within the US National Outbreak Reporting System; 2) US National Aquatic Facility Inspection Surveillance System; 3) US One Health Harmful Algal Bloom Surveillance System; 4) Develop surveillance strategy for drinking water advisories in the US.

Range of Opportunities: A broad range of opportunities are available: investigating foreign/domestic outbreaks of waterborne diseases; designing, conducting, analyzing, and interpreting studies of interventions to prevent diseases

transmitted by unsafe water, sanitation and hygiene; analyzing and interpreting data on waterborne diseases from previous studies; and summarizing findings in scientific manuscripts and oral presentations. We often work closely with partners including Ministries of Health, UN agencies, NGOs, the private sector, and many CDC Divisions/Centers.

Position Strengths: Solid grounding in the essentials of waterborne diseases, applied global health, and epidemiology while working with experienced, dedicated, and caring epidemiologists, microbiologists, and statisticians. Learning opportunities include weekly biostatistics and Division seminars, and trainings in SAS, EpiInfo, scientific writing, etc.

Special Skills Useful for this Position: We welcome EISOs from diverse backgrounds who are interested in addressing fundamental issues in waterborne diseases and global health; learning analytic, presentation and scientific writing skills; and traveling. Overseas experience and foreign languages (Spanish, French, other) may be helpful, but are not required. EISOs who are flexible, eager to learn, willing to work hard, and able to work in teams in a fast-paced and busy environment will get the most out of the opportunities we provide. Our Branch values passionate and creative people!

Available Data: A dataset from >1,500 children with diarrhea and >2,000 controls from the Kenya site of the Global Enterics Multicenter Study, and other study specific datasets are available for analytic projects.

Recent Publications: WDPB values scientific writing, and has a distinguished reputation of publishing many excellent papers in high-profile peer-reviewed journals. From 2013–2015, WDPB published over 250 peer-reviewed journal articles, MMWR articles, and book chapters. Recent WDPB publications have appeared in NEJM, the Lancet, JAMA, JAMA Pediatrics, Vaccine, the Journal of Infectious Diseases, Clinical Infectious Diseases, Emerging Infectious Diseases, Epidemiology and Infection, Tropical Medicine and International Health, PLoS Medicine, PLoS One, the American Journal of Tropical Medicine and Hygiene, among others. A list of recent Branch publications is at www.cdc.gov/ncezid/dfwed/waterborne/publications.

Domestic Travel: 5% **International Travel:** 30%

Available Support: EISOs have access to 9 EIS alumni staff in WDPB, Division statisticians, laboratory scientists (WDPB Laboratory Team and in Enteric Diseases Laboratory Branch), and administrative and communications support (WDPB Health Promotion Team).

Current/Recent EIS Officer: Sae-Rom Chae, MD, MPH, (EIS 2015), EISO, yzv0@cdc.gov

Current/Recent EIS Officer: Lindsey McCrickard, DVM, (EIS 2015), EISO, vjf4@cdc.gov

Current/Recent EIS Officer: Katharine Benedict, DVM, PhD, (EIS 2015), EISO, wte7@cdc.gov

Current/Recent EIS Officer: Karlyn Beer, PhD, (EIS 2014), EISO, ydh7@cdc.gov

Current/Recent EIS Officer: Katie Curran, PhD, (EIS 2014), EISO, ydh9@cdc.gov

Current/Recent EIS Officer: Rupa Narra, MD, (EIS 2014), EISO, ydi5@cdc.gov

Current/Recent EIS Officer: Almea Matanock, MD, (EIS 2013), EISO, xdf2@cdc.gov

Current/Recent EIS Officer: Allison Taylor Walker, PhD, MPH, (EIS 2013), EISO, eie7@cdc.gov

Current/Recent EIS Officer: Julia Painter, PhD, MPH, (EIS 2013), EISO, epf3@cdc.gov

Current/Recent EIS Officer: Craig Kiebler, DVM, MPH, MS, (EIS 2013), EISO, xde3@cdc.gov

Current/Recent EIS Officer: Colin Basler, DVM, MPH, (EIS 2013), EISO, wjq3@cdc.gov

Current/Recent EIS Officer: R. Reid Harvey, DVM, MPH, (EIS 2013), EISO, iez1@cdc.gov

Current/Recent EIS Officer: Ulzii Orshikh Luvsansharav, MD, (EIS 2013), EISO, xde7@cdc.gov

Officer Projects: Responses to outbreaks of cholera in Kenya and Tanzania, shigellosis in American Samoa, and cholera preparedness during flooding in Sierra Leone. Evaluations of handwashing and drinking water stations in healthcare facilities in Mali, and backpacks for water transport in Kenya. Case-control analyses of pediatric diarrhea. Cholera mortality in Tanzania.

Officer Recent Publications: Select EISO first-author manuscripts published 2014-2016:

- Integrating Water Treatment into Antenatal Care: Impact on Use of Maternal Health Services and Household Water Treatment by Mothers — Rural Uganda, 2013 (Am J Trop Med Hyg 2016)
- A cluster randomized controlled evaluation of the health impact of a novel antimicrobial hand towel on the health of children under 2 years old in rural communities in Nyanza Province, Kenya (Am J Trop Med Hyg 2016)
- Acceptability and use of portable drinking water and hand washing stations in health care facilities and their impact on patient hygiene practices, Western Kenya (PLoS One 2015)
- Typhoid fever acquired in the United States, 1999-2010: Epidemiology, microbiology, and use of a space-time scan statistic for outbreak detection (Epidemiol Infect 2015)
- Cholera in the United States, 2001-2011: A reflection of patterns of global epidemiology and travel (Epidemiol Infect 2015)

- Outbreak of diarrheal illness caused by *Shigella flexneri* – American Samoa, May-June 2014 (MMWR Morb Mortal Wkly Rep. 2015)
- Household water treatment uptake during a public health response to a large typhoid fever outbreak in Harare, Zimbabwe (Am J Trop Med Hyg 2014)
- Cholera epidemic – Eastern Freetown, Sierra Leone, 2012 (Am J Trop Med Hyg 2014)

Consultant: Michael Beach, PhD, (EIS 1995), Branch Chief

Consultant: Jonathan Yoder, MPH, MSW, Deputy Branch Chief, jey9@cdc.gov

Consultant: Rob Quick, MD, MPH, (EIS 1990), Medical Epidemiologist

Consultant: Anna Bowen, MD, MPH, (EIS 2003), Medical Epidemiologist, aqb0@cdc.gov

Consultant: Ciara O'Reilly, PhD, (EIS 2004), Epidemiologist, bwf1@cdc.gov

Consultant: Ann Griggs, MSPH, MSN, Epidemiologist, bfy7@cdc.gov

Consultant: Ben Nygren, MPH, Epidemiologist, gyz8@cdc.gov

Consultant: Jacqui Hurd, MPH, Epidemiologist, xyf2@cdc.gov

Consultant: Katie Fullerton, MPH, Domestic Team Lead, kgf9@cdc.gov

Consultant: Jennifer Cope, MD, MPH, (EIS 2009), Medical Epidemiologist, bjt9@cdc.gov

Consultant: Michele Hlavsa, RN, MPH, (EIS 2005), Epidemiologist, acz3@cdc.gov

Consultant: Sarah Collier, MPH, Domestic Epidemiology Team Data Analyst, sau9@cdc.gov

Consultant: Virginia Roberts, MPH, Epidemiologist, evl1@cdc.gov

NCEZID-DFWED-WDPB-GA-2016-02

Agency Name: CDC

Division/Branch/Team/Section: Division of Foodborne, Waterborne, and Environmental Diseases/Waterborne Disease Prevention Branch/Global Team

Physical Address: Atlanta, Georgia

Primary Supervisor: Ciara O'Reilly, PhD, (EIS 2004), Epidemiologist, bwf1@cdc.gov

Secondary Supervisor: Eric Mintz, MD, MPH, (EIS 1989), Team Lead, Global Team, edm1@cdc.gov

Background: The Division of Foodborne, Waterborne, and Environmental Diseases (DFWED) strives to improve public health nationally and internationally through the prevention and control of disease, disability, and death caused by foodborne, waterborne, and environmentally transmitted pathogens. EISOs in DFWED enjoy several advantages resulting from the synergy between the various groups comprising the division. DFWED's Biostatistics Unit provides statistical support; the Enteric Disease Laboratory Branch and the Waterborne Diseases Laboratory Team provide laboratory expertise; EISOs may undertake select projects in branches other than their own in the division; the division conducts journal club and other didactic activities for EISOs, as well as a monthly seminar; resident liaisons from USDA and FDA facilitate interactions with these regulatory agencies, which are important partners in foodborne disease outbreak investigations. The Waterborne Disease Prevention Branch (WDPB; www.cdc.gov/ncezid/dfwed/waterborne/index.html) offers two positions with the Global Epidemiology Team and one position with the Domestic Epidemiology Team.

WDPB leads coordination and response for domestic and global water, sanitation, and hygiene (WASH)-related disease within the Center, and for specific diseases and outbreak investigations that include amebiasis, cryptosporidiosis, giardiasis, cholera, shigellosis, and infections caused by *Cronobacter*, enterotoxigenic *E. coli*, and the free-living amoebae *Acanthamoeba*, *Balamuthia*, and *Naegleria* (recent outbreak investigations are listed at www.cdc.gov/ncezid/dfwed/waterborne/investigations.html). WDPB works globally on: evaluating and promoting WASH interventions, including CDC's Safe Water System (www.cdc.gov/SAFEWATER/); documenting the health and developmental benefits of handwashing; integrating safe water and hygiene into school and healthcare settings; integrating WASH into neglected tropical disease programs; building capacity within Ministries of Health for epidemic cholera and typhoid response; and participating in a global initiative to implement WASH infrastructure into health facilities in developing countries. Domestically, WDPB focuses on public health issues related to drinking and recreational water; operates multiple national surveillance systems (cryptosporidiosis, giardiasis, shigellosis, NORS); provides diagnostic services and clinical consults; works on climate change; and health communications and policy development.

Proposed Initial Projects: 1) Investigate and help respond to outbreaks of waterborne diseases in foreign countries and domestically; 2) Evaluate data from the GEMS Kenya case-control study of pediatric diarrhea in children <5 years old; 3) Contribute to surveillance and evaluation of the health and economic impacts of waterborne diseases in communities in Lusaka, Zambia; 4) Implement and evaluate impact of portable handwashing and drinking water stations in health facilities in developing countries; 5) Evaluate impact of improved water supply and sanitary infrastructure in rural health facilities in Mali; 6) Participate in a Global Health Security (GHS) project to enhance cholera prevention, detection and response in Cameroon; 7) Participate in a GHS project to examine the burden of acute febrile illness caused by typhoid fever and non-Typhi salmonellosis in Uganda.

Proposed Surveillance Projects: 1) Review incomplete reporting within the US National Outbreak Reporting System; 2) US National Aquatic Facility Inspection Surveillance System; 3) US One Health Harmful Algal Bloom Surveillance System; 4) Develop surveillance strategy for drinking water advisories in the US.

Range of Opportunities: A broad range of opportunities are available: investigating foreign/domestic outbreaks of waterborne diseases; designing, conducting, analyzing, and interpreting studies of interventions to prevent diseases transmitted by unsafe water, sanitation and hygiene; analyzing and interpreting data on waterborne diseases from previous studies; and summarizing findings in scientific manuscripts and oral presentations. We often work closely with partners including Ministries of Health, UN agencies, NGOs, the private sector, and many CDC Divisions/Centers.

Position Strengths: Solid grounding in the essentials of waterborne diseases, applied global health, and epidemiology while working with experienced, dedicated, and caring epidemiologists, microbiologists, and statisticians. Learning opportunities include weekly biostatistics and Division seminars, and trainings in SAS, EpiInfo, scientific writing, etc.

Special Skills Useful for this Position: We welcome EISOs from diverse backgrounds who are interested in addressing fundamental issues in waterborne diseases and global health; learning analytic, presentation and scientific writing skills; and traveling. Overseas experience and foreign languages (Spanish, French, other) may be helpful, but are not required. EISOs who are flexible, eager to learn, willing to work hard, and able to work in teams in a fast-paced and busy environment will get the most out of the opportunities we provide. Our Branch values passionate and creative people!

Available Data: A dataset from >1,500 children with diarrhea and >2,000 controls from the Kenya site of the Global Enterics Multicenter Study, and other study specific datasets are available for analytic projects.

Recent Publications: WDPB values scientific writing, and has a distinguished reputation of publishing many excellent papers in high-profile peer-reviewed journals. From 2013 – 2015, WDPB published over 250 peer-reviewed journal articles, MMWR articles, and book chapters. Recent WDPB publications have appeared in the New England Journal of Medicine, the Lancet, JAMA, JAMA Pediatrics, Vaccine, the Journal of Infectious Diseases, Clinical Infectious Diseases, Emerging Infectious Diseases, Epidemiology and Infection, Tropical Medicine and International Health, PLoS Medicine, PLoS One, the American Journal of Tropical Medicine and Hygiene, among others. A list of recent Branch publications: www.cdc.gov/ncezid/dfwed/waterborne/publications.

Domestic Travel: 5% **International Travel:** 30%

Available Support: EISOs have access to 9 EIS alumni staff in WDPB, Division statisticians, laboratory scientists (WDPB Laboratory Team and in Enteric Diseases Laboratory Branch), and administrative and communications support (WDPB Health Promotion Team).

Current/Recent EIS Officer: Sae-Rom Chae, MD, MPH, (EIS 2015), EISO, yzv0@cdc.gov

Current/Recent EIS Officer: Lindsey McCrickard, DVM, (EIS 2015), EISO, vjf4@cdc.gov

Current/Recent EIS Officer: Katharine Benedict, DVM, PhD, (EIS 2015), EISO, wte7@cdc.gov

Current/Recent EIS Officer: Karlyn Beer, PhD, (EIS 2014), EISO, ydh7@cdc.gov

Current/Recent EIS Officer: Katie Curran, PhD, (EIS 2014), EISO, ydh9@cdc.gov

Current/Recent EIS Officer: Rupa Narra, MD, (EIS 2014), EISO, ydi5@cdc.gov

Current/Recent EIS Officer: Almea Matanock, MD, (EIS 2013), EISO, xdf2@cdc.gov

Current/Recent EIS Officer: Allison Taylor Walker, PhD, MPH, (EIS 2013), EISO, eie7@cdc.gov

Current/Recent EIS Officer: Julia Painter, PhD, MPH, (EIS 2013), EISO, epf3@cdc.gov

Current/Recent EIS Officer: Craig Kiebler, DVM, MPH, MS, (EIS 2013), EISO, xde3@cdc.gov

Current/Recent EIS Officer: Kara Jacobs Slifka, MD, MPH, (EIS 2013), EISO, ipf8@cdc.gov

Current/Recent EIS Officer: Colin Basler, DVM, MPH, (EIS 2013), EISO, wjq3@cdc.gov

Current/Recent EIS Officer: R. Reid Harvey, DVM, MPH, (EIS 2013), EISO, iez1@cdc.gov

Current/Recent EIS Officer: Ulzii-Orshikh Luvsansharav, MD, (EIS 2013), EISO, xde7@cdc.gov

Officer Projects: Responses to outbreaks of cholera in Kenya and Tanzania, shigellosis in American Samoa, and cholera preparedness during flooding in Sierra Leone. Evaluations of handwashing and drinking water stations in healthcare facilities in Mali, and backpacks for water transport in Kenya. Case-control analyses of pediatric diarrhea. Cholera mortality in Tanzania.

Officer Recent Publications: Select EISO first-author manuscripts published 2014-2016:

- Integrating Water Treatment into Antenatal Care: Impact on Use of Maternal Health Services and Household Water Treatment by Mothers — Rural Uganda, 2013 (Am J Trop Med Hyg 2016)
- A cluster randomized controlled evaluation of the health impact of a novel antimicrobial hand towel on the health of children under 2 years old in rural communities in Nyanza Province, Kenya (Am J Trop Med Hyg 2016)
- Acceptability and use of portable drinking water and hand washing stations in health care facilities and their impact on patient hygiene practices, Western Kenya (PLoS One 2015)
- Typhoid fever acquired in the United States, 1999-2010: Epidemiology, microbiology, and use of a space-time scan statistic for outbreak detection (Epidemiol Infect 2015)
- Cholera in the United States, 2001-2011: A reflection of patterns of global epidemiology and travel (Epidemiol Infect 2015)
- Outbreak of diarrheal illness caused by *Shigella flexneri* – American Samoa, May-June 2014 (MMWR Morb Mortal Wkly Rep. 2015)
- Household water treatment uptake during a public health response to a large typhoid fever outbreak in Harare, Zimbabwe (Am J Trop Med Hyg 2014)
- Cholera epidemic – Eastern Freetown, Sierra Leone, 2012 (Am J Trop Med Hyg 2014)

Consultant: Michael Beach, PhD, (EIS 1995), Deputy Division Director, mjb3@cdc.gov

Consultant: Jonathan Yoder, MPH, Acting Branch Chief, jey9@cdc.gov

Consultant: Rob Quick, MD, MPH, (EIS 1990), Medical Epidemiologist, rxq1@cdc.gov

Consultant: Anna Bowen, MD, MPH, (EIS 2003), Medical Epidemiologist, aqb0@cdc.gov

Consultant: Sharon Roy, MD, MPH, (EIS 2001), Medical Epidemiologist, str2@cdc.gov

Consultant: Joan Brunkard, PhD, (EIS 2007), Epidemiologist, feu4@cdc.gov

Consultant: Ann Griggs, MSPH, MSN, Epidemiologist, bfy7@cdc.gov

Consultant: Ben Nygren, MPH, Epidemiologist, ghz8@cdc.gov

Consultant: Jacqui Hurd, MPH, Epidemiologist, xyf2@cdc.gov

Consultant: Katie Fullerton, MPH, Domestic Team Lead, kgf9@cdc.gov

Consultant: Jennifer Cope, MD, MPH, (EIS 2009), Medical Epidemiologist, bjt9@cdc.gov

Consultant: Michele Hlavsa, RN, MPH, (EIS 2005), Epidemiologist, acz3@cdc.gov

Consultant: Sarah Collier, MPH, Domestic Epidemiology Team Data Analyst, sau9@cdc.gov

Consultant: Virginia Roberts, MPH, Epidemiologist, evl1@cdc.gov

Division of Global Migration Quarantine/Quarantine and Border Health Services Branch

NCEZID-DGMQ-QBHSB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Global Migration Quarantine/Quarantine and Border Health Services Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Rebecca Merrill, MHS, PhD, (EIS 2010), Senior Epidemiologist, rdaymerrill@cdc.gov

Secondary Supervisor: Doug Hamilton, MD, (EIS 1991), Quarantine Epidemiology and Surveillance Deputy Team Lead, dhh0@cdc.gov

Background: The Division of Global Migration and Quarantine's (DGMQ) mission is to reduce morbidity and mortality among immigrants, refugees, travelers, expatriates, and other globally mobile populations and to prevent the introduction, transmission, and spread of communicable diseases through regulation, science, research, preparedness, and response. This position is primarily located in the Quarantine and Border Health Services Branch (QBHSB) whose mission is to detect and respond to communicable diseases related to travel and imported pathogens and improve the health of globally mobile populations transitioning to U.S. communities as well as traveling across and living along

international boundaries throughout the world.

This position is primarily with the International Border Team which leads most international activity within QBHSB including maintaining readiness to respond to acute events and supporting capacity development in countries receiving Global Health Security (GHS) funding. The EIS officer will also work closely with the Quarantine Epidemiology and Surveillance Team (QueST) which supports activities related to illness and deaths in travelers, including aviation, maritime, surveillance, epidemiology, federal travel restriction, and contact investigations (CI) on airplanes and ships. Federal regulations require airplanes and ships arriving in the US or traveling interstate to report certain illnesses and deaths onboard to CDC. QBHS receives over 2000 such reports annually requiring varying levels of public health response.

The EIS Officer may also have projects with QBHSB Importations and Animal Contact Team (ImpACT) which oversees activities related to CDC-regulated importations, as well as the DGMQ Travelers' Health Branch and Community Interventions for Infection Control Unit.

Proposed Initial Projects: - Provide technical assistance to ministries of health (MoH) to develop cross border surveillance and response coordination in countries with partners funded through Global Health Security (GHS), eg Benin, Ghana, Guinea, etc

- Participate in preparedness activities in a range of countries in collaboration with the World Health Organization (WHO) and the International Civil Aviation Organization (ICAO)

- Assist America Red Cross and CDC/ATSDR's Geospatial Research, Analysis, and Services Program (GRASP) with mapping the border regions of Guinea, Sierra Leone, and Liberia to inform humanitarian response efforts

- Analyze human population connectivity patterns, in collaboration with International Organization for Migration (IOM) and other partners, in international border regions of select countries in West Africa and strengthen national surveillance and response capacity to address findings

- Analyze airplane CI outcome data often focused on tuberculosis, meningococcal disease, pertussis, and rubella, with rare high-impact cases such as rabies, MERS-CoV, and Lassa fever

Proposed Surveillance Projects: - Evaluate surveillance capacity to detect and respond to public health events among mobile populations in land border regions in Guinea, Sierra Leone, Togo, or Benin, for example.

- Evaluate IOM-implemented 'flow monitoring points' designed to inform MoH about traveler volume and point of origin and destination at selected locations.

- Evaluate the utility and effectiveness of current criteria for initiating air travel CI

- Evaluate national surveillance and required reporting of illnesses of public health concern, such as tuberculosis, from cargo vessels entering the United States, and compare to data from private healthcare providers

Range of Opportunities: Projects related to international or interstate travel; support of US-affiliated Pacific Islands; importation or interstate movement of animals; health communications related to travel or importations; DGMQ regulations and policy; nonpharmaceutical interventions

Position Strengths: Diverse range of subject areas, with a focus on movement of people, animals and products rather than a specific disease or disease group; opportunity to work with disease subject-matter experts throughout the agency on DGMQ-related issues; opportunity to engage in projects related to policy or regulatory authority; opportunity to engage in emergency response related to health risks in mobile populations.

Special Skills Useful for this Position: Interest in global health, infectious diseases

Available Data: Quarantine Activity Reporting System
Select national-level data from 2014-2015 Ebola epidemic
IOM 'flow monitoring' data

Recent Publications: - Regan JJ et al. Public Health Response to Commercial Airline Travel of a Person with Ebola Virus Infection — United States, 2014. *MMWR*. 2015.

- Marienau KJ et al. Flight related tuberculosis contact investigations in the United States: Comparative risk and economic analysis of alternate protocols. *Travel Med Infect Dis*. 2014.

- Brown CM et al. Airport exit and entry screening for Ebola--August-November 10, 2014. *MMWR* 2014.

- Bair-Brake H et al. Is That a Rodent in Your Luggage? A Mixed Method Approach to Describe Bushmeat Importation into the United States. *Zoonoses Public Health*. 2014.

Domestic Travel: 5% **International Travel:** 25%

Available Support: DGMQ has approximately 40 medical and doctoral epidemiologists and veterinarians with subject-matter expertise in aviation and maritime issues, travel medicine, infectious and zoonotic diseases, health of migrant populations, and emergency response. About half are EIS-trained, including the Division Director, Deputy Director, and QBHSB Chief. Statistical, economic, policy, communications, and mapping expertise are available, in addition to computer and clerical

Current/Recent EIS Officer: Emily Lankau, DVM, PhD, (EIS 2011)

Current/Recent EIS Officer: Monica Selent, DVM, (EIS 2009)

Officer Projects: Human rabies on airplanes; Nonhuman primate importation impacts; Policy impacts of wildlife importation trends; Guam communicable disease surveillance; Rabid Kenyan zebra exposure; Sarcocystosis in travelers; Legionella on ship; Malaria in airline crew; Thermal scanner efficacy; Pandemic H1N1 on ships; Evaluation ESSENCE pandemic H1N1 surveillance; Evaluation cholera Travel Health Alert Notices

Officer Recent Publications: - Lankau EW et al. Exposure of US travelers to rabid zebra, Kenya, 2011. EID. 2011.

- Lankau EW et al. Prevention and control of rabies in an age of global travel: A review of US travel- and trade- associated rabies cases. Zoonoses Public Health. 2014.

- Lankau EW et al. Worker health and safety practices in research facilities using nonhuman primates, North America. Emerg Infect Dis. 2014.

- Lankau EW et al. Public Health Implications of Changing Rodent Importation Patterns - United States, 1999- 2013. Transbound Emerg Dis. 2015.

- Selent MU et al. Travel Health Alert Notices and Haiti cholera outbreak, Florida, USA, 2011. EID. 2011.

- Selent MU et al. Malaria Prevention Knowledge, Attitudes, and Practices (KAP) Among International Flying Pilots and Flight Attendants of US Commercial Airline. J Trav Med. 2012.

MMWR:

- CDC. U.S-acquired human rabies with symptom onset and diagnosis abroad, 2012. 2012

- CDC. Imported human rabies in a US army soldier – New York, 2011. 2012

- CDC. Notes from the Field: Acute muscular sarcocystosis among returning travelers – Tioman Island, Malaysia, 2011. 2012

- CDC. Assessment of ESSENCE performance for influenza-like illness surveillance after an influenza outbreak--U.S. Air Force Academy, Colorado, 2009. 2012

Consultant: Marty Cetron, MD, (EIS 1992), Division Director

Consultant: Katrin Kohl, MD, MPH, (EIS 1997), Deputy Division Director

Consultant: Pam Diaz, MD, Associate Director for Science, DGMQ

Consultant: Clive Brown, MBBS, MPH, MSc, (EIS 1995), QBHSB Branch Chief

Consultant: Lisa Rotz, MD, (EIS 1996), Associate Director for Global Health and Migration

Consultant: Francisco Alvarado-Ramy, MD, (EIS 1999), Quarantine Epidemiology and Surveillance Team Lead, QBHSB

Consultant: Joanna Regan, MD, MPH, Maritime Lead, QBHSB

Consultant: Nicole Cohen, MD, MS, Associate Chief for Science, QBHSB

Consultant: Mark Sotir, PhD, (EIS 2002), Travelers' Health Branch Surveillance and Epidemiology Team lead

Consultant: Amra Uzicanin, MD, MPH, (EIS 1998), Community Interventions for Infection Control Unit Lead

Division of High-Consequence Pathogens and Pathology/Poxvirus and Rabies Branch

NCEZID-DHCPP-PRB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of High-Consequence Pathogens and Pathology/Poxvirus and Rabies Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Jesse Blanton, MPH, Epidemiologist, asi5@cdc.gov

Secondary Supervisor: Ryan Wallace, DVM, (EIS 2012), Veterinary Medical Officer, euk5@cdc.gov

Secondary Supervisor: Mary Reynolds, (EIS 2002), Epidemiologist, nzt6@cdc.gov

Background: Rabies is an acute, progressive encephalitis caused by RNA viruses from the genus Lyssavirus. This global zoonosis has one of the highest case fatality rates of any infectious disease. Globally more than 60,000 persons die of rabies annually. This burden is primarily focused in poor rural areas that do not have access to care. In December 2015 the WHO, OIE, and FAO met to review the global rabies burden, and jointly issued a call to eliminate canine-mediated human rabies globally by 2030. CDC plays a role in supporting this activity as a National Reference Center, World Health Organization (WHO) Collaborating Center, and World Organization for Animal Health (OIE) reference laboratory. Furthermore, the CDC provides subject matter expertise to support the Global Health Security

Agenda (GHS) activities around zoonotic diseases, immunizations, laboratory capacity, and surveillance. International activities are focused on providing technical expertise for national rabies control programs, zoonotic disease surveillance system evaluations, program evaluation of human and animal vaccination programs, and support of country programs to eliminate canine rabies. Currently focal activities in Haiti, Ethiopia, Bangladesh, and Vietnam are ongoing with additional support to GHSA countries being developed.

Proposed Initial Projects: The EIS officer in this position will have the opportunity to provide significant input into the identification, development, and implementation of projects. Examples of projects include the following: 1) Evaluation of mass canine vaccination programs; 2) Establishing surveillance capacity to determine rabies free status in the Caribbean; 3) Support development of a regional rabies control plan for East Africa; 4) Participation in epidemiologic investigations of outbreaks of canine and human rabies in project countries; 5) Conduct assessments of rabies burden and vaccine utilization in project countries; 6) Develop cost-effectiveness and willingness to pay protocols for project countries

Proposed Surveillance Projects: Evaluation of human or animal rabies surveillance in Ethiopia, Bangladesh, or Vietnam

Range of Opportunities: Surveillance, evaluation, diagnostic evaluation, communication & educational outreach development and evaluation, risk factor analysis, outbreaks, pathogen discovery, policy analysis, emergency preparedness, clinical guidelines development, mentoring of students, scientific writing and presentations.

Position Strengths: Strong one health approach, close working relationships with laboratory colleagues, interdisciplinary team, branch and division-level training activities and coordination, international work, participation in phone duty for the Poxvirus and Rabies Branch.

Special Skills Useful for this Position: Amharic, Bengali, or Vietnamese (not required, but useful), Microsoft access, SAS, ArcGIS, joie de vivre.

Available Data: National surveillance data, KAP survey's

Recent Publications: Hampson K, Coudeville L, Lembo T, et al. Estimating the global burden of endemic canine rabies. *PLoS Negl Trop Dis.* 2015; 9(4):e0003709.

Taylor LH, Hampson K, Fahrion A, et al. Difficulties in estimating the human burden of canine rabies. *Acta Trop.* 2015; [epub ahead of print]

Taylor LH, Knopf L; Partners for Rabies Prevention. Surveillance of Human Rabies by National Authorities--A Global Survey. *Zoonoses Public Health.* 2015; 62: 543-52.

Fooks AR, Banyard AC, Horton DL, et al. Current status of rabies and prospects for elimination. *Lancet.* 2014; 384: 1389-99

Domestic Travel: 5% **International Travel:** 30%

Available Support: Statistical support (SAS, Epi-Info), GIS capabilities, database design and manipulation, diagnostic testing, animal surveillance, publication training, molecular epidemiology and phylogenetics.

Current/Recent EIS Officer: Neil Vora, (EIS 2012), Medical Epidemiologist, wii8@cdc.gov

Current/Recent EIS Officer: Cuc Tran, (EIS 2015), EIS Officer, ywj0@cdc.gov

Officer Projects: • Epi-Aid: Undetermined risk factors associated with increase in bites from rabid dogs, Haiti

• Epi-Aid: Undetermined risk for human-to-human spread of rabies, Puerto Rico

• Epi-Aid: Canine rabies outbreak, Kisumu, Kenya

• Epi-Aid: Re-emergence of rabies associated with Ferret Badgers, Taiwan

Officer Recent Publications: Sinclair JR, Wallace RM, et al. Rabies in a Dog Imported from Egypt with Falsified Rabies Vaccination Certificate - Virginia, 2015. *MMWR* 2015; 64: 1359-62.

Wallace RM, Reses H, et al. Establishment of a Canine Rabies Burden in Haiti through Implementation of a Novel Surveillance Program. *PLoS Negl Trop Dis.* 2015; 9: e0004245

Millien MF, Pierre-Louis JB, Wallace R, et al. Control of Dog Mediated Human Rabies in Haiti: No Time to Spare. *PLoS Negl Trop Dis.* 2015; 9(6):e0003806

Vora NM, Orciari LA, et al. Clinical management and humoral immune responses to rabies post-exposure prophylaxis among three patients who received solid organs from donor with rabies. *Transpl Infect Dis.* 2015; 17: 389-95

Wallace RM, Gilbert A, et al. Right place, wrong species: a 20-year review of rabies virus cross species transmission among terrestrial mammals in the United States. *PLoS One.* 2014; 9(10):e107539

Wallace RM, Bhavnani D, et al. Rabies death attributed to exposure in Central America with symptom onset in a U.S. detention facility - Texas, 2013. MMWR 2014; 63:446-9

Vora NM, Basavaraju SV, et al. Raccoon rabies virus variant transmission through solid organ transplantation. JAMA. 2013; 310:398-407

Consultant: Brett Petersen, (EIS 2009), ige3@cdc.gov

Consultant: Kis Robertson, (EIS 2008)

Consultant: Richard Franka, rpf5@cdc.gov

Consultant: Inger Damon, iad7@cdc.gov

Division of High-Consequence Pathogens and Pathology/Poxvirus and Rabies Branch/Poxvirus

NCEZID-DHCPP-PRB-GA-2016-02

Agency Name: CDC

Division/Branch/Team/Section: Division of High-Consequence Pathogens and Pathology/Poxvirus and Rabies Branch/Poxvirus

Physical Address: Atlanta, Georgia

Primary Supervisor: Andrea McCollum, PhD, (EIS 2009), Poxvirus Epidemiology Unit Lead, azv4@cdc.gov

Secondary Supervisor: Mary Reynolds, PhD, (EIS 2001), Epidemiology Team Lead, Poxvirus and Rabies Branch, nzt6@cdc.gov

Background: Since the eradication of smallpox as a naturally occurring disease, the Poxvirus Program within DHCPP has been one of only two WHO Collaborating Centers for Smallpox and other Poxvirus Infections research in the world. The Poxvirus Team participates in domestic and international public health activities and research projects. In recent years the program has worked with partners to identify several new Poxvirus pathogens. As smallpox vaccine-derived immunity wanes across the globe, new pathogens may emerge with greater frequency and have increasing impact in immunologically naïve populations. New detection and prevention strategies will be needed to improve the capacity of public health programs to mitigate the consequences of these infections. We interact closely with external partners (state health departments, USDA, WHO, various Ministries of Health and non-government organizations) and other groups within CDC. We are involved in developing strategic responses to possible smallpox outbreaks and serve as a key partner for poxvirus outbreaks and case investigations. We work with a diverse set of pathogens including monkeypox, orf, vaccinia, cowpox, molluscum contagiosum, buffalopox, sealpox, etc. A current focus of the Poxvirus Team is understanding the epidemiologic and ecologic determinants of monkeypox in an area of high endemicity and use of a third generation smallpox vaccine to protect healthcare workers against monkeypox in the Democratic Republic of the Congo. In addition, we provide consultation and investigative support for vaccine adverse events following smallpox vaccination. A highlight of this assignment will be the opportunity to work closely with laboratory-based colleagues

Proposed Initial Projects: The EIS officer in this position will have the opportunity to provide significant input into the identification, development, and implementation of projects. Examples of projects include the following: 1) Evaluation of monkeypox surveillance; 2) Implementation of vaccination protocol among health workers in the Tshuapa District of DRC; 3) Participation in ecologic and epidemiologic field studies to identify reservoirs for monkeypox virus in Central Africa; 4) Participation in epidemiologic investigations of human monkeypox; 5) Conduct investigations of smallpox vaccine adverse events, including vaccinia virus transmission from smallpox vaccinees; 6) Using clinical epidemiologic methods to evaluate sufficiency of current standard-of-care treatment protocols for monkeypox in DRC; 7) Capacity building for laboratory diagnostics for monkeypox in DRC; and 8) Capacity building for zoonotic diseases in DRC.

Proposed Surveillance Projects: Evaluation of monkeypox surveillance in DRC; Evaluation of surveillance for smallpox vaccination adverse events in the United States

Range of Opportunities: Surveillance evaluation, diagnostic evaluation, communication & educational outreach development and evaluation, risk factor analysis, outbreaks, pathogen discovery, policy analysis, emergency preparedness, clinical guidelines development, mentoring of students, clinical and vaccine effectiveness studies, scientific writing and presentations.

Position Strengths: Close working relationships with laboratory colleagues, interdisciplinary team, branch and division

-level training activities and coordination, international work, participation in phone duty for the Poxvirus and Rabies Branch.

Special Skills Useful for this Position: French (not required), Microsoft access, SAS

Available Data: Monkeypox surveillance, program effectiveness evaluations, risk factor

Recent Publications: Human monkeypox in the Kivus, a conflict region of DRC. The American Society of Tropical Medicine and Hygiene 2015.

Introduction of monkeypox into a community and household: risk factors and zoonotic reservoirs in DRC. The American Society of Tropical Medicine and Hygiene 2015.

Molluscum contagiosum and dermatological risk factors in American Indian pediatric populations. PlosONE 2014.

Artifacts of another era: poxvirus viability and signatures in historical relics. Emerging Infectious Diseases 2014.

Understanding US Healthcare Providers' Practices and Experiences with Molluscum Contagiosum. PlosONE 2013.

Unintentional Transfer of Vaccinia Virus Associated with Smallpox Vaccines: ACAM2000® Compared to Dryvax®. Human Vaccines & Immunotherapeutics 2013.

Domestic Travel: 5% **International Travel:** 15%

Available Support: Statistical support (SAS, Epi-Info), GIS capabilities, database design and manipulation, diagnostic testing, animal surveillance, publication training, molecular epidemiology and phylogenetics.

Current/Recent EIS Officer: Christopher Hsu, MD, (EIS 2015), His awesomeness

Officer Projects: 1. Epi-Aid: Undetermined risk-factors for human monkeypox in the Republic of Congo

2. Epi-Aid: Investigation of a monkeypox outbreak in DRC

3. Epi-Aid: Novel zoonotic Orthopoxvirus in the Republic of Georgia

4. Epi-Aid: Evaluation of a Portable Diagnostic Platform for Diagnosing Human Monkeypox

Officer Recent Publications: CH Hsu, et al. Incidence and Risk Factors for Chikungunya Hospitalization at Sentinel Hospitals in Puerto Rico, 2014. In preparation.

CH Hsu, et al. Analysis of Two Suspect Case Definitions Utilized During the 2014 West African Ebola Epidemic. In preparation.

CH Hsu, et al. Perceptions and Practices of Mass Bat Exposure Events in the Setting of Rabies Among U.S. Public Health Agencies. Zoonoses and Pub Health. In review.

CH Hsu, et al. Laboratory-Acquired Vaccinia Virus Infection in a Recently Immunized Person – Massachusetts, 2013. MMWR 2015.

LU Osadebe, et al. "Ocular molluscum contagiosum: A case study and review of literature." Pediatric Infectious Disease Journal 2014.

LU Osadebe, et al. "Novel poxvirus infection in two patients from the United States." Clinical Infectious Diseases 2015.

J Bass, DM Tack, AM McCollum, et al. "Enhancing Health Care Worker Ability to Detect and Care for Patients with Monkeypox, Democratic Republic of the Congo." International Health 2013.

DM Tack, et al. "Unintentional transfer of vaccinia virus associated with smallpox vaccines: ACAM2000(®) compared with Dryvax(®)." Human Vaccines & Immunotherapeutics 2013.

CDC "Hantavirus pulmonary syndrome in visitors to a national park--Yosemite Valley, California, 2012." MMWR 2012.

Consultant: Brett Petersen, MD, (EIS 2009)

Consultant: Christine Hughes, MPH, Health Scientist, statistician

Consultant: Benjamin Monroe, MPH, Health Scientist, geographer

Consultant: Whitney Dabidson, MPH, Health Scientist, lab specialist

Consultant: Victoria Olson, PhD, Branch Chief (acting)

Division of Healthcare Quality Promotion/Epidemiology Research and Innovations Branch

NCEZID-DHQP-ERIB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Healthcare Quality Promotion/Epidemiology Research and Innovations Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Alice Guh, MD, MPH, (EIS 2007), Medical Officer, ggt4@cdc.gov

Secondary Supervisor: Rachel Slayton, PhD, (EIS 2011), Epidemiologist

Background: The mission of the Division of Healthcare Quality Promotion (DHQP) is to promote patient safety across healthcare settings through prevention, control, and investigation of healthcare-associated infections (HAI) and outbreaks, adverse events related to drugs and immunizations, and infections from blood, organ, and other tissues. DHQP has played a critical role in recent public health emergencies such as the Ebola virus outbreak in West Africa and Middle East Respiratory Syndrome (MERS) coronavirus. DHQP also manages the National Healthcare Safety Network (NHSN), the nation's most comprehensive surveillance system for HAI data, and promotes antimicrobial stewardship across healthcare settings. Work within DHQP is highly collaborative; therefore most opportunities in the DHQP/PRB and DHQP/ERIB positions will be available to officers in both branches. Officers are encouraged to also review position description NCEZID-DHQP-PRB-GA-2016-01.

DHQP's Epidemiology Research and Innovations Branch (ERIB) develops innovative projects and analytic strategies to address knowledge gaps critical to HAI prevention. This includes evaluation of novel and existing public health practices and interventions; designing and implementing studies to fill epidemiologic knowledge gaps; developing innovative surveillance strategies; and assessing impact and burden. ERIB leads analytic work in case-control, cohort, and mathematical modeling studies as well as cost-effectiveness studies and novel data linkages to evaluate HAI prevention strategies. ERIB coordinates population-based surveillance for *Clostridium difficile* infections (CDI), MRSA, and drug-resistant gram-negative bacterial infections, studies to identify potentially modifiable risk factors and populations at risk, prevalence surveys of HAIs and antimicrobial use, and projects to advance the science of HAI and antimicrobial use surveillance. The results of ERIB's work have informed national priorities and policies for measuring and reducing HAIs.

Officers will work closely with other groups within DHQP including: 1) the Clinical and Environmental Microbiology Branch (laboratory) for environmental sampling and advanced molecular diagnostics; 2) the Surveillance Branch to analyze NHSN data; and 3) the Office of Blood, Organ, and Other Tissue Safety to investigate transplant- and transfusion-related disease transmission. Opportunities for international experiences will be made available to officers as they arise. Many of our officers have played critical roles in the response to Ebola virus disease and MERS. DHQP officers collaborate with epidemiologists and statisticians to address infection prevention, healthcare epidemiology, and antimicrobial use and resistance in a supportive work environment, gaining valuable experiences and skills to position them for successful careers in multiple fields—public service, academic research, industry and clinical care.

Proposed Initial Projects: 1) Analysis of risk of invasive community-associated MRSA from underlying conditions
2) Identify risk factors for community-associated CDI among the pediatric population
3) Investigate and validate social networks in large statewide inpatient datasets
4) Examine the risk of surgical site infections by insurance payer and facility and patient characteristics

Proposed Surveillance Projects: 1) Evaluate a quality assurance system for invasive MRSA surveillance
2) Evaluate a new surveillance definition algorithm for ventilator-associated events
3) Evaluate a new surveillance definition for sepsis
4) Evaluate dialysis surveillance data reported to NHSN through electronic data transfer

Range of Opportunities: Officers have opportunities to lead multiple outbreak investigations in healthcare settings, develop data analysis skills, and participate in the development of public health surveillance systems. There are abundant opportunities to submit outbreak and analytic work for publication.

Position Strengths: This position offers strong, interdisciplinary training that includes collaborations with state and local public health, opportunities to work with experts from DHQP's laboratory, and connections to clinical medicine. This interdisciplinary training expands officers' career opportunities after EIS, and former officers have gone on to

take positions in state and federal public health, academia, clinical medicine, and industry.

Special Skills Useful for this Position: Open to new experiences; willingness to learn and adapt to a variety of topics and settings; strong communication skills; team player who is also capable of independent work.

Available Data: NHSN: infections associated with diverse healthcare settings and antimicrobial use and resistance. Emerging Infections Program: C. difficile, MRSA, drug-resistant Gram-negative bacteria, and HAI prevalence. Centers for Medicare & Medicaid Services and other administrative datasets for inpatients and outpatients.

Recent Publications: Sustained Infection Reduction in Outpatient Hemodialysis Centers Participating in a Collaborative Bloodstream Infection Prevention Effort (ICHE, 2016); Identification of population at risk for future Clostridium difficile infection following hospital discharge to be targeted for vaccine trials (Vaccine, 2016); Epidemiology of Carbapenem-Resistant Enterobacteriaceae in 7 US Communities, 2012-2013. (JAMA, 2015); Burden of Clostridium difficile infection in the US (NEJM, 2015); Prevalence of antimicrobial use in US acute care hospitals, May–September 2011 (JAMA, 2014); Multistate prevalence survey of healthcare-associated infections (NEJM, 2014); Infection prevention practices in NICUs reporting to the NHSN (ICHE, 2014)

Domestic Travel: 20% **International Travel:** 5%

Available Support: The DHQP orientation for incoming officers encompasses epidemiologic methods, data management, media training, and some hands-on training in laboratory techniques. Statistical expertise and support from DHQP staff is readily available. Biweekly statistical seminars given by David Kleinbaum (Emory professor and DHQP consultant), and weekly work-in-progress seminars provide additional opportunities for EISOs to discuss analytic approaches.

Current/Recent EIS Officer: Jason Lake, MD, (EIS 2015)

Current/Recent EIS Officer: Cheri Grigg, DVM, MPH, (EIS 2014)

Officer Projects: Methicillin-resistant Staphylococcus aureus (MRSA) infections among nursing home residents; Evaluation of hospital antimicrobial use data to indicate prescribing quality; Preoperative antimicrobials' impact on surgical site infection risk; Causes and risk factors for sepsis in children; Attributable mortality from mediastinitis in Medicare population

Officer Recent Publications: Hunter JC, et al., Burden of nursing home-onset clostridium difficile infection in the United States: estimates of incidence and patient outcomes (Open Forum Infect Dis, 2016); Epstein L, et al., Risk factors for invasive methicillin-resistant Staphylococcus aureus infection after recent discharge from an acute-care hospitalization, 2011-2013 (CID, 2016); Chea N, et al, Improved phenotype-based definition for identifying carbapenemase producers among carbapenem-resistant enterobacteriaceae (Emerging Infect Dis, 2015); Epstein L, et al., Post-Ebola signs and symptoms in U.S. survivors (N Engl J Med, 2015); Chea N, et al, Identify, Isolate, Inform: Background and Considerations for Ebola Virus Disease Preparedness in U.S. Ambulatory Care Settings (Am J Infect Control, 2015); Epstein L, Chea N, et al., Epidemiologic investigation of a cluster of neuroinvasive Bacillus cereus infections in 5 patients with acute myelogenous leukemia (Open Forum Infect Dis, 2015); Epstein L, Hunter JC, et al, New Delhi metallo- β -lactamase-producing carbapenem-resistant Escherichia coli associated with exposure to duodenoscopes (JAMA, 2014); See I, et al. The NAP1 strain is a predictor of outcomes from Clostridium difficile infection (CID, 2014)

Consultant: Lauren Epstein, MD, (EIS 2013)

Consultant: Isaac See, MD, (EIS 2011)

Consultant: Nicola Thompson, PhD, (EIS 2006)

Consultant: James Baggs, PhD

Consultant: Sarah Yi, PhD

Consultant: Doug Scott, PhD

Consultant: Shelley Magill, MD, PhD, Team Lead

Consultant: John Jernigan, MD, MS, Team Lead

Consultant: Anthony Fiore, MD, (EIS 1996), Branch Chief

Consultant: Dan Pollock, MD, (EIS 1984)

Consultant: David Kleinbaum, PhD

Consultant: Benjamin Park, MD, (EIS 2002)

Consultant: Arjun Srinivasan, MD

Consultant: Scott Fridkin, MD, (EIS 1993)

Consultant: Clifford McDonald, MD, (EIS 1996)

Division of Healthcare Quality Promotion/Immunization Safety Office

NCEZID-DHQP-ISO-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Healthcare Quality Promotion/Immunization Safety Office

Physical Address: Atlanta, Georgia

Primary Supervisor: John Su, MD, PhD, MPH, (EIS 2006), Medical Officer, ezu2@cdc.gov

Secondary Supervisor: Maria Cano, MD, MPH, (EIS 1999), Team Lead

Secondary Supervisor: Tom Shimabukuro, MD, MPH, MBA, (EIS 2004), Deputy Director, ISO

Background: The mission of the Division of Healthcare Quality Promotion (DHQP) is to promote patient safety, spanning from the identification and prevention of: healthcare-associated infections and adverse drug events among inpatients, outpatients, and residents of long term care; infections from blood, organ, and other tissues; adverse events related to immunizations. The role of the Immunization Safety Office (ISO) is to monitor and assess the safety of vaccines administered to children, adolescents and adults. ISO's comprehensive approach to post-licensure vaccine safety monitoring includes active and passive surveillance to detect possible increased risk for adverse events (AEs) following vaccination and evaluate whether or not there is an association with vaccination. ISO also assesses risk factors for specific AEs and develops potential strategies to prevent AEs. ISO collaborates with other partners, particularly CDC's National Center for Immunization and Respiratory Diseases (NCIRD) and the U.S. Food and Drug Administration (FDA).

The three main activities in ISO are: 1) the Vaccine Adverse Event Reporting System (VAERS), a large spontaneous (or passive) surveillance system that receives over 30,000 reports annually of AEs following immunization. VAERS is the nation's front-line, early warning vaccine safety monitoring system. VAERS has the capability to detect rare events and unusual patterns of AEs may not have been detected during pre-licensure clinical trials, which involve relatively small numbers of volunteer participants; 2) the Vaccine Safety Datalink (VSD), which is a collaboration between ISO and 9 large integrated health care organizations, incorporates health records in large-linked databases for more than 9 million covered individuals and is used to perform active surveillance for vaccine safety and to conduct epidemiologic research studies to assess for associations between vaccines and AEs and quantify risk; 3) the Clinical Immunization Safety Assessment (CISA) project is a collaboration between CDC and 7 medical research centers. CISA conducts individual-level case reviews, including causality assessment, for persons who experienced AEs following immunization and conducts clinical studies of vaccine safety.

Proposed Initial Projects: 1) Conduct seasonal influenza vaccine safety surveillance with a focus on recently licensed influenza vaccines.

2) Describe AEs reported to VAERS among persons who are immunocompromised, and potentially design a pilot clinical study in this area.

3) Describe reports of specific skin reactions (erythema multiforme, Stevens-Johnson Syndrome, toxic epidermal necrolysis) following vaccination to VAERS.

4) Evaluate adverse events reported to VAERS following MMR vaccine related to recent measles outbreaks.

5) Compare health outcomes between fully vaccinated children and those on a delayed or alternative vaccination schedule in the VSD population.

Proposed Surveillance Projects: 1) Evaluate VAERS overall, with particular attention to where improvement can be made.

2) Evaluate the impact of proposed changes to the VAERS reporting form and data collection methods.

3) Describe the characteristics of the VSD population and identify longitudinal cohorts for long-term follow-up.

Range of Opportunities: The officer is encouraged to develop their own research study protocol within the scope of ISO's mission. The officer can pursue opportunities to participate in EPI-AIDs through DHQP or in vaccine preventable disease outbreaks/other vaccine-related field work. The officer will attend meetings of the Advisory

Committee on Immunization Practices (ACIP) and could present to ACIP.

Position Strengths: Opportunity to perform analyses using large databases, and to learn and apply innovative epidemiologic methods. Numerous opportunities to publish. Possible opportunities to collaborate with research partners at outside institutions.

Special Skills Useful for this Position: Previous experience with epidemiologic study design and data analysis would be useful. While not required, a clinical background (e.g., MT, RN, MD) could also be useful. SAS programming skills or a desire to learn or improve SAS skills will be beneficial.

Available Data: The main data sources for ISO projects are the Vaccine Adverse Event Reporting System (VAERS) and the Vaccine Safety Datalink (VSD). Other data sources that can be accessed and may be used for projects are Market Scan®, the Healthcare Cost and Utilization Project, and the National Vital Statistics System.

Recent Publications: See ISO's website for lists of recent publications from VAERS, VSD, and CISA:
<http://www.cdc.gov/vaccinesafety/library/>

Domestic Travel: 10% **International Travel:** 0%

Available Support: DHQP conducts a week-long officer orientation and ongoing training that encompasses epidemiologic methods, data management, statistical analysis, and media/communications skills. The officer would also have access to a weekly NCIRD EIS epidemiology course that includes outbreak exercises, journal clubs, and guest speakers on a wide variety of topics. ISO's epidemiologists, physicians, and statisticians will provide methodological, statistical, and programming support.

Current/Recent EIS Officer: Yenlik Zheteyeva, MD, MPH, (EIS 2009)

Current/Recent EIS Officer: Wan-Ting Huang, MD, (EIS 2007)

Officer Projects: Studying seizures after pertussis vaccines. Studying Tdap safety in pregnant women. Vaccine safety surveillance during the 2009 influenza pandemic. Implementing the first national lab-based surveillance for potential vaccine contamination after 1 million Hib vaccine doses were recalled. Analyzing VAERS postvaccination syncope reports following new adolescent vaccines.

Officer Recent Publications: •Zheteyeva YA, Moro PL, Tepper NK, et al. Adverse event reports after tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis vaccines in pregnant women. *Am J Obstet Gynecol.* 2012 Jul;207(1):59.

•Safety of Influenza A (H1N1) 2009 Monovalent Vaccines - United States, October 1--November 24, 2009. *Morbidity and Mortality Weekly Report* 58 (early release)1-6.

•Huang WT, Gargiullo PM, Broder KR, et al. Lack of association between acellular pertussis vaccine and seizures in early childhood. *Pediatrics.* 2010; 126 (2), 263-269.

•Syncope after vaccination--United States, January 2005-July 2007. *Morbidity and Mortality Weekly Report* 57 (17), 457-460.

Consultant: Karen Broder, MD, (EIS 2002)

Consultant: Frank DeStefano, MD, MPH, (EIS 1979)

Consultant: Jonathan Duffy, MD, MPH, (EIS 2008)

Consultant: Penina Haber, MPH

Consultant: Theresa Harrington, MD, (EIS 2002)

Consultant: Michael McNeil, MD, MPH, (EIS 1983)

Consultant: Pedro Moro, MD

Consultant: Eric Weintraub, MPH

Division of Healthcare Quality Promotion/Prevention and Response Branch

NCEZID-DHQP-PRB-GA-2016-01 Positions: 2

Agency Name: CDC

Division/Branch/Team/Section: Division of Healthcare Quality Promotion/Prevention and Response Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Ryan Fagan, MD, MPHTM, (EIS 2006), Medical Officer, fev3@cdc.gov

Primary Supervisor: Nimalie Stone, MD, Medical Officer, eiy2@cdc.gov

Secondary Supervisor: Melissa Schaefer, MD, (EIS 2007), Medical Officer, ggj3@cdc.gov

Secondary Supervisor: Katherine Fleming-Dutra, MD, (EIS 2010), Medical officer, ftu2@cdc.gov

Background: The mission of the Division of Healthcare Quality Promotion (DHQP) is to promote patient safety across healthcare settings through prevention, control, and investigation of healthcare-associated infections (HAI) and outbreaks, adverse events related to drugs and immunizations; and infections from blood, organ, and other tissues. DHQP has played a critical role in recent public health emergencies such as the Ebola virus outbreak in West Africa and Middle East Respiratory Syndrome (MERS) coronavirus. DHQP also manages the National Healthcare Safety Network (NHSN), the nation's most comprehensive surveillance system for HAI data, and promotes antimicrobial stewardship across healthcare settings. Work within DHQP is highly collaborative; most opportunities in the DHQP/PRB and DHQP/ERIB positions will be available to officers in both branches. Officers are encouraged to also review position description NCEZID-DHQP-ERIB-GA-2016-01.

DHQP's Prevention and Response Branch (PRB) is offering 2 EIS positions. PRB strives to improve the safety and quality of healthcare by investigating infectious disease and other outbreaks in healthcare settings, designing and implementing best-practices for preventing infections, measuring the impact of prevention efforts, informing policies, and promoting antimicrobial stewardship. Central to PRB's success is its strong connection of public health science to clinical medicine, laboratory science, and regulatory agencies. PRB EIS officers will lead rapid responses to outbreaks of healthcare-associated infections, implement and evaluate prevention strategies, and conduct epidemiological analyses that provide the scientific basis for policies that prevent healthcare-associated infections and other adverse events.

Officers will work closely with other groups within DHQP including: 1) the Clinical and Environmental Microbiology Branch (laboratory) for environmental sampling and advanced molecular diagnostics; 2) the Surveillance Branch to analyze NHSN data; and 3) the Office of Blood, Organ, and Other Tissue Safety to investigate transplant- and transfusion-related disease transmission. Opportunities for international experiences will be made available to officers as they arise. Many of our officers have played critical roles in the response to Ebola virus disease and MERS. DHQP officers collaborate with epidemiologists and statisticians to address infection prevention, healthcare epidemiology, and antimicrobial use and resistance in a supportive work environment, gaining valuable experiences and skills to position them for successful careers in multiple fields—public service, academic research, industry and clinical care.

Proposed Initial Projects: 1) Analyze data from a multi-center evaluation of barriers to Clostridium difficile infection prevention in acute care settings

2) Analyze rates of dialysis events (e.g., bloodstream infections, antibiotic starts) reported to NHSN by dialyzer reuse status

3) Analyze multi-state data summarizing infection control assessments in healthcare settings (nursing homes, hospitals, outpatient, dialysis)

4) Validate Clostridium difficile data reported by nursing homes to NHSN using population-based surveillance

Proposed Surveillance Projects: 1) Evaluate a quality assurance system for invasive MRSA surveillance

2) Evaluate a new surveillance definition algorithm for ventilator-associated events

3) Evaluate a new surveillance definition for sepsis

4) Evaluate dialysis surveillance data reported to NHSN through electronic data transfer

Range of Opportunities: Officers have opportunities to lead multiple outbreak investigations in healthcare settings, develop data analysis skills, and participate in the development of public health surveillance systems. There are abundant opportunities to submit outbreak and analytic work for publication.

Position Strengths: This position offers strong, interdisciplinary training that includes collaborations with state and local public health, opportunities to work with experts from DHQP's laboratory branch, and connections to clinical medicine. This interdisciplinary training expands officers' career opportunities after EIS, and former officers have gone on to take positions in state and federal public health, academia, clinical medicine, and industry.

Special Skills Useful for this Position: Open to new experiences; willingness to learn and adapt to a diversity of topics and settings; good communication skills; team player who is also capable of independent work.

Available Data: NHSN: infections associated with diverse healthcare settings and antimicrobial use and resistance. Emerging Infections Program: C. difficile, MRSA, drug-resistant Gram-negative bacteria, and HAI prevalence. Centers for Medicare & Medicaid Services and other administrative datasets for inpatients and outpatients.

Recent Publications: Epidemiology of Carbapenem-resistant enterobacteriaceae in 7 US Communities, 2012-2013 (JAMA 2015); Outbreak of Serratia marcescens bloodstream infections in patients receiving parenteral nutrition

prepared by a compounding pharmacy (CID 2014); A Large Outbreak of HCV Infections in a Hemodialysis Clinic (ICHE 2016); Measles in Healthcare Facilities in the United States during the Postelimination Era, 2001-2014 (CID 2015); Revisiting Standard Precautions to reduce antimicrobial resistance in nursing homes (JAMA IM 2015); Invasive group A Streptococcus infections associated with liposuction surgery at outpatient facilities not subject to state or federal regulation (JAMA IM 2014)

Domestic Travel: 20% **International Travel:** 5%

Available Support: The DHQP orientation for incoming officers encompasses epidemiologic methods, data management, media training, and some hands-on training in laboratory techniques. Statistical expertise and support from DHQP staff is readily available. Biweekly statistical seminars given by David Kleinbaum (Emory professor and DHQP consultant), and weekly work-in-progress seminars provide additional opportunities for EISOs to discuss analytic approaches.

Current/Recent EIS Officer: W. Chris Edens, PhD, (EIS 2014), iek4@cdc.gov

Current/Recent EIS Officer: Meghan Lyman, MD, (EIS 2014), yeo4@cdc.gov

Current/Recent EIS Officer: Shannon Novosad, MD, (EIS 2015), ydz1@cdc.gov

Current/Recent EIS Officer: Amber Vasquez, MD, (EIS 2015), yxi9@cdc.gov

Officer Projects: Trends in catheter-associated urinary tract infections to identify hypervirulent bacteria; Central-line associated bloodstream infections outside acute care settings; Risk of bloodstream infections related to dialysis cannulation method; Risk of infection associated with hemodialyzer reuse; Pilot surveillance for carbapenem-resistant *Pseudomonas aeruginosa*

Officer Recent Publications: Hunter JC, et al., Burden of nursing home-onset clostridium difficile infection in the United States: estimates of incidence and patient outcomes (Open Forum Infect Dis, 2016); Epstein L, et al., Risk factors for invasive methicillin-resistant *Staphylococcus aureus* infection after recent discharge from an acute-care hospitalization, 2011-2013 (CID, 2016); Chea N, et al., Improved phenotype-based definition for identifying carbapenemase producers among carbapenem-resistant enterobacteriaceae (Emerging Infect Dis, 2015); Epstein L, et al., Post-Ebola signs and symptoms in U.S. survivors (N Engl J Med, 2015); Chea N, et al., Identify, Isolate, Inform: Background and Considerations for Ebola Virus Disease Preparedness in U.S. Ambulatory Care Settings (Am J Infect Control, 2015); Epstein L, Chea N, et al., Epidemiologic investigation of a cluster of neuroinvasive *Bacillus cereus* infections in 5 patients with acute myelogenous leukemia (Open Forum Infect Dis, 2015); Epstein L, Hunter JC, et al., New Delhi metallo- β -lactamase-producing carbapenem-resistant *Escherichia coli* associated with exposure to duodenoscopes (JAMA, 2014); See I, et al., The NAP1 strain is a predictor of outcomes from *Clostridium difficile* infection (CID, 2014)

Consultant: Duc Nguyen, MD, MSc, (EIS 2011), vif8@cdc.gov

Consultant: Joe Perz, DrPH, (EIS 1999), bzp4@cdc.gov

Consultant: Priti Patel, MD, MPH, (EIS 2002), pgp0@cdc.gov

Consultant: Lauri Hicks, MD, (EIS 2003), auq3@cdc.gov

Consultant: Maroya Walters, PhD, ScM, (EIS 2011), vii0@cdc.gov

Consultant: Kiran Perkins, MD, (EIS 2013), guu9@cdc.gov

Consultant: Alex Kallen, MD, MPH, (EIS 2006), ffp0@cdc.gov

Consultant: J. Todd Weber, MD, (EIS 1990), jtw5@cdc.gov

Consultant: Carolyn Gould, MD, MS, gby3@cdc.gov

Consultant: David Kuhar, MD, jto7@cdc.gov

Consultant: Ronda Sinkowitz-Cochran, MS, Behavioral Science, rls7@cdc.gov

Consultant: Lynne Schulster, PhD, los0@cdc.gov

Consultant: Sridhar Basavaraju, MD, (EIS 2007), etu7@cdc.gov

Consultant: Benjamin Park, MD, (EIS 2002), International Infection Control Team Lead, bip5@cdc.gov

Consultant: Clifford McDonald, MD, (EIS 1996), ljm3@cdc.gov

Consultant: Matthew Kuehnert, MD, (EIS 1996), mgk8@cdc.gov

Consultant: Jonathan Edwards, MS, jde3@cdc.gov

Consultant: Noble-Wang Judith, PhD, Laboratorian, cux2@cdc.gov

Consultant: David Kleinbaum, PhD, Consultant (Emory Professor), dgk0@cdc.gov

Division of Preparedness and Emerging Infections/Arctic Investigations Program/Epidemiology Team

NCEZID-DPEI-AIP-AK-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Preparedness and Emerging Infections/Arctic Investigations Program/Epidemiology Team

Physical Address: Anchorage, Alaska

Primary Supervisor: Michael Bruce, MD, MPH, (EIS 1997), Team Lead, zwa8@cdc.gov

Secondary Supervisor: Prabhu Gounder, MD, MPH, (EIS 2010), Medical epidemiologist, iym4@cdc.gov

Secondary Supervisor: Thomas Hennessy, MD, MPH, (EIS 1994), AIP Director, tbh0@cdc.gov

Background: The Arctic Investigations Program (AIP) offers an exciting opportunity for EIS officers to engage with a broad range of infectious disease public health challenges confronting northern populations. We have a special interest in understanding the unique social/environmental risk factors for infectious diseases in indigenous populations. AIP provides international leadership on Arctic health issues, collaborates with the State health department to conduct surveillance for invasive bacterial diseases, and maintains close working partnerships with Alaska Native tribal entities.

We conduct epidemiologic research with an eye towards understanding upstream determinants of infectious diseases and informing public health policy. Priority activities include prevention of diseases caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, *Helicobacter pylori*, respiratory syncytial virus (RSV), viral hepatitis, and *Staphylococcus aureus*. Additionally, AIP is the headquarters for the International Circumpolar Surveillance network's invasive bacterial disease surveillance.

Research activities take place throughout Alaska, with opportunities to travel to remote Alaska Native communities where lifestyles are still very traditional. AIP is located on the Alaska Native Medical Center campus and has 30 staff members. EIS officers will work with three full-time and two part-time medical epidemiologists, and enjoy the support of three research nurses and three biostatisticians. Data entry/management duties are handled by full-time programmers, leaving officers free to focus on study design, data analysis/interpretation, and presentation of results. The epidemiology activities are supported by AIP's laboratories for microbiology/molecular diagnostics and a 500,000+ specimen bank.

Anchorage (population: 300,000) is bordered by beautiful woodlands, mountains and the ocean. Extensive hiking, biking and cross-country ski trails plus 3 downhill ski areas within the city offer easy access to outdoor recreational activities. Anchorage supports a lively art and cultural community, world-class restaurants, two universities, and professional hockey and summer league baseball teams. In summary, AIP offers EIS officers a diverse epidemiologic research experience at the international, national, state, local and tribal level while living in a scenic and culturally-captivating city.

Proposed Initial Projects: 1) Travel to remote western Alaskan villages to implement interventions to prevent MRSA boils, then follow-up to assess impact; 2) Evaluate the severity of illness among Alaska children with invasive *Haemophilus influenzae* serotype A (Hia) infection, 3) Analyze seroprevalence data on a climate-sensitive zoonotic disease (*Brucella* spp., *Echinococcus multilocularis*, *Francisella tularensis*, *Trichinella* spp., and 5 Arboviruses) in Alaska; 4) Evaluate the long-term immunogenicity of the inactivated hepatitis A virus vaccine 23 years after initial dose; 5) Use pneumococcal carriage and surveillance data to evaluate the indirect effect of the 13-valent pneumococcal conjugate vaccine on Alaskan adults; 6) Using pneumococcal colonization data to determine if adults living in a household with a child colonized by resistant pneumococcus is also at increased risk for resistant pneumococcal colonization 7) Retrospective cohort analysis of the association between diagnosis of *Helicobacter pylori* infection and subsequent development of gastric cancer among American Indian and Alaska Native persons using Indian Health Service national data.

Proposed Surveillance Projects: Evaluate statewide surveillance system for invasive bacterial diseases

Range of Opportunities: Officers will have opportunities to participate in outbreak investigations, initiate new studies (including writing an IRB protocol), conduct field work in rural Alaska, and design/conduct studies using existing data sets. Officers will have opportunities to present research at local, national and international conferences.

Position Strengths: AIP offers a very diverse experience. Our mandate encompasses all infectious diseases. Although we are based in Alaska, we focus on the health of populations across the circumpolar north. We focus on the broader

determinants of infectious disease burden such the socioeconomic factors contributing to health disparities or the impact of climate change on access to clean water and sanitation.

Special Skills Useful for this Position: No special skills are required, but familiarity with infectious diseases can be helpful

Available Data: Surveillance data on 5 invasive bacterial diseases, cohort of 1500 HBV-infected patients followed for over 30 years, cohort of >1200 HCV-infected patients followed for over 20 years, specimen bank with >500,000 specimen, State Inpatient Databases with complete discharge data, nationwide Indian Health Service healthcare database

Recent Publications: Bruce MG, et al. Impact of the 13-valent pneumococcal conjugate vaccine on invasive pneumococcal disease and carriage in Alaska. *Vaccine*. 2015;33(38):4813-9.
Hennessy TW, et al. A case-control study of risk factors for death from 2009 pandemic influenza A(H1N1): is American Indian racial status an independent risk factor? *Epidemiology and Infection*. 2016;144(2):315-24.
Raczniak GA, et al. A survey of knowledge, attitudes, and practices towards skin and soft tissue infections in rural Alaska. *International J Circumpolar Health*. 2016;75:30603.

Domestic Travel: 10% **International Travel:** 5%

Available Support: 3 research nurses to assist with data collection; 3 biostatisticians to assist with data analysis; team of data entry personnel; computer programmers to clean and manage data; in-house laboratory support as needed for studies

Current/Recent EIS Officer: Ian Plumb, MBBS, (EIS 2014)

Current/Recent EIS Officer: Greg Raczniak, MD, (EIS 2011)

Current/Recent EIS Officer: James Keck, MD, (EIS 2009)

Current/Recent EIS Officer: Kathy Byrd, MD, MPH, (EIS 2007)

Current/Recent EIS Officer: Laura Hammitt, MD, (EIS 2003)

Current/Recent EIS Officer: Henry "Kip" Baggett, MD, (EIS 2000)

Division of Vector-borne Diseases/Arboviral Diseases Branch

NCEZID-DVBD-ADB-CO-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Vector-borne Diseases/Arboviral Diseases Branch

Physical Address: Fort Collins, Colorado

Primary Supervisor: J. Erin Staples, MD, PhD, (EIS 2003), Medical Epidemiologist, estaples@cdc.gov

Secondary Supervisor: Marc Fischer, MD, MPH, (EIS 1994), Activity Chief, mxf2@cdc.gov

Secondary Supervisor: Susan Hills, MBBS, MPH, Medical Epidemiologist, SHills@cdc.gov

Secondary Supervisor: Ingrid Rabe, MBChB, MMed, (EIS 2007), Medical Epidemiologist, IRabe@cdc.gov

Background: The Arboviral Diseases Branch is located in Fort Collins, Colorado and works on viruses that are transmitted to humans by infected mosquitoes, ticks, and other arthropod vectors. More than 100 arthropod-borne viruses (arboviruses) are known to cause human disease. Different vectors, animal hosts, and tissue tropisms contribute to variations in geographic distribution, disease incidence, clinical manifestations, and outcomes.

West Nile virus is the leading cause of arboviral disease in the United States. However, other arboviruses cause sporadic cases and seasonal outbreaks, including Colorado tick fever, Eastern equine encephalitis, Jamestown Canyon, La Crosse, Powassan, and St. Louis encephalitis viruses. Japanese encephalitis, Tick-borne encephalitis, and Yellow fever viruses are important vaccine-preventable causes of disease internationally. In late 2013, Chikungunya virus was first identified in the Americas resulting in >1 million suspected and confirmed cases in the first year of the outbreak. In May 2015, Zika virus also was identified for the first time in the Americas and was reported to be associated with previously unrecognized complications, such as microcephaly. Several other arboviruses are new or emerging causes of disease (e.g., Cache Valley, Heartland, and Bourbon viruses).

The primary responsibility for the EIS Officer will be to participate in surveillance, research, and outbreak investigations of domestic, international, and travel-related arboviral diseases. During these investigations, the Officer

will serve as the epidemiologist on a multidisciplinary team that may include entomologists, vertebrate biologists, laboratory scientists, statisticians, and health education specialists.

The Arboviral Diseases Branch is in the Division of Vector-Borne Diseases (DVBD) which is responsible for viral, bacterial, and rickettsial diseases transmitted by arthropod vectors. The EISO will likely have opportunities to collaborate with other branches in Division, including Bacterial Diseases Branch in Fort Collins, Dengue Branch in Puerto Rico, and Rickettsial Diseases Branch in Atlanta. Although the branch is located outside of Atlanta, the EIS position is considered center-level positions not state-based or Field Services positions.

Proposed Initial Projects: 1. Conduct a retrospective review to identify additional human disease cases due to the recently-discovered Bourbon and Heartland viruses;
2. Assess the potential role in transmission and utility in diagnostic testing of various body fluids (e.g., saliva, semen, urine) for Zika virus disease;
3. Analyze data on duration of seroprotection after yellow fever vaccines;
4. Evaluate sensitivity of chikungunya and Zika virus RT-PCR and IgM ELISA diagnostic assays;
5. Assist with implementation of a study to evaluate safety and immunogenicity of co-administration of measles/mumps/rubella and yellow fever vaccines compared to sequential administration;
6. Evaluate cross-protective neutralizing antibodies against Powassan virus in people who received Tick-borne encephalitis virus vaccine;
7. Define the role of molecular and serologic tests for the diagnosis of West Nile virus disease in immunocompromised individuals;
8. Participate in data collection and monitoring of women infected with Zika virus during pregnancy

Proposed Surveillance Projects: Assess sensitivity and specificity of the case definition and evaluate surveillance for Zika virus disease.

Range of Opportunities: Conduct outbreak and other field investigations, design and implement epidemiologic studies, perform data analysis, write MMWR articles, chapters, and scientific papers for peer-reviewed journals, assess arboviral diseases in international settings, assist with developing arboviral vaccine and diagnostic recommendations, and work closely with state health departments.

Position Strengths: Diversity: Wide variety of pathogens and project types; Strong supervision: Maximum of two EISOs to four doctoral-level epidemiologists; Location: Combines the advantages of a center-level CDC-experience with the recreational and lifestyle advantages of Colorado.

Special Skills Useful for this Position: No special skills necessary. We work with you to develop skills you do not have while drawing upon your current skills.

Available Data: Large datasets available to incoming officers include 1) ArboNET - Internet-based arbovirus surveillance system that captures information on human arboviral disease cases, veterinary cases, and infections in sentinel animals, dead birds, and mosquitoes; and 2) ADBDiag - MSAccess database of all arboviral diagnostic testing performed at CDC on samples submitted from physicians, health departments, and countries around the world.

Recent Publications: Staff typically publishes 20-30 peer-reviewed articles, short reports, and book chapters on a variety of arboviral diseases per year.

Domestic Travel: 30% **International Travel:** 20%

Available Support: Fort Collins campus has over 200 personnel including programmers, doctoral-level statisticians, IT, travel, and clinic personnel. Our group has four doctoral-level epidemiologists, one MPH-level epidemiologist, and one surveillance officer. We are networked to the main campus so is easy to access conferences in Atlanta, including Tuesday Morning Seminar, Grand Rounds, and training classes.

Current/Recent EIS Officer: Elisabeth Krow-Lucal, PhD, MPH, (EIS 2015), Current EIS Officer, yxn9@cdc.gov

Current/Recent EIS Officer: Morgan Hennessey, DVM, MPH, (EIS 2014), Current EIS Officer, fcv0@cdc.gov

Current/Recent EIS Officer: Daniel Pastula, MHS, MD, (EIS 2013), Recent EIS Officer, DPastula@cdc.gov

Current/Recent EIS Officer: Stephanie Yendell, DVM, MPH, (EIS 2011), Recent EIS Officer, Stephanie.Yendell@state.mn.us

Current/Recent EIS Officer: Katherine Gibney, MBBS, MPH, (EIS 2009), Recent EIS Officer, katherine.gibney@monash.edu

Current/Recent EIS Officer: Kris Janusz, DVM, MPH, (EIS 2008), Recent EIS Officer, kbjanusz@aol.com

Officer Projects: 1. Association between microcephaly and Zika virus, Brazil;
2. Impact of chikungunya virus, US Virgin Islands;
3. Zika virus disease epidemiology, US travelers;
4. Concurrent outbreak of West Nile and St. Louis encephalitis viruses, Arizona;
5. Guillain-Barre syndrome investigation, Brazil;

6. Acute flaccid paralysis due to La Crosse virus

- Officer Recent Publications:** 1. Hennessey MJ, Fischer M, et al. Zika virus disease in travelers returning to the United States – 2010–2015. *Am J Trop Med Hyg* 2016; in press.
2. Hills SL, Russell K, Hennessey M, et al. Transmission of Zika virus through sexual contact with travelers to areas of ongoing transmission — Continental United States, 2016. *MMWR* 2016;65(8):215–216.
3. Hennessey M, Fischer M, Staples JE. Zika virus spreads to new areas - region of the Americas, May 2015-January 2016. *MMWR* 2016;65(3):55–8.
4. Venkat H, Krow-Lucal E, Hennessey M, et al. Concurrent Outbreaks of St. Louis Encephalitis Virus and West Nile Virus Disease - Arizona, 2015. *MMWR* 2015;64(48):1349–50
5. Kosoy OI, Lambert AJ, Hawkinson DJ, Pastula DM, et al. Novel Thogotovirus Species Associated with Febrile Illness and Death, United States. *Emerg Infect Dis* 2015;21(5):784–788.
6. Pastula DM, Hoang Johnson DK, et al. Jamestown Canyon Virus Disease in the United States — 2000–2013. *Am J Trop Med Hyg* 2015;93(2):384–389.
7. Yendell SJ, Fischer M, Staples JE. Colorado Tick Fever in the United States, 2002–2012. *Vector Borne Zoonot Dis* 2015;15(5):311–316.

Consultant: Lyle Petersen, MD, MPH, (EIS 1985), Director, Division of Vector-borne Diseases, lxp2@cdc.gov

Division of Vector-borne Diseases/Dengue Branch/Epidemiology Team

NCEZID-DVBD-DB-PR-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Vector-borne Diseases/Dengue Branch/Epidemiology Team

Physical Address: San Juan, Puerto Rico

Primary Supervisor: Stephen Waterman, MD, MPH, (EIS 1981), Branch Chief, shw2@cdc.gov

Secondary Supervisor: Jennifer Read, MD, MPH, Epidemiology Team Lead, jennifer.read@nih.gov

Secondary Supervisor: Tyler Sharp, PhD, (EIS 2010), Epidemiologist, iyp4@cdc.gov

Secondary Supervisor: Laura Adams, DVM, MPH, (EIS 2012), Veterinary Epidemiologist, laura.adams@azdhs.gov

Secondary Supervisor: Matthew Lozier, PhD, (EIS 2012), Epidemiologist, wfu2@cdc.gov

As an *Aedes* mosquito-borne virus, Zika and the Puerto Rico Zika emergency response is dominating the Dengue Branch's activities in 2016 and Zika as a priority will likely continue into 2017. The Dengue Branch is immersed in all aspects of the response: epidemiologic, laboratory, entomologic for control and research. That said, dengue is the world's most common and important arboviral illness in terms of morbidity and mortality, and is endemic throughout the tropics and sub-tropics where an estimated 100 million cases and 400 million dengue virus (DENV) infections occur annually. The mission of CDC Dengue Branch, located in San Juan, Puerto Rico, is to develop, implement and evaluate strategies to reduce dengue morbidity and mortality. Dengue Branch has ~70 employees and is composed of four Teams: Epidemiology (EIS Officer assigned to this team), Laboratory, Entomology and Ecology, Communications and Public Health Management. Prominent activities of the Epidemiology Team include: 1) The Sentinel Enhanced Dengue Surveillance System (SEDSS) that conducts acute febrile illness surveillance in three hospital systems in PR and tests for 26 different pathogens; 2) Outbreak investigations to improve clinical awareness of and surveillance for dengue in the U.S. and abroad; and 3) Travel-associated dengue outbreak investigations to better inform U.S. travelers of the risk of dengue. Epi Team conducts dengue clinical trainings in all of these settings to improve the capacity of clinicians in the U.S. and abroad to appropriately identify and manage dengue patients, which is currently the sole approach available to reduce dengue mortality. An EIS officer will be experiencing an exciting time in dengue science and disease control with imminent availability of dengue vaccines and new technologies for mosquito control. Dengue Branch has also recently brought on highly experienced epidemiologists and as well as recent EIS graduates to make up a team with the critical mass to tackle the challenges of dengue and Zika. The Dengue Branch works closely with PR Dept of Health on many projects in PR, and thus EISOs will gain perspectives of both "Center-" and "State"-based experiences in public health. In addition to Zika, the Dengue Branch has been actively involved in working on Chikungunya, the other *Aedes* transmitted disease re-introduced into the Western hemisphere in 2014

Proposed Initial Projects: Repeat serosurvey in southern Puerto Rico to look at risk factors for Zika incidence and the impact of gravid mosquito-cidal trap intervention.

Evaluation of immunologic and other risk factors for Zika clinical disease and mortality.

Establishing a cohort of children and adults for dengue and Zika vaccine studies.

Evaluation the Zika Prevention Kits as an intervention to prevent pregnant women from becoming infected with ZIKV.
Analysis of SEDSS data to determine if diagnostic testing should utilize urine or saliva instead of blood;
Initiation of a prospective evaluation of the dengue rapid diagnostic tests in the SEDSS site

Proposed Surveillance Projects: Evaluation of Puerto Rico Guillain-Barre surveillance system (with an eye to possible arboviral associations), Zika-associated Pregnancy Surveillance System, or Sentinel Enhanced Dengue Surveillance System

Range of Opportunities: All Dengue Branch EISOs take a “Dengue 101” course and become knowledgeable in clinical aspects of dengue, laboratory diagnostics, vector control and surveillance, and best practices in dengue surveillance and outbreak response. EISOs are provided opportunities to generate a pertinent research question, write a protocol, collect and analyze data, present findings at conferences, and write manuscripts. EISOs will have the opportunity to participate in and lead a multidisciplinary team during domestic or international outbreak responses, which typically include epidemiology, laboratory diagnostics, clinical care, community engagement, and vector assessment and control.

Position Strengths: Research-minded outbreak investigations throughout the world; long-term research and surveillance projects in PR and abroad; high-profile investigations of high-impact illnesses; become a subject matter expert in all aspects of dengue (clinical, epi, diagnostics, entomology, prevention); work closely with PR Dept of Health; strong mentoring from recognized international experts in dengue; Caribbean lifestyle, salsa and Latin joie de vivre.

Special Skills Useful for this Position: Experience in vector-borne disease epidemiology/ecology and international health. Spanish language. Background in immunology, virology

Available Data: Passive Dengue Surveillance System (>40 years of data); Sentinel Enhanced Dengue Surveillance System (5 years); ArboNET (10 years); outbreak, serosurvey databases.

Recent Publications: Thomas DL et al. Local transmission of Zika virus - Puerto Rico, Nov-Jan, 2016. MMWR 2016
Sharp TM et al. Chikungunya cases identified through passive surveillance and household investigations - Puerto Rico, 2014. MMWR 2014

Hause AM et al, Epidemiology of dengue among children < 18 months - Puerto Rico, 1999-2011. Am J Trop Med Hyg (AJTMH) 2016

Sharp TM et al, Underrecognition of dengue during 2013 epidemic in Angola. EID 2015

Waterman SH et al. Surveillance for dengue and dengue-associated neurologic syndromes in the U.S. AJTMH 2015

Domestic Travel: 10% **International Travel:** 10%

Available Support: Molecular, molecular epidemiology, and immuno-diagnostic laboratories; dengue mosquito expertise in surveillance and control; biostatistics; modeling; database management; data entry; administrative/logistical.

Current/Recent EIS Officer: Jessica Healy, PhD, (EIS 2015), Epidemiologist, jessica.healy@sdcountry.ca.gov

Current/Recent EIS Officer: Esther Ellis, PhD, (EIS 2012), Territorial Epidemiologist, USVI, esther.ellis@doh.vi.gov

Current/Recent EIS Officer: Dana Thomas, MD, MPH, (EIS 2012), Medical Epidemiologist, WII6@CDC.GOV

Current/Recent EIS Officer: Tyler Sharp, PhD, (EIS 2010), Epidemiologist, iyp4@cdc.gov

Current/Recent EIS Officer: Christopher Gregory, MD, (EIS 2008), Arboviral Diseases Branch Chief, hgk4@cdc.gov

Current/Recent EIS Officer: Emilio Dirilikov, PhD, (EIS 2015), Epidemiologist, klt9@cdc.gov

Officer Projects: Dengue outbreak investigations (Fiji, Kenya, Tanzania, Haiti, Jamaica, Florida, Puerto Rico, Texas, US Virgin Islands, Arizona); Fatal dengue, chikungunya and leptospirosis in Puerto Rico; Evaluation of multiple surveillance systems during Puerto Rico Chikungunya epidemic; Serosurvey for Chikungunya in mosquito intervention and control sites; Zika and Guillain-Barre, Zika Virus Shedding

Officer Recent Publications: Thomas DA, et al., Re-emergence of dengue in South Texas, 2013. EID, in press.

Ellis EM et al., Incidence and Risk Factors for Developing Dengue-associated Hemophagocytic Lymphohistiocytosis in Puerto Rico, 2008—2013. In review.

Sharp TM et al., Early Indicators of Fatal Leptospirosis during the 2010 Epidemic in Puerto Rico. PLOS NTD, 2016.

Ellis EM et al., A household serosurvey to estimate the magnitude of a dengue outbreak in Mombasa, Kenya, 2013. PLOS NTD, 2015.

Sharp TM et al, Characteristics of a dengue outbreak in a remote pacific island chain--Republic of The Marshall Islands, 2011-2012. PLOS ONE 2014.

Sharp TM et al, Virus specific differences in rates of disease during the 2010 dengue epidemic in Puerto Rico. PLoS

NTD 2013.

Sharp TM et al, Fatal human co-infection with *Leptospira* spp. and dengue virus, Puerto Rico, 2010. EID 2012.

Radke EG, Gregory CJ et al., Dengue outbreak in Key West, Florida, 2009. EID 2012.

Gregory CJ et al., Utility of the tourniquet test and the white blood cell count to differentiate dengue among acute febrile illnesses in the emergency room. PLoS NTD 2012.

Consultant: Brenda Rivera, DVM, MPH, Puerto Rico Territorial Epidemiologist, brendarivera@salud.gov

National Center for Environmental Health

The National Center for Environmental Health (NCEH)'s mission is to promote healthy and safe environments and prevent harmful exposures. EIS officers lead epidemiological investigations, analyze large national datasets, serve as technical advisors, and respond to requests for assistance from state and international governments. They are placed in the Division of Emergency and Environmental Health Services (DEEHS) and the Division of Environmental Hazards and Health Effects (DEHHE). The DEEHS's areas of work include healthy homes, lead poisoning prevention, healthy community design initiative, foodborne and waterborne illness outbreaks, and vessel sanitation. The DEHHE's areas of work include study of the effects of airborne environmental agents on respiratory diseases, investigation of health effects from various environmental hazards, climate change, asthma and use of environmental public health tracking. Visit us at <http://www.cdc.gov/nceh> and <http://www.cdc.gov/nceh/eis>

Division of Emergency and Environmental Health Services/Office of the Director

NCEH-ATSDR-DEEHS-OD-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Emergency and Environmental Health Services/Office of the Director

Physical Address: Atlanta, Georgia

Primary Supervisor: Helen Schurz-Rogers, PhD, Associate Director for Science, hhs0@cdc.gov

Secondary Supervisor: Hugh Mainzer, DVM, MSPH, (EIS 1992)

Background: The Division of Emergency and Environmental Health Services (DEEHS) provides national leadership in the development of environmental and emergency public health policy and prevention programs to improve public health practice nationwide. We are looking for a highly motivated individual with an interest in studying the relationship between environment and health. This EIS position is stationed in the Office of the Director of the Division of Emergency and Environmental Health Services. As such there is a wide breadth of potential study areas in environmental health correlating with the specialized work in our programs:

- Environmental Health Services: Provides surveillance, practice-based research, evidence-based practice, training, and technical assistance for state, tribal, local, and territorial environmental health practitioners in food safety, recreational and drinking water quality assurance, on-site wastewater management, indoor air quality, rodent/vector control, and community environmental health service delivery.
- Environmental Public Health Readiness: Protects public health and safety by reviewing, advising, and making recommendations on the safe disposal and transportation of stockpile and non-stockpile chemical warfare agents and providing technical guidance for issues involving highly hazardous chemicals.
- Lead Poisoning and Prevention: Tracks and prevents childhood lead poisoning and other adverse health conditions related to the home environment using surveillance and by providing technical assistance for determining lead exposure.
- Vessel Sanitation: Assists the cruise ship industry to prevent and control the introduction, transmission, and spread of gastrointestinal illnesses on cruise ships by conducting inspections, monitoring for gastrointestinal illness and trains cruise ship employees on public health practices.

Proposed Initial Projects: • Conduct record review and a case series analysis of blood lead level (BLL) data on previously collected data sets of children with BLL >70ug/dL.

*Analyze data collected as part of the CDC response and recovery effort to lead-contaminated water in Flint, MI.

- Analyze data collected by the National Environmental Assessment Reporting System (NEARS). This system captures environmental assessment data from foodborne illness outbreak investigations to identify environmental causes of outbreaks, provide fact-based actions to reduce or prevent future foodborne illness outbreaks, and evaluate food safety programs. There are several potential data sets from this system that are available for analysis and publication focusing on links between outbreak establishment characteristics and policies, and outbreak characteristics (number of illnesses, hospitalizations, death); links between outbreak investigation activities and identification of the pathogen, food, and contributing factors; and links between outbreak pathogens and outbreak vehicle.

Further details about the division's activities are available at <http://www.cdc.gov/nceh/eehs/>

Proposed Surveillance Projects: The Childhood Blood Lead Surveillance system collects data to target limited resources to the highest risk children and to track incidence and risk factors.

Range of Opportunities: Environmental Health Services: Provides surveillance, practice-based research, evidence-based practice, training, and technical assistance for state, tribal, local, and territorial environmental health practitioners.

- Environmental Public Health Readiness: Protects public health and safety by reviewing and monitoring the safe disposal and transportation of stockpile and non-stockpile chemical warfare agents and providing technical guidance for issues involving highly hazardous chemicals.
- Lead Poisoning and Prevention: Tracks and prevents childhood lead poisoning.
- Vessel Sanitation: Assists the cruise ship industry to prevent and control the introduction, transmission, and spread of gastrointestinal illnesses on cruise ships.

Position Strengths: Because this position is located in the office of the director, it is possible for the officer to be involved in many different aspects of environmental health. As such, the EIS officer may have responsibility for the epidemiologic component of environmental system evaluations during outbreaks and public health emergencies.

Special Skills Useful for this Position: Knowledge of health sanitation and/or environmental health would be helpful, but not necessary, for this position.

Available Data: The Childhood Blood Lead Surveillance system collects data to target limited resources to the highest risk children and to track incidence and risk factors.

The National Environmental Assessment Reporting System (NEARS). This system captures environmental assessment data from foodborne illness outbreak investigations.

Recent Publications: Modeling Health Impacts of the Transportation Built Environment: Challenges and Opportunities. *J Environ Health.* 2015; 77(7): 36-37.

Surveillance of bicycle related fatalities in the US: the Fatal Accident Reporting System 1975-2012. *MMWR.* 2015; 64(31): 837-841

Active transportation surveillance across five systems – United States 1999-2012. *MMWR Surveillance Summaries.* 2015; 64(SS07): 1-17.

Acute gastrointestinal illness following a prolonged community-wide water emergency. *Epidemiol. Infect.* 2015.

Walking associated with public transit: moving toward increased physical activity in the United States. *Am J Public Health.* 2013.

Domestic Travel: 20% **International Travel:** 0%

Available Support: epidemiology, statistics, wide range of environmental health expertise

Current/Recent EIS Officer: Emily Ussey, PhD, (EIS 2015), yzv4@cdc.gov

Current/Recent EIS Officer: Jeff Whitfield, PhD, (EIS 2013), epidemiologist, xdh5@cdc.gov

Current/Recent EIS Officer: Amy Freeland, PhD, (EIS 2009), epidemiologist, igc3@cdc.gov

Officer Projects: rural water system disruption response; hybrid vehicle related fatalities; lead exposure in Nigeria; heat-related death investigation in Arizona; Modeling the health impacts of ITHIM in Nashville, TN; Surveillance of bicycle related fatalities; active transportation using 5 surveillance systems in the US.

Officer Recent Publications: Whitfield GP, Wendel AM. Modeling Health Impacts of the Transportation Built Environment: Challenges and Opportunities. *J Environ Health.* 2015; 77(7): 36-37.

Vargo J, Whitfield GP, Wendel AM. Surveillance of bicycle related fatalities in the US: the Fatal Accident Reporting System 1975-2012. *MMWR.* 2015; 64(31): 837-841

Whitfield GP, Paul P, Wendel AM. Active transportation surveillance across five systems – United States 1999-2012. *MMWR Surveillance Summaries.* 2015; 64(SS07): 1-17.

o Also featured in Am J Pub Health, MMWR In Brief, 2015;106(3):e1

Gargano JW, Freeland AL, Morrison MA, Stevens K, Zajac L, Wolkon A, Hightower A, Miller MD, Brunkard JM. Acute gastrointestinal illness following a prolonged community-wide water emergency. *Epidemiol. Infect.* 2015.

Freeland AL, Banerjee SN, Dannenberg AL, Wendel AM. Walking associated with public transit: moving toward increased physical activity in the United States. *Am J Public Health.* 2013.

Kochitzky CS, Freeland AL, Yen IH. Ensuring mobility-supporting environments for an aging population: critical actors and collaborations. *J Aging Res.* 2011.

Community Health Impact of Extended Loss of Water Service — Alabama, January 2010. *MMWR.* 2011.

Consultant: Sharunda Buchanan, PhD, MS, (EIS 1993)

Consultant: Amy Freeland, PhD, (EIS 2009), igc3@cdc.gov

Consultant: Shaileen Banerjee, PhD, statistician

Division of Environmental Hazards and Health Effects/Air Pollution and Respiratory Health Branch

NCEH-ATSDR-DEHHE-APRHB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Environmental Hazards and Health Effects/Air Pollution and Respiratory Health Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Kanta Sircar, MPH, PhD, (EIS 2007), Epidemiologist, ddq0@cdc.gov

Secondary Supervisor: Fuyuen Yip, PhD, MPH, (EIS 2004), Team Lead, fay1@cdc.gov

Background: Almost 25 million people in the United States currently have asthma, and asthma prevalence is at a historically high level. Air Pollution and Respiratory Health Branch's (APRHB's) mission is to reduce the burden of asthma and adverse health effects associated with exposure to indoor and outdoor air pollutants through surveillance, partnerships, research, and investigations. APRHB scientists work at the intersection of medicine, epidemiology, and environmental health and have expertise in a broad range of areas including surveillance, evaluation, exposure assessment, prevention effectiveness, and biostatistics.

ARPHB oversees the National Asthma Control Program, which funds health departments in 23 states in their work to reduce asthma-related morbidity and mortality.

APRHB:

- works with grantees to conduct asthma surveillance, which is used to identify high-burden populations and target their programs
- disseminates national data to advance the asthma knowledge base and reduce the burden of asthma
- provides evidence-based guidance to help improve asthma management practices
- studies the impact of air pollution exposure on cardiorespiratory illnesses, including asthma.

Air Pollution and Asthma Epidemiology: APRHB has a team of epidemiologists who work with internal and external partners (e.g., local, state, and federal; academic) to study the impact of air pollution exposure on respiratory illnesses, including asthma. The epidemiologists:

- conduct research in outdoor and indoor air pollution (particulate matter, mold, volatile organic compounds (VOCs)), built environment, environmental disasters (wildfires, biomass burning, volcanic emissions, hurricanes) and carbon monoxide poisoning
- inform the development of asthma interventions using evidence-based science
- provide technical assistance and Epi-Aid support to states on urgent requests pertaining to respiratory health, air pollution exposure, and environmental health.

For further information, see <http://www.cdc.gov/nceh/airpollution/default.htm>, <http://www.cdc.gov/asthma/> and www.cdc.gov/co

Proposed Initial Projects: 1) Characterizing schools in the U.S. using the USEPA Air Quality Flag Program; 2)

evaluate asthma quality of care measures using clinical and ACBS data, and how these measures could be affected by the Affordable Care Act; 3) evaluate frequency of guidelines-recommended outpatient follow-up (within 4 weeks) after asthma hospitalization or emergency department visit and its association to risk for subsequent asthma exacerbations, using a large insurance claims database; 4) measure the effects of green eco-friendly renovations on indoor air exposures (e.g., allergens, particulate matter, volatile organic compounds) and asthma outcomes of children living in low-income urban housing; 5) analysis of national poison data system data for burden of unintentional carbon monoxide poisoning deaths in the United States.

Proposed Surveillance Projects: Evaluate the creation of a lab-based surveillance system for national notification of carbon monoxide poisoning.

Range of Opportunities: The officer will enjoy a variety of opportunities to design and lead epidemiologic investigations, analyze large national datasets, and respond to requests for emergency assistance (Epi-Aids) from state or international governments (within and outside of the National Center for Environmental Health).

Position Strengths: The strengths of the position include: 1) a broad range of subject areas (e.g., asthma, healthcare reform, indoor and outdoor air pollution, carbon monoxide poisoning), 2) strong analytic experiences; 3) ability to tailor projects to EISO's interest and background; 4) an opportunity to collaborate with other groups within and outside of the National Center for Environmental Health, including field investigations; 5) an opportunity for interested EIS officers to learn programmatic skills; 6) extensive branch experience supervising EISO.

Special Skills Useful for this Position: We have had success working with officers with different backgrounds (e.g., PhD, MD, etc.). The officer should be excited to learn about the role of the environment on population health and should enjoy working with public health practitioners based in a variety of settings. The officer should also be able to function well as a team member.

Available Data: The officer will have access to data from BRFSS Asthma Call-Back Survey, NHANES, National Health Interview Survey (NHIS), National Ambulatory Medical Care Survey, National Vital Statistics, National Poison Data System (NPDS), MarketScan (health cost and utilization data), American Hospital Association Survey, and air quality data.

Recent Publications: Amy Heinzerling, Joy Hsu, and Fuyuen Yip, Respiratory Health Effects of Ultrafine Particles in Children: A Literature Review. Accepted by Water, Air, and Soil Pollution 2016.

CH Chiu, M. Lozier, T. Bayleyegn, K. Tait, T. Barreau, L. Copan, R. Roisman, R. Jackson, S. Smorodinsky, R. Kreutzer, F. Yip, A. Wolkin. Geothermal gases – community experiences, perceptions and exposures in Northern California. *J Env Health* 2015

Byers N, Ritchey M, Vaidyanathan A, Brandt A, Yip F. Short-term effects of ambient air pollutants on asthma-related emergency department visits in Indianapolis, Indiana, 2007–2011. *J of Asthma* 2015

Domestic Travel: 5% **International Travel:** 0%

Available Support: The officer will work with CDC epidemiologists, environmental health scientists, statisticians, physicians, and evaluation and communications experts. The EIS officer can consult with epidemiology, biostatistics, and environmental health science faculty from Emory University.

Current/Recent EIS Officer: Matthew Lozier, PhD, (EIS 2012), wfu2@cdc.gov

Current/Recent EIS Officer: Joy Hsu, MD, MPH, (EIS 2013), Medical Officer

Current/Recent EIS Officer: Matt Karwowski, MD, MPH, (EIS 2014), EIS officer

Current/Recent EIS Officer: Lillianne Lewis, MD, (EIS 2015), EIS Officer

Officer Projects: Disaster response (West Virginia chemical spill, Deepwater Horizon Oil Spill, post-hurricane carbon monoxide surveillance, Ebola response, Zika response); asthma response (UT epi-aid), indoor air pollution and cookstove use, Kenya; influenza vaccination coverage among persons with asthma; mercaptan spill public health response; geothermal venting exposure assessment.

Officer Recent Publications: Hsu J, Qin, X, Beavers S, Mirabelli M. (2016) Asthma-related School Absenteeism, Morbidity, and Modifiable Factors. *Am J of Prev Med* 2016; doi:10.1016/j.amepre.2015.12.012
Karwowski MP et al. Response to importation of a case of Ebola virus disease--Ohio, October 2014. *MMWR* 2014;63:1089–1091.

M Lozier, L Ogilvie, C Stanley, L Lewis, M Boyd. Notes from the Field: Acetyl Fentanyl Overdose Fatalities — Rhode Island, March–May 2013. *MMWR* 2013; 62(34);703-704.

B Behbod, EM Parker, EA Jones, T Bayleyegn, et al. Community Health Assessment Following Mercaptan Spill: Eight Mile, Mobile County, Alabama, September 2012. *J Public Health Manag Pract*; 2013; 18:1-8.

Consultant: Tegan Boehmer, (EIS 2006)
Consultant: Suzanne Beavers, (EIS 2006)
Consultant: Paul Garbe, (EIS 1982)
Consultant: Judy Qualters
Consultant: Josephine Malilay
Consultant: Joy Hsu, MD, (EIS 2013), Medical Officer

Division of Environmental Hazards and Health Effects/Health Studies Branch

NCEH-ATSDR-DEHHE-HSB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Environmental Hazards and Health Effects/Health Studies Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Rebecca S. Noe, MN, MPH, FNP-BC, Epidemiologist, rhn9@cdc.gov

Secondary Supervisor: Royal Law, MPH, PhD, Epidemiologist

Background: When hazards such as toxic chemicals or natural or man-made disasters threaten a community, public health decision makers look for answers based in sound science. The Health Studies Branch (HSB) of the National Center for Environmental Health provides data based on applied epidemiology to public health professionals across the country and around the world to help them find these answers. HSB responds to emergencies and researches/investigates health effects from environmental hazards (non-infectious agents). The branch's major activities include responding to outbreaks of toxic etiology; preparing for and responding to disasters; investigating exposures and health effects associated with the environment; conducting surveillance for emerging environmental health threats; and assisting partners to identify and prepare for emerging threats.

Proposed Initial Projects: • Use Avon Longitudinal Study of Parents and Children (ALSPAC) data on early life environmental exposures and childhood health outcomes to evaluate (Desk based)

- Environmental exposures (e.g., PFCs) and obesity
 - Health effects of PFCs on cognitive development in boys
 - Health effects of PFCs on bone health in boys
- Characterize exposures to kratom (an emerging herbal supplement) using poison center data (Desk based)
- Analyze additional available datasets to explore associations between environmental exposure and health outcomes (Desk based)
- National Health and Nutritional Examination Survey (NHANES)
 - National Environmental Public Health Tracking Network
- While the specific project cannot be identified ahead of time, HSB regularly responds to requests for assistance to investigate outbreaks presumed to be associated with chemical exposures. HSB has a protocol in place to rapidly assist EISOs in responding to these unpredictable, but always interesting, public health events. (Potential project, field based)

Proposed Surveillance Projects: • Evaluation of a state-based (Oklahoma or Washington) Electronic Death Registration System (EDRS) for tracking disaster-related deaths after a natural disaster. (Field based)

• Evaluate National Environmental Public Health Tracking Network's national and/or state-based surveillance system for monitoring environmental hazards and associated health effects. (e.g., heat-stress illness surveillance using emergency department visits, childhood lead poisoning surveillance using state and national childhood lead poisoning data). (Desk based)

Range of Opportunities: Incoming officers will have a range of opportunities. HSB has several datasets from studies of exposures to environmental chemicals and health outcomes available for analysis. As opportunities arise, officers can lead or participate in outbreak investigations or public health disaster response activities. Officer-initiated projects consistent with branch priorities are encouraged.

Position Strengths: Officers will have the opportunity to work on a wide range of environmental health problems, including non-infectious contaminants in drinking water or food, disaster surveillance and epidemiology, and emerging environmental health issues. Former HSB EIS officers have been recognized for their epidemiology, leadership, and analytic skills with nominations for the Shepard and Peavey awards and by winning CDC and NCEH Honor awards, the Mackel, and Langmuir awards.

Special Skills Useful for this Position: Interest in applied epidemiology, interest in exploring associations between the

environment and health, flexibility, interest in disaster response, creative problem solving, personal initiative, desire to work in a wide range of topic areas

Available Data: National Poison Data System data, Avon Longitudinal Study of Parents and Children study data, National Health and Nutrition Examination Survey (NHANES), Environmental Public Health Tracking Network datasets.

Recent Publications: Ridpath A, Taylor E, Martin C., et al., Description of calls from private well owners to a national well water hotline, 2013. (Sci Total Environ)

Ellen Yard, Tesfaye Bayleyegn, et al., Metals Exposures of Residents Living Near the Akaki River in Addis Ababa, Ethiopia: A Cross-Sectional Study. (J Environ Public Health)

Wolkin A, Burrer S, et al., Reducing Public Health Risk During Disasters: Identifying Social Vulnerabilities. (J Homel Secur Emerg)

Chiu C, Vagi, S., et al. Evaluation of the National Weather Service's Extreme Cold Warning experiment in North Dakota during the 2011-2012 winter season. (Weather Clim Soc)

Domestic Travel: 10% **International Travel:** 5%

Available Support: Officers will have the opportunity to work with EIS-trained staff across all three HSB teams. In addition, statisticians and health communications specialists within the branch/division are available to provide expertise and guidance to EIS officers. Officers will be able to consult with HSB experts in disaster epidemiology, environmental epidemiology, and medical toxicology.

Current/Recent EIS Officer: Ethel Taylor, DVM, MPH, (EIS 2009)

Current/Recent EIS Officer: Ekta Choudhary, PhD, MPH, (EIS 2009)

Current/Recent EIS Officer: Ellen Yard, PhD, MPH, (EIS 2009)

Current/Recent EIS Officer: Sherry Burrer, DVM, MPH, (EIS 2008)

Current/Recent EIS Officer: Rebecca Noe, MN, MPH, (EIS 2004)

Current/Recent EIS Officer: Amelia (Amy) Kssper, MD, MPH, (EIS 2014)

Current/Recent EIS Officer: Kevin Chatham-Stevens, MD, (EIS 2013)

Current/Recent EIS Officer: Olaniyi (Niyi) Olayinka, MD, (EIS 2013)

Current/Recent EIS Officer: Gamola Fortenberry, PhD, (EIS 2015)

Current/Recent EIS Officer: Alice Wang, PhD, (EIS 2015)

Officer Projects: •Assessed associations between prenatal PCB exposure and cognitive development and timing of menarche

•Evaluated existing surveillance of dietary supplement-induced liver injury

•Characterized health effects of hand sanitizer poisoning

•Investigated outbreak of adverse illness from synthetic cannabinoid use, Mississippi

•Investigated severe illness and death among funeral attendees drinking pombe, Mozambique

Officer Recent Publications: •Severe Illness Associated with Reported Use of Synthetic Cannabinoids - Mississippi, April 2015 (MMWR)

•Calls to Poison Centers for Exposures to Electronic Cigarettes — United States, September 2010–February 2014 (MMWR)

•Surveillance of a Liver Disease of Unidentified Cause in a Rural, Resource-Limited Setting: A Case Study of an Active Surveillance System to Detect an “Unidentified Liver Disease” in Ethiopia (Ethiop Med J)

•Household Emergency Preparedness by Housing Type from a Community Assessment for Public Health Emergency Response (CASPER), Michigan (Disaster Med Public Health Prep)

•Geothermal Gases—Community Experiences, Perceptions, and Exposures in Northern California. Journal of Environmental Health. 2015 (Journal of Environmental Health)

•Impact of the 2012 Extreme Drought Conditions on Private Well Owners in the United States, a Qualitative Analysis. (Journal of Environmental Management- Submitted)

•Hepatotoxicity associated with the dietary supplement OxyELITE Pro™ - Hawaii, 2013. (Drug Test Anal)

•Acetyl Fentanyl, a Novel Fentanyl Analog, Causes 14 Overdose Deaths in Rhode Island, March – May 2013. (J Med Toxicol)

•Effectiveness of using cellular phones to transit real-time shelter morbidity surveillance data after Hurricane Sandy - New Jersey, October-November, 2012. (Disaster Med Public Health Prep)

•Evaluating National Weather Service’s Extreme Cold Warning Experiment in North Dakota (Weather, Climate and Society)

Consultant: Amy Wolkin, DrPH, MPH, Branch Chief

Consultant: Lorrie Backer, PhD, MPH, (EIS 1994)

Consultant: Tesfaye Bayleyegn, MD, (EIS 2004)

Consultant: Stephanie Kieszak, MA, MPH

Consultant: Josh Schier, MD, MPH

Consultant: Terri Hartman, PhD

Consultant: Art Chang, MD, Toxicologist

Consultant: Dana Flanders, MD, DSc, MPH, MA

National Center for Health Statistics

The National Center for Health Statistics (NCHS), the government's principal health statistics agency, is charged with monitoring the nation's health. To accomplish this mission, NCHS has collected, analyzed and disseminated health statistics for over 50 years. NCHS offers EIS officers the opportunity to work on a wide array of subjects, with specific topics chosen based on public health priorities and the EIS officer's own interest areas. EIS officers at NCHS obtain an appreciation for the strengths and weaknesses of the NCHS data sources through interactions with epidemiologists, statisticians, physicians, and computer programmers involved in the data collection, analysis, and dissemination. The EIS officer's experience at NCHS is further enriched through field epidemiologic experiences, computer and analytic short courses and seminars at NCHS, and seminars from Atlanta. Additional seminars are within commuting distance at such institutions as NIH, FDA and Johns Hopkins University.

Division of Health and Nutrition Examination Surveys/Analysis Branch

NCHS-DHNES-AB-MD-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Health and Nutrition Examination Surveys/Analysis Branch

Physical Address: Hyattsville, Maryland

Primary Supervisor: Lara Akinbami, MD, (EIS 1998), Medical Officer, lea8@cdc.gov

Secondary Supervisor: Tala Fakhouri, PhD, (EIS 2011), Epidemiologist, vid2@cdc.gov

Background: The National Health and Nutrition Examination Survey (NHANES) is the only nationally representative survey that combines demographic, socioeconomic and dietary interview data with physical examination data such as biochemistries and body measurements. NHANES data drive many national health and nutrition policy decisions. For example, the growth charts used by pediatricians are based on NHANES data; low blood folate levels seen in NHANES led to mandatory food fortification; and NHANES data form a basis of spirometry criteria for pulmonary function. This position will focus on chronic disease and health behaviors. Recent EIS officers have worked on diverse topics including: assessing the hydration status of US adults, blood lipid levels and body fat in children; prescription medication use among adults by weight status; and physical activity among school age children and beverage consumption among children and adolescents.

Proposed Initial Projects: 1) Examining the association between pesticide exposure and other environmental exposures with pulmonary function and asthma among children and youth; 2) Assessing the association between sleep, and sleep disorders and various physical and mental health outcomes among US adult; 3) Exploring trends in polypharmacy among older adults, and the combined use of prescription drugs and dietary supplements.

Proposed Surveillance Projects: Evaluation of NHANES for surveillance of a specific health condition (e.g. potentially undiagnosed conditions such as hypertension, diabetes, periodontal disease, existing caries, or chronic obstructive pulmonary disease) or behavior (e.g., physical activity).

Range of Opportunities: The focus is analysis of NHANES health data of chronic health conditions and involvement in

federal activities in the Washington DC area. The officer will have the opportunity to see NHANES in the field. Collaboration with analysts in the Division, at NIH, or in other centers within CDC will be possible for some projects. The officer will have the opportunity to participate in federal meetings and activities related to nutrition and asthma such as the NIH Nutrition Coordinating Committee, the National Asthma Education and Prevention Program, and attend Congressional hearings.

Position Strengths: The position will provide a strong foundation in SAS and analyzing complex survey data. NCHS is located within a short walking distance from the Metro, which facilitates living in the Washington, DC area. Being in DC also offers the opportunity to be exposed to other federal agencies.

Special Skills Useful for this Position: Prior knowledge of SAS, STATA, or other statistical software packages is helpful but not required.

Available Data: National Health and Nutrition Examination Survey

Recent Publications: Interrelationships between BMI, skinfold thicknesses, percent body fat, and cardiovascular disease risk factors among children and adolescents. *BMC Pediatrics* 2015, 15(188).

Fruit Consumption in Youth in the US. *Pediatrics*. 2015;136(4)

B-vitamin status and bone mineral density and risk of lumbar osteoporosis in older women. *Am J Clin Nutr* 2015;102(3)

More than half of youth consume seafood, most have blood mercury concentrations below EPA reference. *J Nutr* 2015; 145(2):322-7.

Prevalence and trends in dyslipidemia and blood pressure among children. *JAMA Pediatr* 2015; 169(3):272-9.

Domestic Travel: 0% **International Travel:** 0%

Available Support: The branch is composed of infectious disease and environmental epidemiologists, statisticians, nutritionists, programmers, behavioral psychologists, pediatrician, dentist and EIS Officers. All staff are available for consultation.

Current/Recent EIS Officer: Duong Nguyen, DO, (EIS 2014), EIS Officer, DTNguyen1@cdc.gov

Current/Recent EIS Officer: Asher Rosinger, PhD, (EIS 2015), EIS Officer, ARosinger@cdc.gov

Officer Projects: Racial differences in fractional exhaled nitric oxide among children with asthma; Prevalence of failure to floss among adults; The association between hydration status and weight status; Abnormal cholesterol levels in US children;

Officer Recent Publications: Nguyen DT, Kit BK, Carroll MD. Abnormal cholesterol among children and adolescents in the United States, 2011–2014. *NCHS DataBrief*, 228. 2015.

Quinto KB, Kit BK, Lukacs SL, Akinbami LJ. Environmental tobacco smoke exposure in children with and without asthma, 1999-2010. *NCHS DataBrief*, 126, 2013.

Fakhouri TH, Hughes JP, Burt VL, et al. Physical activity in US Youth aged 12-15 years, 2012. *NCHS DataBrief*, 141, 2014.

Kit BK, Fakhouri TH, Park S, et al. Trends in sugar-sweetened beverage consumption among US youth and adults: 1999-2010. *Am J Clin Nutr*. 2013;98(1):180-8.

Fakhouri TH, Hughes JP, Brody DJ, et al. Physical activity and screen-time viewing among elementary school-aged children, 2009 to 2010. *JAMA Pediatr*. 2013. 7:1-7.

Fakhouri TH, Kit BK, Ogden CL. Consumption of diet drinks in the US, 2009-2010. *NCHS DataBrief*, 109, 2012.

Kit BK, Carroll MD, Lacher DA, et al. Trends in serum lipids among US youths aged 6 to 19 years, 1988-2010. *JAMA*. 2012;308(6):591-600.

Kit BK, Ogden CL, Flegal KM. Prescription medication use among normal weight, overweight, and obese US adults, 2005-2008. *Ann Epidemiol*. 2012;22(2):112-9.

Consultant: Cynthia Ogden, PhD, (EIS 1994), Branch Chief, COgden@cdc.gov

Consultant: Eleanor Fleming, PhD, DDS, MPH, (EIS 2011), Dental Officer, EFleming@cdc.gov

Division of Health and Nutrition Examination Surveys/Office of the Director

NCHS-DHNES-OD-MD-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Health and Nutrition Examination Surveys/Office of the Director

Physical Address: Hyattsville, Maryland

Primary Supervisor: Susan Lukacs, (EIS 2001), Science Advisor, SLukacs@cdc.gov

Secondary Supervisor: Mark Eberhardt, (EIS 1983), Epidemiologist, MEberhardt@cdc.gov

Background: The National Health and Nutrition Examination Survey (NHANES) is the only nationally representative survey that combines demographic, socioeconomic and dietary interview data with physical examination data that includes laboratory biochemistries and body measurements. It collects data on 1) risk factors including environmental exposures, physical activity, nutrition, and other health behaviors; 2) dental, sensory, reproductive and other measures of health status, as well as 3) infectious and chronic disease health outcomes. NHANES is unique in that it combines personal interviews with standardized physical examinations and includes a blood draw and urine collection for analysis in laboratories. NHANES has a biorepository to store survey participants' blood (sera or plasma) and urine which are made available for future research. The resulting data are obtainable on the NHANES website and can be combined with already established NHANES data. NHANES also has a DNA Specimen Repository of stored survey participants' DNA and a Genetic Data Repository which includes over 800,000 single nucleotide polymorphisms (SNPs) for non-Hispanic blacks and fasting non-Hispanic whites from the NHANES 1999-2002 genetic subset. The NHANES Genetic Variant Search on the NHANES Biospecimen Program website allows potential researchers to find genetic variants that are available in the Genetic Data Repository for research. This position will focus on genetics and laboratory and physical measures of health. Officers will have the opportunity to assess the relationship between genetics and health status or specific environmental or infectious biomarkers and health conditions.

Proposed Initial Projects: 1) Examine racial differences in associations of chronic conditions and candidate genetic markers in the NHANES database of single nucleotide polymorphisms (SNPs); 2) Assess associations of infectious disease or environmental serum or urine biomarkers and disease risk; 3) Assess chemosensory dysfunction (taste and smell) by smoking status.

Proposed Surveillance Projects: The Officer will evaluate NHANES for surveillance of a specific risk factor for chronic disease. An example: sleep disorders.

Range of Opportunities: This assignment focuses analysis of NHANES data using laboratory biomarkers, SNP data, or physical measures to assess health. The Officer will have the opportunity to see NHANES in action in the field and be a part of the NHANES Biospecimen Working Group. Collaboration with other scientists in the Division or in other centers within CDC will be possible for some projects.

Position Strengths: The position is in the Washington, DC area at a world-renowned research institution which has strong relationships with Atlanta CDC colleagues, researchers at the National Institutes of Health (e.g. NIDDK, NCI, NHLBI, NIAAA and NEI) and collaborators at other Federal agencies. The Officer will conduct cutting edge epidemiologic research with direct implications for public health improvements, while gaining an in-depth understanding of a National community-based survey, which has served as a model for other countries.

Special Skills Useful for this Position: Prior knowledge of SAS, STATA, or other statistical software packages is helpful but not required.

Available Data: National Health and Nutrition Examination Survey (NHANES)

Recent Publications: Opioid analgesic use among US adults, 1999-2012. NCHS Data Brief. 2015

Prevalence and trends in dyslipidemia and blood pressure among children. JAMA Pediatrics. 2015

Strength and body weight in US children and adolescents. Pediatrics. 2014

Seafood consumption and blood mercury concentrations in adults. Am J Clin Nutr. 2014

Association between variants in or near PNPLA3, GCKR, and PPP1R3B with ultrasound-defined steatosis based on data from the third National Health and Nutrition Examination Survey. Clin Gastroenterol and Hepatol. 2013

Comparison of population iodine estimates from 24-hour urine and timed spot urine samples. Thyroid. 2014

Domestic Travel: 0% **International Travel:** 0%

Available Support: The Division has a staff of epidemiologic researchers and statisticians with clinical, epidemiologic, genetic, and computer science expertise who are available to consult with the EIS officer. Division staff include 8 current or former EIS Officers.

Current/Recent EIS Officer: Kenneth Quinto, (EIS 2012)

Current/Recent EIS Officer: Joseph Woodring, DO, (EIS 2012)

Current/Recent EIS Officer: Duong (Tony) Nguyen, DO, (EIS 2014), EIS Officer, DTNguyen1@cdc.gov

Current/Recent EIS Officer: Asher Rosinger, PhD, (EIS 2015), EIS Officer, ARosinger@cdc.gov

Officer Projects: Examine the association between hydration status and weight status; Examine cholesterol levels in

US children; Examine trends in cotinine levels among children with asthma; Estimate current U.S. HIV prevalence; Evaluate worker safety at a wind turbine manufacturer

Officer Recent Publications: Nguyen DT, Kit BK, Carroll MD. Abnormal cholesterol among children and adolescents in the United States, 2011–2014. NCHS data brief, no 228. 2015.

Joseph Woodring, D.O., M.P.H., M.T.M.H.; Deanna Kruszon-Moran, M.S.; and Geraldine McQuillan. HIV Infection in U.S. Household Population Aged 18–59: Data From the National Health and Nutrition Examination Survey, 2007–2012. National Health Statistics Reports, no. 83, Sept 24, 2015.

Quinto KB, Kit BK, Lukacs SL, Akinbami LJ. Environmental tobacco smoke exposure in children aged 3–19 years with and without asthma in the United States, 1999–2010. NCHS Data Brief, no. 126, Aug 2013.

Woodring JV1, Kruszon-Moran D, Oster AM, McQuillan GM. Did CDC's 2006 revised HIV testing recommendations make a difference? Evaluation of HIV testing in the US household population, 2003–2010. J Acquir Immune Defic Syndr. 2014 Nov 1;67(3):331–40.

Kateh F, Nagbe T, Kieta A, ... Woodring J, et al. Rapid Response to Ebola Outbreaks in Remote Areas — Liberia, July–November 2014 MMWR, February 27, 2015 / 64(07);188–192.

Consultant: Brian Kit, (EIS 2010), Medical Officer, BKit@cdc.gov

Consultant: Lara Akinbami, MD, (EIS 1998), Medical Officer, LAkinbami@cdc.gov

National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention

Division of Adolescent and School Health/School-Based Surveillance Branch

NCHHSTP-DASH-SBSB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Adolescent and School Health/School-Based Surveillance Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Richard Lowry, (EIS 1990), Medical Officer, RLowry@cdc.gov

Secondary Supervisor: Zewditu Demissie, (EIS 2010), Research Scientist, ZDemissie@cdc.gov

Background: The mission of the Division of Adolescent and School Health (DASH) is to promote environments where teens can gain fundamental health knowledge and skills, establish healthy behaviors for a lifetime, connect to health services, and avoid becoming pregnant or infected with HIV or STDs. Surveillance of priority health risk behaviors is one strategy used to achieve that mission. Priority areas include sexual health behaviors, alcohol and other drug use, violence and unintentional injury, tobacco use, nutrition, and physical activity. Risk behaviors in these areas are interrelated, often initiated during adolescence, and lead to HIV infection and other sexually transmitted disease (STD), unplanned pregnancies, and serious injuries, in the short-term; and to cardiovascular diseases, cancer, diabetes, and other chronic diseases in the long-term. DASH provides financial and technical assistance to approximately 9 national organizations and 36 state and local departments of education that offer school- and community-based educational programs to reduce the prevalence and incidence of the priority risk behaviors. In addition, DASH provides financial and technical assistance to all 50 states plus DC, 21 large urban school districts, and 6 territories to conduct school-based surveillance through the Youth Risk Behavior Survey (YRBS) and the School Health Profiles (Profiles). For further information see <http://www.cdc.gov/HealthyYouth>.

Proposed Initial Projects: 1) Analyze associations between sexual behaviors that increase risk for HIV infection, other STDs, and unplanned pregnancies and other types of health risk behavior (e.g., alcohol, drug, and tobacco use, violence-related behaviors, physical activity, and dietary behaviors) among sexual minority U.S. high school students, using the 2015 national Youth Risk Behavior Survey (YRBS); 2) Conduct analyses of school health policies and practices that address HIV, other STDs, and teen pregnancy prevention using the 2014 School Health Profiles (Profiles) or 2014 School Health Policies and Practices Study (SHPPS).

Proposed Surveillance Projects: Monitoring health risk behaviors among sexual minority youth; conduct an evaluation

of the sexual identity and same-sex behavior components of the national, state, or local Youth Risk Behavior Surveillance System (YRBSS).

Range of Opportunities: Opportunities include: 1) data analysis, presentation, and publication of epidemiologic studies involving health risk behaviors of adolescents and school health policies and practices that address those behaviors; 2) consultation with federal, state, local, and private health and education agencies regarding surveillance of health risk behaviors; 3) EIS officers are encouraged to pursue opportunities for field experience outside the branch.

Position Strengths: Large dataset analysis, behavioral epidemiology, and analysis of secular trends in health risk behaviors.

Special Skills Useful for this Position: Interest in school health, behavioral epidemiology, and the adolescent and young adult population, as well as strong data analysis interest and skills, are important for this position. EIS Officers who have prior experience with SAS and/or SUDAAN will do well in this position.

Available Data: Available datasets include: 1) biennial, national, state, and local school-based YRBS datasets during 1991-2015; 2) a sexual minority dataset that combines YRBS data from 19 large urban school districts and 25 states that included questions about sexual orientation during 1995-2015; 3) biennial, state and local Profiles datasets during 2006-2014, which assess school health policies and practices in states, large urban school districts, territories, and tribal governments; 4) SHPPS datasets during 1994-2014, which assess school health policies and practices at the state, district, school, and classroom levels.

Recent Publications: Clayton HB, Lowry R, August E, Everett Jones S. Nonmedical Use of Prescription Drugs and Sexual Risk Behaviors. *Pediatrics*. 2015 Dec 14. pii: peds.2015-2480.

Lowry R, Robin L, Kann L, Galuska DA. Associations of body mass index with sexual risk-taking and injection use among U.S. high school students. *J Obesity*. 2014; Article ID 816071, 10 pages.

Lowry R, Crosby AE, Brener ND, Kann L. Suicidal thoughts and attempts among US high school students: trends and associated health-risk behaviors, 1991-2011. *J Adolesc Health*. 2014;54:100-8.

Domestic Travel: 5% **International Travel:** 0%

Available Support: Supervision is provided through close interaction with career staff and consultants with expertise in the areas of epidemiology, preventive medicine, school health education, research psychology, community health, survey research, public health law, statistics, and data processing.

Current/Recent EIS Officer: Zewditu Demissie, (EIS 2010), Research Scientist

Officer Projects: Analytic projects included: media use and its association with beverage intake among U.S. high school students; missing meals among U.S. high school students; and trends in weight management goals and behaviors. Field investigation included data collected for an assessment of pertussis vaccine effectiveness in California.

Officer Recent Publications: Demissie Z, Lowry R, Eaton DK, Nihiser A. Trends in weight management goals and behaviors among 9th-12th grade students: United States, 1999-2009. *Matern Child Health J*. 2015;19(1):74-83. DOI 10.1007/s10995-014-1497-9.

Demissie Z, Eaton DK, Lowry R, et. al. The association of meal practices and other dietary correlates with dietary intake among high school students in the United States, 2010. *Am J Health Promot* 2014; DOI: 10.4278/ajhp.131211-QUAN-632.

Demissie Z, Lowry R, Eaton DK, Hertz MF, Lee SM. Associations of school violence with physical activity and sedentary behaviors among U.S. high school students. *Journal of Physical Activity and Health*. 2014;11(4):705-711.

Demissie Z, Lowry R, Eaton DK, Park S, Kann L. Electronic media and beverage intake among U.S. high school students - 2010. *J Nutr Behav*. 2013;45(6):756-60.

Consultant: Richard Lowry, (EIS 1990), Medical Officer

Consultant: Zewditu Demissie, (EIS 2010), Research Scientist

Consultant: Nancy Brener, (EIS 1995), Lead Health Scientist

Consultant: Laura Kann, Branch Chief

Consultant: Sherry Everett Jones, Health Scientist

Consultant: Heather Clayton, (EIS 2010), Health Scientist

Consultant: Emily Olsen, Statistician

Division of HIV/AIDS Prevention/Behavioral and Clinical Surveillance Branch/Behavioral Surveillance Team

NCHHSTP-DHAPSE-BCSB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of HIV/AIDS Prevention/Behavioral and Clinical Surveillance Branch/Behavioral Surveillance Team

Physical Address: Atlanta, Georgia

Primary Supervisor: Dita Broz, PhD, MPH, (EIS 2009), Activity Lead for Methods, dbroz@cdc.gov

Secondary Supervisor: Gabriela Paz-Bailey, MD, PhD, MSc, (EIS 2000), Team Lead, gpazbailey@cdc.gov

Secondary Supervisor: Brooke Hoots, PhD, MSPH, (EIS 2011), Epidemiologist, bhoots@cdc.gov

Secondary Supervisor: Wade Ivy, III, PhD, MPH, (EIS 2009), Epidemiologist, wivy@cdc.gov

Secondary Supervisor: Christine Mattson, PhD, MS, (EIS 2007), Epidemiologist, cmattson@cdc.gov

Background: The Behavioral and Clinical Surveillance Branch (BCSB) guides HIV prevention and care by identifying, monitoring, and reporting the drivers of the HIV epidemic. The Branch has three teams: the Behavioral Surveillance Team (BST), the Clinical Outcomes Team (COT), and the Special Studies and Diagnostics Team. The EIS position will be housed on BST, which designs, implements, and analyzes data from the National HIV Behavioral Surveillance (NHBS) system, the largest and most geographically diverse surveillance system to monitor populations at risk for HIV infection in the U.S. NHBS conducts surveys and HIV testing in 22 cities among three populations: men who have sex with men (MSM), persons who inject drugs (PWID), and heterosexuals at increased risk of HIV infection. NHBS offers a variety of opportunities for EIS officers including: 1) monitoring interviews and HIV testing at MSM venues and field sites; 2) assisting with implementation of cutting edge sampling strategies for hidden populations, such as respondent-driven and venue-based sampling; 3) conducting a wide range of data analyses (simple to highly complex) to answer important questions about the HIV epidemic. Data from BST are critical to DHAP's prevention efforts and are used not only to monitor the epidemic but also to guide CDC HIV testing and prevention recommendations and prioritize national and local approaches to prevention.

The EIS officer will also have opportunities to work on other projects conducted by BST, such as surveillance among MSM ages 13-18 years and transgender women, and to collaborate with COT, which designs, implements, and analyzes data from the Medical Monitoring Project (MMP), the only nationally representative sample of persons diagnosed with HIV infection in the U.S.

Proposed Initial Projects: The officer will have the opportunity to conduct site visits to major U.S. cities and Puerto Rico to supervise implementation of NHBS qualitative and quantitative data collection. The officer will also have multiple opportunities to conduct original analyses using data from our large, multi-city datasets on three high-risk populations: MSM, PWID, and/or heterosexuals at increased risk of HIV infection. Such projects will be determined based on the officer's interests and could include analyses of: 1) substance use and sexual risk among young MSM (13-18 years); 2) HIV prevalence among PWID who use high-dead space compared to low-dead space syringes; 3) injection risk behaviors among young PWID (18-29 years) who obtain sterile syringes from pharmacies; 4) sexual risk behaviors associated with crack cocaine use among heterosexual women; 5) differences in knowledge and access to pre-exposure prophylaxis (PrEP) for HIV infection in MSM, PWID and high-risk heterosexuals. The officer will have access to the MMP data on HIV-positive persons, which could lead to analyses to estimate the national prevalence of diagnosed psychiatric illnesses, osteopenia or osteoporosis, or malignancies and lymphomas. Although this position focuses on domestic HIV infection, opportunities for international projects will be supported.

Proposed Surveillance Projects: Evaluation of HIV behavioral surveillance among high-risk women, including women who exchange sex for money or drugs.

Range of Opportunities: Monitor implementation of a large surveillance system across 22 U.S. cities and Puerto Rico, lead advanced statistical analyses using data from the most geographically diverse samples of populations at risk for HIV infection and HIV-diagnosed persons in the U.S., and present findings at national conferences and through peer-reviewed publications. The officer will also be encouraged to participate in public health assignments outside the branch, in the U.S., and internationally.

Position Strengths: BCSB offers rigorous epidemiologic training through the combination of sophisticated analyses of large, complex survey datasets, development of data collection instruments and protocols, and field experience. The position offers a nurturing environment to learn about the design and implementation of surveillance systems to monitor high-risk populations and provides ample opportunities to analyze and publish data that are used to monitor the HIV epidemic.

Special Skills Useful for this Position: Because NHBS utilizes a combination of methods for data collection (venue-based and respondent-driven sampling), analyses may employ basic or sophisticated techniques. Although the position does not require previous training to analyze complex survey data, a basic familiarity with data analysis and SAS

would be beneficial. Excellent written and oral communication skills and the ability to work well on a large and diverse team would also be advantageous.

Available Data: NHBS and MMP are ongoing projects; the officer will have immediate access to data from previous rounds of data collection.

Recent Publications: Broz D, et al. HIV infection and risk, prevention, and testing behaviors among injecting drug users — National HIV Behavioral Surveillance System, 20 U.S. cities, 2009. *MMWR*. 2014;63(6):1-51.

Paz-Bailey G, et al. Engagement in HIV care among HIV-positive men who have sex with men from 21 cities in the United States. *AIDS Behav*. 2014;18 Suppl 3:348-58.

Ivy W, et al. Correlates of HIV infection among African American women at increased risk of HIV — United States, NHBS, 2010. *AIDS Behav*. 2014;18 Suppl 3:266-75.

Domestic Travel: 10% **International Travel:** 0%

Available Support: BCSB staff include epidemiologists, clinicians, behavioral scientists, sociologists, and anthropologists, and include 14 EIS alumni. EIS supervisors have expertise in conducting surveillance in all three NHBS high-risk populations and among HIV-positive persons. Computer, statistical, and clerical support is available.

Current/Recent EIS Officer: Laura Cooley, MD, (EIS 2012)

Current/Recent EIS Officer: Runa Gokhale, MD, (EIS 2014)

Officer Projects: Field assignments: HIV outbreak in rural Indiana; HIV outbreak in Cambodia; Ebola surveillance in Nigeria; repeat syphilis and HIV co-infection among MSM in Baltimore, Maryland; HCV outbreak in Minot, North Dakota; bio-behavioral surveillance in Mozambique.

Analyses: Depression and viral suppression among HIV-positive adults; HIV testing among MSM.

Officer Recent Publications: CDC [Vun MC, Galang RR, Fujita M, Killam W, Gokhale R, et al.] Cluster of HIV infections attributed to unsafe injection practices – Cambodia, December 12014-February 28, 2015. *MMWR Weekly*. Feb 19, 2016; 65(6):142-5.

Cooley LA, Pearl ML, Flynn C, et al. Low viral suppression and high HIV diagnosis rate among men who have sex with men with syphilis—Baltimore, Maryland. *Sex Transm Dis* 2015; 42(4):226-31.

Cooley LA, Wejnert C, Rose CE, et al. Increases in recent HIV testing among men who have sex with men coincide with the Centers for Disease Control and Prevention's expanded testing initiative. *Clin Infect Dis* 2014; 60(3):483-5.

Cooley LA, Oster AM, Rose CE, et al. Increases in HIV testing among men who have sex with men—National HIV Behavioral Surveillance System, 20 U.S. Metropolitan Statistical Areas, 2008 and 2011. *PLoS One* 2014;9(9).

Baltazar CS, Horth R, Inguane C, Sathane I, César F, Ricardo H, Botão C, Augusto A, Cooley L, et al. HIV prevalence and risk behaviors among Mozambicans working in South African mines. *AIDS Behav* 2015; Suppl1:S59-67.

Consultant: Alexandra Balaji, PhD, (EIS 2005)

Consultant: Pollyanna Chavez, PhD, (EIS 2007)

Consultant: Muazzam Nasrullah, MD, MPH, (EIS 2008)

Consultant: Lina Nerlander, MD, MPH, (EIS 2011)

Consultant: Heather Bradley, PhD, MHS, (EIS 2010)

Division of HIV/AIDS Prevention/Epidemiology Branch/Epidemiology Research Team

NCHHSTP-DHAPSE-EB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of HIV/AIDS Prevention/Epidemiology Branch/Epidemiology Research Team

Physical Address: Atlanta, Georgia

Primary Supervisor: Kate Buchacz, PhD, MPH, (EIS 2002), Epidemiologist, acu7@cdc.gov

Secondary Supervisor: Madeline Sutton, MD, (EIS 1997), zxa3@cdc.gov

Secondary Supervisor: Paul Weidle, PharmD, MPH, (EIS 1997), pew6@cdc.gov

Secondary Supervisor: Taraz Samandari, MD, PhD, (EIS 2001), tts0@cdc.gov

Background:

This EIS position will be on the Epidemiology Research Team (ERT), shared between the ERT Cohorts Activity and Minority Health and Health Equity Activity. The mission of ERT is to investigate and synthesize behavioral, clinical and social outcomes data to characterize the U.S. HIV epidemic and its determinants to improve prevention and treatment services, especially for disproportionately affected and at-risk communities.

Current projects include:

1) the CDC-sponsored HIV Outpatient Study (HOPS) and the NIH-sponsored North American AIDS Cohort Collaboration on Research and Design (NA-ACCORD) Study to which the HOPS is a major contributor.

2) the Minority HIV/AIDS Research Initiative (MARI) to build capacity for HIV prevention research in highly affected minority communities.

3) The study of Knowledge, Beliefs, Attitudes, and Practices (KBAP) of providers and patients in at-risk jurisdictions about HIV risk, HIV diagnosis and antiretroviral drug interventions.

Current EIS Officers and scientific staff on the Team and in the Branch have had prominent roles in domestic and international emergency outbreak response including Ebola Field Emergency Response and an HIV outbreak associated with injection drug use in Southeast Indiana. Officers have been able to work on projects of interest across Teams in the Branch, elsewhere in the Division, and with external partners, for a variety of field and analytic opportunities.

ERT members have recently contributed to the development and dissemination of guidelines for: 1) strengthening prevention strategies with and for persons living with HIV infection, and 2) prevention and treatment of opportunistic infections among U.S. adults living with HIV infection.

ERT collaborates closely with Health Services Research-Prevention with Positives Team in the Epidemiology Branch whose mission is to conduct implementation science to improve access to and delivery of HIV care in order to improve health outcomes of HIV-infected persons and prevent onward transmission of HIV. Research studies include 1) an HIV clinic-based intervention to improve patient's health and reduce transmission risk, 2) a patient-centered HIV care model integrating community pharmacists with clinical providers, 3) a health department-clinic intervention to re-engage HIV-infected persons in care.

Proposed Initial Projects: The initial projects will be determined based on the Officer's interests, but would likely include: (1) investigation of occurrence of opportunistic infections at high CD4 cell counts in HIV-infected patients in the HOPS; (2) analyses of social and structural determinants of HIV risk in geographic areas with high rates of disease in a MARI project; (3) assessment whether less frequent monitoring for toxicities is appropriate for stable and effectively treated HIV-infected patients in the HOPS; (4) investigation of proximal and distal risk factors for HIV infection in black gay men in New York City; (5) secondary analyses of data from qualitative survey and case control study of risk factors for HIV infection in Southeast Indiana.

Proposed Surveillance Projects: (1) assessment of ability to capture stage zero infections in HIV surveillance in Georgia, US; (2) using supplemental databases to complete information on HIV risk in local health department HIV surveillance system.

Range of Opportunities: We anticipate the Officer will focus primarily on domestic activities (~90%) but may have opportunities for international activities (~10%) including outside of HIV for high priority epidemic responses.

Position Strengths: EIS training in the Branch dates back to the 1980's with numerous EIS Alumni on staff along with other senior and mid-level scientific staff, including statisticians and data managers. There is a culture and support for prevention efforts with disproportionately affected communities as well as scientific publications and abstract presentations by EISOs and staff. Mentoring of EISOs is a priority.

Special Skills Useful for this Position: EISOs with a variety of skills have successfully worked in the branch, including Ph.D. Epidemiologists, Infectious Disease Physicians, Internists and Pediatricians. An interest in HIV care and epidemiology is essential. A willingness to learn SAS data programming and analysis, and also some qualitative analytical skills, is helpful.

Available Data: Data are available from existing large U.S.-based cohort of persons with HIV (HOPS and NA-ACCORD); Minority HIV/AIDS Research Initiative (MARI)-related projects; ongoing and prior clinical trials in the Branch; and a large health service records database (MarketScan).

Recent Publications: Team members have published numerous manuscripts, several book chapters, and presented many abstracts at domestic and international conferences in recent years. In 2015, the Epidemiology Research Team

members published 25 papers, of which 11 involved HOPS data, and 4 MARI data. Staff in the Branch have been instrumental to the development of DHHS guidelines for antiretroviral treatment and opportunistic illness prophylaxis for HIV infected patients, and pre-exposure prophylaxis against acquisition of HIV. We also provide technical guidance to other guidelines developed by the Division.

Domestic Travel: 10% **International Travel:** 5%

Available Support: The Epidemiology Branch is focused on the domestic HIV epidemic. It has four scientific Teams, and approximately 60 full-time scientists and support staff, most based in Atlanta, with a small number of international field staff currently stationed in Kenya and Thailand. The EIS Officer will be able to work with staff across the Branch, including data managers and statisticians for training in analyses and SAS programming.

Current/Recent EIS Officer: Mary Tanner, MD, (EIS 2015), klt6@cdc.gov

Current/Recent EIS Officer: Monita Patel, PhD, (EIS 2014), cwa3@cdc.gov

Current/Recent EIS Officer: Romeo Galang, MD, (EIS 2014), ydh0@cdc.gov

Current/Recent EIS Officer: Hsiu Wu, MD, (EIS 2013)

Current/Recent EIS Officer: Kpandja Djawe, PhD, (EIS 2012), wgp6@cdc.gov

Current/Recent EIS Officer: Renatus Mdodo, MD, (EIS 2011)

Current/Recent EIS Officer: Candice Kwan, MD, (EIS 2010)

Current/Recent EIS Officer: Timothy Minnear, MD, (EIS 2010)

Officer Projects: Field studies include: community outbreak of HIV linked to injection drug use in rural Indiana; transmission of HIV linked to unsafe medical injections/infusions in Cambodia. Analyses include: assessment of screening for sexually transmitted infections among HIV-infected persons; reductions in HIV risk behaviors associated with needle exchange program.

Officer Recent Publications: Galang RR, Patel MR, Wu H, et al. Community outbreak of HIV infection linked to injection drug use of oxymorphone-Indiana 2015. *MMWR* 2015.

Kateh F, Nagbe T, [...] Patel MR, et al. Rapid response to Ebola outbreaks in remote areas - Liberia, July - November 2014. *MMWR* 2015.

Chhi Vun M, Galang RR, et al. Cluster of HIV infections attributed to unsafe injection practices – Cambodia, December 1, 2014 – February 28, 2015. *MMWR* 2016.

Wu H, et al. Unreported Male Sex Partners Among Men with Newly Diagnosed HIV Infection — North Carolina, 2011–2013. *MMWR* 2015.

Djawe K, et al. Mortality risk after AIDS-defining opportunistic illness among HIV-infected persons-San Francisco, 1981-2012. *JID* 2015.

Djawe K. et al. Community-based electronic data collections for HIV prevention research with black/African-American men in the rural, Southern USA. *AIDS Care* 2014.

Mdodo R, et al. Rapid HIV testing at gay pride events to reach previously untested MSM: U.S., 2009-2010. *Public Health Rep* 2014.

Mdodo R, et al. Cigarette smoking prevalence among adults with HIV compared with the general adult population in the United States: cross-sectional surveys. *Ann Intern Med* 2015.

Consultant: John Brooks, MD, (EIS 1998), zud4@cdc.gov

Consultant: Kenneth Dominguez, MD, (EIS 1991), kld0@cdc.gov

Consultant: Dawn Smith, MD, (EIS 1991), dks0@cdc.gov

Consultant: Philip Peters, MD, (EIS 2006), ewe9@cdc.gov

Consultant: Kathy Byrd, MD, (EIS 2007), gdn8@cdc.gov

Consultant: Karen Hoover, MD, ffw6@cdc.gov

Consultant: Ann Do, MD, (EIS 1994), aad9@cdc.gov

Division of HIV/AIDS Prevention/Epidemiology Branch/Prevention with Negatives Team

NCHHSTP-DHAPSE-EB-GA-2016-02

Agency Name: CDC

Division/Branch/Team/Section: Division of HIV/AIDS Prevention/ Epidemiology Branch/ Prevention with Negatives Team

Physical Address: Atlanta, Georgia

Primary Supervisor: Philip Peters, MD, (EIS 2006), HIV Testing Activity Lead, pjpeters@cdc.gov

Secondary Supervisor: Dawn Smith, MD, (EIS 1991), HIV Biomedical Interventions Activity Lead

Secondary Supervisor: Karen Hoover, MD, MPH, HIV Prevention with Negatives Team Lead

Secondary Supervisor: Ken Dominguez, MD, (EIS 1991), Medical Officer

Secondary Supervisor: Aileen Huang, PhD, Health Services Researcher

Secondary Supervisor: Taraz (EIS '01) Samandari, MD, PhD, (EIS 2001), Branch Chief

Background: This EIS position will be working on the Health Services Research-Prevention With Negatives (HSR-PWN) team in the Epidemiology branch of the Division of HIV/AIDS Prevention. The mission of HSR-PWN team is to conduct implementation science in health care settings, examining biomedical interventions for HIV-uninfected persons to prevent acquisition of HIV infection and novel HIV testing strategies with linked HIV prevention activities. Current focus areas include (i) the diagnosis and treatment of acute HIV infection, (ii) novel strategies for immediate linkage to HIV care, (iii) implementation science to increase access to biomedical interventions that prevent HIV infection including pre-exposure prophylaxis (PrEP), and (iv) health services research to assess utilization of HIV testing and biomedical HIV prevention interventions.

Current projects include:

- 1) the "Early HIV Treatment to Optimize Patient Health and HIV Prevention" study - a demonstration project to link acute HIV diagnosis with immediate HIV treatment;
- 2) "Health Department Demonstration Projects for Comprehensive HIV Prevention and Care for Men Who Have Sex with Men of Color (PS15-1509)" - a seven health department collaborative project to implement state-of-the-art comprehensive HIV prevention and treatment in communities disproportionately affected by HIV;
- 3) the "Four Site Implementation Study of Antiretroviral Preexposure Prophylaxis in Federally Qualified Health Centers (SHIPP study)" - a multisite, real-world, demonstration project of PrEP implementation in five community health centers.

In addition this team has datasets from a recently completed study on acute HIV infection (with stored specimens), HIV outbreak investigations, and large commercial databases that are used for sub-analyses. This team is also responsible for development and dissemination of guidelines for preexposure and postexposure prophylaxis against acquisition of HIV.

Proposed Initial Projects: We anticipate the EIS Officer will focus primarily on domestic activities (~85%), but will have opportunity for international activities (~15%). The initial projects will be determined based on the Officer's interests, but would likely include:

- 1) an assessment of point-of-care technologies for detecting acute HIV infection
- 2) an evaluation of HIV preexposure prophylaxis in sexually transmitted disease (STD) clinics in collaboration with a city health department
- 3) a description of the molecular epidemiology and sexual networks of persons diagnosed with acute HIV infection in the Early HIV Treatment study
- 4) an analysis of vaccinations among adult HIV-infected patients in a large commercial database

Opportunities also exist to support newly started projects (EIS officer initiated) in the HIV Epidemiology Branch. The EIS Officer will have opportunities to participate in projects and outbreak investigations on other teams in the Branch as well as other parts of the agency.

Proposed Surveillance Projects: An assessment of how National Vital Statistics Systems (NVSS) surveillance data on drug overdose deaths can be used to identify areas vulnerable to rapid HIV (and other bloodborne infection) transmission among persons who inject drugs.

Range of Opportunities: There is flexibility in assignments to respond to emergent situations. EIS officers manage multiple projects and travel to the field for outbreak response, study site visits, and program evaluation as necessary. EIS officers present abstracts at national HIV conferences and publish manuscripts in peer-reviewed journals. EIS officers can participate in non-HIV outbreak responses and international public health activities as opportunities arise.

Position Strengths: EIS officers are valued team members and mentoring is a priority. EIS training dates back to the beginning of the HIV epidemic and alumni are in senior public health positions. The branch is highly productive scientifically (60 publications in 2015). There is a culture to improve HIV public health in the most disproportionately affected communities and resource support to accomplish these goals.

Special Skills Useful for this Position: EIS officers with a variety of skills have had productive experiences in this position and the most important characteristic is having a professional interest in HIV public health. Having an interest in working with and learning from quantitative epidemiologists, infectious disease physicians, and HIV laboratorians is essential. EIS officers are expected to learn about (or improve on their knowledge of): (i) SAS data programming and analysis, (ii) the principals of HIV treatment and biomedical prevention, and (iii) the basics of HIV tests used for diagnosis and molecular epidemiology during their fellowship.

Available Data: Numerous datasets are available including national HIV surveillance data, HIV cohort studies, completed projects on acute HIV infection, and large health service records databases.

Recent Publications: In 2014 and 2015, EIS officers from the branch were selected for having the outstanding abstract at the prestigious ID Week annual conference. Staff have been instrumental to the development of guidelines for antiretroviral treatment, HIV opportunistic illness prophylaxis, and pre-exposure prophylaxis against acquisition of HIV.

Limited manuscript list:

Peters PJ, et al. JAMA. 2016;315(7):682-690.

Peters PJ, et al. HIV: Epidemiology in the Tropics. In: Manson's Tropical Diseases. 2014; p.68–78.

Thigpen MC, et al. N Engl J Med. 2012 Aug 2;367(5):423-34.

Domestic Travel: 10% **International Travel:** 5%

Available Support: The Epidemiology Branch has approximately 60 full-time scientists and support staff (most in Atlanta and some in Kenya and Thailand). Staff have complementary training including epidemiology, statistics, behavioral science, medical writing, and medical science. EIS officers work closely with statisticians and data managers for training in analysis and SAS programming.

Current/Recent EIS Officer: MaryTanner, MD, (EIS 2015)

Current/Recent EIS Officer: Monita Patel, PhD, MPH, (EIS 2014)

Current/Recent EIS Officer: Romeo Galang, MD, MPH, (EIS 2014)

Current/Recent EIS Officer: Hsiu Wu, MD, (EIS 2013)

Current/Recent EIS Officer: KpandjaDjawe, PhD, (EIS 2012)

Current/Recent EIS Officer: RennatusMdodo, DrPH, (EIS 2011)

Current/Recent EIS Officer: CandiceKwan, MD, (EIS 2010)

Current/Recent EIS Officer: TimothyMinnear, MD, (EIS 2010)

Officer Projects: Field investigations: (1) large HIV outbreak linked to injection of prescription opiates in rural Indiana; (2) HIV outbreak linked to unsafe medical injections/infusions in rural Cambodia.

Analytic projects: (1) evaluation of HIV pre-exposure prophylaxis in a large database; (2) assessment of HIV diagnostic tests to detect acute infection.

Officer Recent Publications: Galang RR, et al. HIV-1 and HCV molecular epidemiology of a large community outbreak of HIV-1 infection linked to injection drug use of oxymorphone – Indiana, 2015. J Int AIDS Soc. 2015; 18(5Suppl 4): 20479.

Wu H, et al. Unreported Male Sex Partners Among Men with Newly Diagnosed HIV Infection — North Carolina, 2011–2013. MMWR 2015;64(37):1037-41.

Djawe K, et al. Mortality risk after AIDS-defining opportunistic illness among HIV-infected persons-San Francisco, 1981-2012. JID 2015; 2012 (9):1366-75.

CDC [Galang RR, Patel MR, Wu H, et al.]. Community outbreak of HIV infection linked to injection drug use of oxymorphone-Indiana 2015. MMWR 2015; 64(16):443-4.

Wu H, et al. Wildlife Rabies on an Island Free from Canine Rabies for 52 Years — Taiwan, 2013. MMWR 2014;63(8):178.

Mdodo R., et al. Rapid HIV testing at gay pride events to reach previously untested MSM: U.S., 2009-2010. Public

Health Rep. 2014 Jul-Aug; 129(4):328-34.

Mdodo R, et al. Cigarette smoking prevalence among adults with HIV compared with the general adult population in the United States: cross-sectional surveys. *Ann Intern Med* 2015; 162:335-44.

Consultant: Paul Weidle, PharmD, (EIS 1997)

Consultant: Kate Buchacz, PhD, (EIS 2002)

Consultant: John Brooks, MD, (EIS 1998)

Consultant: Madeline Sutton, MD, MPH, (EIS 1997)

Consultant: Kathy Byrd, MD, MPH, (EIS 2007)

Consultant: Ann Do, MD, MPH, (EIS 1994)

Division of STD Prevention/Epidemiology and Statistics Branch/Epidemiology Team 2

NCHHSTP-DSTDP-ESB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of STD Prevention/Epidemiology and Statistics Branch/Epidemiology Team 2

Physical Address: Atlanta, Georgia

Primary Supervisor: Tom Peterman, MD, MSc, (EIS 1984), Team Lead, tap1@cdc.gov

Secondary Supervisor: Kyle Bernstein, PhD, Branch Chief, kio8@cdc.gov

Background: Nearly 85% of all reportable infections are sexually transmitted diseases (STD), even though the three most prevalent STD are not reportable. Last year there were increases in syphilis, congenital syphilis, gonorrhea, and chlamydia, plus sexual transmission became an issue for two new infections. The Epidemiology Unit 2 in the Epidemiology and Surveillance Branch needs your help to develop and evaluate methods to prevent and control STD at state and local levels. The Unit includes epidemiologists assigned to state or local health departments in New York City, Philadelphia, North Carolina, Florida, Washington DC (and the Indian Health Service). The EIS officer assigned to this position will spend time working on CDC-based projects but will also have ample opportunity to work “in the field” with local assignees working in the Epidemiology Unit 2.

We work closely with the Division’s International Activities Unit. Past EIS Officers have worked in South Africa, Kenya, Mozambique, Mali, Malawi, Peru, and Chile. EIS Officers will have the opportunity, if interested, to participate in at least one international project. Potential projects include: (1) supporting the global elimination of congenital syphilis initiative by providing technical assistance to a health ministry in a Latin American or Caribbean nation applying for validation of elimination; (2) a field evaluation of a new STI diagnostic test for use in prenatal screening in a low or middle income country; and (3) a study assessing feasibility of specific STI services in specialized, high-risk clinics in one or more Central American nations.

Proposed Initial Projects: (1) Evaluate approaches to preventing congenital syphilis and stopping outbreaks of syphilis among women. (2) Study ways of measuring and increasing timely partner treatment for gonorrhea and chlamydia including the use of patient-delivered partner therapy and treatment of partners of patients who had been treated presumptively before their test results were available. (3) Evaluate the actual and potential use of new communications technologies and innovations by health departments, such as texting and partner notification via the internet. (4) Evaluate approaches to working with private providers and managed care organizations. (5) Conduct field investigations of outbreaks of chlamydia, gonorrhea, syphilis, or other STDs. (6) Evaluate the frequency of and risk factors for neurosyphilis among syphilis cases diagnosed at VA facilities. (7) Describe the distribution of STDs and risk factors using the SSuN dataset. (8) Study how before/after questionnaire responses changed for women who tested positive vs negative for chlamydia.

Proposed Surveillance Projects: (1) Assess chlamydia surveillance to identify reasons for recent decreases in reported infections among adolescent women. After more than 25 years of increasing rates (due to increases in screening, and increasingly sensitive tests), reported chlamydia rates have started to fall. What do rates of reported cases tell us about the epidemiology of chlamydia and effectiveness of screening programs? (2) Evaluate a state or city STD surveillance program to assess its utility to guide STD prevention interventions. Identify opportunities to improve data quality, strengthen local capacity, and enhance national surveillance.

Range of Opportunities: Analyses of major surveillance systems; outbreaks of syphilis; increasing rates of gonorrhea; large datasets such as NHANES, NSFG, National Job Training Program; case-control and cohort studies; surveys. Work on your own and with multidisciplinary groups from within the Division and around CDC.

Position Strengths: Numbers. Drama. Great people. The prevalence of sexually transmitted infections is estimated to be 110 million. However, stigma associated with STI, and reluctance to discuss sex, make prevention a challenge. STD involve many aspects of public health, so you will work with experts from a wide range of backgrounds.

Special Skills Useful for this Position: Ability to work with multidisciplinary groups. Clinical or analytic expertise. Creativity.

Available Data: NHANES, NSFG, National Surveillance Data, Clinic and Surveillance data from FEU sites, National Job Training Program Data, and others.

Recent Publications: Viral loads among HIV-infected persons diagnosed with primary and secondary syphilis in four US cities. *JAIDS* 2015;70:179-185.

Syphilis in the United States: On the rise? *Expert Rev Anti-infective Therapy* 2015;13:161-168

Partner meeting place is significantly associated with gonorrhea and chlamydia in adolescents participating in a large high school STD screening program. *Sex Transm Dis* 2014;41:605-10

Risk for HIV following a diagnosis of syphilis, gonorrhoea or chlamydia: 328,456 women in Florida, 2000-2011 *Int J STD AIDS* 2015;26:113-119

Domestic Travel: 10% **International Travel:** 5%

Available Support: DSTDP has many former EIS Officers, Behavioral Scientists, Programmers, Support Personnel, Economists, Public Health Advisors, Evaluators, Communication Specialists, and Statisticians who will work with you.

Current/Recent EIS Officer: Ginny Bowen, (EIS 2013), xef3@cdc.gov

Current/Recent EIS Officer: Booke Hoots, (EIS 2011), Epidemiologist, vie2@cdc.gov

Current/Recent EIS Officer: Lizzi Torrone, (EIS 2009), Team Lead, igf0@cdc.gov

Officer Projects: Assess treatment verification for reported cases of gonorrhea.

Targeting syphilis partner notification based on characteristics of the index case—Philadelphia, NYC, Washington, DC, Texas, Virginia.

Assess effectiveness of partner treatment after patients are treated presumptively for gonorrhea/chlamydia.

Integrate rapid syphilis/HIV testing with safe water program, antenatal clinics, Malawi

Officer Recent Publications: Bowen VB, et al. Verifying treatment of reported cases of gonorrhea. *Sex Transm Dis* 2016;43:130-133.

Hoots BE, et al. Would targeting increase efficiency of syphilis partner services programs?—Data from New York City, Philadelphia, Texas, and Virginia. *Sex Transm Dis* 2014;41:407-412.

Hoots BE, et al. A Trich-y question: Should Trichomonas vaginalis infection be reportable? *Sex Transm Dis* 2013;40:113-116.

Torrone E, et al. Estimating chlamydia re-infection rates: an empirical example. *Sex Transm Infect* 2013;89:388-390.

Torrone EA et al. Increased HIV and primary and secondary syphilis diagnoses among young men—United States 2004-2008. *J Acquir Immune Defic Syndr.* 2011;58:328-335.

Consultant: Julie Schillinger, MD, MSc, (EIS 1993), JSchilli@health.nyc.gov

Consultant: Bruce Furness, MD, MPH, (EIS 1998), bff0@cdc.gov

Consultant: Felicia Lewis, MD, (EIS 2004), bwe1@cdc.gov

Consultant: Daniel Newman, MA, dcn7@cdc.gov

Consultant: Mary Kamb, MD, MPH, (EIS 1989), mlk5@cdc.gov

Consultant: Sevgi Aral, PhD, soa1@cdc.gov

Consultant: Gail Bolan, MD, (EIS 1982), gyb2@cdc.gov

Consultant: Lizzi Torrone, PhD, (EIS 2009), igf0@cdc.gov

Consultant: Anna Cope, PhD, lnu4@cdc.gov

Consultant: Jim Matthias, MS, lnk1@cdc.gov

Consultant: Raul Romaguera, DMD, MPH, (EIS 1988), rar2@cdc.gov

Division of STD Prevention/Surveillance and Data Management Branch/Surveillance and Special Studies

Team

NCHHSTP-DSTDP-SDMB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of STD Prevention/Surveillance and Data Management Branch/Surveillance and Special Studies Team

Physical Address: Atlanta, Georgia

Primary Supervisor: Sarah Kidd, MD, MPH, (EIS 2008), Medical Epidemiologist, SKidd@cdc.gov

Secondary Supervisor: Elizabeth (Lizzi) Torrone, MSPH, PhD, (EIS 2009), Team Lead, ETorrone@cdc.gov

Secondary Supervisor: Eloisa (Lisa) Llata, MD, MPH, (EIS 2007), Medical Epidemiologist, gge3@cdc.gov

Background: Nearly 85% of all reportable infections are sexually transmitted diseases (STDs). The Division of STD Prevention Surveillance and Special Studies Team is responsible for monitoring and interpreting surveillance data on STDs in the United States; evaluating local, state, and national STD surveillance systems; performing special studies of STD prevalence in high risk populations; and conducting special investigations of epidemic changes in STDs (often as Epi-Aids) and other emerging STD problems in the United States and internationally. STD surveillance can be challenging because most STDs are asymptomatic and case finding is heavily influenced by screening practices. Additionally, some STDs are curable and persons can be infected multiple times in their lifetime, with each diagnosis indicating a new infection. For viral STDs with no cure, serologic markers can monitor lifetime exposure, but may not represent incident disease. Thus, a number of approaches are used to monitor STDs, including case reporting, sentinel surveillance, population-based surveys, and analyses of administrative databases.

Proposed Initial Projects: Choice of projects is flexible and depends on the interests of the officer. Potential projects include:

- (1) Analyze congenital syphilis case report data to better describe morbidity/mortality in reported cases and assess whether clinical outcome in reported cases varies with maternal stage of syphilis, treatment regimen, or timing of treatment during pregnancy;
- (2) Analyze data from the STD Surveillance Network (SSuN) to examine adherence to clinical guidelines among patients diagnosed with STDs and among patients accessing care in STD clinics, or to examine STD diagnoses among HIV-positive persons who attend STD clinics;
- (3) Analyze large administrative databases to evaluate trends in STI related sequelae, including pelvic inflammatory disease and ectopic pregnancy;
- (4) Conduct field investigations of outbreaks of STDs in the US;
- (5) Participate in international projects such as (a) providing technical assistance to health ministry in a Latin American or Caribbean nation applying for validation of elimination of congenital syphilis; (b) field evaluation of new STI diagnostic test for use in prenatal screening; (c) feasibility assessment of STI services in high-risk clinics in a Central American nation;
- (6) Evaluate clinical decision support (CDS) system for chlamydia screening implemented in electronic medical record of community health centers, focusing on clinical outcomes, processes, and technical feasibility of a cloud-based CDS system.

Proposed Surveillance Projects: (1) Evaluate congenital syphilis case report data to assess the proportion of cases that are classified as cases based on maternal criteria, infant criteria, or both; assess whether this proportion has changed over time. Findings from this evaluation will improve our clinical understanding of reported congenital syphilis cases, and will aid the interpretation of recent increases in congenital syphilis.

(2) Evaluate a state or city STD surveillance program to assess its utility to guide STD prevention interventions. Evaluation of key STD surveillance program attributes, such as completeness of collected demographic and clinical variables and timeliness of reporting, can identify opportunities to improve the quality of case-based data. Findings from the evaluation will be used to strengthen local STD surveillance capacity and ultimately enhance national STD surveillance.

Range of Opportunities: Analyses of major surveillance systems and large datasets, including the National Health and Nutrition Examination Survey (NHANES), National Survey of Family Growth (NSFG), and the National Job Training Program; investigations of STD outbreaks, changes in STD rates, and antimicrobial-resistant gonorrhea; evaluations of the impact of clinical informatics interventions, including electronic health records, clinical decision support, and electronic lab reporting; opportunities to work internationally.

Position Strengths: Great team with many former EISOs who enthusiastically support and mentor EISOs. STD Prevention involves many aspects of public health, including ongoing surveillance, shifting epidemiology, interface with clinical and public health information technology, behavioral and policy interventions, clinical guideline

development, and emerging antimicrobial resistance. This position is flexible, and the EISO will be able to pursue a variety of projects based on his/her interests and needs.

Special Skills Useful for this Position: Ability to work with multidisciplinary groups. An interest in infectious disease or sexual health and a desire to practice “real world” epidemiology. An EISO with clinical experience and/or training in epidemiology will be able to use current skills and develop new ones.

Available Data: National case report data, data from the STD Surveillance Network, Gonococcal Isolate Surveillance Program, NHANES, NSFG, National Job Training Program, other large administrative databases, as well as original research study data.

Recent Publications: • Increase in incidence of congenital syphilis – US, 2012-2014. MMWR 2015.

- Management of pelvic inflammatory disease in selected US STD clinics: STD Surveillance Network, January 2010-December 2011. STD 2015.
- Neighborhoods at risk: estimating risk of higher *Neisseria gonorrhoeae* incidence among women at the census tract level. STD 2014.
- Efficacy and safety of gentamicin plus azithromycin and gemifloxacin plus azithromycin as treatment of uncomplicated gonorrhea. CID 2014.
- Prevalence of Chlamydia trachomatis genital infection among persons aged 14-39 years--US, 2007-2012. MMWR 2014.
- Prevalence of genital warts among STD clinic patients, US, January 2010 to December 2011. STD 2014.

Domestic Travel: 10% **International Travel:** 10%

Available Support: The Division of STD Prevention has many former EISOs, as well as other epidemiologists, medical officers, public health informatics specialists, behavioral scientists, health economists, policy scientists, program evaluators, communication specialists, microbiologists, and statisticians who enjoy collaborating with EISOs.

Current/Recent EIS Officer: Alex de Voux, MSc, PhD, (EIS 2015)

Current/Recent EIS Officer: Charnetta Williams, MD, (EIS 2014)

Current/Recent EIS Officer: Monica Patton, MD, (EIS 2012)

Current/Recent EIS Officer: Heather Bradley, PhD, MHS, (EIS 2010)

Current/Recent EIS Officer: Robert (Bob) Kirkcaldy, MD, MPH, (EIS 2008)

Officer Projects: • Case-control study of early syphilis among HIV negative men who have sex with men

- Investigation of lymphogranuloma venereum outbreak (Michigan)
- Assessing the frequency of STDs in pregnancy and their impact on maternal/fetal outcomes using national survey data
- Identifying unreported and undiagnosed cases of congenital syphilis —New York City

Officer Recent Publications:• De Voux A, et al. A cluster of lymphogranuloma venereum cases among men who have sex with men – Michigan, August 2015-January 2016. MMWR, in clearance.

- Smith C, et al. Addressing needs of contacts of Ebola patients during an investigation of an Ebola cluster in the United States—Dallas, Texas, 2014. MMWR 2015; 64(05):121-123.
- Patton ME, et al. Gonorrhea screening and case finding after implementation of an expanded screening policy —Phoenix Indian Medical Center, Phoenix, Arizona, 2011–2013, accepted for publication in Sexually Transmitted Diseases.
- Patton ME, et al. Primary and secondary syphilis--United States, 2005-2013. MMWR 2014;63(18):402-6.
- Patton ME, et al. Extragenital gonorrhea and chlamydia testing and infection among men who have sex with men: STD Surveillance Network, United States, 2010–2012. CID 2014;58(11):1564-70.
- Bradley H, et al. Does discussing sexually transmissible infections or HIV with a parent increase condom use among young women using other contraceptive methods? Sexual Health 2013; 10(1):82–90.
- Bradley H, et al. HIV testing among patients infected with *Neisseria gonorrhoeae*: STD Surveillance Network, United States, 2009–2010. AIDS and Behavior 2013; 17(3):1205–10.

Consultant: Hillard Weinstock, MD, MPH, (EIS 1988), Branch Chief, Surveillance and Data Management Branch

Consultant: Gail Bolan, MD, (EIS 1982), Division Director, Division of STD Prevention

Consultant: Mary Kamb, MD, MPH, (EIS 1989), Associate Director, Division of STD Prevention Office of Global Activities

Consultant: Robert (Bob) Kirkcaldy, MD, MPH, (EIS 2008), Medical Epidemiologist, Surveillance Team

Consultant: Marion Carter, PhD, (EIS 2002), Team Lead, Health Services Research Branch

Consultant: Mark Stenger, MPH, Epidemiologist, Surveillance Team

Consultant: Emily Weston, MPH, Epidemiologist, Surveillance Team

Consultant: Ninad Mishra, MD, MS, Team Lead, Informatics Team

Consultant: Raul Romaguera, DMD, MPH, (EIS 1988), Associate Director for Policy, Division of STD Prevention Office of Policy, Planning, and External R

Consultant: Elaine Flagg, PhD, MS

Division of Tuberculosis Elimination/Surveillance, Epidemiology, and Outbreak Investigations Branch

NCHHSTP-DTE-SEOIB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Tuberculosis Elimination/Surveillance, Epidemiology, and Outbreak Investigations Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Jonathan Wortham, MD, (EIS 2011), Medical Officer, vij5@cdc.gov

Secondary Supervisor: Adam Langer, DVM, MPH, (EIS 2006), Team Leader – Surveillance Team, ak17@cdc.gov

Background: The Surveillance, Epidemiology, and Outbreak Investigations Branch (SEOIB) has mentored EIS officers since the TB resurgence of the early 1990s. We provide onsite and remote epidemiologic support to state and local TB programs for outbreak investigations and maintain a data repository of investigations dating back to 1972, giving officers diverse opportunities to gain field epidemiology experience. We also maintain the National TB Surveillance System (NTSS), a national TB registry of nearly 350,000 detailed TB case reports from 1993 to the present, which are systematically linked to nearly 90,000 genotyping results from the National TB Genotyping Service (NTGS) launched in 2004. These systems are a rich data source for surveillance evaluations, outbreak detection, and other epidemiologic analyses.

Recent Epi-Aid field investigations led by our EIS officers have included TB outbreak investigations in healthcare settings, homeless shelters, correctional and detention facilities, as well as in community settings. EIS officers also perform analyses using NTSS and NTGS data to increase our understanding of changing TB epidemiology in the United States. Additionally, depending on the officer's interest, collaboration with the Division of Global HIV and Tuberculosis might allow an international project. Recent projects have included travel to Kenya, Guyana, Mozambique, and Vietnam.

Proposed Initial Projects: Upon arrival, the EISO will begin the surveillance project detailed below. There will also be a menu of available analytic projects including analysis of National TB Surveillance System data to examine trends and risk factors for multidrug-resistant TB; comparison of epidemiologic characteristics of human and bovine *Mycobacterium bovis* cases that have matching genotypes; and update of epidemiologic risk factors for *M. tuberculosis* with a historically important genotype. Analytic projects of interest to the incoming EISO will have human subjects determinations and other approvals completed in advance of the EISO's arrival to allow for immediately beginning analysis. The Outbreak Investigations Team will also work to identify one or more field investigation opportunities for the incoming EISO. Typically, the incoming EISO will also have the opportunity to be the lead author on the annual World TB Day Trends in Tuberculosis MMWR report that is published in March of each year.

Proposed Surveillance Projects: Both the National TB Surveillance System (NTSS) maintained by the Division of Tuberculosis Elimination (DTBE) and the National Vital Statistics System (NVSS) maintained by the National Center for Health Statistics (NCHS) are considered credible and stable sources of public health data, but they contain discrepant data on the number of U.S. TB-related deaths. The incoming EISO will conduct a comprehensive evaluation of the NTSS variable for TB-related deaths using a capture-recapture methodology with the NVSS death certificate data as the "gold standard." This evaluation will have all necessary approvals and partnerships established before the EISO arrives. Although this project is envisioned as a "desk audit," if field data collection is necessary, travel support is available. This surveillance project will be supervised by EIS alumni Maryam Haddad and Adam Langer.

Range of Opportunities: The position offers a "complete package" of opportunities to complete all of the Core Activities for Learning without having to seek opportunities outside of DTBE; nonetheless, DTBE officers have been deployed in support of public health emergency responses (e.g., Ebola and Zika responses) with the enthusiastic support of the branch. Analytic and surveillance projects are supported by various teams within the Surveillance, Epidemiology, and Outbreak Investigations Branch and the division.

Position Strengths: Officers lead field and analytic investigations that affect medically underserved and vulnerable populations. Enthusiastic mentors, many of whom are EIS alumni, from a variety of backgrounds provide ample support for diverse training opportunities on applied epidemiology.

Special Skills Useful for this Position: No specific skills are needed for this position. Previous officers have come from a variety of clinical and nonclinical backgrounds. Some have had doctoral training in epidemiology, while others' careers in epidemiology began with DTBE. What is important for success is intellectual curiosity about DTBE's work, eagerness to listen and learn from a variety of partners (including frontline health department staff and TB patients themselves), and readiness to build the confidence needed to lead investigations.

Available Data: The National TB Surveillance System (1993–present) and the National TB Genotyping Service (2004–present) are linked datasets that are recognized nationally for their quality and timeliness. SEOIB also maintains a surveillance database of investigations for serious adverse events (i.e., hospitalization or death) resulting from treatment for latent TB infection. Officers also gain experience in primary data collection during outbreak field investigations.

Recent Publications: France AM, et. al. A field-validated approach using surveillance and genotyping data to estimate tuberculosis attributable to recent transmission in the United States. *Am J Epidemiol* 2015.
Haddad MB, Mitruka K, Navin TR, et. al. Characteristics of tuberculosis cases that started outbreaks in the United States, 2002–2011. *Emerg Infect Dis* 2015.
Mitruka K, Blake H, Ricks P, Miramontes R, Bamrah S, Chee C, Hickstein L. A tuberculosis outbreak fueled by cross-border travel and illicit substances: Nevada and Arizona. *Public Health Reports* 2014.

Domestic Travel: 25% **International Travel:** 5%

Available Support: DTBE hosts a comprehensive 2-week EIS orientation and provides TB clinical and program manager courses along with formal and informal SAS training and statistical consultation.

Current/Recent EIS Officer: Erik Reaves, (EIS 2013), xdg7@cdc.gov

Current/Recent EIS Officer: Courtney Yuen, (EIS 2012), wij3@cdc.gov

Current/Recent EIS Officer: Robert Luo, (EIS 2011)

Current/Recent EIS Officer: Brian Baker, (EIS 2010), izj4@cdc.gov

Current/Recent EIS Officer: Godwin Mindra, MBBCh, MPH, (EIS 2014), EIS Officer, vrw0@cdc.gov

Current/Recent EIS Officer: Jorge Salinas, MD, (EIS 2015), EIS Officer, klq8@cdc.gov

Officer Projects: TB outbreak investigations in different settings; evaluation of surveillance for large TB outbreaks; evaluation of surveillance for latent TB infection in 2 states; and analyses of risk factors associated with positive TB screening tests among HIV-infected persons; and analyses of trends among persons incarcerated at time of TB diagnosis.

Officer Recent Publications: Increase in number of tuberculosis cases — United States, 2015. *MMWR* 2016. (Godwin Mindra, EIS 2014 and Jorge Salinas, EIS 2015)

Control of Ebola virus disease — Firestone District, Liberia, 2014. *MMWR*. 2014. (Erik Reaves, EIS 2013).

Comparison of trends in tuberculosis incidence among adults living with HIV and adults without HIV — Kenya, 1998–2012. *PLoS One*. 2014 (Courtney Yuen, EIS 2012).

Annual risk of tuberculous infection measured using serial skin testing, Orel Oblast, Russia, 1991–2005. *Int J Tuberc Lung Dis*. 2015 (Courtney Yuen, 2012).

Association between *Mycobacterium tuberculosis* complex phylogenetic lineage and acquired drug resistance. *PLoS One*. 2013. (Courtney Yuen, 2012)

Notes from the Field: Tuberculosis cluster associated with homelessness — Duval County, Florida, 2004–2012. *MMWR*. 2012 (Robert Luo, 2011).

Characterizing tuberculosis genotype clusters along the United States-Mexico border. *Int J Tuberc Lung Dis* 2014. (Brian Baker, EIS 2010)

An old foe revisited: an outbreak of tuberculosis in an American Indian community. *IHS Primary Care Provider* 2012. (Bisrat Abraham, EIS 2009).

Consultant: Tom Navin, MD, (EIS 1982), Branch Chief -- Surveillance Epidemiology and Outbreak Investigations Branch, trn1@cdc.gov

Consultant: Krista Powell, MD, MPH, (EIS 2008), Team Lead -- Outbreak Investigations Team, duf8@cdc.gov

Consultant: Christine Ho, Team Lead -- Epidemiology Team, gtb9@cdc.gov

Consultant: Maryam Haddad, MSN, MPH, (EIS 2001), Epidemiologist, zkt6@cdc.gov

Consultant: Dolly Katz, PhD, (EIS 1995), Epidemiologist, ddk4@cdc.gov

Consultant: Lori Armstrong, PhD, (EIS 1993), Epidemiologist, lra0@cdc.gov

Consultant: Ben Silk, PhD, MPH, (EIS 2008), Team Leader – Molecular Epidemiology Activity, ekj8@cdc.gov

Consultant: Sandy Althomsons, MA, MHS, Epidemiologist, soa4@cdc.gov

Consultant: Steve Kammerer, MBA, Statistician, fzk3@cdc.gov

Division of Viral Hepatitis/Epidemiology and Surveillance Branch

NCHHSTP-DVH-ESB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Viral Hepatitis/Epidemiology and Surveillance Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Philip Spradling, MD, (EIS 1999), Medical Officer, pspradling@cdc.gov

Secondary Supervisor: Scott Holmberg, MD, MPH, (EIS 1982)

Secondary Supervisor: Anne Moorman, BSN, MPH

Secondary Supervisor: Eyasu Teshale, MD, (EIS 2001)

Secondary Supervisor: Ruth Jiles, PhD, MS, MPH, (EIS 1991)

Secondary Supervisor: Melissa Collier, MD, MPH, (EIS 2010)

Background: In the United States, an estimated 3.5-5.3 million Americans are infected with hepatitis B virus (HBV) or hepatitis C virus (HCV); HCV alone accounts for more deaths than all 60 other infectious conditions reportable to CDC (including HIV). In addition, hepatitis A virus (HAV) infections continue to affect thousands of US residents every year; and hepatitis E virus (HEV) infections are a major cause of illness and death in developing countries. The Epidemiology and Surveillance Branch of the Division of Viral Hepatitis: (1) monitors and evaluates rates and risk factors associated with acute and chronic infections with hepatitis viruses, viral hepatitis and liver disease through surveillance systems and special studies, including sentinel surveillance; (2) conducts research, including outbreak investigations and population-based demonstration projects, to determine the epidemiology of transmission of known and new hepatitis viruses and their variants, the natural history of infections with hepatitis viruses, evaluate the performance of diagnostic tests for hepatitis virus infections, and evaluate methods and approaches for the prevention and control of hepatitis virus infections; (3) estimates disease burden attributable to infections with hepatitis viruses and the effectiveness of programs to prevent these infections; and (4) provides consultation to state, local, national, and international authorities for the prevention and control of viral hepatitis, the investigation of disease outbreaks, and surveillance of hepatitis and liver disease. All activities are reinforced by the DVH Laboratory Branch which does cutting edge molecular analyses.

Proposed Initial Projects: • Analysis of data collected from the Chronic Hepatitis Cohort Study to examine the antiviral treatment experience among patients with chronic hepatitis B. Potential areas of study include the clinical and demographic characteristics of patients who initiate HBV antiviral therapy; trends in treatment initiation; type of antiviral drugs administered; frequency of and reasons for treatment cessation; and incidence of hospitalization, end-stage liver disease, hepatocellular carcinoma, and liver transplantation.

• Investigate outbreaks of viral hepatitis. During 2013-16, DVH was asked to assist in investigating outbreaks of HEV infection in refugee camps in South Sudan, a multi-state foodborne outbreak of hepatitis A, several outbreaks of healthcare-associated hepatitis B or hepatitis C virus infection including a large outbreak of hepatitis C among elderly patients receiving podiatry care in North Dakota and an outbreak of hepatitis C in a prolotherapy clinic in California. During 2013-2015 DVH consulted or assisted in the investigation of 25 domestic healthcare-associated hepatitis B and hepatitis C outbreaks.

• Lead analysis of current HBV testing practices in foreign-born persons from HBV-endemic countries.

• Analysis of data collected from the Chronic Hepatitis Cohort Study to examine the frequency of clinical conditions traditionally associated with chronic hepatitis C.

Proposed Surveillance Projects: An analysis of improvements in quality and quantity of data from seven sites that recently received funding for “enhanced” viral hepatitis surveillance.

Range of Opportunities: Large data bases that allow EISOs to analyze a range of topics for most types of viral hepatitis; outbreak investigations; and global projects.

Position Strengths: Potential to make a big difference. Many new therapies to treat HCV infection, in particular, have emerged and will likely have a substantial impact on morbidity and mortality.

Special Skills Useful for this Position: Prior clinical, analytic, or epidemiologic experience.

Available Data: Chronic Hepatitis Cohort Study (CHeCS): Observational cohort study of HBV- and HCV-infected patients in care from 4 major U.S. health care systems.

National HIV Behavioral Surveys: Surveys of gay men, injection drug users, and high risk heterosexuals in U.S. cities.
National Health and Nutrition Examination Survey (NHANES): Ongoing surveys and examinations of representative samples of U.S. residents (includes testing for viral hepatitis).

Data from a long-standing national viral hepatitis surveillance system for hepatitis A, B, and C.

Various smaller focused studies, epi-aids, and data from outbreak investigations.

Recent Publications: DVH had approximately 70 publications (over half in mainly high-impact peer-review medical journals) during 2015. 'Academic' productivity is encouraged in all EIS Officers.

Domestic Travel: 15% **International Travel:** 15%

Available Support: Several experienced supervisors, most are former EISOs; statistical and informatics support within DVH; travel and training support from DVH and through the CDC Foundation.

Current/Recent EIS Officer: Monique Foster, MD, MPH, (EIS 2014)

Current/Recent EIS Officer: Winston Abara, MBBS, MPH, PhD, (EIS 2015)

Officer Projects: • Field investigation of a viral hepatitis outbreak among young persons who abuse drugs, Tennessee

- Field investigation to assess the status of Hepatitis B elimination in US-Affiliated Pacific Islands
- Field assessment of hepatitis C virus seroprevalence, Republic of Georgia
- Analysis of causes of death after successful hepatitis C treatment

Officer Recent Publications: • Frequency of and factors associated with receipt of liver-related specialty care among patients with hepatitis C in the Chronic Hepatitis Cohort Study. Submitted for publication.

• Notes from the Field: Investigation of healthcare-associated hepatitis C virus transmission associated with prolotherapy injections—California, 2015. Submitted for MMWR publication.

• Notes from the Field: Hepatitis A virus infection among travelers — Tulum, Mexico, 2015. Submitted for MMWR publication.

• The predictive value of International Classification of Disease codes for chronic hepatitis C virus infection surveillance: the utility and limitations of electronic health records. Currently in CDC clearance.

• Mahajan R, et al. Mortality among persons in care with hepatitis C virus infection. Clin Infect Dis 2014;58:1055-61.

• Gerbi G, et al. Reported reasons for testing among hepatitis B virus infected patients, Chronic Hepatitis Cohort Study (CHeCS), United States, 2006–2010. Liver International 2014;34:e162-e163.

• Ko SC, et al. Hepatitis B vaccine response among infants born to hepatitis B surface antigen-positive women. Vaccine 2014;32:2127-2133.

Consultant: Yuna Zhong, MSPH, MD

Consultant: Jian Xing, PhD, MS

Division of Viral Hepatitis/Prevention Branch-OADGH

NCHHSTP-DVH-PB-GA-2016-02

Agency Name: CDC

Division/Branch/Team/Section: Division of Viral Hepatitis/Prevention Branch-OADGH

Physical Address: Atlanta, Georgia

Primary Supervisor: Sarah Schillie, MD, MPH, MBA, (EIS 2007), Medical Epidemiologist, sschillie@cdc.gov

Secondary Supervisor: Francisco Averhoff, MD, MPH, (EIS 1992), Associate Director for Global Health, fma0@cdc.gov

Background: In the United States, an estimated 3.5-5.3 million persons are infected with hepatitis B virus (HBV) or hepatitis C virus (HCV). Infections with HBV or HCV are an even greater problem globally, affecting more than 400 million persons worldwide. The Division of Viral Hepatitis, Prevention Branch and Office of the Associate Director for Global Health offers a position for one EIS officer. The Prevention Branch conducts national testing and linkage to care projects in an effort to assess best practices for implementing CDC/U.S. Preventive Services Task Force (USPSTF) HBV and HCV screening and testing recommendations. The Branch works with the Advisory Committee on Immunization Practices (ACIP) to develop national Hepatitis A and B vaccine policy and provides technical support to the Perinatal Hepatitis B Prevention Program. The Office of the Associate Director for Global Health provides technical and programmatic leadership to assist the international community with efforts to implement and evaluate programs to prevent viral hepatitis (hepatitis A virus [HAV], HBV, HCV, and hepatitis E virus [HEV]) infections and provides technical support to the World Health Organization (WHO), Hepatitis Program in Geneva and

Manila. Priority countries include, but are not limited to, Georgia, China, India, Vietnam, Uganda, and Mongolia.

Proposed Initial Projects:

- Support the WHO Regional Office for the Western Pacific in assessing implementation of viral hepatitis surveillance in key countries, including Mongolia, Vietnam, and China
- Evaluate the effectiveness of perinatal hepatitis B prevention strategies in China
- Contribute to national vaccine policy through updated Advisory Committee on Immunization Practices (ACIP) recommendations for Hepatitis A and Hepatitis B vaccination
- Perform a root cause analysis to identify systems issues leading to perinatal hepatitis B transmission in the United States
- Develop and implement a study to assess the impact of treatment as prevention of hepatitis C infection among high risk populations in Georgia (country)
- Assess the effectiveness of strategies for screening, care, and treatment in a lower and middle income country with an established hepatitis C treatment program (e.g., Pakistan, Egypt, Georgia, or India)
- Monitor and evaluate domestic hepatitis C management programs using electronic health records
- Analyze data from U.S. Perinatal Hepatitis B Prevention Programs to assess failure to administer infant post-exposure prophylaxis
- Evaluate domestic viral hepatitis testing and linkage to care programs

Proposed Surveillance Projects: Evaluation of Georgia's (country) viral hepatitis surveillance system

Range of Opportunities: Public health practice experience by interacting with state/local health departments and community-based organizations, developing prevention strategies, and evaluating prevention programs; potential to contribute to national vaccine policy; ready-to-go databases for analytic skill development; and global experience

Position Strengths: New, highly effective drug therapies have emerged to combat viral hepatitis in recent years, which has created an opportunity to achieve significant public health impacts. The position offers the officer a broad range of opportunities for development of epidemiologic, program evaluation, and analytical skills, and the opportunity to gain invaluable experience by working in both domestic and international settings.

Special Skills Useful for this Position: Prior clinical experience, understanding of epidemiology, and basic statistical skills beneficial (but not required) for the position.

AvailableData:• Punjab, India serosurveys for HAV, HBV, and HEV infection

- Annual Reports from U.S. Perinatal Hepatitis B Prevention Programs for infants not receiving recommended post-exposure prophylaxis
- Wisconsin injection drug use/behavioral data and serosurvey for HCV infection
- MarketScan (commercial claims database) to monitor care cascade for persons with HBV and HCV infection
- Commercial laboratory data to augment surveillance activities

Recent Publications: DVH had approximately 70 publications; over half in mainly high-impact peer-review medical journals during 2015; such 'academic' productivity is encouraged in all EIS Officers

Domestic Travel: 10% **International Travel:** 20%

Available Support: Experienced supervisors, both of whom are former EISOs; statistical support within DVH; travel and training support from DVH and through the CDC Foundation

Current/Recent EIS Officer: Winston Abara, MBBS, PhD, (EIS 2015), EIS Officer, xxb0@cdc.gov

Current/Recent EIS Officer: Monique Foster, MD, MPH, (EIS 2014), EIS Officer, ydg9@cdc.gov

Current/Recent EIS Officer: Gemechu Gerbi, PhD, MSc, (EIS 2012)

Current/Recent EIS Officer: Stephen Ko, MD, MA, MPH, MDiv, (EIS 2012)

Current/Recent EIS Officer: Reena Mahajan, MD, (EIS 2011)

Officer Projects: • Examination of strategies to improve testing and linkage to care for patients with chronic hepatitis B in the United States

- Case series study of patients infected with hepatitis C virus in Georgia (country)
- Modeling analysis to estimate number of perinatal hepatitis B infections in the United States

Officer Recent Publications: •Frequency of and factors associated with receipt of liver-related specialty care among patients with hepatitis C in the Chronic Hepatitis Cohort Study. Submitted for publication.

•Notes from the Field: Investigation of healthcare-associated hepatitis C virus transmission associated with prolotherapy injections — California, 2015. Submitted for MMWR publication.

•Notes from the Field: Hepatitis A virus infection among travelers — Tulum, Mexico, 2015. Submitted for MMWR publication.

•The predictive value of International Classification of Disease codes for chronic hepatitis C virus infection surveillance: the utility and limitations of electronic health records. Currently in CDC clearance.

•Mahajan R, et al. Mortality among persons in care with hepatitis C virus infection: the Chronic Hepatitis Cohort Study

(CheCS), 2006-2010. Clin Infect Dis 2014;58:1055-1061.

•Gerbi G, et al. Reported reasons for testing among hepatitis B virus infected patients — Chronic Hepatitis Cohort Study (CHeCS), United States, 2006–2010. Liver International 2014;34:e162-e163. (Co-author: Stephen Ko)

•Ko S, et al. Hepatitis B vaccine response among infants born to hepatitis B surface antigen-positive women. Vaccine 2014;32:2127-2133.

Consultant: Susan Hariri, PhD, MPH, (EIS 2004), bse4@cdc.gov

Consultant: Aaron Harris, MD, MPH, (EIS 2012), ieo9@cdc.gov

Consultant: Noele Nelson, MD, PhD, MPH, xdg9@cdc.gov

Consultant: Claudia Vellozzi, MD, MPH, bno1@cdc.gov

National Center for Immunization and Respiratory Diseases

Division of Bacterial Diseases/Meningitis and Vaccine Preventable Diseases Branch/Epi Team

NCIRD-DBD-MVPDB-GA-2016-01 Positions: 2

Agency Name: CDC

Division/Branch/Team/Section: Division of Bacterial Branch/Meningitis and Vaccine Preventable Diseases Branch/Epi Team

Physical Address: Atlanta, Georgia

Primary Supervisor: Jennifer Liang, DVM, MPVM, (EIS 2005), Epidemiologist, bgz8@cdc.gov

Primary Supervisor: Ryan Novak, PhD, (EIS 2005), Epidemiologist, bnk4@cdc.gov

Secondary Supervisor: Jessica MacNeil, MPH, Epidemiologist, aji8@cdc.gov

Secondary Supervisor: Elizabeth Briere, MD, (EIS 2008), Medical Officer, ejc0@cdc.gov

Background: MVPDB is dedicated to the prevention and control of meningitis, pertussis, and other bacterial vaccine-preventable diseases. We work domestically and globally on meningococcal disease, Haemophilus influenzae disease, pertussis, tetanus, and diphtheria. Epidemiologic activities encompass investigating outbreaks, assessing burden of disease and understanding risk factors, and implementing and evaluating prevention strategies including developing and evaluating vaccine policy. MVPDB is lead of MenAfriNet, a consortium of international partners supporting meningitis surveillance in sub-Saharan Africa with the goal to evaluate progress towards elimination of serogroup A meningitis epidemics through the implementation of a novel meningococcal A conjugate vaccine (MACV, MenAfriVac™). MVPDB also plays an integral scientific role in broader programs including Active Bacterial Core surveillance (ABCs), the Emerging Infections Program (EIP), the Advisory Committee on Immunization Practices (ACIP), Global Disease Detection, Global Health Security and the International Emerging Infections Program (IEIP). Our 3 laboratory sections provide EISOs with an unparalleled opportunity to learn about vaccine evaluation, molecular epidemiology, and the development of diagnostic tests. MVPDB values and encourages collaboration among epidemiologists, laboratorians, and statisticians.

Proposed Initial Projects: 1) Measure long-term antibody persistence and vaccine effectiveness of novel, newly recommended serogroup B meningococcal vaccine; 2) Evaluate maternal meningococcal antibody transfer; 3) Assess use of serology to diagnose pertussis in the U.S. to evaluate for a potential change to pertussis case definition; 4) Field evaluation of a novel Dried Blood Spot assay to evaluate meningococcal immune responses following vaccination with MenAfriVac; 5) Design and conduct diphtheria carriage study; 6) Analyze data utilizing the Enhanced Pertussis Surveillance system; 7) Develop a model on pertussis infection and disease transmission dynamics; 8) Evaluate pertussis carriage and immunology during an outbreak; 9) Analyze data from expanded chart reviews of hospitalized pertussis cases; 10) Evaluate impact of tetanus-conjugated MenA vaccine on neonatal tetanus; 11) Measure meningococcal immune responses after vaccination administered in a controlled temperature chain; 12) Geospatial analysis of meningococcal carriage in Burkina Faso; 13) Characterize the molecular epidemiology of Neisseria meningitidis urethritis, a potentially emerging disease; 14) Characterize long-term sequelae after meningococcal disease; 16) Evaluating the prevalence of serogroup W in the United States; 17) Evaluate trends in molecular

epidemiology of non-b H. influenzae disease; 18) Evaluate the impact of introducing MenAfriVac into the routine childhood EPI schedule; 19) Conduct a decision analysis to inform the pertussis vaccine development process; 20) Assist with the development and programmatic implementation of a comprehensive approach to meningitis surveillance in the African Meningitis Belt; 21) Estimate the long-term effectiveness of meningococcal A conjugate vaccine (MenAfriVac) in various early implementing countries

Proposed Surveillance Projects: 1) Conduct a surveillance evaluation for tetanus and diphtheria in the U.S.; 2) Evaluate diphtheria surveillance in Haiti; 3) Evaluate pertussis surveillance in India; 4) Evaluation meningitis surveillance in Togo

Range of Opportunities: EIS Officer will gain a strong foundation in field epidemiology; study design; data analysis; and development, implementation and evaluation of public health program and policy. All these opportunities come together in a supportive and friendly work environment with a record of strong mentorship and supervision.

Position Strengths: EIS Officer will pursue a balanced mix of international and domestic projects, gaining experience in cutting edge science and evolving public health policy. Officers also have the opportunity to join other domestic and international field projects and larger public health response activities. Officers have made important contributions to investigating outbreaks of numerous emerging infectious diseases, recently serogroup C meningitis in Niger, Ebola, and MERS-CoV.

Special Skills Useful for this Position: MVPDB has successfully worked with EIS Officers with a diversity of backgrounds and expertise. The breadth of Branch activities is diverse enough to provide opportunities that will capitalize on a range of skill sets. A basic understanding of French would be useful in French-speaking Africa.

Available Data: EIS Officer will have the opportunity to conduct analyses using existing data from the following systems: Enhanced Pertussis Surveillance, Active Bacterial Core surveillance for meningococcal disease and Haemophilus influenzae, and Enhanced Meningococcal Disease Surveillance. Additionally, there are opportunities to evaluate and analyze case-base surveillance from MenAfriNet, a Gates Foundation-funded project to conduct regional surveillance for meningococcal disease in the Meningitis Belt of Africa.

Recent Publications: In 2014 and 2015 the Branch published over 50 articles including vaccine effectiveness evaluations, novel molecular characterization and epidemiologic findings, decision analyses, diagnostic evaluations, outbreak investigations, clinical trial results, assessments of vaccine strategies, meningococcal carriage study findings, surveillance evaluations, policy recommendations, and invited editorials.

Domestic Travel: 20% **International Travel:** 10%

Available Support: EIS Officer will be supported by epidemiologists, medical epidemiologists, surveillance officers, biostatisticians and modelers. EIS Officer will also benefit from working closely with branch laboratorians.

Current/Recent EIS Officer: Temi Folaranmi, MD, MPH, (EIS 2014), EIS Officer, ydk2@cdc.gov

Current/Recent EIS Officer: Heidi Soeters, PhD, (EIS 2014), EIS Officer, hzx8@cdc.gov

Current/Recent EIS Officer: John Otshudiema, MD, MPH, (EIS 2015), EIS Officer, yvw6@cdc.gov

Officer Projects: Investigating serogroup B meningococcal disease outbreaks; conducting meningococcal carriage studies; assessing meningococcal disease risk among MSM and HIV+; responding to diphtheria outbreak (Haiti); conducting systematic review of pertussis (Latin America); evaluating meningitis surveillance and MenA vaccine impact (Africa); estimating effectiveness of pneumococcal vaccine (Burkina Faso); supporting Ebola response in Africa

Officer Recent Publications: • Use of serogroup B meningococcal vaccines in persons aged =10 years at increased risk for serogroup B meningococcal disease: Recommendations of the Advisory Committee on Immunization Practices, 2015

- Pertussis vaccine effectiveness in the setting of pertactin-deficient pertussis
- Meningococcal disease among men who have sex with men — United States, January 2012–June 2015
- Prolonged university outbreak of meningococcal disease associated with a serogroup B strain rarely seen in the United States
- Identifying optimal vaccination strategies for serogroup A Neisseria meningitidis conjugate vaccine in the African meningitis belt.
- Impact and cost-effectiveness of a second tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis (Tdap) vaccine dose to prevent pertussis in the united states
- Accuracy of real-time PCR, Gram stain and culture for Streptococcus pneumoniae, Neisseria meningitidis and Haemophilus influenzae meningitis diagnosis
- Serogroup A meningococcal conjugate (MenA) vaccine coverage and measles vaccine coverage in Burkina Faso – Implications for introduction of MenA vaccine into the Expanded Program on Immunization
- First use of a Serogroup B Meningococcal vaccine in the US in response to a university outbreak
- Serogroup B meningococcal disease outbreak and carriage evaluation at a college — Rhode Island, 2015

Consultant: Rana Hajjeh, MD, (EIS 1993), Division Director, rfh@cdc.gov
Consultant: Conrad Quinn, PhD, Branch Chief, caq7@cdc.gov
Consultant: Stacey Martin, MSc, Team Lead, SMartin4@cdc.gov
Consultant: Tami Skoff, MS, Epidemiologist, TSkoff@cdc.gov
Consultant: Tej Tiwari, MD, MBBS, (EIS 1999), Medical Officer, TTiwari@cdc.gov
Consultant: Anna Acosta, MD, (EIS 2011), Medical Officer, vhy8@cdc.gov
Consultant: Sarah Meyer, MD, MPH, (EIS 2011), Medical Officer, vif6@cdc.gov
Consultant: Monica Patton, MD, (EIS 2012), Medical Officer, gnh9@cdc.gov
Consultant: Lucy McNamara, PhD, (EIS 2013), Epidemiologist, xdf4@cdc.gov
Consultant: Amanda Faulkner, MPH, Epidemiologist, iqq2@cdc.gov

Division of Bacterial Diseases/Respiratory Diseases Branch

NCIRD-DBD-RDB-GA-2016-01 Positions: 2

Agency Name: CDC

Division/Branch/Team/Section: Division of Bacterial Diseases/Respiratory Diseases Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Fernanda Lessa, MD, MPH, (EIS 2006), Medical Epidemiologist, FLessa@cdc.gov

Primary Supervisor: Gayle Langley, MD, (EIS 2006), Medical Epidemiologist, GLangley@cdc.gov

Secondary Supervisor: Laura Cooley, MD, (EIS 2012), Medical epidemiologist, LCooley@cdc.gov

Secondary Supervisor: Chris Van Beneden, MD, MPH, (EIS 1995), medical epidemiologist, cav7@cdc.gov

Background: The Respiratory Diseases Branch (RDB) focuses on prevention and control of leading community-acquired bacterial respiratory and neonatal infections. Our work is both domestic and international. Primary pathogens include *Streptococcus pneumoniae* (with emphasis on disease caused by drug-resistant and vaccine preventable strains), *Haemophilus influenzae* (in international settings), *Streptococcus pyogenes* (group A *Streptococcus*), group B *Streptococcus*, and respiratory *Chlamydia*, *Legionella*, and *Mycoplasma* species. Recent uptake of pneumococcal conjugate vaccines in developing countries and global interest in pneumonia and respiratory pandemics have created unique opportunities for high-profile work on priority issues. RDB conducts investigations of acute outbreaks, designs and coordinates national and international surveillance systems, identifies risk factors for disease, and develops and evaluates disease prevention and control strategies. RDB assists global efforts to accelerate introduction of new vaccines to the poorest of the poor. We also evaluate non-vaccine interventions against pneumonia such as cleaner burning stoves and produce guidelines for the prevention of perinatal group B streptococcal disease. Collaboration with the Branch's laboratory teams provides strong support for epidemiologic activities and has led to numerous analytic and field opportunities. The Branch also has substantial interaction with the World Health Organization (WHO) in Geneva, the Pan-American Health Organization (PAHO), the Global Disease Detection program in Thailand, Kenya, Guatemala, China, Bangladesh, India, South Africa, and Egypt, and collaborations with Global Health Security work in countries in Asia and Africa. Excellent collaborative relationships also exist with medical professional societies, academic institutions, and the units at CDC that focus on global health, immunizations, antimicrobial resistance, healthcare-associated infections, chronic diseases, viral respiratory diseases, and reproductive tract infections. EIS officers assigned to RDB can expect to lead several planned domestic projects with publication products and to play a major role in at least one international project in addition to participating in a variety of outbreak investigations that involve environmental and person-to-person transmission.

Proposed Initial Projects: 1. Estimate burden of pneumococcal disease in the U.S., including proportion that is antibiotic resistant. 2. Conduct an analysis of the epidemiology of late onset group B *Streptococcus* disease in infants in the United States. 3. Evaluate the performance of dried blood spots for detection of pneumococcus in Children in Mozambique. 4. Evaluate the impact of pneumococcal vaccine using active surveillance and hospital administrative data in Africa and Asia. 5. Estimate rates of legionellosis among persons with underlying medical conditions using a domestic population-based surveillance system. 6. Conduct a review of international primary prevention guidelines for legionellosis. 7. Analyze group A *Streptococcus* (GAS) surveillance data, evaluating emm type distribution over time and geographic area in preparation for a multivalent GAS vaccine.

Proposed Surveillance Projects: 1. Evaluate ability of 10-state Active Bacterial Core surveillance (ABCs) system to

characterize social determinants of health disparities, using insurance, smoking, alcoholism and other data. 2. Evaluate the Supplemental Legionnaires' Disease Surveillance System in order to improve travel-related and other cases. 3. Evaluate the quality of antimicrobial resistance data for neonatal sepsis collected through ABCs

Range of Opportunities: Officers work on planned, long-term studies and acute investigations and are encouraged to conduct one international, field-based project along with domestic projects. The branch houses a rich, multi-state database (Active Bacterial Core surveillance) that provides officers with ample analytic opportunities and the chance to influence domestic disease prevention policy. We offer global programmatic and field experiences through CDC, WHO, and academic collaborations.

Position Strengths: Tradition of providing balanced, rigorous training, including a mix of pathogens that impact all age groups, domestic and global activities, outbreaks that involve both environmental and person-to-person transmission, well-established surveillance systems, prevention activities (e.g. vaccines, environmental remediation), other interventions (e.g. antibiotics) and health communications with support from EIS-trained epidemiologists and statisticians. Besides having immediate impact through recommendations provided during outbreak investigations, officers have also had the opportunity to impact policies through involvement with the Advisory Committee of Immunization Practices (ACIP). We have several “ready to go” activities allowing for completion within 2 years.

Special Skills Useful for this Position: Interest, motivation, and a willingness to ask questions as needed are the most important skills. Prior experience in infectious disease, research, writing, and data analysis can be helpful but are not necessary. Foreign language skills (Spanish, French, and Portuguese, in particular) can be helpful. Flexibility regarding travel is important. Willingness to assist with outbreaks as needed over the course of the 2 years.

Available Data: Active Bacterial Core surveillance; Nationally Notifiable Disease Surveillance; Supplemental Legionnaires' Disease Surveillance System

Recent Publications: Moore MR et al. Effect of use of 13-valent pneumococcal conjugate vaccine in children on invasive pneumococcal disease in children and adults in the USA: analysis of multisite, population-based surveillance. *Lancet Infect Dis.* 2015;15:301-9.

Pilishvili T, Bennett NM. Pneumococcal disease prevention among adults: Strategies for the use of pneumococcal vaccines. *Vaccine.* Epub 2015 Jul 9.

Hajjeh R, Whitney CG. Call to action on world pneumonia day. *Emerg Infect Dis.* 2012 Nov;18(11):1898-9.

Langley G et al. Twenty Years of Active Bacterial Core Surveillance. *Emerg Infect Dis* 2015; 21(9):1520-8.

Domestic Travel: 10% **International Travel:** 10%

Available Support: 30-member Epidemiology Team, including 10 senior epidemiologists. Strong collaborations with microbiologists. Statisticians dedicated to team. Weekly team meetings, RDB EIS orientation lectures.

Current/Recent EIS Officer: Alicia Demirjian, (EIS 2012)

Current/Recent EIS Officer: Aaron Harris, (EIS 2012)

Current/Recent EIS Officer: Louise Francois Watkins, (EIS 2013)

Current/Recent EIS Officer: Sara Tomczyk, (EIS 2013)

Current/Recent EIS Officer: Jonathan Wortham, (EIS 2011)

Current/Recent EIS Officer: Kathleen Dooling, (EIS 2011)

Current/Recent EIS Officer: Miwako Kobayashi, MD, MPH, (EIS 2014)

Current/Recent EIS Officer: Matt Westercamp, PhD, MS, BSN, (EIS 2014)

Current/Recent EIS Officer: Sana Shireen Ahmed, MD, BS, (EIS 2015)

Current/Recent EIS Officer: Srinivas Acharya Nanduri, MD, MPH, MBBS, (EIS 2015)

Officer Projects: 1. Analysis of group B streptococcal disease to inform vaccine development; 2. Neonatal infection etiology study in Soweto, South Africa; 3. Investigations of group A streptococcus and legionellosis outbreaks in Illinois nursing homes; 4 Assess the impact of pneumococcal conjugate vaccine in the Dominican Republic.

Officer Recent Publications: Kobayashi M et al. Intervals between PCV13 and PPSV23 Vaccines: Recommendations of the ACIP. *MMWR* 2015; 64(34):944-947.

Tomczyk S et al. Outbreak of MERS Coronavirus in Jeddah: A link to healthcare facilities. *NEnglJMed.* 2015 ;372(9):846-54.

Francois Watkins LK et al. Knowledge and attitudes regarding antibiotic use among adult consumers, adult Hispanic consumers, and health care providers--United States, 2012-2013. *MMWR* 2015 ;64:767-70.

Demirjian A, Wortham JM et al. The importance of clinical surveillance in detecting Legionnaires' Disease outbreaks: A large outbreak in a hospital with a Legionella disinfection system, Pennsylvania, 2011-2012. *Clin Infect Dis.* 2015;60(11):1596-602.

Harris AM et al. Community-acquired invasive group A streptococcal disease among Native Americans, Arizona, USA, Winter 2013. *Emerging Infectious Diseases.* 2015;21(1):177-9.

Wortham JM et al. Chorioamnionitis and culture-confirmed, early-onset neonatal infections. Pediatrics. 2016 Jan;137(1):1-11.

Wortham JM et al. Racial disparities in invasive Streptococcus pneumoniae infections, 1998-2009. Clin Infect Dis 2014;58(9):1250-7.

Dooling KL, et al. Overprescribing and inappropriate antibiotic selection for children with pharyngitis in the United States, 1997-2010. JAMA Pediatr 2014;168(11):1073-4.

Consultant: Cynthia Whitney, (EIS 1993)

Consultant: Stephanie Schrag, (EIS 1998)

Consultant: Matt Moore, (EIS 2000)

Consultant: Lauri Hicks, (EIS 2003)

Consultant: Gayle Langley, (EIS 2006)

Consultant: Preeta Kutty, (EIS 2005)

Consultant: Aaron Harris, (EIS 2012)

Consultant: Louise Francois Watkins, (EIS 2013)

Consultant: Tamara Pilishvili

Consultant: Lindsay Kim, (EIS 2012)

Consultant: Anne Schuchat, (EIS 1988)

Consultant: Chris Van Beneden, (EIS 1995)

Consultant: Jennifer Verani, MD, (EIS 2006)

Consultant: Kathleen Dooling, MD, MPH, (EIS 2011)

Division of Viral Disease/Epidemiology Branch/Viral Gastroenteritis Team

NCIRD-DVD-EB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Viral Disease/Epidemiology Branch/Viral Gastroenteritis Team

Physical Address: Atlanta, Georgia

Primary Supervisor: Umesh Parashar, (EIS 1996), Dr, uap2@cdc.gov

Secondary Supervisor: Jackie Tate, (EIS 2006)

Secondary Supervisor: Catherine Yen, (EIS 2009)

Secondary Supervisor: Ben Lopman

Secondary Supervisor: Aron Hall, (EIS 2006)

Secondary Supervisor: Margaret Cortese, (EIS 1999)

Secondary Supervisor: Dan Payne

Background: This team is responsible for epidemiology, surveillance, research and program activities for prevention and control of gastroenteritis associated with rotavirus and norovirus, as well as other enteric viruses. Rotavirus is the leading cause of severe childhood gastroenteritis and is estimated to cause more than 500,000 deaths each year worldwide. New rotavirus vaccines have recently been introduced for routine immunization of young children in many

countries, including the United States. The Team is actively engaged with domestic and international partners in the first evaluations of the post-licensure effectiveness and safety of these vaccines in routine programmatic use and to generate data to accelerate the introduction and use of these vaccines globally. Noroviruses are the most common cause of epidemic gastroenteritis worldwide and the leading cause of foodborne disease outbreaks in the U.S. The Team investigates norovirus outbreaks, coordinates national and international surveillance platforms, identifies risk

factors for disease, and develops and evaluates prevention and control strategies for these infections. Close collaborations with the Division's Laboratory Branches provide strong support for epidemiologic activities and excellent statistical support is available within the Branch. Opportunities exist to work with other teams in the Branch

responsible for prevention and control of disease caused by herpes viruses (varicella, herpes, zoster, cytomegalovirus), measles, mumps and rubella, non-influenza respiratory viruses, and picornaviruses, including poliovirus.

Proposed Initial Projects: 1) Analyze national and state data on diarrhea and rotavirus-associated hospitalizations and outpatient visits to monitor impact of rotavirus vaccine introduction in the United States; 2) Develop and conduct studies to evaluate the field effectiveness of rotavirus vaccines in “early introduction” countries of Latin America, East Europe, and Africa; 3) Analyze national norovirus outbreak data and conduct epidemiologic attribution analyses to identify appropriate targets for intervention; 4) Conduct analyses of national databases and existing domestic and international surveillance platforms to help better characterize the disease and economic burden of norovirus; 5) Develop and conduct studies on epidemiology of gastroenteritis outbreaks in hospitals and other health care settings, with a focus on those caused by norovirus; 6) Develop and conduct studies to determine the risk factors for severe outcomes (including hospitalization and death) from norovirus in vulnerable populations.

Proposed Surveillance Projects: Compare surveillance of norovirus using administrative databases versus active surveillance at sentinel hospitals in NVSN to better understand optimal norovirus surveillance approaches.

Range of Opportunities: Officers will have the opportunity to conduct epidemiologic evaluations in the United States and in early introducing countries in Latin America and Africa to document the health benefits of rotavirus vaccination. For norovirus, the officer will lead and participate in norovirus surveillance and epidemiologic studies

both domestically and internationally to assess the burden of both epidemic and endemic disease. Recent implementation of the National Outbreak Reporting System (NORS) for all gastrointestinal illness outbreaks and ongoing development of the national laboratory network for norovirus sequences (CaliciNet), will afford the officer opportunities to evaluate and analyze new data collected on norovirus outbreaks, including identification of predominant transmission mechanisms, multi-state epidemics, and novel vehicles

Position Strengths: 1) Broad opportunities within Team and Branch; 2) Excellent and extensive supervisory support; 3) Considerable latitude in developing opportunities tailored to EIS officer interest

Special Skills Useful for this Position: 1) Energy and Enthusiasm; 2) Team player; 3) Eagerness to learn and contribute; Language skills (French) an asset.

Available Data: NCHS data. MarketScan data. NVSN data. NORS and Calicinet data.

Recent Publications: 1: Leshem E, et al. Distribution of rotavirus strains and strain-specific effectiveness of the rotavirus vaccine after its introduction: a systematic review and meta-analysis. *Lancet Infect Dis.* 2014.

2: Leshem E, et al. Rotavirus vaccines and health care utilization for diarrhea in the United States (2007-2011). *Pediatrics* 2014.

3: Rha B, et al. Intussusception following rotavirus vaccination: an updated review of the available evidence. *Expert Rev Vaccines.* 2014.

4: Rha B, et al. Effectiveness and impact of rotavirus vaccines in the United States - 2006-2012. *Expert Rev Vaccines.* 2014.

Domestic Travel: 10% **International Travel:** 20%

Available Support: In addition to the primary supervisor, the position has 6 secondary supervisors who each have doctoral level training, including 4 former EIS officers. Thus, considerable mentoring support is readily available. In addition, the Branch has a data analytic support team that provides high quality statistical support.

Current/Recent EIS Officer: Negar Aliabadi, MD, (EIS 2014)

Current/Recent EIS Officer: Minesh Shah, MD, (EIS 2015)

Current/Recent EIS Officer: Eyal Leshem, MD, (EIS 2012)

Officer Projects: 1. Assessing impact and effectiveness of rotavirus vaccines in the United States and in early introducer countries in Latin America, Africa, and Europe.

2. Assessing safety of rotavirus vaccines with respect to intussusception worldwide.

3. Assessing burden of norovirus disease and value of vaccines.

Officer Recent Publications: 1: Alkoshi S, Leshem E, et al. Anticipating rotavirus vaccines in Libya, 2012-13. *BMC Public Health.* 2015;15(1):26.

2: Dóro R, László B, Martella V, Leshem E, et al. Review of global rotavirus strain prevalence data from six years post vaccine licensure surveillance. *Infect Genet Evol.* 2014 Dec;28:446-61.

3: Leshem E, et al. Distribution of rotavirus strains and strain-specific effectiveness of the rotavirus vaccine after its introduction: a systematic review and meta-analysis. *Lancet Infect Dis.* 2014 Sep;14(9):847-56. doi: 10.1016/S1473-3099(14)70832-1.

4: Leshem E, et al. Rotavirus vaccines and health care utilization for diarrhea in the United States (2007-2011). *Pediatrics.* 2014 Jul;134(1):15-23

5: Fernandes EG, Sato HK, Leshem E, et al. Impact of rotavirus vaccination on diarrhea-related hospitalizations in São Paulo State, Brazil. *Vaccine*. 2014 Jun 5;32(27):3402-8.

6: Steenland MW, Joseph GA, Lucien MA, Freeman N, Hast M, Nygren BL, Leshem E, et al. Laboratory-confirmed cholera and rotavirus among patients with acute diarrhea in four hospitals in Haiti, 2012-2013. *Am J Trop Med Hyg*. 2013 Oct;89(4):641-6.

Division of Viral Diseases/Epidemiology Branch/HPV Team

NCIRD-DVD-EB-GA-2016-02

Agency Name: CDC

Division/Branch/Team/Section: Division of Viral Diseases/Epidemiology Branch/HPV Team

Physical Address: Atlanta, Georgia

Primary Supervisor: Julia Gargano, PhD, (EIS 2009), Epidemiologist, jgargano@cdc.gov

Secondary Supervisor: Lauri Markowitz, MD, (EIS 1983), Team Lead, Associate Director for Science for HPV, lem2@cdc.gov

Background: Human papillomavirus (HPV) can cause cervical cancer in women, and anal, oropharyngeal, and other cancers in both women and men, genital warts, and juvenile-onset recurrent respiratory papillomatosis. There are three highly effective vaccines against HPV, and routine vaccination has been recommended in the United States since 2006 for girls and since 2011 for boys, but HPV vaccine uptake in the US has been lower than target levels. The HPV team, located in the Division of Viral Diseases, is responsible for working on national vaccine policy with the Advisory Committee on Immunization Practices (ACIP), evaluating vaccine impact and effectiveness, investigating the epidemiology of HPV and associated outcomes and collaborating with other groups across the agency working on HPV and HPV vaccine implementation. The team provides subject matter expertise and conducts clinical and epidemiologic research and surveillance on HPV infections, cervical precancers, and other outcomes. Team members have a wide range of expertise in epidemiologic methods, vaccine evaluation, public health policy issues, other sexually transmitted infections, infectious disease outbreaks and public health emergency responses.

Recent or ongoing Team research activities include (1) estimating national prevalence of HPV; (2) assessing population-level impact of HPV vaccine on cervical cancer precursor lesions, genital warts, and HPV infection; (3) studying HPV prevalence and vaccine impact among high-risk groups including men who have sex with men; (4) estimating vaccine effectiveness to help guide the HPV vaccine program in the United States; and (5) evaluating incidence of juvenile-onset respiratory papillomatosis. The HPV team works closely with the Chronic Viral Diseases Branch, where the HPV Laboratory is located, on multiple projects. HPV is a cross-cutting issue, and our EISO is likely to be involved in collaboration across the agency with, for example, the Immunization Services Division, Division of HIV/AIDS Prevention, Global Immunization Division, or Division of Cancer Prevention and Control. In addition, the team provides consultation and expertise for partners including ACIP, U.S. state and local health departments, and other professional organizations.

Proposed Initial Projects: Choice of projects is flexible and depends on the interests of the EISO in discussion with supervisors. Potential initial projects include: (1) Analyze nationally representative data on HPV prevalence; (2) Evaluate HPV vaccine effectiveness using indirect cohort method in sentinel surveillance data; (3) Analyze data on HPV vaccine uptake in adolescents and young adults from national surveys; (4) Investigate associations between HPV prevalence and other factors using data from National Health and Nutrition Evaluation System, according to EISO interests; (5) Participate in investigations of other viral diseases housed in the Division, including measles, mumps, MERS, etc. as opportunities arise.

Proposed Surveillance Projects: (1) Evaluate the HPV Vaccine Impact Monitoring Project (HPV-IMPACT), a 5-site sentinel surveillance system for monitoring the impact of HPV vaccine on incidence of cervical precancers; or (2) Assess the ability of NHANES, a nationally representative survey, to estimate the national prevalence of HPV in men and women.

Range of Opportunities: Conduct analyses of U.S. national survey data sentinel surveillance data, and data from other observational epidemiologic studies. The HPV team collaborates across the CDC agency, including with staff in the Assessment Branch within NCIRD, laboratorians in NCEZID, health economists, and cancer epidemiologists in NCCDPHP. May evaluate international HPV vaccine programs with Global Immunization Division. Additional activities including teaching, policy development, international deployment and emergency response will be supported according to EISO interest and availability.

Position Strengths: Many opportunities for EISOs to complete CAL requirements, including publication and presentation opportunities. This position is flexible, and the EISO will be able to pursue a range of projects based on interests and needs. Officer can learn about other viral diseases through branch and division-level seminars and possible investigations. Center offers ongoing training in epidemiology and biostatistics through weekly seminar series.

Special Skills Useful for this Position: Team player with ability to collaborate with multidisciplinary groups, and solicit and synthesize high-level input from a variety of sources. Interest in infectious diseases, vaccine-preventable diseases, adolescent or women's health, sexual health. An EISO with clinical experience and/or data analysis experience can use current skills and develop new ones in this position. Ample opportunity to publish, so strong writing skills are a plus.

Available Data: NHANES, National Immunization Survey, other large administrative databases, HPV Vaccine Impact Monitoring Project (HPV-IMPACT), original research study data.

Recent Publications: Liu et al. Seroprevalence of 9 Human Papillomavirus Types in the United States, 2005-2006. *J Infect Dis.* 2016.

Markowitz et al. Prevalence of HPV After Introduction of the Vaccination Program in the United States. *Pediatrics* 2016.

Hariri et al. Reduction in HPV 16/18-associated high grade cervical lesions following HPV vaccine introduction in the United States – 2008-2012. *Vaccine* 2015.

Meites et al. HPV vaccine coverage among men who have sex with men—United States. *Vaccine* 2014.

Domestic Travel: 5% **International Travel:** 5%

Available Support: Team includes former and current EISOs and other epidemiologists who enjoy collaborating with and supporting EISOs. Additional support available from other epidemiologists in Epidemiology Branch and Data Management and Statistics Activity within division. EISO can also interact with HPV and vaccine experts outside division.

Current/Recent EIS Officer: Sara Oliver, MD, MSPH, (EIS 2015), EISO, yxo4@cdc.gov

Current/Recent EIS Officer: Emiko Petrosky, MD, MPH, (EIS 2013), Medical Officer, xfq7@cdc.gov

Current/Recent EIS Officer: Camille Introcaso, MD, (EIS 2011)

Officer Projects: EISOs conducted evidence-based evaluation of 9-valent HPV vaccine nationally, evaluated HPV vaccine coverage among U.S. men who have sex with men, assessed national survey data on HPV seroprevalence; responded to Ebola in Sierra Leone, investigated an outbreak of ocular syphilis in North Carolina.

Officer Recent Publications: Petrosky E, Bocchini JA Jr, Hariri S, Chesson H, Curtis CR, Saraiya M, Unger ER, Markowitz LE; CDC. Use of 9-valent human papillomavirus (HPV) vaccine: updated HPV vaccination recommendations of the Advisory Committee on Immunization Practices. *MMWR* 2015 Mar 27;64(11):300-4.

Petrosky EY, Hariri S, Markowitz LE, et al. Is Vaccine Type Seropositivity a Marker for Human Papillomavirus Vaccination?—National Health and Nutrition Examination Survey, 2003–2010. *International Journal of Infectious Diseases* 2015.

Introcaso CE, Dunne EF, Hariri S, Panicker G, Unger ER, Markowitz LE. Prevacine era human papillomavirus types 6, 11, 16 and 18 seropositivity in the U.S.A., National Health and Nutrition Examination Surveys, 2003-2006. *Sexually Transmitted Infections* 2014.

Introcaso CE, Gruber D, Bradley H, et al. Challenges in congenital syphilis surveillance: how are congenital syphilis investigations classified? *Sexually Transmitted Diseases* 2013.

Introcaso CE, Xu F, Kilmarx PH, Zaidi A, Markowitz LE. Prevalence of circumcision among men and boys aged 14 to 59 years in the United States, National Health and Nutrition Examination Surveys 2005-2010. *Sexually Transmitted Diseases* 2013.

Introcaso CE, Bradley H, Gruber D, Markowitz LE. Missed opportunities for preventing congenital syphilis infection. *Sexually Transmitted Diseases* 2013.

Consultant: Elissa Meites, MPH, MD, (EIS 2008), Medical Epidemiologist, dri9@cdc.gov

Consultant: Michelle Johnson, MPH, Epidemiologist, huk3@cdc.gov

Consultant: Elizabeth Unger, PhD, MD, Chief, Chronic Viral Diseases Branch, eru0@cdc.gov

Consultant: Terri Hyde, MD, MPH, (EIS 1999), Medical Officer, tkh4@cdc.gov

Consultant: Daniel Feikin, MD, (EIS 1996), Chief, Epidemiology Branch, drf0@cdc.gov

Division of Viral Diseases/Epi/Measles, Mumps, Rubella, Herpesviruses, Polio

NCIRD-DVD-EB-GA-2016-03

Agency Name: CDC

Division/Branch/Team/Section: Division of Viral Diseases/Epi/Measles, Mumps, Rubella, Herpesviruses, Polio

Physical Address: Atlanta, Georgia

Primary Supervisor: Manisha Patel, MD, MS, (EIS 2005), Medical Officer, Team Lead, dvn4@cdc.gov

Secondary Supervisor: Kathleen Dooling, MD, MPH, (EIS 2011), Medical Officer, vic9@cdc.gov

Secondary Supervisor: Paul Gastanaduy, MD, MPH, (EIS 2011), Medical Officer, vid7@cdc.gov

Secondary Supervisor: Tatiana Lanzieri, MD, MPH, Medical Officer, uyk4@cdc.gov

Background: We are a team within the Division of Viral Diseases, National Center for Immunizations and Respiratory Disease. Our team is responsible for epidemiology, surveillance and research programs for measles, mumps, rubella, domestic polio, varicella, herpes zoster and cytomegalovirus as well as other disease causing viruses within the Herpesvirus family. The diverse pathogen mix includes vaccine preventable and non-vaccine preventable and spans congenital, childhood and disease of the elderly. Some of our pathogens have “eliminated” endemic transmission in the US but have a huge burden globally. Our team is frequently involved in outbreak response and has numerous ongoing epidemiologic studies. In the past 2 years our team has lead responses to an outbreak of mumps in Iowa, and measles outbreaks linked to Disneyland, an Amish community and in Melanesia. We collaborate closely with our laboratory branches for outbreak investigations as well as research studies. We are closely linked to our colleagues working on MMRP globally, and our Branch has a number of international activities in which an EIS Officer may choose to be involved. Our communications associates are a resource embedded in our team with whom we work on health messaging via web presence and outbreak communications.

Proposed Initial Projects: The EISO may choose from a variety of analytic and policy focused projects: (i) Evaluate Strategies that led to elimination of measles in the U.S. (ii) Analyze time trends and geographic clustering of measles under-immunization in the U.S. (iii) Design and implement a study to evaluate alternate clinical samples (e.g. oral swabs) for the diagnosis of measles mumps and rubella (iv) Use various national survey and administrative data to enumerate varicella hospitalizations and monitor the impact of the second vaccine dose policy. (v/vi) Use large longitudinal administrative data (>100 M participants) to analyze the mortality rate of patients hospitalized for herpes zoster and describe the duration of post herpetic neuralgia. (vii) Analyze the largest and longest running cohort of CMV affected children for long term sequelae. (viii) Analyze the genotype distribution of CMV collected from NHANES samples. (ix) Gather, analyze and interpret laboratory and epidemiologic evidence for the U.S. submission to PAHO to re-verify measles and rubella elimination. (x) Participate on the Advisory Committee on Immunization Practices (ACIP) working group for Herpes Zoster and contribute to evidence-informed national vaccine policy. (xi) Provide SME support for risk communication for outbreaks and emergency response

Proposed Surveillance Projects: The EISO may choose from several surveillance projects: (i) Evaluation of national Acute Flaccid Myelitis (AFM) Surveillance. In place since June 2015, AFM surveillance aims to describe the burden of disease in the US and help identify a cause. The system has not been formally evaluated. (ii) Evaluate Varicella surveillance in the National Notifiable Diseases Surveillance System (NNDSS) and compare sensitivity to other large surveys and health care administrative data.

Range of Opportunities: A broad range of opportunities exist, from assisting local and state Health Departments investigate cases of measles/mumps, to in-depth epidemiologic analysis to responding to national and international emerging infections (MERs CoV, EV- D86, Ebola, Zika) to national policy issues (ACIP). Although this position is domestically-focused, we are committed to providing international experience to meet EIS Officer interests.

Position Strengths: 1) Diversity of expertise among supervisors and mentors 2) Variety of pathogens 3) Flexibility for involvement in activities outside the team.

Special Skills Useful for this Position: Ability to work independently as well as within a team 2) Analytic experience (useful but not necessary)

Available Data: MarketScan, NHANES, HCUP, Lab data, unpublished national surveillance data, outbreak data, cohort data.

Recent Publications: -Assessment of the Status of Measles Elimination in the United States, 2001-2014, (submitted 2016), Gastañaduy et al.

Global Varicella Vaccine Effectiveness: A Meta-Analysis, Pediatrics, 2016, Marin et al.

-Impact of the Maturing Varicella Vaccination Program on Varicella and Related Outcomes in the United States: 1994-2012, JPIDS, 2016, Leung et al.

-An assessment of the impact of heterogeneity in vaccine uptake due to religious and philosophical exemptions on the potential for outbreaks, Lancet ID, 2015, Glasser et al.

-Modeling the Potential Impact of Vaccination on the Epidemiology of Congenital Cytomegalovirus Infection Vaccine, Vaccine, 2014, Lanzieri et al.

Domestic Travel: 5% **International Travel:** 5%

Available Support: Supervisors and many team members are EIS alumni. Computer, statistical and clerical support are readily available. A data analytics support team exists within the Branch, to which the EIS Officer will have access.

Current/Recent EIS Officer: Emmaculate Lebo, MD, MPH, (EIS 2012), Epidemiologist, ipc8@cdc.gov

Officer Projects: Characterized measles outbreaks, 2013, U.S. | Analyzed seroprevalence of measles, mumps, rubella and varicella antibodies, National Health and Nutrition Survey | Middle East Coronavirus - technical support to WHO in Geneva | Surveillance system evaluation of national CMV registry | Epi-Aids: Measles (Micronesia), Dengue (Puerto Rico), Fungal meningitis (EOC), Pertussis (Washington)

Officer Recent Publications: 1. E. Lebo, D. Kruszon-Moran, M. Marin et al. Seroprevalence of Measles, Mumps, Rubella and Varicella Antibodies in the United States Population, 2009–2010. Open Forum Infect Dis. 2015 Jan;2(1):ofv006.

2. Centers for Disease Control and Prevention. Measles—United States, January 1–August 24, 2013. MMWR 2013; 62:741-3. Corresponding contributor

3. E. Lebo, T. Lanzieri, S. Bialek, G. Demmler. The National Congenital Cytomegalovirus Disease Registry; 20- year evaluation. (Draft)

4. Revised and finalized guidelines for investigation of cases of human infection with MERS-CoV. Available at: http://www.who.int/csr/disease/coronavirus_infections/MERS_CoV_investigation_guideline_Jul13.pdf.

5. Wrote a summary update on the risk assessment of the current situation with MERS-CoV. Available at: http://www.who.int/csr/disease/coronavirus_infections/update_20130620/en/index.html.

6. A. Mahamud et al. Varicella-zoster virus in American Samoa: Seroprevalence and predictive value of varicella disease history among elementary and college students. Epidemiology and Infection. 2014; 142(5):1002-7

Consultant: Mona Marin, MD, (EIS 2002), Medical Officer, zsn8@cdc.gov

Consultant: Rafael Harpaz, MD, MPH, (EIS 1992), Medical Officer, rzh6@cdc.gov

Consultant: Cristina Cardemil, MD, MPH, (EIS 2010), Medical Epidemiologist, iyk8@cdc.gov

Consultant: Chengbin Wang, MD, PhD, Medical Epidemiologist, fur9@cdc.gov

Consultant: Adriana Lopez, MHS, Epidemiologist, ail7@cdc.gov

Consultant: Jessica Leung, MPH, Epidemiologist, ctf2@cdc.gov

Consultant: John Zhang, PhD, Health Scientist, jbz2@cdc.gov

Consultant: Nakia Clemmons, MPH, Epidemiologist, xjb4@cdc.gov

Division of Viral Diseases/Epidemiology Branch/RVP

NCIRD-DVD-EB-GA-2016-04

Agency Name: CDC

Division/Branch/Team/Section: Division of Viral Diseases/Epidemiology Branch/RVP

Physical Address: Atlanta, Georgia

Primary Supervisor: John Watson, MD, MSc, (EIS 2002), Medical Officer, acq4@cdc.gov

Secondary Supervisor: Lindsay Kim, MD, MPH, (EIS 2010)

Secondary Supervisor: Susan Gerber, MD, Team Lead, bhx1@cdc.gov

Background: This team is responsible for the epidemiology, surveillance, research and program activities for prevention and control of respiratory viruses and picornaviruses, including respiratory syncytial virus (RSV), non-polio

enteroviruses (EV), human metapneumoviruses (hMPV), adenoviruses, parainfluenza viruses (PIV), and coronaviruses such as the Middle Eastern Respiratory Syndrome Coronavirus (MERS-CoV).

RSV is the most common etiology of viral pneumonia in infants and children, and the second most commonly identified cause of pneumonia in elderly persons, estimated to cause more than 3 million hospitalizations each year worldwide. Parainfluenza infection is the second most common viral illness, after RSV, in infants. Nonpolio enteroviruses are responsible for 10-20 million symptomatic infections per year. Recent attention to these common viruses has led to a strengthening of priorities for prevention and control, including a renewed focus on better characterizing their epidemiology in light of available but underused therapies and upcoming vaccines.

The Team is actively engaged with domestic and international partners in the surveillance, epidemiology and control of these viruses.

The EIS Officer will be given considerable latitude and support in developing investigations tailored to his/her areas of interest. Officers will have the opportunity to conduct epidemiologic evaluations in the United States and internationally with partners. Activities are focused on further describing the burden of disease, seasonality, severe illnesses and mortality, and prioritizing surveillance and control measures, including the identification of possible changes in the epidemiology of disease and the emergence of new viral strains.

Proposed Initial Projects: Proposed Initial Projects: 1) Participate in international investigations of MERS-CoV infections with partner countries; 2) Develop and conduct studies to evaluate the disease burden, seasonality, and mortality of RSV in partner countries of Latin America, the Middle East, and Asia; 3) Analyze national RSV mortality data and conduct epidemiologic analyses to identify appropriate targets for intervention; 4) Conduct analyses of national databases and existing domestic and international surveillance platforms to help better characterize the disease and economic burden of RSV; 5) Develop and conduct sentinel surveillance studies on the epidemiology of severe picornavirus infections in infants and children with sepsis.

Proposed Surveillance Projects: Analyze national and state data from the National Respiratory and Enteric Virus Surveillance System (NREVSS) and the National Enterovirus Surveillance System (NESS), both of which are fundamental to team activities.

Range of Opportunities: The Team investigates respiratory virus and picornavirus outbreaks, coordinates national and international surveillance platforms, identifies risk factors for disease, and develops and evaluates prevention and control strategies for these infections. Opportunities also exist to work with other teams in the Branch responsible for prevention and control of disease caused by herpes viruses (varicella, herpes zoster, cytomegalovirus), measles, mumps and rubella, and poliovirus.

Position Strengths: The EISO will be able to work on a broad range of potential projects in a well-supported and collegial environment. The team is small and is responsible for a wide variety of viral pathogens, allowing the EISO to manage and lead critical work in support of completion of CALs.

Special Skills Useful for this Position: Ability to successfully complete projects involving diverse partners in sometimes challenging environments; flexibility; humility; enthusiasm.

Available Data: The National Respiratory and Enteric Virus Surveillance System (NREVSS) and the National Enterovirus Surveillance System (NESS) are coordinated through the team. These are both ongoing national surveillance systems which generate data to guide team activities.

Recent Publications: Midgley CM et al. Severe respiratory illness associated with a nationwide outbreak of enterovirus D68 in the USA (2014): a descriptive epidemiological investigation. *Lancet Respir Med.* 2015 Oct 5

Midgley CM et al. Severe respiratory illness associated with enterovirus D68—Missouri and Illinois, 2014. *MMWR Morb. Mortal. Wkly. Rep.* 63:798–799.

Oboho IK, Tomczyk SM, Al-Asmari AM, Banjar A, Al-Mugti H, Aloraini M, et al. 2014 MERS-CoV outbreak in Jeddah — a link to health care facilities. *N Engl J Med* 2015 Feb 26;372(9):846-54

Domestic Travel: 10% **International Travel:** 20%

Available Support: Close collaborations with the Division's Laboratory Branches provide strong support for epidemiologic activities, with excellent statistical support available within the Branch.

Current/Recent EIS Officer: Claire Midgley, PhD, MSc, (EIS 2014)

Officer Projects: 1) MERS-CoV natural history - viral shedding and immune response among MERS-CoV patients, Saudi Arabia.

2) Investigation of Human Parechovirus-3 outbreak among infants, Missouri.

3) Epidemiology of a novel recombinant MERS-CoV clade, Saudi Arabia.

4) Severe respiratory illness associated with a nationwide outbreak of EV D-68

Officer Recent Publications: Midgley CM, Watson JT, Nix WA, Curns AT, Rogers SL, Brown BA, et al. Severe respiratory illness associated with a nationwide outbreak of enterovirus D68 in the USA (2014): a descriptive epidemiological investigation. *Lancet Respir Med.* 2015 Oct 5

Midgley CM, Jackson MA, Selvarangan R, Turabelidze G, Obringer E, Johnson D, et al. 2014. Severe respiratory illness associated with enterovirus D68—Missouri and Illinois, 2014. *MMWR Morb. Mortal. Wkly. Rep.* 63:798–799.

Oboho IK, Tomczyk SM, Al-Asmari AM, Banjar A, Al-Mugti H, Aloraini M, et al. 2014 MERS-CoV outbreak in Jeddah — a link to health care facilities. *N Engl J Med* 2015 Feb 26;372(9):846-54

Consultant: Daniel Feikin, MD, (EIS 1996), Branch Chief

Consultant: Brian Rha, MD, (EIS 2012), Medical Officer

Consultant: Mark Pallansch, PhD, Division Director

Influenza Division/Epidemiology and Prevention Branch

NCIRD-ID-EPB-GA-2016-01 Positions: 2

Agency Name: CDC

Division/Branch/Team/Section: Influenza Division/Epidemiology and Prevention Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Fiona Havers, MD, MHS, (EIS 2012), Medical Epidemiologist, fhavers@cdc.gov

Primary Supervisor: Danielle Iuliano, PhD, MPH, (EIS 2008), Epidemiologist, aiuliano@cdc.gov

Secondary Supervisor: Alicia Fry, MD, (EIS 1999), Medical Epidemiologist

Secondary Supervisor: Sonja Olsen, PhD, (EIS 1998), Epidemiologist

Secondary Supervisor: Shikha Garg, MD, (EIS 2010), Medical Epidemiologist

Background: The Epidemiology and Prevention Branch (EPB) offers many opportunities for EIS Officers interested in learning about public health practice in domestic and international settings. EISOs work in a collegial atmosphere with support from clinicians, epidemiologists and laboratory scientists working on innovative influenza research. EISOs will participate in outbreak investigations of influenza, including outbreaks of antiviral-resistant strains and outbreaks of novel influenza A viruses with pandemic potential, such as avian influenza H5 and H7 viruses and variant (swine-origin) influenza viruses.

In addition to avian and pandemic influenza, EPB maintains a focus on establishing the disease burden associated with annual seasonal influenza epidemics. EISOs will have the opportunity to participate in analytic, surveillance, and modeling activities designed to estimate the cost and burden of influenza, including the number of influenza-associated hospitalizations and deaths, occurring each year in the United States and other countries. EPB also estimates influenza vaccine effectiveness periodically and has several ongoing studies related to antiviral use and effectiveness with which EISOs may assist. EISOs will also have opportunities to gain experience in health communications through media interviews and educational outreach programs. EPB has a large international focus, with active collaborations in >40 countries; EISOs will have opportunities for international work, if desired.

Proposed Initial Projects: (1) Model the impact of outpatient antiviral treatment to prevent hospitalization and missed work, (2) Describe facility characteristics associated with healthcare-associated influenza in FluSurvNet, (3) Estimate influenza vaccine effectiveness for older adults and persons with underlying medical conditions by year and influenza subtype, (4) Describe influenza mortality in children during recent influenza seasons, (5) Identify risk factors for long term care facility admission after influenza hospitalization, (6) Describe non-respiratory complications associated with influenza hospitalization, (7) Describe influenza testing and antiviral use using administrative data and electronic medical records, (8) Model benefit of high-dose or adjuvanted vaccines, compared to standard dose vaccines in older adults, (9) Determine the timing of influenza and other respiratory virus epidemic periods within countries and WHO transmission zones, (10) Estimate influenza-associated hospitalization rates by age group at international sentinel sites, (11) Model averted deaths and hospitalizations as a result of influenza vaccination at international sites, (12) Explore knowledge attitudes and behaviors about vaccines among target groups at international sites, (13) Explore cost-benefit of influenza vaccination in countries contemplating introduction of vaccines, (14) Conduct post influenza vaccine introduction evaluations through the Partnership for Influenza Vaccine introduction program (15) Describe the effect of repeat influenza vaccination on influenza B virus infection.

Proposed Surveillance Projects: (1) Evaluate influenza surveillance in Indonesia and (2) the Americas; (3) Evaluate the use of electronic billing data for influenza surveillance; (4) Evaluate FluSurv-NET surveillance for influenza-associated hospitalizations in the United States compared to administrative data sources, such as those contained in the Healthcare Cost & Utilization Project (HCUP) database.

Range of Opportunities: Officers will participate in outbreak investigations; design and conduct a project to address a research question; collect and analyze data; present findings in peer-reviewed literature and at national meetings; and communicate public health issues to media and lay audiences.

Position Strengths: Supervisors have a strong commitment to mentoring EISOs. Influenza is a high-profile disease with broad public health impact, so Officers will gain experience in many different areas of public health, including surveillance, outbreak investigations, preparedness, prevention, and policy matters.

Special Skills Useful for this Position: Our positions offer flexibility based on individual preference, while ensuring that EISOs gain experience in fundamental public health practice. No special skills are required, other than an enthusiasm for public health and interest in learning. We have worked happily and successfully with clinicians, veterinarians, and doctoral-level scientists and epidemiologists in the past.

Available Data: We own or have direct access to large datasets, including: FluSurvNet data (national, hospitalized patients), ILINet (national, outpatient visits for influenza-like illness), Pediatric Mortality and 122 Cities Pneumonia and Influenza Mortality (national), WHO/NREVSS laboratory data, US VE Network data (multi-site vaccine effectiveness study), Etiology of Pneumonia in the Community data (multi-center, laboratory and epidemiology, multiple pathogen), and MarketScan data (patient level data from US commercial insurance claims).

Recent Publications: Community-acquired pneumonia requiring hospitalization. *NEJM*—2015.

Estimating the potential effects of a vaccine program against an emerging influenza pandemic—United States. *Clin Infect Dis*—2015.

Severe acute respiratory illness deaths in Sub-Saharan Africa and the role of influenza: A case series from 8 countries. *J Infect Dis*—2015.

Hospitalizations attributable to respiratory infections among children with neurologic disorders. *J Pediatrics*—2015.

Estimating influenza disease burden from population-based surveillance data in the United States. *PLoS One*—2015.

Challenges to global pandemic mortality estimation. *Lan Infect Dis*—2014.

Global concerns regarding novel influenza (H7N9) virus infections. *NEJM*—2013.

Domestic Travel: 10% **International Travel:** 10%

Available Support: EPB has a large staff of physicians, veterinarians, and doctoral level epidemiologists and statisticians with considerable experience in state, federal, and international public health, including ~25 EIS alumni. The Influenza Division also has a large laboratory group and a strong communications team which support EISO activities.

Current/Recent EIS Officer: Grace Appiah, (EIS 2014)

Current/Recent EIS Officer: Melissa Rolfes, (EIS 2014)

Current/Recent EIS Officer: Kate Russell, MD, (EIS 2015)

Current/Recent EIS Officer: Becky Schicker, MPH, MSN, (EIS 2015)

Officer Projects: Influenza antiviral use among outpatients, estimating burden of severe respiratory illnesses in Cambodia, evaluating demand for H5N1 vaccine in laboratory workers, co-infections in patients hospitalized with influenza, risk factors for influenza hospitalization after outpatient care, outbreaks of influenza-associated parotitis and rash, respiratory disease incidence in children in Ecuador.

Officer Recent Publications: Timing of influenza A(H5N1) in poultry and humans and seasonal influenza activity worldwide, 2004-2013. *Emerg Infect Dis.* 2015

Detecting H7N9 spread beyond China. *Emerg Infect Dis.* 2015.

2014 MERS-CoV outbreak in Jeddah—a link to health care facilities. *N Engl J Med.* 2015

Estimated paediatric mortality associated with influenza virus infections, United States, 2003-2010. *Epidemiol Infect.* 2015.

Influenza Outbreaks Among Passengers and Crew on Two Cruise Ships: A Recent Account of Preparedness and Response to an Ever-Present Challenge. *J Travel Med.* 2015.

The East Jakarta Project: surveillance for highly pathogenic avian influenza A(H5N1) and seasonal influenza viruses in patients seeking care for respiratory disease, Jakarta, Indonesia, October 2011-September 2012. *Epidemiol Infect.* 2015.

Investigation of an Outbreak of Variant Influenza A(H3N2) Virus Infection Associated With an Agricultural Fair-Ohio, August 2012. *J Infect Dis.* 2015.

Use of influenza antiviral agents by ambulatory care clinicians during the 2012-2013 influenza season. *Clin Infect Dis.* 2014.

Improving Accuracy of Influenza-Associated Hospitalization Rate Estimates. *Emerg Infect Dis.* 2015.

Risk factors for influenza A(H7N9) disease—China, 2013. *Clin Infect Dis.* 2014.

Influenza vaccination and treatment in children with neurologic disorders. *Therapeutic Advances in Vaccines.* 2014.

Consultant: Joseph Bresee, (EIS 1993)

Consultant: Lynnette Brammer

Consultant: Jill Ferdinands, (EIS 2000)

Consultant: Lisa Grohskopf, (EIS 1999)

Consultant: Daniel Jernigan, (EIS 1994)

Consultant: Jerry Tokars, (EIS 1989)

Consultant: Tim Uyeki, (EIS 1998)

Consultant: Eduardo Azziz-Baumgartner, MD, (EIS 2003)

Consultant: Fatimah Dawood, MD, (EIS 2008)

Consultant: Brenden Flannery, PhD, (EIS 2002)

Consultant: Carrie Reed, PhD, (EIS 2007)

Consultant: Michael Jhung, MD, (EIS 2005)

Consultant: Angie Campbell, MD, (EIS 2002)

Consultant: Sofia Arriola, DVM, (EIS 2013)

Immunization Services Division/Office of the Director

NCIRD-ISD-OD-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Immunization Services Division/Office of the Director

Physical Address: Atlanta, Georgia

Primary Supervisor: Amy Parker Fiebelkorn, MSN, MPH, (EIS 2005), Epidemiologist, dez8@cdc.gov

Secondary Supervisor: Carolyn Bridges, MD, (EIS 1996), Associate Director for Adult and Influenza Immunization

Secondary Supervisor: J. Michael Underwood, PhD, (EIS 2009), Team Lead

Secondary Supervisor: Adam Bjork, PhD, (EIS 2010), Epidemiologist

Secondary Supervisor: Loren Rodgers, PhD, (EIS 2010), Team Lead

Background: The mission of the Immunization Services Division (ISD) is to protect individuals and communities from vaccine-preventable diseases through: provision of federal funds and contracts to purchase vaccine; provision of technical and financial support to immunization programs; provider and public education; and evaluation and research. ISD has 7 Branches and Offices, and oversees an annual budget of over \$4 billion, which it uses to: purchase and distribute vaccines for the uninsured or underinsured 42% of US children through the Vaccines for Children program;

support immunization infrastructure in state and urban area health departments; provide technical support and funding for immunization information systems; provide training and education to health professionals; conduct research to improve uptake and delivery of vaccines; assess vaccination coverage throughout the lifespan using National Immunization Surveys, the Behavioral Risk Factor Surveillance System, the Trends in Immunization Practices System (>200M vaccination records from Immunization information System sentinel sites), assessments of vaccination coverage in US territories, and other surveys; and work with awardees to evaluate immunization program effectiveness. ISD has a large staff of doctoral-level professionals including 20 EIS Alumni. The EIS Officer has the opportunity to work with professionals from across the Division on a wide variety of interesting projects.

Proposed Initial Projects: (1) Analyze data from national surveys of health care providers and the general population, to identify gaps in implementation of Adult Immunization Standards and develop targeted interventions for healthcare providers based on these findings; (2) Lead a project to understand/evaluate state-level policies and procedures related to school entry vaccination requirements; (3) Work with U.S. territories to assess vaccination coverage, including travel to the US islands in the Pacific to provide assistance with vaccine data collection in the field, analyzing and reporting vaccination coverage, and providing scientific support to territories to strengthen immunization programs; (4) Use immunization information systems data to assess the impact of vaccine shortages on vaccination practices; (5) Identify potential improvements in vaccination policy and program through a study of factors associated with vaccine coverage disparities by poverty status; (6) Conduct an economic evaluation of the cost of extra immunizations administered to children because of provider changes and lack of complete immunization records; (7) Compare vaccine financing for adult versus child immunization and identify gaps that prevent adults from receiving routinely recommended vaccines; (8) Conduct qualitative and quantitative analyses to measure socioeconomic benefits of increased adult immunization coverage compared to other adult preventive health services; (9) Participate in the pandemic influenza preparedness Vaccine Task Force; (10) Lead a team to investigate errors in vaccine administration, storage, and handling occurring during vaccination clinics.

Proposed Surveillance Projects: (1) Assess patterns of undervaccinated children in immunization information systems compared to the National Immunization Survey. (2) Work with selected states to evaluate systems for assessing vaccination coverage at the local (e.g. county) level and describe the implications of using different systems (data from IIS, Census of schools for Kindergarten vaccination coverage, or other local surveys). (3) Assess vaccination coverage in U.S. territories, including timeliness and disparities in vaccinations.

Range of Opportunities: There are multiple short- and long-term projects available, opportunities to work with large databases, create surveys, travel to the field to provide technical assistance or conduct evaluation, respond to national emergencies, and work across NCIRD and with other Centers for field epidemiology experiences.

Position Strengths: ISD oversees the immunization enterprise for the entire United States. We provide the opportunity to get involved in disease prevention at the most effective level. ISD has depth of subject matter expertise to support the Officer in all required projects, and breadth of scope to enable Officers to be exposed to many other organizational units both within CDC and outside CDC, including State and Local health departments and a variety of immunization partners. Energetic, knowledgeable colleagues are happy to work with the officer to get projects done.

Special Skills Useful for this Position: Flexibility to travel to US territories in the Caribbean and Pacific regions, including qualifying for relevant security and health clearances.

Available Data: Many data sources are available for analysis, including state-level immunization registries, U.S. territory vaccination assessments, annual state immunization program data, on-line systems with updated provider-level information on Vaccines For Children programs, the National Immunization Surveys, continuing education data, and other surveys and databases.

Recent Publications: Racial ethnic disparities in vaccination coverage among adult populations. *American Journal Preventive Medicine* 2015

Estimating potential effects of vaccine program against emerging influenza pandemic--United States. *Clinical Infectious Diseases* 2015

Impact and Cost-effectiveness of a Second Tetanus Toxoid, Reduced Diphtheria Toxoid, Acellular Pertussis (Tdap) Vaccine Dose to Prevent Pertussis in the US. *Vaccine* 2016

HPV Vaccination coverage of male adolescents in the US. *Pediatrics* 2015

Children & adolescents unvaccinated against measles: Geographic clustering, parents' beliefs, missed opportunities. *Public Health Reports* 2015

National, state, selected local area vaccination coverage among children 19-35 months -- US, 2014. *MMWR* 2015

Domestic Travel: 5% **International Travel:** 0%

Available Support: Support is available from many ISD staff across the Division: epidemiology, evaluation, program operations, statistics, economic evaluation, and modeling; and administrative support.

Current/Recent EIS Officer: Suchita Patel, DO, MPH, (EIS 2005), Medical Officer, dv17@cdc.gov

Current/Recent EIS Officer: Tom Shimabukuro, MD, MPH, MBA, (EIS 2004), Deputy Director, Immunization Safety Office

Officer Projects: ISD is providing a large data project to another Center's EISO. This multi-state immunization records analysis will determine best practices to consolidate duplicate records for clinical and public health purposes. This is a priority for public health and the American Immunization Registry Association, and will shape industry practices.

Officer Recent Publications: N/A

Consultant: Shannon Stokley, MPH, DrPH, Associate Director for Science

Consultant: Xia (Michelle) Lin, PhD, MSPH, (EIS 2012)

Consultant: Mark Messonnier, MS, PhD, Lead economist

Consultant: Tara Vogt, PhD, MPH, (EIS 2002), Team Lead

National Center for Injury Prevention and Control

Injuries kill nearly 192,900 people in the U.S. each year—nearly 1 person every 3 minutes. Millions more are injured each year and survive. For more than 20 years, CDC's Injury Center has helped protect Americans from violence and injury threats. We study violence and injuries and research the best ways to prevent them, applying science for real-world solutions to keep people safe, healthy, and productive. The Injury Center consists of 3 divisions. Unintentional Injury Prevention focuses on major contributors to injury mortality, morbidity and disability including motor vehicle crashes, prescription drug overdose, falls, drowning, fires and traumatic brain injury. Violence Prevention applies science to prevent child maltreatment, youth violence, sexual violence, intimate partner violence and suicide. Analysis, Research and Practice Integration focuses on cross-cutting areas including statistics, surveillance, economic and program evaluation and technical assistance to state programs.

Division of Unintentional Injury Prevention/Home, Recreation, and Transportation Branch/Transportation Safety Team and Home and Recreation Team

NCIPC-DUIP-HRTB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Unintentional Injury Prevention/Home, Recreation, and Transportation Branch/Transportation Safety Team and Home and Recreation Team

Physical Address: Atlanta, Georgia

Primary Supervisor: Ruth Shults, PhD, MPH, (EIS 1990), Epidemiologist, rshults@cdc.gov

Secondary Supervisor: Erin Parker, PhD, (EIS 2011), Health Scientist, eparker@cdc.gov

Background: The EIS position will include projects related to transportation safety and fall prevention within the Home, Recreation and Transportation Branch (HRTB). The cross-team position will provide a broad and flexible learning experience tailored to the officer's interests.

Motor Vehicle Injury Prevention is one of CDC's Winnable Battles (<http://www.cdc.gov/WinnableBattles>) and a National Center for Injury Prevention and Control (NCIPC) priority area. Motor vehicle injuries are a leading cause of death in the United States, and many of these deaths are preventable. The HRTB conducts epidemiological investigations and evaluates interventions for preventing motor vehicle injuries in five focus areas: improving proper use of car seats, booster seats, and seat belts; reducing impaired driving; preventing crashes among high risk groups (e.g., teens; American Indians and Alaska Natives); safe transportation for older adults; and data linkage.

Older Adults fall prevention is a growth area for NCIPC and has increasing interest from all levels of CDC leadership.

The aging U.S. population is having a profound impact on our nation's public health services and health care system. Falls are the leading cause of fatal and non-fatal injuries among older adults, including hip fractures and head trauma. Each year, one out of three Americans over 65 falls, resulting in \$34 billion in direct medical costs. HRTB is working with health systems, electronic health record systems and public health researchers to integrate fall prevention throughout the U.S. For more information about CDC's STEADI initiative to prevent falls visit: <http://www.cdc.gov/STEADI>.

Proposed Initial Projects: Supervisors will work with the EIS officer to develop projects based on the officer's interests. Options for initial projects (in no particular order) include, but are not limited to: 1) Analyzing Centers for Medicare and Medicaid Services Current Medicare Beneficiary Survey questions on older adult mobility; 2) Contrasting trends in self-reported seatbelt use with use among fatally injured teens and adults; 3) Examining population-level change in traffic injuries using national and international data sources; 4) Analyzing Medicare claim data to measure state-specific hospital readmission rates for falls as well as state-specific cost estimates for medically treated falls; 5) Analyzing multiple health economic and injury data sources to update metrics on the direct medical costs of older adult falls, including emergency department visits, hospitalizations, outpatient visits, and fatalities; 6) Evaluating an electronic health record clinical decision support tool for optimizing patient medication use to prevent older adult falls; 7) Developing online training modules to educate and guide the clinical community on how to integrate fall prevention into clinical care.

Proposed Surveillance Projects: This project would use CDC guidelines for evaluating surveillance systems to assess the Centers for Medicare and Medicaid Services (CMS) Current Medicare Beneficiary Survey as a source for establishing mobility-related trends in older adults. Mobility measures would include older adult driving behaviors related to transition to driving cessation and prevalence of total falls and falls requiring medical treatment.

Range of Opportunities: The EIS Officer will develop expertise in designing epidemiologic studies, analyzing data, giving oral presentations, writing scientific papers, communications, and field investigations. Officers will work with two collegial, multi-disciplinary teams and could collaborate with state health departments, academic partners, health systems, and assist with global road safety projects.

Position Strengths: The EIS Officer will have opportunities to participate in high profile research and evaluation and partnership development that will result in measurable impact in two years. The cross-team position will be housed in the Home, Recreation and Transportation Branch and will provide a broad and flexible learning experience tailored to the officer's interests.

Special Skills Useful for this Position: Interest in and eagerness to learn about motor vehicle injury and falls prevention, experience conducting quantitative analysis and scientific writing, and ability to work independently and as part of a team. Officers should also be flexible and able to multi-task.

Available Data: Numerous datasets and strong statistical support are available including: 1) Centers for Medicare and Medicaid Services (CMS) Claims data/Current Medicare Beneficiary Survey; 2) Behavioral Risk Factor Survey alcohol-impaired driving data; 3) ConsumerStyles and DocStyles survey data; 4) NCHS Vital Statistics mortality data; 5) MarketScan claims data; 6) NHTSA Fatality Analysis Reporting System data.

Recent Publications: Selected 2015 titles:

Predictive influence of youth assets on drinking and driving behaviors in adolescence and young adulthood

Alcohol-impaired driving among adults - United States 2012

Motor vehicle crashes, medical outcomes, and hospital charges among children aged 1-12 years

Predictors of rear seat belt use among US adults, 2012

Assistive device use and mobility-related factors among adults aged =65 years

Healthcare providers' perceptions and self-reported fall prevention practices

Primary care opportunities to prevent unintentional home injuries: A focus on children and older adults

A cost-benefit analysis of three older adult fall prevention interventions

Domestic Travel: 10% **International Travel:** 0%

Available Support: The Center, Division, and Branch include doctoral and medically trained epidemiologists, statisticians, evaluation experts, economists, behavioral scientists, pharmacists, former and current EISOs, and communications and policy staff with strong publication records.

Current/Recent EIS Officer: Alexis Peterson, PhD, (EIS 2015), EISO, Apeterson4@cdc.gov

Current/Recent EIS Officer: Melissa Mercado-Crespo, PhD, (EIS 2013), Behavioral Scientist, cju8@cdc.gov

Current/Recent EIS Officer: Ben Levy, MD, (EIS 2013), Guest Researcher, BLevy@cdc.gov

Officer Projects: Projects include analysis of drug and alcohol use by college students; road traffic injury surveillance evaluation in Thailand; improving survey metrics to address childhood drowning and prevention; marijuana-impaired driving surveillance evaluation in Colorado; field investigations related to prescription drug overdose deaths; injuries at National Parks; trends in childhood injuries.

Officer Recent Publications: Parker E, et al. 2014. Surveillance of road crash injuries in Cambodia: an evaluation of the Cambodia Road Crash and Victim Information System. *Traffic Injury Prev.*

Roehler DR, Ear C, Parker EM, et al. 2015. Fatal motorcycle crashes: a growing public health problem in Cambodia. *Int J Inj Contr Saf Promot.*

Parker E, et al. 2012. Vital Signs: unintentional injury deaths among persons aged 0-19 Years—United States, 2000–2009. *MMWR.*

Levy B, et al. 2015. Trends in opioid analgesic prescribing rates by specialty, United States, 2007-2012. *Am J Prev Med.*

Mercado M, Sumner S (EIS '13), et al. 2014. Notes from the Field: increase in fentanyl-related overdose deaths — Rhode Island, November 2013–March 2014. *MMWR.*

Mercado MC, Levy BA, Robinson CL (EIS '13), Wendorf K (EIS '13), et al. (2016). Can you really swim? Validation of self- and parent reports of swim skill among children attending community pools in Washington state. *Inj Prev.*

Arriola CS (EIS '13), Mercado MC, et al. (2015). Reasons for low influenza vaccination coverage among adults in Puerto Rico, influenza season 2013-14. *Vaccine.*

Division of Unintentional Injury Prevention/Health Systems and Trauma Systems Branch/PDO/EST

NCIPC-DUIP-HSTSB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Unintentional Injury Prevention/Health Systems and Trauma Systems Branch/PDO/EST

Physical Address: Atlanta, Georgia

Primary Supervisor: John Halpin, MD, MPH, (EIS 2007), Medical Officer, jhalpin@cdc.gov

Secondary Supervisor: Rose Rudd, MSPH, Health Scientist, rvr2@cdc.gov

Background: Drug overdose has overtaken motor vehicle crashes as the leading cause of unintentional fatalities among adults in the US. Much of this increase is due to a rise in fatalities attributable to the misuse and abuse of prescription opioid pain relievers. Over the last 10 years, prescribing rates of opioid pain relievers (OPR) have increased four-fold, and closely paralleling this increase has been the fatality rate from opioid overdoses. The Prescription Drug Overdose Epidemiology and Surveillance team works to track trends in opioid prescribing practices, analyze trends in both prescription and illicit opioid fatalities, track various morbidity and mortality outcomes related to opioid use, and examine the impact of state level policies and legislation aimed at curbing the OPR overdose epidemic.

Proposed Initial Projects: Initial projects could include: (1) an analysis of trends over a four to five year period in opioid prescribing behaviors in 12 states utilizing Prescription Behavior Surveillance System (PBSS) data; (2) an analysis of trends in opioid prescribing practices by age, gender, and state utilizing PBSS data; (3) the development and refinement of a dashboard of key indicators utilized by the PBSS system, and (4) an analysis of IMS prescription data for concerning trends in opioid prescribing practices.

Proposed Surveillance Projects: 1. Evaluation of the Prescription Behavior Surveillance System, a system which utilizes aggregated, de-identified data from the Prescription Drug Monitoring Program (PDMP) data from 12 states to describe population level indicators of prescriber, patient, and pharmacy behaviors related to controlled substances. The system is a relatively new one, and continues to expand and retool its approach to analysis and deliverables. 2. Evaluation of a State-Based opioid Surveillance program. The purpose of this program is to improve the timeliness and usefulness of data collected on morbidity and mortality related to heroin and illicitly made fentanyl.

Range of Opportunities: Opportunities exist to develop expertise in designing epidemiologic studies, analyzing data, giving oral presentations, writing scientific papers, and developing external collaborations. Officers will work with a collegial, multi-disciplinary team within the Branch and participate in field investigations.

Position Strengths: Opioid overdose, including both prescription opioids and illicit drugs (e.g., Heroin and Fentanyl), is a growing priority at CDC, with greatly increased federal spending aimed at improving surveillance and public health response at the national, state, and local levels. Recently, \$50 million dollars was assigned to CDC to expand a state based program to improve and enhance prescription drug monitoring program activities and public health response, moving program support from 16 states to over 35 states within FY2016.

Special Skills Useful for this Position: Special skills useful helpful for this position include an eagerness to learn and to contribute to work on preventing opioid overdose, including both prescription and illicit drug overdoses. Data analytic skills using SAS, STATA, and Excel would also be very helpful

Available Data: Myriad data sources are available for analysis, including the Prescription Behavior Surveillance System, IMS prescription data, the National Survey on Drug Use and Health (NSDUH), Healthcare Cost and Utilization (HCUP) data, data from the new state-based Opioid Surveillance FOA which will provide data from coroner and medical examiner reports within the National Violent Death Reporting System.

Recent Publications: Centers for Disease Control and Prevention, Increases in Fentanyl Drug Confiscations and Fentanyl-related Overdose Fatalities, HAN Advisory, October 26, 2015

Rudd R., et al., Increases in Drug and Opioid Overdose Deaths – United States, 2000-2014, MMWR Morb Mortal Wkly Rep. 2016 Jan 1;64(50-51):1378-82

Centers for Disease Control and Prevention. Recommendations for Laboratory testing for Acetyl Fentanyl and Patient Evaluation and Treatment for Overdose for Synthetic Opioids. HAN Advisory. June 20, 2013

CDC, Vital Signs: Demographic and Substance Use Trends Among Heroin Users — United States, 2002–2013. MMWR 2015; 64(26);719-725

Domestic Travel: 10% **International Travel:** 0%

Available Support: The Center, Division, and Branch contain doctoral and medically trained epidemiologists, statisticians, former and current EISOs, and communications and policy staff, all with strong publication records.

Current/Recent EIS Officer: Melissa Mercado-Crespo, PhD, MSc, MA, (EIS 2013), Health Scientist, mmercadocrespo@cdc.gov

Current/Recent EIS Officer: Benjamin Levy, MD, BS, (EIS 2013), Medical Officer, xew6@cdc.gov

Current/Recent EIS Officer: Alexis Peterson, PhD, (EIS 2015), EISO, yxf5@cdc.gov

Officer Projects: EpiAid 2016-003, Ohio, 2015, Undetermined risk factors for fentanyl-related overdose
EpiAid 2014-037, Rhode Island, 2014, Investigation of undetermined risk factors for excess overdose mortality due to fentanyl
Epi-Aid 2012-022, Levy B. Undetermined risk factors associated with drug overdose deaths, New Mexico – New Mexico, Feb.2014

Officer Recent Publications: Levy, B., L. Paulozzi, K.A. Mack, C.M., “Trends in Opioid Analgesic Prescribing Rates by Specialty, United States, 2007-2012”, Am J Prev Med. 2015 Sep;49(3):409-13
Centers for Disease Control and Prevention. Notes from the field: Acetyl fentanyl overdose fatalities - Rhode Island, March-May 2013. MMWR: Morbidity & Mortality Weekly Report [serial online]. August 30, 2013; 62(34):703-704
Faul M, Dailey MW, Sugerman DE, Sasser SM, Levy B, Paulozzi LJ, 2015, Disparity in naloxone administration by emergency medical service providers and the burden of drug overdose in US rural communities., Am J Public Health, 2015 Jul;105 Suppl 3:e26-32

Consultant: Grant Baldwin, PhD, MPH, Division Director, gfb3@cdc.gov

Consultant: Rita Noonan, PhD, Branch Chief, rgn5@cdc.gov

Consultant: Matthew Gladden, PhD, (EIS 2008), Senior Scientist, gkv7@cdc.gov

Consultant: Jon Zibbell, PhD, Senior Scientist, vqu5@cdc.gov

Consultant: Deborah Dowell, MD, MPH, (EIS 2007), Division Medical Officer, gdo7@cdc.gov

Consultant: Tamara Haegerich, PhD, Deputy Associate Director for Science, DUIP, eqd4@cdc.gov

Consultant: Puja Seth, PhD, Team Lead PDO-EST, idj5@cdc.gov

Division of Violence Prevention/Research and Evaluation Branch/Youth Violence, Suicide, and Elder Maltreatment Team

NCIPC-DVP-REVB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Violence Prevention/Research and Evaluation Branch/Youth Violence, Suicide, and Elder Maltreatment Team

Physical Address: Atlanta, Georgia

Primary Supervisor: Steven Sumner, MD, MSc, (EIS 2013), Medical Officer, hvo5@cdc.gov

Secondary Supervisor: Susan Hillis, PhD, (EIS 1991), Epidemiologist, seh0@cdc.gov

Background: The Division of Violence Prevention (DVP) is the largest organization in the world addressing violence as a public health problem. It has been at the forefront of establishing the public health approach to violence prevention both within the United States and globally. DVP addresses the prevention of youth violence, suicidal behavior, child maltreatment, sexual violence, intimate partner violence, and elder abuse. Previous EIS officers were actively involved in responses to a range of violence-related topics, including the 2002 sniper attacks in Washington, DC; physical and sexual violence against children in Tanzania, Swaziland, and Haiti; gender-based violence in Belize; suicide clusters among American Indian/Alaskan Native youth and in several communities around the country; and firearm violence in Delaware. This position is housed in DVP's Research and Evaluation Branch--Youth Violence, Suicide, and Elder Maltreatment Team, though cross-Division projects can be conducted.

Proposed Initial Projects: This position is a combined domestic/global position that can be tailored based on EISO interests. Global projects will focus on international violence against children. Domestic projects will focus on 'big data,' social media analytics, machine learning, and geospatial analyses. Options for initial projects include, but are not limited to: (a) Examining link between childhood violence exposure and HIV acquisition in global Violence Against Children Surveys; (b) Identifying the influence of social network on self-harm messaging in Instagram and Twitter; (c) Development of forecasting models for geographic and temporal occurrence of interpersonal violence in Atlanta using Cardiff Model data; (d) Determining cellular phone technology access and use for electronic violence reporting and prevention programming using Zambia Violence Against Children Survey; (e) Violence hotspot mapping and evaluation of the adaptation of the U.K.'s Cardiff Violence Prevention Model to the U.S. Opportunities also exist to analyze numerous large datasets maintained by DVP.

Proposed Surveillance Projects: Multiple surveillance projects exist. The EISO can evaluate global or domestic surveillance systems. The EISO can evaluate the Cardiff Model—a unique approach which combines police and hospital data for violence mapping. Globally, the EISO could assess surveillance of HIV and violence with the national Violence Against Children Surveys. Multiple innovative opportunities exist within our social media work and could potentially include Twitter, Instagram, news media, or incidental web data, among others. The officer will also have the opportunity to conduct a surveillance evaluation for one of the following surveillance systems: National Violent Death Reporting System (NVDRS) (a system for recording details of all violent deaths in participating states); the National Intimate Partner and Sexual Violence Survey (NISVS) (a national telephone survey on sexual violence and stalking by any perpetrator and physical violence by an intimate partner, including health consequences of victimization); the Behavioral Risk Factor Surveillance System (BRFSS) (a national telephone survey on health conditions and risk behaviors); or the National Electronic Injury Surveillance System (NEISS) (injury-related emergency department data).

Range of Opportunities: Officers have access to multiple datasets to describe the public health burden, risk/protective factors, and the economic impact and trends for different forms of violence. Officers can participate in other NCIPC or CDC projects. Short-term international assignments and rapid field activities (Epi Aids) are available.

Position Strengths: This position offers diverse opportunities with both global and domestic work and can be tailored to EISO interests. Recent events in the U.S. and internationally have highlighted the high-profile and urgent need for violence prevention work. Project opportunities such as large-scale social media work and machine learning are unique to this position. Opportunities range from high level, multi-country work to evaluation of local programs in Atlanta.

Special Skills Useful for this Position: Ideal EISO is creative, hardworking, strong communicator, and interested in quantitative analysis. Experience with R, Python, and SAS is a strength. Candidates should have a willingness to work in the field of violence prevention and skills to work with people from diverse personal and professional backgrounds.

Available Data: Violence Against Children Surveys (national household surveys in multiple low- and middle-income countries); Cardiff Violence Prevention Program Implementation Data; Social media and suicide data; National Violent Death Reporting System; National Intimate Partner and Sexual Violence Survey; the Behavioral Risk Factor

Surveillance System; National Electronic Injury Surveillance System; and many other datasets.

Recent Publications: Sumner SA, Marcelin LH, Cela T, et al. Sentinel events predicting later unwanted sex among girls: A national survey in Haiti, 2012. *Child Abuse & Neglect* 2015;50:49-55.

Sumner SA, Mercado-Crespo MC, Spelke MB, et al. Use of naloxone by emergency medical services during opioid drug overdose resuscitation efforts. *Prehospital Emergency Care* 2015;Sep18:1-6.

Hillis S, Mercy J, Amobi A, et al. Global Prevalence of Past-year Violence Against Children. *Pediatrics*. 2016.

Mercado-Crespo MC, Sumner SA, Spelke MB, et al. Increase in fentanyl-related overdose deaths - Rhode Island. *MMWR*. 2014 Jun 20;63(24):531

Domestic Travel: 10% **International Travel:** 10%

Available Support: Large staff of doctoral level epidemiologists and behavioral scientists, including over 10 EIS alumni. Computer, statistical, and clerical support are available. The position's EISO supervisors are experienced and productive scientists.

Current/Recent EIS Officer: Amanda Garcia-Williams, PhD, (EIS 2015)

Current/Recent EIS Officer: Erica Spies, PhD, (EIS 2014)

Current/Recent EIS Officer: Kristin Vanderende, PhD, (EIS 2014)

Current/Recent EIS Officer: Steven Sumner, MD, (EIS 2013)

Current/Recent EIS Officer: Leah Gilbert, MD, (EIS 2012)

Current/Recent EIS Officer: Katie Fowler, PhD, (EIS 2011)

Current/Recent EIS Officer: Asha Ivey-Stephenson, PhD, (EIS 2010)

Current/Recent EIS Officer: Dawn McDaniel, PhD, (EIS 2010)

Current/Recent EIS Officer: Kevin Vagi, PhD, (EIS 2008)

Current/Recent EIS Officer: Matt Gladden, PhD, (EIS 2008)

Current/Recent EIS Officer: Joseph (J) Logan, PhD, (EIS 2006)

Officer Projects: Firearm violence, DE; Youth suicide, VA, DE, CA; Fentanyl-related overdose deaths, OH, RI; Bhutanese refugee suicide, GA, TX, AZ, NY; Domestic violence, IN; Firearm injuries, AK; Sexual, physical, and emotional abuse against children and young adults, Tanzania, Kenya; Metrorail crash injuries, Washington, DC

Officer Recent Publications: Sumner SA, Mercy JA, Dahlberg LL, et al. Violence in the United States: Status, challenges, and opportunities. *Journal of the American Medical Association* 2015; 314(5):478-488.

Sumner SA, Mercy JA, Buluma R, et al. Childhood Sexual Violence Against Boys: A Study in 3 Countries. *Pediatrics* 2016 [in press]

Sumner SA, Mercy J, Saul J, et al. Prevalence of Sexual Violence Against Children and Social Services Utilization - Seven Countries, 2007-2013. *MMWR* 2015; 64(21):565-569.

Gilbert LK, Breiding MJ, Merrick MT, et al. Childhood adversity and adult chronic disease: An update from ten states and the District of Columbia, 2010. *American Journal of Preventive Medicine* 2015; 48(3):345-349.

Fowler KA, Dahlberg LL, Haileyesus T, Annett JL. Firearm injuries in the United States. *Preventive Medicine* 2015.

Fowler KA, Gladden RM, Vagi KJ, et al. Increase in suicides associated with home eviction and foreclosure during the US housing crisis: findings from 16 National Violent Death Reporting System States, 2005-2010. *Am J Public Health*. 2015 Feb.

Logan JE, Skopp NA, Reger MA, et al. Precipitating circumstances of suicide among active duty U.S. Army personnel versus U.S. civilians, 2005-2010. *Suicide Life Threat Behav*. 2015 Feb.

Consultant: Katherine Fowler, PhD, (EIS 2011)

Consultant: Shalon Irving, PhD, (EIS 2012)

Consultant: Leah Gilbert, MD, (EIS 2012)

Consultant: Asha Ivey-Stephenson, PhD, (EIS 2010)

Consultant: Shane Davis, PhD, (EIS 2007)

Consultant: Kevin Vagi, PhD, (EIS 2008)

Consultant: Joseph (J) Logan, PhD, (EIS 2006)

Consultant: Janet Blair, PhD, (EIS 1998)

Consultant: James Mercy, PhD, (EIS 1982)

Consultant: Thomas Simon, PhD, Associate Director for Science

Consultant: Corinne (Cory) Ferdon, PhD, Deputy Associate Director for Science

Consultant: Brad Bartholow, PhD, Team Lead

Division of Violence Prevention/Surveillance Branch/Morbidity and Behavioral Surveillance Team

NCIPC-DVP-SB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Violence Prevention/Surveillance Branch/Morbidity and Behavioral Surveillance Team

Physical Address: Atlanta, Georgia

Primary Supervisor: Shalon Irving, MPH, BA, MS, PhD, (EIS 2012), Epidemiologist, sirving@cdc.gov

Secondary Supervisor: Leah Gilbert, MD, MPH, (EIS 2012), Medical Epidemiologist, wji4@cdc.gov

Background: The Division of Violence Prevention (DVP) is the largest organization in the world addressing violence as a public health problem. It has been at the forefront of establishing the public health approach to violence prevention both within the United States and abroad. DVP addresses the prevention of youth violence, suicidal behavior, child maltreatment, sexual violence, intimate partner violence, and elder abuse. Previous EIS officers were actively involved in responses to a range of violence-related topics, including the 2002 sniper attacks in Washington, DC; physical and sexual violence against children in Tanzania, Swaziland, and Haiti; gender-based violence in Belize; suicide among American Indian/Alaskan Native youth and several communities around the country; and firearm violence in Delaware. This position is located in the Surveillance Branch on the Morbidity and Behavioral Surveillance Team.

Proposed Initial Projects: Options for initial projects include, but are not limited to: (1) Examine the patterns/trends of violence-related injuries captured in emergency departments using the National Electronic Injury Surveillance System (NEISS); (2) Examine the patterns of intimate partner and sexual violence using the National Intimate Partner and Sexual Violence Survey (NISVS); (3) Examine the characteristics of homicide, suicide, legal intervention, unintentional firearm deaths and deaths of undetermined intent using data collected from death certificates, coroner/medical examiner and law enforcement reports through the National Violent Death Reporting System (NVDRS); (4) Examine risk factors for perpetration and victimization in school-associated violent deaths using media databases and police and school official reports through the School-Associated Violent Death Study (SAVD); (5) Identify risk and protective factors of violence by utilizing multiple DVP/CDC surveillance systems- for example, youth violence in the National Violent Death Reporting System (NVDRS), the School Associated Violent Death Study (SAVD), and the Youth Risk Behavior Surveillance System (YRBSS); and (6) Examine risk and protective factors associated with violence against children in low and middle-income countries using the Violence Against Children Surveys (VACS).

Proposed Surveillance Projects: The officer will have the opportunity to conduct a surveillance evaluation for the National Violent Death Reporting System (NVDRS) (a system for recording details of all violent deaths in participating states). Specifically, the proposed surveillance evaluation will involve a site visit to a Violent Death Reporting System state. Other possible surveillance systems that could be evaluated include but are not limited to: the School Associated Violent Deaths Study (captures and presents the most recent data available on school-associated homicides, suicides, and legal intervention related deaths; common features of these events; and potential risk factors for perpetration and victimization); National Intimate Partner and Sexual Violence Surveillance System (NISVSS) (a national telephone survey on sexual violence and stalking by any perpetrator and physical violence by an intimate partner, including health consequences of victimization); or the National Electronic Injury Surveillance System (NEISS) (injury-related emergency department data).

Range of Opportunities: Officers can access multiple datasets to describe the public health burden, risk/protective factors, economic impact and trends for different forms of violence. Officers may participate in NCIPC or CDC projects, short-term assignments and Epi-Aids.

Position Strengths: Position offers opportunities to creatively apply epidemiologic techniques to an emerging area of public health and the opportunity to work with a variety of people and agencies. The officer joins a team with experience in epidemiology, behavioral sciences and the application of these skills around the world.

Special Skills Useful for this Position: The successful EISO will have an interest in quantitative data and strong statistical skills with experience working with large datasets. SAS proficiency is preferred. In addition, candidate should exhibit a strong willingness to do work in the field of violence prevention, flexibility in working with people from diverse personal and professional backgrounds, and strong written skills.

Available Data: National Violent Death Reporting System (records details of all violent deaths in participating states); National Intimate Partner and Sexual Violence Survey (national survey on physical/sexual violence, psychological aggression, coercive control, and stalking); School Associated Violent Deaths Study (data from media, police, and school officials about school-associated violent deaths); Violence Against Children Survey (national surveys in low- and middle-income countries); Behavioral Risk Factor Surveillance System Adverse Childhood Experiences Module (national survey on health conditions and risk behaviors); National Electronic Injury Surveillance System (injury-related emergency department data).

Recent Publications: Basile KC, Breiding MJ, Smith SG. The Association of Disability Status and Recent Sexual Violence Victimization Among a National Sample of Women and Men. *American Journal of Public Health* epub ahead of print, February 18, 2016.

Fowler KA, Dahlberg LL, Haileyesus T, Annett JL. Firearm injuries in the United States. *Preventive Medicine* 2015; 79:5-14.

Gilbert LK, Breiding MJ, Merrick MT, Thompson WW, Ford DC, Dhingra SS, Parks SE. Childhood adversity and adult chronic disease: An update from ten states and the District of Columbia, 2010. *American Journal of Preventive Medicine* 2015; 48(3):345–349.

Domestic Travel: 10% **International Travel:** 5%

Available Support: Large staff of doctoral level epidemiologists and behavioral scientists, including EIS alumni. Computer, statistical, and clerical support are available, including NCIPC's Statistics, Programming, and Economics Branch.

Current/Recent EIS Officer: Emiko Petrosky, MD, (EIS 2013)

Current/Recent EIS Officer: Katherine (Katie) Fowler, PhD, (EIS 2011)

Current/Recent EIS Officer: Steven Sumner, MD, (EIS 2013)

Current/Recent EIS Officer: Kevin Vagi, PhD, (EIS 2008)

Current/Recent EIS Officer: Joseph (J.) Logan, PhD, (EIS 2006)

Current/Recent EIS Officer: R. Matthew Gladden, PhD, (EIS 2008)

Current/Recent EIS Officer: Kristin Vanderende, PhD, (EIS 2014)

Current/Recent EIS Officer: Asha Ivey-Stephenson, PhD, (EIS 2010)

Current/Recent EIS Officer: Leah Gilbert, MD, MSPH, (EIS 2012)

Current/Recent EIS Officer: Erica Spies, PhD, MS, (EIS 2014)

Current/Recent EIS Officer: Amanda Garcia-Williams, PhD, MPH, (EIS 2015)

Current/Recent EIS Officer: Matt Breiding, PhD, (EIS 2005)

Officer Projects: Firearm violence, DE; Youth suicide, VA, DE, CA; Fentanyl-related overdose deaths, OH, RI; Tornado response, AL; Bhutanese refugee suicide, GA, TX, AZ, NY; Domestic violence, IN; Firearm injuries, AK; Sexual, physical, and emotional abuse against children and young adults, Tanzania, Kenya; Metrorail crash injuries, Washington, DC.

Officer Recent Publications: Fowler KA, Dahlberg LL, Haileyesus T, Annett JL. Firearm injuries in the United States. *Preventive Medicine* 2015; 79:5-14.

Gilbert LK, Breiding MJ, Merrick MT, Thompson WW, Ford DC, Dhingra SS, Parks SE. Childhood adversity and adult chronic disease: An update from ten states and the District of Columbia, 2010. *American Journal of Preventive Medicine* 2015; 48(3):345–349.

Sumner SA, Mercy JA, Dahlberg LL, Hillis SD, Klevens J, Houry D. Violence in the United States: Status, Challenges, and Opportunities. *JAMA*. 2015 Aug 4;314(5):478-88.

Sumner SA, Marcelin LH, Cela T, Mercy JA, Lea V, Kress H, Hillis SD. Sentinel events predicting later unwanted sex

among girls: A national survey in Haiti, 2012. *Child Abuse & Neglect* 2015; 50: 49-55.

Breiding MJ, Smith SG, Basile KC, Walters ML, Chen J, Merrick MT. Prevalence and characteristics of sexual violence, stalking, and intimate partner violence victimization in the United States—2011. *MMWR Surveillance Summaries* 2014; 63(SS-8):1-18.

Parks SE, Johnson LL, McDaniel DD, Gladden M. Surveillance for Violent Deaths — National Violent Death Reporting System, 16 States, 2010. *Morbidity and Mortality Weekly Report* 2014; 63(SS01):1-33.

Consultant: Katherine (Katie) Fowler, PhD, (EIS 2011)

Consultant: Asha Ivey-Stephenson, PhD, MA, (EIS 2010)

Consultant: Shane Davis, PhD, (EIS 2007)

Consultant: Kevin Vagi, PhD, (EIS 2008)

Consultant: Janet Blair, PhD, (EIS 1998)

Consultant: Alex Crosby, MD, (EIS 1991)

Consultant: Jeffrey Hall, PhD, MPH

Consultant: James Mercy, PhD, (EIS 1982)

Consultant: Corrine (Cory) Ferdon, PhD

Consultant: Linda Dahlberg, PhD

Consultant: Thomas Simon, PhD

National Center on Birth Defects and Developmental Disabilities

The National Center on Birth Defects and Developmental Disabilities (NCBDDD) has a host of great opportunities available for incoming EIS Officers. Currently, NCBDDD includes three divisions - the Division of Congenital and Developmental Disorders, the Division of Human Development and Disability, and the Division of Blood Disorders. Our Center aims to identify the causes of birth defects and developmental disabilities; help children to develop and reach their full potential; and promote health and well-being among people of all ages with disabilities, including blood disorders.

Division of Congenital and Developmental Disorders/Birth Defects Branch

NCBDDD-DCDD-BDB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Congenital and Developmental Disorders/Birth Defects Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Sherry Farr, PhD, (EIS 2004), Epidemiologist, bwa0@cdc.gov

Secondary Supervisor: Cheryl Broussard, PhD, (EIS 2007), Epidemiologist

Background: Birth defects are common, costly, and critical. The work of CDC's Birth Defects Branch begins before a child is conceived and continues throughout life. The officer(s) assigned to this position use surveillance and research to understand how to prevent birth defects and improve the lives of those affected. CDC has a unique and critical role in the national effort to address birth defects through state-based tracking and public health research and has become increasingly involved in international efforts.

When the increase in the prevalence of microcephaly was first recognized in Brazil in late fall 2015, the Birth Defects Branch became involved with the public health response to examine a potential link between Zika virus infection during pregnancy and microcephaly in infants. When the Emergency Operations Center (EOC) was activated, Branch

staff were officially brought in to lead the response. Subsequently, several staff deployed to the EOC and traveled to assist other countries or U.S. territories with implementation of emergency response measures and longer-term investigations. Zika virus is a worldwide public health crisis, and it is likely that Zika virus-related activities will be ongoing for several years. EIS officers in the Birth Defects Branch are sure to be involved.

Other opportunities for EISOs in this position include data analysis projects in our Branch's priority research areas, including modifiable prenatal risk factors (medication use during pregnancy; www.cdc.gov/treatingfortwo) and birth defects that are common (e.g., congenital heart defects) or on the rise (e.g., gastroschisis). Data are easily accessible as soon as the officer identifies a project and fulfills a brief data training requirement.

Field investigation opportunities are available in response to requests from state and governmental agencies in investigating birth defects or other topics related to the Center's and CDC's missions. EISOs have also assisted other Centers in field studies.

Proposed Initial Projects: Choice of analytic, surveillance, and field projects is flexible and depends on the interests of the officer in discussion with the supervisors. Potential initial projects include:

- 1) Describe medication trends among women of childbearing age, using "big data" from healthcare and pharmacy systems
- 2) Analyze the risk of birth defects associated with use of antipsychotic medication during pregnancy
- 3) Model the potential public health impact of shifting prescribing practices from higher to lower risk medications (in terms of fetal risk) for a specific maternal condition (e.g., antidepressants, antibiotics)
- 4) Examine comorbidities and outcomes among adolescents, adults, and/or pregnant women with congenital heart defects (CHD) using surveillance data
- 5) Evaluate state implementation of a national policy of screening newborns for critical CHD
- 6) Assess racial/ethnic disparities in birth defects prevalence and/or survival
- 7) Describe maternal reports of fetal surgery in National Birth Defects Prevention Study (NBDPS)
- 8) Assess risk factors for VACTERL association of birth defects using NBDPS

Proposed Surveillance Projects: Evaluate a pregnancy drug registry; evaluate the integration of the Bronx into the New York State birth defects surveillance program; evaluate a birth defects or stillbirth surveillance system.

Range of Opportunities: Field investigations have included an outbreak investigation of influenza at a residential facility for people affected by neurologic/neurodevelopmental conditions, a cluster investigation of gastroschisis in a tribal community, and a multi-state investigation of the association between cochlear implants and meningitis. In addition to typical opportunities to complete CALs, opportunities exist to learn about innovative approaches for public health–health care integration (e.g., informatics).

Position Strengths: Strong support for epidemiology training, with award-winning scientists and mentors; unique opportunity to network and collaborate with colleagues across CDC, various partner federal agencies (e.g., FDA), and clinical and public health organizations (e.g., March of Dimes).

Special Skills Useful for this Position: Interest in maternal and child health, and strong communication skills are important.

Clinical (OB/GYN, pediatrics, family practice, nursing), pharmaceutical, or pharmacological experience would be helpful, but not necessary. Although data analysis experience will enable the EISO to begin analytic projects earlier, supervisors will ensure that any EISO without this experience receives substantial support and training in statistical programming, epidemiologic methods, and statistics.

EISO will be encouraged to attend additional training as needed and/or desired for professional development, including trainings offered to Center EIS officers (usually epidemiology-focused).

Available Data: Several national databases (e.g., NHANES, Medicaid); case-control data from the National Birth Defects Prevention Study (www.nbdps.org); surveillance data from the Metropolitan Atlanta Congenital Defects Program and the network of state-based surveillance programs.

Recent Publications: Jones AM, et al. Increasing Prevalence of Gastroschisis — 14 States, 1995–2012. *MMWR* 2016;65:23–26.

Dawson AL, et al. Antidepressant Prescription Claims Among Reproductive-Aged Women With Private Employer-Sponsored Insurance — United States 2008–2013. *MMWR Morb Mortal Wkly Rep* 2016;65:41–46.

Reefhuis J, et al. Specific SSRIs and birth defects: bayesian analysis to interpret new data in the context of previous reports. *BMJ* 2015;351:h3190.

Simeone RM, et al. Diabetes and congenital heart defects: a systematic review, meta-analysis, and modeling project. *Am J Prev Med* 2015; 48(2):195-204.

Domestic Travel: 10% **International Travel:** 10%

Available Support: Supervisors will work closely with the officer to strategically plan the 2-year fellowship, and are supportive of the officer pursuing additional opportunities that arise. Statistical and analytic support are readily available. EISOs are encouraged to collaborate with any of the consultants listed in this position description (e.g., clinicians, pharmacists, economists); supervisors will help facilitate such collaborations.

Officer Projects: Field: Investigation of neural tube defects cluster in Washington; epi/econ-aids assessing newborn screening for critical congenital heart defects (CCHD)

Analytic: Antibiotics for urinary tract infections and risk for birth defects; modeling impact of CCHD screening

Surveillance evaluations: Pregnancy Flu Line; Iowa Early Hearing Detection and Intervention Data System

Officer Recent Publications: Ailes EC, et al. Estimated number of infants detected and missed by screening for critical congenital heart defects through pulse oximetry. *Pediatrics* 2015.

Peterson C, Ailes E, et al. Late detected critical congenital heart disease among US newborns: estimating the potential impact of proposed universal screening. *JAMA Pediatr.* 2014;168(4):361-370.

Ailes EC, et al. Maternal report of prenatal diagnosis of congenital heart defects, National Birth Defects Prevention Study, 1997-2005. *Prenatal Diagnosis* 2014;34(3):214-222.

Ailes E, et al. CDC Pregnancy Flu Line: Monitoring Severe Illness among Pregnant Women with Influenza, *Matern Child Health J.* 2014;18(7):1578-82.

Ailes E, et al. Assessment of Current Practices and Feasibility of Routine Screening for Critical Congenital Heart Defects — Georgia, 2012, *MMWR* 2013; 62(15):288-91.

Investigation of a cluster of neural tube defects - central Washington, 2010-2013. *MMWR* 2013; 62(35):728.

Gill S, et al. The Effects of Opt-out Legislation on Data Collection and Surveillance of Birth Defects by the New Hampshire Birth Conditions Program- New Hampshire, United States, 1997-2007. *J Registry Manag* 2012; 39(1):19-23.

Consultant: Peggy Honein, PhD, (EIS 1997), Branch Chief

Consultant: Jill Glidewell, MSN, MPH, (EIS 2010), Epidemiologist

Consultant: Jennifer Lind, PharmD, MPH, (EIS 2012), Epidemiologist

Consultant: Janet Cragan, MD, MPH, (EIS 1991), Medical Officer

Consultant: Katie Arnold, MD, MPH, (EIS 1992), Medical Officer

Consultant: Suzanne Gilboa, PhD, Team Lead

Consultant: Sarah Tinker, PhD, Epidemiologist

Consultant: Matthew Oster, MD, MPH, Medical Officer

Consultant: Cynthia Moore, PhD, MD

Consultant: Stuart Shapira, MD, PhD

Consultant: Coleen Boyle, PhD

Consultant: Scott Grosse, PhD

Consultant: Kara Polen, MPH

Consultant: CJ Alverson, MS

Division of Congenital and Developmental Disorders/Birth Defects Branch/Epidemiology Team

NCBDDD-DBDDD-BDB-GA-2016-02

Agency Name: CDC

Division/Branch/Team/Section: Division of Congenital and Developmental Disorders/Birth Defects Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Jennita Reefhuis, PhD, (EIS 2001), Epidemiologist/Team Lead, nzs5@cdc.gov

Secondary Supervisor: Elizabeth Ailes, PhD, (EIS 2011), Epidemiologist, eha0@cdc.gov

Background: Birth defects are common, costly, and critical. The work of CDC's Birth Defects Branch begins before a child is conceived and continues throughout life. The officer(s) assigned to this position use surveillance and research to understand how to prevent birth defects and improve the lives of those affected. CDC has a unique and critical role in the national effort to address birth defects through state-based tracking and public health research and has become increasingly involved in international efforts as well.

When the increase in the prevalence of microcephaly was first recognized in Brazil in late fall 2015, the Birth Defects Branch became involved with the public health response to examine a potential link between Zika virus infection during pregnancy and microcephaly in infants. When the Emergency Operations Center (EOC) was activated, Branch staff were officially brought in to lead the response. Subsequently, several staff deployed to the EOC and traveled to assist other countries or U.S. territories with implementation of emergency response measures and longer-term investigations. Zika virus is a worldwide public health crisis, and it is likely that Zika virus-related activities will be ongoing for several years. EIS officers in the Birth Defects Branch are sure to be involved.

Other opportunities for EISOs in this position include data analysis projects in our Branch's priority research areas, including modifiable prenatal risk factors (medication use during pregnancy; www.cdc.gov/treatingfortwo) and birth defects that are common (e.g., congenital heart defects) or on the rise (e.g., gastroschisis). Data are easily accessible as soon as the officer identifies a project and fulfills a brief data training requirement.

Field investigation opportunities are available in response to requests from state and governmental agencies in investigating birth defects or other topics related to the Center's and CDC's missions. EISOs have also assisted other Centers in field studies.

Proposed Initial Projects: Choice of analytic, surveillance, and field projects is flexible and depends on the interests of the officer. Potential initial projects include:

- 1) Describe medication trends among women of childbearing age, using "big data" from healthcare and pharmacy systems
- 2) Analyze the risk of birth defects associated with use of antipsychotic medication during pregnancy
- 3) Model the potential public health impact of shifting prescribing practices from higher to lower risk medications (in terms of fetal risk) for a specific maternal condition (e.g., antidepressants, antibiotics)
- 4) Examine comorbidities and outcomes among adolescents, adults, and/or pregnant women with congenital heart defects (CHD) using surveillance data
- 5) Evaluate state implementation of a national policy of screening newborns for critical CHD
- 6) Assess racial/ethnic disparities in birth defects prevalence and/or survival
- 7) Describe maternal reports of fetal surgery in National Birth Defects Prevention Study (NBDPS)
- 8) Assess risk factors for VACTERL association of birth defects using NBDPS

Proposed Surveillance Projects: Evaluate a pregnancy drug registry; evaluate the integration of the Bronx into the New York State birth defects surveillance program; evaluate a state or territorial birth defects or stillbirth surveillance system.

Range of Opportunities: Field investigations have included an outbreak investigation of influenza at a residential facility for people affected by neurologic/neurodevelopmental conditions, a cluster investigation of gastroschisis in a tribal community, and a multi-state investigation of the association between cochlear implants and meningitis. In addition to opportunities to complete CALs, opportunities exist to learn about innovative approaches for public health–health care integration (e.g., informatics).

Position Strengths: Strong support for epidemiology training, with award-winning scientists and mentors; unique opportunity to network and collaborate with colleagues across CDC, various partner federal agencies (e.g., FDA), and clinical and public health organizations (e.g., March of Dimes).

Special Skills Useful for this Position: Interest in maternal and child health, and strong communication skills are important.

Clinical (OB/GYN, pediatrics, family practice, nursing), pharmaceutical, or pharmacological experience would be helpful, but not necessary. Although data analysis experience will enable the EISO to begin analytic projects earlier, supervisors will ensure that any EISO without this experience receives substantial support and training in statistical programming, epidemiologic methods, and statistics.

EISO will be encouraged to attend additional training as needed and/or desired for professional development, including trainings offered to Center EIS officers (usually epidemiology-focused).

Available Data: Case-control data from the National Birth Defects Prevention Study (www.nbdps.org); surveillance data from the Metropolitan Atlanta Congenital Defects Program and the network of state-based surveillance programs, several national databases (e.g., NHANES, Medicaid);

Recent Publications: Jones AM, et al. Increasing Prevalence of Gastroschisis — 14 States, 1995–2012. *MMWR* 2016;65:23–26.

Dawson AL, et al. Antidepressant Prescription Claims Among Reproductive-Aged Women With Private Employer-Sponsored Insurance — United States 2008–2013. *MMWR Morb Mortal Wkly Rep* 2016;65:41–46.

Reefhuis J, et al. Specific SSRIs and birth defects: bayesian analysis to interpret new data in the context of previous reports. *BMJ* 2015;351:h3190.

Simeone RM, et al. Diabetes and congenital heart defects: a systematic review, meta-analysis, and modeling project. *Am J Prev Med* 2015; 48(2):195-204.

Domestic Travel: 10% **International Travel:** 10%

Available Support: Supervisors will work closely with the officer to strategically plan the 2-year fellowship, but are also supportive of the officer pursuing additional opportunities that arise. Statistical and analytic support are readily available. EISOs are encouraged to collaborate with any of the consultants listed in this position description (e.g., clinicians, pharmacists, economists); supervisors will help facilitate such collaborations.

Current/Recent EIS Officer: Elizabeth Ailes, PhD, (EIS 2011)

Current/Recent EIS Officer: Simerpal (Sammy) Gill, PhD, (EIS 2010)

Current/Recent EIS Officer: M. Jill Glidewell, RN, MSN, MPH, (EIS 2010)

Officer Projects: Field: Investigation of neural tube defects cluster in Washington; epi/econ-aids assessing newborn screening for critical congenital heart defects (CCHD)

Analytic: Urinary tract infection antibiotics and birth defects; modeling impact of universal CCHD screening

Surveillance evaluations: CDC's Pregnancy Flu Line; Iowa Early Hearing Detection and Intervention Data System

Officer Recent Publications: Ailes EC, et al. Estimated number of infants detected and missed by screening for critical congenital heart defects through pulse oximetry. *Pediatrics* 2015; pii: peds.2014-3662.

Peterson C, Ailes E, et al. Late detected critical congenital heart disease among US newborns: estimating the potential impact of proposed universal screening. *JAMA Pediatr.* 2014;168(4):361-370.

Ailes EC, et al. Maternal report of prenatal diagnosis of congenital heart defects, National Birth Defects Prevention Study, 1997-2005. *Prenatal Diagnosis* 2014;34(3):214-222.

Ailes E, et al. CDC Pregnancy Flu Line: Monitoring Severe Illness among Pregnant Women with Influenza, *Matern Child Health J.* 2014;18(7):1578-1582.

CDC. Notes from the field: investigation of a cluster of neural tube defects - central Washington, 2010-2013. *MMWR* 2013; 62(35): 728.

Gill S, et al. The Effects of Opt-out Legislation on Data Collection and Surveillance of Birth Defects by the New Hampshire Birth Conditions Program- New Hampshire, United States, 1997-2007. *J Registry Manag* 2012; 39(1):19-23.

Gill SK, et al. Association between maternal age and birth defects of unknown etiology: United States, 1997–2007. *Birth Defects Res A Clin Mol Teratol* 2012;94(12):1010-8.

Consultant: Margaret Honein, PhD, (EIS 1997), Branch Chief

Consultant: Jennifer Lind, PharmD, (EIS 2012), Epidemiologist/pharmacist, vox2@cdc.gov

Consultant: Sarah Tinker, PhD, Epidemiologist

Consultant: Janet Cragan, MD, (EIS 1991), Medical Officer

Consultant: Suzanne Gilboa, PhD, Epidemiologist/Team Lead

Consultant: Jill Glidewell, RN, (EIS 2010), Health Scientist

Consultant: Kathryn Arnold, MD, (EIS 1992), Medical Officer

Consultant: Matt Oster, MD, Medical Officer

Consultant: Cynthia Moore, MD, Division Director

Consultant: Coleen Boyle, PhD, Center Director

Consultant: Stuart Shapira, MD, Center ADS

Consultant: Kara Polen, MPH, Health Scientist

Consultant: CJ Alverson, MS, statistician

Division of Congenital and Developmental Disorders/Developmental Disabilities Branch/Epidemiology Team

NCBDDD-DCDD-DDB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Congenital and Developmental Disorders/Developmental Disabilities Branch/Epidemiology Team

Physical Address: Atlanta, Georgia

Primary Supervisor: Matthew Maenner, PhD, (EIS 2013), Epidemiologist, xde8@cdc.gov

Secondary Supervisor: Schieve Laura, PhD, (EIS 1996), Team Lead, Epidemiologist, ljs9@cdc.gov

Secondary Supervisor: Nicole Dowling, PhD, Acting Branch Chief, ncd5@cdc.gov

Background: Developmental disabilities (DD) are common among children in the United States: approximately 1-2% of children have autism, over 1% of children have intellectual disability, and 4-5% of children have been diagnosed with other developmental delays. Many children with DDs have lifelong impairments, leading to activity limitations and restricted participation in society. In addition, persons with DDs are at increased risk for other chronic health conditions such as asthma, obesity, and gastrointestinal disorders, suggesting that DDs represent a complex cascade of both health and developmental effects. Epidemiologic research on the causes and consequences of many DDs is sparse, and population-based research is urgently needed to better understand the situations of persons with developmental disabilities.

The Developmental Disabilities Branch (DDB) is at the forefront of the national and international epidemiologic research efforts currently underway to better understand the prevalence and risk factors for autism, cerebral palsy, and intellectual disability and to better understand the full range of health consequences associated with DDs. Among its cornerstone activities, the Epidemiology Team in the DDB supports and participates as a site in the Study to Explore Early Development (SEED), a multi-site case control study to assess prenatal and early postnatal risk factors for autism and related disorders and to more fully characterize the spectrum of autism among US children. SEED is currently the largest epidemiologic study of autism, with over 6000 children enrolled to date. The ready-to-analyze SEED data include detailed diagnostic and behavioral information, an extensive maternal health interview, genetic samples (GWAS), medical record information, and additional questionnaires.

The officer in this position will have opportunities to undertake studies of risk factors for autism and other DDs and studies of the health consequences and health care needs associated with DDs using SEED and other large population-based datasets. These datasets include the Autism and Developmental Disabilities Monitoring (ADDM) Network, a major source of US autism prevalence data, which is maintained by the Branch's Surveillance Team. In addition, Epi Team scientists frequently collaborate with the National Center for Health Statistics on analyses of national survey data (National Health Interview Survey, National Survey of Children's Health, National Survey of Children with Special Health Care Needs) pertaining to developmental disabilities.

Proposed Initial Projects: The initial project is flexible based on the officer's interest but can include: 1) use SEED data to assess associations between maternal pre-conceptional, prenatal, and perinatal risk factors for autism 2) evaluate the utility of various machine learning algorithms for cerebral palsy surveillance. 3) Use national survey data to see if the characteristics & health conditions of children with autism have changed over time, as prevalence has increased. 4) compare prevalence of autism & developmental disabilities obtained from large-scale administrative databases (e.g., CMS, MarketScan) to ADDM, national surveys, or special education data.

Proposed Surveillance Projects: Evaluate the strengths and weaknesses of the Autism and Developmental Disabilities Monitoring Network surveillance system for either autism, intellectual disability, or cerebral palsy case-finding.

Range of Opportunities: Ample in-depth opportunities to:

- Develop analytic and data visualization skills in SAS and/or R
- Conduct large, population-based epidemiologic studies

- Collaborate with our grantees/academic partners on SEED
- Publish in peer-reviewed journals
- Give presentations to a variety of audiences

Position Strengths: Access to cutting-edge datasets, including SEED, the largest epidemiologic study of autism and ADDM, the key source of US prevalence data on autism. Work with the SEED team on both intramural and extramural research activities. Mentorship from senior scientists and leadership in DDB and NCBDDD. Flexibility; we will help you develop the right balance of analytic activities and field work. Historically, Epi Team EISOs have been encouraged to seek out and participate in as many field opportunities as they would like.

Special Skills Useful for this Position: A passion for using data to better understand the situations of persons with developmental disabilities. Proficiency in statistical programming tools (R, SAS) is helpful but not necessary. Supervisors will ensure that the EISO will have substantial opportunities to learn and use modern statistical computing tools.

Available Data: Abundant branch-collected data: SEED, ADDM; Completed project on fetal growth and child development; several ongoing national child health surveys; large health-care databases (e.g., MarketScan)

Recent Publications: Maenner MJ, Greenberg JS, Mailick MR. Association between mild intellectual disability and early mortality in men and women: evidence from a population-based cohort study. *AJIDD*. 2015

Schieve LA, et al. Does Autism Diagnosis Age or Symptom Severity Differ Among Children According to Whether Assisted Reproductive Technology was Used to Achieve Pregnancy? *JADD*. 2015

Schieve, LA., et al. Comparison of perinatal risk factors associated with autism spectrum disorder, intellectual disability, and co-occurring ASD and ID. *JADD*, 2015

Maenner MJ, Schieve LA, et al. Frequency and Pattern of Documented Diagnostic Features and the Age of Autism Identification. *JAACAP*. 2013

Domestic Travel: 5% **International Travel:** 0%

Available Support: DDB epidemiologists, statisticians, behavioral scientists, and program staff. Computer/clerical support are readily available. Our Division also has an epidemiology-focused journal club. We are also involved with other scientific interest groups, such as NCBDDD's monthly Quantitative Interest Group and the CDC R user group.

Current/Recent EIS Officer: Norbert Soke, MD, PhD, (EIS 2015), EIS Officer

Current/Recent EIS Officer: Matthew Maenner, PhD, (EIS 2013), Epidemiologist

Officer Projects: Machine learning approach for autism surveillance casefinding; characteristics of children with autism at 4 and 8 years old; national prevalence estimates of autism, cerebral palsy, and intellectual disability.

Epi investigations since 2013: Zika (Brazil), Ebola (Sierra Leone & Guinea); Firearm violence (Wilmington DE). Vitamin K deficient bleeding & MERS-CoV (Atlanta)

Officer Recent Publications: Maenner MJ, Blumberg SJ, Kogan MD, Christensen D, Yeargin-Allsopp M, Schieve LA. Prevalence of cerebral palsy and intellectual disability among children identified in two U.S. national surveys, 2011-2013. *Annals of Epidemiology* (in press)

Crowe SJ*, Maenner MJ*, Kuah, S, Erickson BR, Coffee M, Knust B, ... Towner JS., et al. Prognostic Indicators for Ebola Patient Survival. *Emerging Infectious Diseases*. 2016 22(2) *co-first authors

CDC. A plan for community event-based surveillance to reduce Ebola transmission – Sierra Leone. 2014-2015. *MMWR* 2015 Jan 30;64(3):70-3

Maenner MJ, Rice CE, Arneson CL, Cunniff C, Schieve LA, Carpenter LA, Van Naarden Braun K, Kirby RS, Bakian AV, Durkin MS. Potential Impact of DSM-5 Criteria on Autism Spectrum Disorder (ASD) Prevalence Estimates. *JAMA Psychiatry* 2014 Mar;71(3):292-300.

CDC. Notes from the field: Late Vitamin K Deficiency Bleeding in Infants Whose Parents Declined Vitamin K Prophylaxis – Tennessee, 2013. *MMWR* 2013 Nov 62(45):901-902

Consultant: Coleen Boyle, PhD, Director, NCBDDD

Consultant: Stuart Shapira, MD, PhD, Associate Director for Science, NCBDDD

Consultant: Cynthia Moore, MD, PhD, Director, DCDD

Consultant: Deborah Christensen, PhD, (EIS 2008), Surveillance Team Lead

Consultant: Lin Tian, MD, Statistician

**Division of Congenital and Developmental Disorders/Prevention Research and Translation
Branch/Prevention Research Team**

NCBDDD-DCDD-PRTB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Congenital and Developmental Disorders/Prevention Research and Translation Branch/Prevention Research Team

Physical Address: Atlanta, Georgia

Primary Supervisor: Jenny Williams, MSN, MPH, (EIS 2001), Nurse Epidemiologist, znv8@cdc.gov

Secondary Supervisor: Lorraine Yeung, MD, MPH, (EIS 2002), Medical Officer, Lcy5@cdc.gov

Background: Birth defects are major causes of infant morbidity and mortality. The Prevention Research Team (PRT) conducts research, evaluation, health communication, and education efforts to prevent birth defects – in particular, neural tube defects (NTDs). NTDs are a significant cause of infant death and major physical and cognitive disability worldwide. Conclusive research has shown that daily folic acid use can reduce a woman's risk for having a pregnancy affected by a neural tube defect. The current focus of our Team is to provide assistance to global efforts to increase intake of folic acid by reproductive-age women both domestically and abroad. Some of the ways in which we achieve this is by assisting Ministries of Health in South East Asia and eastern Africa to develop birth defects surveillance; to provide technical assistance to fortification projects in India and; to assist countries in South East Asia with the implementation of national plans. In addition, the Team is involved in the CDC Zika virus response with a particular focus on the investigations of microcephaly domestically and in Latin America.

Proposed Initial Projects: The choice of analytic and surveillance projects is flexible and depends on the interests of the officer in collaboration with the EIS supervisors. Potential initial projects include:

1. Analyzing the prevalence of known risk factors for birth defects among U.S. pregnant and non-pregnant women of childbearing age using the most recent National Health and Nutritional Examination Survey
2. Analyzing maternal medical and reproductive history and the use of medications and vitamin supplements using data from the China Children and Family Cohort Study
3. Analyzing the impact of polymorphism in folate metabolism on dose-response to folic acid intake using the China Feeding Study data
4. Assisting with implementation of a birth defects surveillance program in Southeast Asia or East Africa

Proposed Surveillance Projects: Evaluate an existing birth defects surveillance system from one of CDC NCBDDD's funded cooperative agreement grantees

Range of Opportunities: The EIS officer in this position will have the opportunity to examine the effectiveness and impact of current approaches for the prevention of birth defects, particularly NTDs, and assist with the development of prevention interventions for birth defects domestically and globally. Activities might include but are not limited to: determination of blood folate and vitamin B-12 concentrations in various populations including women of childbearing age; evaluation of maternal risk factors in conjunction with nutrient intake as they relate to NTD risk; assisting with global birth defects surveillance efforts; and assisting with global efforts to increase folic acid consumption among women of reproductive age.

Position Strengths: Large data sources, strong epidemiological support, strong ties to the World Health Organization and international birth defects monitoring programs, opportunity to engage in both analytic and programmatic activities and participate in cross-agency collaborations

Special Skills Useful for this Position: Experience in SPSS, SAS, or other statistical software program is useful, but not required. Background in maternal and child health is helpful but not necessary.

Available Data: NHANES; HealthStyles; China Children and Family Cohort Study

Recent Publications: 1. Yeung LF, Berry RJ, Moore CM. Ascertaining the Burden of Birth Defects. AJPM 2015. In press.

2. Flores A, Valencia D, Sekkarie A, Hillard CL, Williams J, Groisman B, et al. Building capacity for birth defects

surveillance in Africa: Implementation of an intermediate birth defects surveillance workshop. *Journal of Global Health Perspectives*. 2015 Dec 19. Edition 1.

3. Cordero AM, Crider KS, Rogers LM, et al. Optimal serum and red blood cell folate concentrations in women of reproductive age for prevention of neural tube defects: WHO guidelines. *MMWR Morb Mortal Wkly Rep*. 2015 Apr 24;64(15):421-3.

Domestic Travel: 10% **International Travel:** 10%

Available Support: 1. Medical and nursing epidemiologists specializing in reproductive and perinatal epidemiology, geneticists, dysmorphologists, birth defects researchers, behavioral and communications scientists, biostatisticians

2. Training opportunities include but are not limited to: workgroups, scientific interest groups, journal clubs, and statistical/software training.

Current/Recent EIS Officer: Alejandro Azofoifa, DDS, MSc, MPH, (EIS 2010)

Officer Projects: Evaluated a stillbirth surveillance system (Atlanta); analyzed oral health data from the National Health and Nutrition Examination Survey; led an Epi-Aid on illegal pesticides use and lead blood levels in children (Puerto Rico); participated in an influenza outbreak Epi-Aid (Ohio) and a birth defect investigation (Kenya)

Officer Recent Publications: Azofoifa A, Yeung LF, Alverson CJ, Beltrán-Aguilar E. Oral Health Conditions and Dental Visits Among Pregnant and Nonpregnant Women of Childbearing Age in the United States, National Health and Nutrition Examination Survey, 1999–2004. *Prev Chronic Dis* 2014;11:140212.

Azofoifa A, Yeung LF, Peacock G, et al. Infection Control Assessment after an Influenza Outbreak in a Residential Care Facility for Children and Young Adults with Neurologic and Neurodevelopmental Conditions. *Infection Control and Hospital Epidemiology* 2013; 34 (7):717-722. Available at: <http://www.jstor.org/stable/10.1086/670990>

Azofoifa A, Yeung LF, Duke CW, Gilboa SM, Correa A. Evaluation of an active surveillance system for stillbirths in metropolitan Atlanta. *Journal of registry management* 2012;39 (1):13-18. Available at: http://www.ncreausa.org/files/public/Spring_2012_V39.1.pdf

Azofoifa, A et al. Centers for Disease Control and Prevention. Severe influenza among children and young adults with neurologic and neurodevelopmental conditions - Ohio, 2011. *MMWR Morbidity and Mortality Weekly Report* 2012;60:1729-1733. Available at <http://www.cdc.gov/mmwr/pdf/wk/mm6051.pdf>

Consultant: R.J. Berry, MD, MPHTM, (EIS 1981), Medical Officer

Consultant: Michael Cannon, PhD, Team Lead

Consultant: Krista Crider, PhD, Geneticist

Consultant: Diana Valencia, MS, MS, Health Scientist

Consultant: Alina Flores, MPH, Health Scientist

Consultant: Jorge Rosenthal, PhD, Epidemiologist

Consultant: Joseph Sniezek, MD, MPH, (EIS 1985), Branch Chief

Consultant: Cynthia Moore, MD, PhD, Division Director

Consultant: Scott Grosse, PhD, Health Economist

Consultant: Stuart Shapira, MD, PhD, Associate Director for Science/Chief Medical Officer

Consultant: Coleen Boyle, PhD, Center Director

Division of Human Development and Disability/Child Preparedness Unit and Child Development Branch/Child Development Studies Team

NCBDDD-DHDD-CDB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of Human Development and Disability/Child Preparedness Unit and Child Development Branch/Child Development Studies Team

Physical Address: Atlanta, Georgia

Primary Supervisor: Rebecca Bitsko, PhD, (EIS 2005), Health Scientist, dvk2@cdc.gov

Secondary Supervisor: Eric Dziuban, MD, Medical Officer, Team Lead, esv8@cdc.gov

Background: This position is within the Division of Human Development and Disability, Child Development Studies (CDS) and Children's Preparedness Unit (CPU). Both CDS and CPU work to promote child resilience. Specifically, CDS works to promote optimal development for all children, including typically and atypically developing children, and those with neurobehavioral disorders including Attention-Deficit/Hyperactivity Disorder (ADHD) and Tourette Syndrome. CPU works to prepare for and protect children during public health emergencies, including epidemics, acts of terrorism, and natural disasters. The CPU is often activated for CDC coordinated emergency responses to focus on children's health needs, such as during responses for H1N1 pandemic influenza, unaccompanied minors at the US border, Ebola, and Flint MI water contamination.

Proposed Initial Projects: Initial projects will be tailored to the interests of the officer. Content areas of interest may include factors associated with early child development, including parenting, neurobehavioral disorders, health disparities, and preparedness issues including medical countermeasures for children, children's hospital preparedness, and technical assistance for jurisdictions involved in protecting children in emergencies, possibly involving fieldwork assignments. The EIS officer will have the opportunity to focus on public health issues around child health, while expanding analytic, program planning, and critical thinking skills. Examples of potential initial projects include:

- 1) Evaluate the role and relationships between sociodemographic, healthcare, family and community factors associated with mental, behavioral and developmental disorders in early childhood using national survey data and/or data from CDS funded community-based projects;
- 2) Evaluate social outcomes, health risk behaviors, or other factors of interest among children with ADHD using longitudinal data from the Project to Learn about ADHD in Youth;
- 3) Identify factors associated with increases in diagnosed prevalence of mental and developmental disorders (e.g. ADHD, anxiety, speech)
- 4) Evaluate gene-environment interactions related to responses to an early intervention targeted to improve outcomes of children of mothers in poverty (Legacy for Children) ;
- 5) Identify medical countermeasures used in children for accidental or intentional chemical exposures, where gaps exist in the current stockpiles, and plan for remediation of these gaps;
- 6) Facilitate a network approach for children's hospitals to prepare for public health emergencies through appropriate surge capacity planning;
- 7) Create materials for pediatric health care providers that cover basics of children's health needs within specific public health emergencies, especially in regards to children and youth with special healthcare needs.

Proposed Surveillance Projects: We have identified significant gaps in the available surveillance data for mental disorders among children [<http://www.cdc.gov/mmwr/preview/mmwrhtml/su6202a1.htm>]. Little is known about the validity of current methodology for surveillance of mental disorders using national surveys. The proposed surveillance projects would help address this: Evaluation of the National Survey of Children's Health as a surveillance system for mental/neurobehavioral disorders by evaluating changes in responses in a follow-up survey on ADHD and Tourette Syndrome.

Range of Opportunities: Across both teams, opportunities exist for descriptive and complex analyses, writing for and presenting to public and professional audiences, presenting within and outside of CDC, working with partners to disseminate public health practices, and participating in domestic and potentially international outbreak investigations and emergency responses either from headquarters or the field. CPU can specifically support the officer in identifying fieldwork opportunities.

Position Strengths: By creating a position across two groups, and mentors with research, clinical and field experience, the officer in this position will have opportunities to explore multiple aspects of the public health approach to early childhood.

Special Skills Useful for this Position: Clinical or research work with children, would be valuable, but not necessary.

Available Data: The groups have access to and expertise in analyzing data from: National Survey of Children's Health; National Survey on the Diagnosis and Treatment of ADHD and Tourette Syndrome (NS-DATA); Project to Learn about ADHD (PLAY, longitudinal data on ADHD, limited data on other disorders); MarketScan data; Legacy for Children longitudinal data.

Recent Publications: Peacock et al. Ebola Virus disease and children: what pediatric health-care professionals need to know. *JAMA Pediatrics*. 2014;168.

Bartenfeld, Peacock, Griese. Public Health emergency planning for children in chemical, biological, radiological and nuclear disasters. *J Biosecurity Bioterrorism: Biodefense Strategy, Practice, and Science*. 2014; 12.

Visser, Danielson, Bitsko, et al. Trends in the Parent-Report of Health Care Provider-Diagnosed and Medicated Attention-Deficit/Hyperactivity Disorder: United States, 2003–2011. *J Am Acad Child Adol Psychiatry*. 2014;53:34.

Bitsko, Holbrook, Visser, et al. A national profile of tourette syndrome, 2011-2012. J Dev Behav Peds. 2014;35:317.

Domestic Travel: 5% **International Travel:** 0%

Available Support: Available support includes: analytic support from team epidemiologists and statisticians; study design, interpretation, and dissemination from team health scientists; content expertise in neuroscience, child development, psychology, health communications, policy, child preparedness, field investigation, and developmental and behavioral pediatrics. The division offers additional mentoring for fellows and early career scientists.

Consultant: Melissa Danielson, MSPH, Statistician

Consultant: Joseph Holbrook, PhD, Epidemiologist

Consultant: Michael Fox, ScD, Associate Director for Science

Consultant: Jennifer Kaminski, PhD, Team Lead

National Institute for Occupational Safety and Health

Division of Surveillance, Hazard Evaluations & Field Studies/Hazard Evaluations and Technical Assistance Branch

NIOSH-DSHEFS-HETAB-OH-2016-01 Positions: 2

Agency Name: CDC

Division/Branch/Team/Section: Division of Surveillance, Hazard Evaluations & Field Studies/Hazard Evaluations and Technical Assistance Branch

Physical Address: Cincinnati, Ohio

Primary Supervisor: John Gibbins, DVM, MPH, (EIS 2006), Team Lead, jgibbins@cdc.gov

Primary Supervisor: Marie de Perio, MD, (EIS 2008), Team Leader, hgl1@cdc.gov

Secondary Supervisor: Bruce Bernard, MD, MPH, (EIS 1989), Medical Section Chief, bpb4@cdc.gov

Secondary Supervisor: Sally Brown, RN, MPH, (EIS 1997)

Background: NIOSH's Health Hazard Evaluation (HHE) Program is a congressionally mandated program established in 1971. Through the HHE program, NIOSH responds to requests for assistance from employers, employees and their representatives, and government agencies to identify chemical, biological, or physical hazards in workplaces throughout the United States. EIS officers will have a broad-based occupational epidemiology experience and can be involved in studies involving environmental and biological monitoring.

As an EIS officer in HETAB, which houses the HHE program, you will work with an experienced team of NIOSH physicians, epidemiologists, industrial hygienists, social scientists, and statisticians. We are looking for an officer with exceptional interpersonal skills to interact with workers and union and management representatives. For more information about the HHE program, visit <http://www.cdc.gov/niosh/hhe>.

Our EIS officers have the opportunity to: 1) conduct HHEs in a variety of workplaces. HHE's are equivalent to Epi-Aids in terms of completion of EIS CALS, 2) develop public health prevention strategies in a variety of workplaces, and 3) deal with emerging occupational illnesses and injuries as they occur, including responding to emergencies.

HHEs can involve a wide range of health outcomes and workplace hazards including chemical or biological exposures, heat, noise, radiation, musculoskeletal strain, and workplace stress. Our EIS officer will develop skills including questionnaire design and administration, data analysis and interpretation, and formulation of recommendations. Your work in HETAB will have direct impact upon the health and safety of workers throughout the nation, and results of your investigations will be broadly disseminated through government, scientific, and trade publications and national professional and scientific conferences.

Proposed Initial Projects: Each EIS officer will conduct approximately 4–6 HHEs during each year of assignment.

Several HHE requests come in every week, and the EIS officer will work with the supervisors for the best epi projects. Our most common evaluated industry sectors include the services, healthcare and social assistance, manufacturing, wholesale and retail trade, and public safety sectors. There are ample opportunities for projects examining a wealth of occupational exposures and health outcomes because the HHE program responds to requests nationwide. Potential projects include 1) an evaluation of visual symptoms and styrene exposures at a windblade manufacturer and 2) an evaluation of *Coccidioides* exposures among outdoor workers in hyperendemic areas.

Proposed Surveillance Projects: EIS officers can work with our NIOSH Surveillance Branch for this project and can evaluate NIOSH-funded state health department's occupational disease surveillance systems, which cover pesticide poisonings, silicosis, burns, lead etc. There are also opportunities to examine other large surveillance systems including Bureau of Workers Compensation and Bureau of Labor Statistics. EIS officers may also examine other large infectious disease and cancer surveillance systems and focus on the collection of occupation and industry information.

Range of Opportunities: We offer a variety of projects in all hazards such as chemical, biological/infectious disease, radiological, ergonomic, noise, heat, and stress nationwide. For Spanish-speaking EISOs, we have potential opportunities with Hispanic/Latino workers. We also support participation in domestic and international Epi-Aids.

Position Strengths: We have an unmatched opportunity to delve into many types of exposures and illnesses in various workplaces. Our work is challenging and interesting. We have a great mission and really help workers. Our Congressional mandate gives us access to workplaces. We have great field teams and a family-friendly work climate with helpful co-workers. We offer autonomy combined with experienced supervision. Our EIS officers have private offices, not cubicles!

Special Skills Useful for this Position: A clinical background and judgment to determine work-related symptoms are helpful but not necessary. An ability to lead public meetings with workers, employers, and attorneys. Excellent communication and writing skills. Spanish fluency is also helpful.

Available Data: We have 30 plus years of data collected from HHEs in a variety of exposures. Our Division also has data from large industry-wide cohort studies and surveillance systems.

Recent Publications: • de Perio MA et al. *Coccidioides* Exposure and *Coccidioidomycosis* among Prison Employees, California, United States. *Emerg Inf Dis* 2015; 21(6):1031–1033.

• Page EH et al. Evaluation of a multiple sclerosis cluster among nurses in an inpatient oncology ward. *J Occup Environ Hyg* 2015;12(5):D54–9.

• de Perio et al. Notes from the field: Investigation of infectious disease risks associated with a nontransplant anatomical donation center--Arizona, 2014. *MMWR*. 2014;63(17):384–385.

• West et al. Resident Aggression Toward Staff at a Center for the Developmentally Disabled. *Workplace Health Saf* 2014;62:19–26.

Domestic Travel: 20% **International Travel:** 0%

Available Support: The HETAB medical section is staffed by 6 physicians, a veterinarian, and a behavioral scientist, most of whom are former EIS officers. The industrial hygiene section has 14 masters or doctoral level industrial hygienists. Other staff includes a statistician and secretarial support. NIOSH Cincinnati covers two campuses with >450 staff including chemists, engineers, biologists, and social scientists.

Current/Recent EIS Officer: Sophia Chiu, MD, MPH, (EIS 2015)

Current/Recent EIS Officer: Kerton Victory, PhD, (EIS 2014)

Current/Recent EIS Officer: Kristin Musolin, DO, MS, (EIS 2011)

Officer Projects: • Eye and respiratory symptoms among water park employees in OH

• Exposures to synthetic oil at an aircraft parts manufacturing facility in MI

• Chemical and ergonomics concerns among nail salon workers in NY

• Silica exposures in a granite countertop fabricator in TX

• Musculoskeletal disorders among poultry processing plant employees in SC

Officer Recent Publications: • Victory et al. Ebola Transmission Linked to a Single Traditional Funeral Ceremony — Kissidougou, Guinea, December, 2014–January 2015. *MMWR* 2015; 64(14):386–388.

• Ceballos D, Beaucham C, Kurtz, K, Musolin K. Assessing occupational exposure to sea lamprey pesticides. *Int J Occup Environ Health* 2015; 21(2): 151–160.

• Musolin et al. Prevalence of Carpal Tunnel Syndrome Among Employees at a Poultry Processing Plant. *Appl Ergon* 2014;45(6):1377–1383.

• Meza et al. Investigation of respiratory and dermal symptoms associated with metal working fluids at an aircraft engine manufacturing facility. *Am J Ind Med* 2013;56(12):1394–1401.

• Meza et al. Chlorine Gas Release Associated with Employee Language Barrier — Arkansas, 2011. *MMWR* 2012;61(48):981–985.

Consultant: Allison Tepper, PhD, MPH, Branch Chief

Consultant: Douglas Wiegand, PhD

Consultant: Charles Mueller, MS, Statistician

Consultant: Judi Eisenberg, MD, MS, (EIS 2004)

Consultant: Elena Page, MD, MPH, (EIS 1997)

Division of Surveillance, Hazard Evaluations & Field Studies/Industrywide Studies Branch/Epidemiology Team

NIOSH-DSHEFS-ISB-OH-2016-01 Positions: 2

Agency Name: CDC

Division/Branch/Team/Section: DSHEFS/Industrywide Studies Branch/Epidemiology Team

Physical Address: Cincinnati, Ohio

Primary Supervisor: Candice Johnson, PhD, (EIS 2012), Epidemiologist, cyjohnson@cdc.gov

Primary Supervisor: Mary Schubauer-Berigan, PhD, Senior Research Epidemiologist, zcg3@cdc.gov

Secondary Supervisor: Sally Brown, BSN, MPH, (EIS 1997), Nurse Epidemiologist, stb9@cdc.gov

Secondary Supervisor: Christina (Tina) Lawson, PhD, Team Lead, clawson@cdc.gov

Secondary Supervisor: Lynne Pinkerton, MD, MPH, (EIS 1993), Senior Medical Officer, lep5@cdc.gov

Secondary Supervisor: Elizabeth Whelan, PhD, (EIS 1991), Branch Chief, eaw0@cdc.gov

Background: This premier research program conducts large-scale, in-depth studies examining the health effects of workplace exposures. Findings impact occupational health regulations, policies that protect workers, and recommendations for controlling hazards. Major research initiatives in cancer, chronic disease, musculoskeletal disorders, reproductive health, and epidemiologic methods with international impact are a focus of the Branch. Recent studies include: cancer incidence among flight attendants and firefighters; cancer mortality among nuclear workers (in collaboration with the International Agency for Research on Cancer); guidelines for lifting during pregnancy; parental occupational exposures and birth defects in the National Birth Defects Prevention Study (NBDPS); shift work, heavy lifting, chemical exposures and reproductive health in the Nurses' Health Study (NHS); and studies of occupation and cardiovascular disease in the Multi-Ethnic Study of Atherosclerosis (MESA) and Reasons for Geographic and Racial Differences in Stroke (REGARDS). The Branch has over 25 researchers (including current and former EISOs, epidemiologists, medical officers, industrial hygienists, and statisticians) as well as computer programmers and research assistants to support EIS officers. Fully equipped private offices are provided. The wide variety of research in the Branch will allow the EISO to work with their supervisor to choose the projects of most interest to them. EISOs also design, conduct, and complete new research studies that fall within the NIOSH mission. EISOs are encouraged to participate in a variety of NIOSH health hazard evaluations and domestic and international Epi-Aids to gain field experience.

Proposed Initial Projects: Supervisors will work with the EISO to identify the most suitable projects. (a) Investigating effects of maternal and paternal occupational exposures on birth outcomes. (b) Examining predictors of influenza vaccine coverage among healthcare workers. (c) Using workers' compensation claims to investigate injuries among veterinary personnel or other occupational groups. (d) Exploring the interaction between race or gender and ionizing radiation in cancer mortality among U.S. nuclear workers. (e) Evaluating temporal and smoking-related effect modification in lung cancer risk from radon exposure in the Colorado Plateau cohort. (f) Exploring the influence of long working hours on cardiovascular health in the REGARDS study. (g) Examining the role of occupation in immigrant health in the MESA study.

Proposed Surveillance Projects: (a) Evaluate a proposed registry of nanomaterial-exposed workers for surveillance of occupational illnesses. (b) Evaluate use of workers' compensation data for occupational injury and illness surveillance. (c) Use the National Health Interview Survey (NHIS), National Occupational Mortality Surveillance (NOMS), or other public use datasets to design an evaluation project to suit specific research interests.

Range of Opportunities: We offer a wide array of projects including studies of cancer, reproductive health, cardiovascular disease, musculoskeletal disorders, and epidemiologic methods. Officers have the flexibility to initiate projects that most interest them and collaborate with other NIOSH divisions, other CDC CIOs, and the Ohio Department of Health.

Position Strengths: (a) Outstanding opportunities for conducting and analyzing large epidemiologic studies. (b) Wide

variety of projects with potentially highly influential findings. (c) Collaborative, multi-disciplinary team approach. (d) Excellent work-life balance. (e) Private offices, onsite fitness center, walking workstation (treadmill desk). (f) Colleagues are passionate about improving workers' safety and health. (g) Cincinnati is fun!

Special Skills Useful for this Position: Strong data analysis skills, experience using SAS, strong oral and written communication skills.

Available Data: (a) Large datasets from external collaborators (MESA, NBDPS, NHS, REGARDS). (b) Public use datasets such as NHANES, NHIS, and NOMS. (c) Over 50 occupational cohorts covering a wide variety of occupations and disease endpoints. (d) Ohio Bureau of Workers' Compensation.

Recent Publications: (a) Cancer mortality through 2005 among a pooled cohort of US nuclear workers exposed to external ionizing radiation. *Radiat Res* 2015; 183(6):620–631. (b) Maternal occupational pesticide exposure and risk of congenital heart defects in the National Birth Defects Prevention Study. *BDRA* 2015; 103(10):823-833. (c) Job strain and changes in the body mass index among working women: a prospective study. *Int J Obes* 2015; 39(9):1395-1400. (d) The effectiveness of insurer-supported safety and health engineering controls in reducing workers' compensation claims and costs. *Am J Ind Med* 2014; 57(12):1398-1412.

Domestic Travel: 10% **International Travel:** 0%

Available Support: Computer programmers; statisticians; industrial hygienists; administrative support.

Current/Recent EIS Officer: John Beard, PhD, (EIS 2015), EIS Officer, yls0@cdc.gov

Current/Recent EIS Officer: Candice Johnson, PhD, (EIS 2012), Epidemiologist, cyjohnson@cdc.gov

Current/Recent EIS Officer: Alysha Meyers, PhD, (EIS 2010), Epidemiologist, itm4@cdc.gov

Officer Projects: (a) Cross-sectional study of workers exposed to carbon nanotubes and nanofibers. (b) Occupational neurodegenerative disease mortality in a nationally representative surveillance system. (c) Workers' compensation claims for musculoskeletal disorders in the wholesale and retail trade sector. (d) Endometriosis in flight attendants. (e) Workplace secondhand smoke exposure among pregnant workers.

Officer Recent Publications: (a) Occupational risk factors for endometriosis in a cohort of flight attendants. *Scand J Work Environ Health* 2015; 42(1):52-70. (b) Inequities in workplace secondhand smoke exposure among nonsmoking women of reproductive age. *Am J Public Health* 2015; 105(Suppl 3):e33-e40. (c) Work schedule and physically demanding work in relation to menstrual function: the Nurses' Health Study 3. *Scand J Work Environ Health* 2015; 41(2):194-203. (d) Workers' compensation insurance: a primer for public health. January 2014, NIOSH Pub No. 2014-110:1–42. (e) Cohort mortality study of garment industry workers exposed to formaldehyde: update and internal comparisons. *Am J Ind Med* 2013; 56(9):1027-1038. (f) Assessment of ALS mortality in a cohort of formaldehyde-exposed garment workers. *Amyotroph Lateral Scler Frontotemporal Degener* 2013; 14(5-6):353-355.

Consultant: Alysha Meyers, PhD, (EIS 2010), Epidemiologist, itm4@cdc.gov

Consultant: Teresa Schnorr, PhD, (EIS 1982), Division Director, ths1@cdc.gov

Division of Surveillance, Hazard Evaluations & Field Studies/Surveillance Branch

NIOSH-DSHEFS-SB-OH-2016-01 Positions: 2

Agency Name: CDC

Division/Branch/Team/Section: Division of Surveillance, Hazard Evaluations & Field Studies/Surveillance Branch

Physical Address: Cincinnati, Ohio

Primary Supervisor: Sara Luckhaupt, MD, MPH, (EIS 2006), Medical Officer/Team Lead, sluckhaupt@cdc.gov

Primary Supervisor: Geoffrey Calvert, MD, MPH, (EIS 1989), Medical Officer/Team Lead, jac6@cdc.gov

Secondary Supervisor: Marie Sweeney, PhD, Branch Chief

Secondary Supervisor: Marie Sweeney, PhD, Branch Chief

Secondary Supervisor: Marie Sweeney, PhD, Branch Chief, mhs2@cdc.gov

Background: The Surveillance Branch (SB) is the CDC group responsible for conducting surveillance of disease and hazards in the nation's labor force. The intent is to provide both early detection of emerging problems and continuous assessment of the magnitude and trends of job-related illnesses and hazards. Surveillance findings are used to guide prevention and intervention efforts. They are often used to establish new CDC and NIOSH public health policies, and to strengthen occupational health regulations. SB also houses NIOSH's Occupational Health Equity Program which

focuses on the identification and elimination of health disparities that manifest as adverse occupational exposures especially among immigrant and minority workers with low income and low literacy. EISOs are encouraged to participate in a variety of NIOSH health hazard evaluations and domestic and international Epi-Aids to gain field experience.

Proposed Initial Projects: SB sponsored supplemental occupational health questions in the 2015 National Health Interview Survey (NHIS), and the data will become available in the summer of 2016. The new NHIS data will present opportunities for analyses related to many topics such as: work-related low back pain, health effects of non-standard work arrangements and night shift work, and the availability and use of health promotion programs among various groups of workers. Other current areas of SB interest include: adult lead poisoning; acute pesticide-related illness and injury; musculoskeletal disorders; exposures in health care facilities; occupational cancer; and occupational hearing loss. Typically, SB EIS officers are offered a variety of opportunities to gain experience in epidemiology and public health, while making meaningful and timely contributions that protect the health of the nation's workers. Large databases from the National Center for Health Statistics, and the Bureau of Labor Statistics (BLS) provide SB EIS officers with excellent opportunities to explore occupational disease-exposure relationships. EIS officers will also work with state and local health departments to establish, improve, and evaluate effective occupational disease surveillance systems. Finally, EIS officers can also conduct field investigations to study emerging occupational health problems identified by NIOSH-affiliated surveillance systems in state and local health departments.

Proposed Surveillance Projects: There are several surveillance projects to choose from. These include systems that track or review one of more of the following: lead poisoning; acute pesticide-related illness and injury; workers' compensation claims; exposures in health care facilities; occupational cancer; occupational hearing loss; occupational infectious diseases; and, other chronic illnesses associated with work (e.g. heart disease, obesity, musculoskeletal disorders, mental disorders).

Range of Opportunities: Supervisors will work with the EIS officer to identify the most suitable projects. Choices will include: 1) Analyzing occupational health data from the 2015 NHIS; 2) investigating outbreaks of pesticide-related illness, lead poisoning, infectious disease, or other occupational health problems identified through state-based surveillance programs or from among occupational cohorts or disease registries; 3) analyzing existing datasets (e.g., NHIS, BRFSS) to identify patterns of morbidity and health behaviors among workers 4) investigating occupational contributions to health disparities.

Position Strengths: Attentive supervisory support, broad and interesting range of projects tailored to the preferences of the officer, opportunity to establish new CDC policies, family friendly work environment, safe and attractive city, confidence that all EIS requirements will be completed promptly.

Special Skills Useful for this Position: Training in epidemiology and statistics is vital. Interest in protecting worker health is also crucial. Knowledge of SAS is desirable, but training can be provided. Excellent communication skills are a benefit.

Available Data: Data for most projects described above are owned by CDC and are available for analysis. For the remaining projects, NIOSH has agreements that permit use of the data for research purposes.

Recent Publications: 1. Calvert GM, Rodriguez L, Prado JB. Worker illness related to newly marketed pesticides – Douglas County, Washington, 2014. *MMWR* 2015; 64:42-44.
2. CDC. Very high blood lead levels among adults — United States, 2002–2011. *MMWR* 2013; 62: 967-971.
3. Luckhaupt SE, Cohen MA, Li J, Calvert GM. Prevalence of obesity among US workers and associations with occupational factors. *Am J Prev Med* 2014; 46:237-48.
4. Luckhaupt et al. Prevalence of Influenza-like Illness and Seasonal and Pandemic H1N1 Influenza Vaccination Coverage among Workers—United States, 2009-2010 Influenza Season. *MMWR* 2014; 63:217-221.

Domestic Travel: 10% **International Travel:** 0%

Available Support: To support, assist, and teach officers, SB has over 35 staff professionals including five former EIS officers, medical officers, epidemiologists, statisticians, IT specialists, and industry and occupation coders. Office space, telephones, computer hardware, computer software, and fax machines are all available.

Current/Recent EIS Officer: Chia-ping Su, MD, MSc, (EIS 2015), EIS Officer, yxu4@cdc.gov

Current/Recent EIS Officer: Rebecca Tsai, PhD, (EIS 2011)

Officer Projects: Identifying occupational risk factors for infectious diseases; investigating outbreaks of acute pesticide-related illness; analyzing existing datasets to identify morbidity associated with occupational exposures, and to assess the prevalence of healthy behaviors and participation in health promotion activities; assessing the risk of specific cancers in various jobs.

Officer Recent Publications: 1. Tsai RJ, Luckhaupt SE, Schumacher P, Cress RD, Deapen DM, Calvert GM. Acute Myeloid Leukemia Risk by Industry and Occupation. *Leuk Lymphoma* 2014; 55(11):2584-91.
2. Tsai RJ, Luckhaupt SE, Sweeney M, Calvert GM. Shift Work and Cancer Screening: Do Females Who Work Alternative Shifts Undergo Recommended Cancer Screening?. *AJIM* 2014; 57(3):265-275.

3. Centers for Disease Control and Prevention (CDC authors: Tsai, RJ, Calvert GM). Occupational Phosphine Gas Poisoning at Veterinary Hospitals from Dogs that ingested Zinc Phosphide – Michigan, Iowa, and Washington, 2006-2011. MMWR 2012; 61(16):286-288.

Consultant:Jia Li,MS

Consultant: Walter Alarcon, MD, (EIS 2004)

Consultant:Toni Alterman,PhD

Consultant: AndreaSteege,PhD

Consultant: David Wall,MS

Respiratory Health Division/Field Studies Branch

NIOSH-RHD-FSB-WV-2016-01 Positions: 4

Agency Name: CDC

Division/Branch/Team/Section: RespiratoryHealthDivision/FieldStudiesBranch

Physical Address:Morgantown, West Virginia

Primary Supervisor: Randall Nett, MD, MPH, (EIS 2007), Medical Officer, gge5@cdc.gov

Primary Supervisor: Kristin Cummings, MD, MPH, (EIS 2005), Branch Chief, cvx5@cdc.gov

Primary Supervisor: Cara Halldin, PhD, (EIS 2011), Epidemiologist, vgx5@cdc.gov

Primary Supervisor: A. Scott Laney, PhD, (EIS 2006), Epidemiologist, aol4@cdc.gov

Secondary Supervisor: Rachel Bailey, DO, MPH, (EIS 2006), Medical Officer, feu2@cdc.gov

Secondary Supervisor: Sally Brown, BSN, MPH, (EIS 1997), Nurse Epidemiologist, stb9@cdc.gov

Secondary Supervisor: David Blackley, DrPH, (EIS 2013), Epidemiologist, xdc2@cdc.gov

Secondary Supervisor: Ethan Fechter-Leggett, DVM, MPVM, (EIS 2013), Epidemiologist, iun8@cdc.gov

Secondary Supervisor: Reid Harvey, DVM, MPH, (EIS 2013), Epidemiologist, iez1@cdc.gov

Background: The Respiratory Health Division at NIOSH conducts research and public health investigation of occupational lung diseases through its two branches. The Surveillance Branch examines ongoing surveillance data, e.g. from death certificates, national and state surveys, state-based surveillance activities, and a surveillance program that it conducts for coal miners in the U.S. It is also the locus for developing better means of medical surveillance of workers, such as digital radiography and serial spirometry tests, and efforts to include and use occupational information in electronic medical records. The Surveillance Branch collects medical test data on coal miners across the nation with a medical van; certifies physicians as expert in reading chest radiographs for pneumoconiosis; and certifies courses as having appropriate instruction in quality spirometry. The Field Studies Branch does workplace health hazard evaluations requested by workers, unions, or managers and has research initiatives in metal-related lung disease, flavoring-related lung disease, dampness-related respiratory diseases, work-related asthma, and nanomaterial-related health outcomes. EIS officers coming to this division can select projects in either branch, regardless of the branch location of the primary supervisor. In the last decade, many EIS officers have worked in both branches. Occupational lung disease is the most common of the illnesses associated with work conditions, and occupational health is a relatively under-resourced area of public health, considering that most adults spend one-third of their time at work. Opportunities abound to describe new occupational diseases and old diseases in new industries.

Proposed Initial Projects: Health hazard evaluation (similar to Epi-Aid) of a workplace with concerns of occupational lung disease; or taking responsibility for part of ongoing research, such as on beryllium disease, silicosis mortality in hard rock miners, cause of death in veterinarians, exposure to cleaning agents and asthma in healthcare workers, cardiovascular disease among working and former coal miners, associations between respiratory physiology and radiographic findings in coal miners, respiratory health hazards in the oil and gas industry, transplants for occupational lung diseases, smoking by occupation, idiopathic pulmonary fibrosis mortality, National Health and Nutrition Examination Survey 2007-2012, use of clinical decision support to enhance clinician use of occupational information in electronic health records.

Proposed Surveillance Projects: The Division has many surveillance opportunities that the EISO can pick from, including: coal worker surveillance data query system utility, mortality surveillance of pneumoconiosis and co-mortality from other diseases, utility of industry and occupation in medical record surveillance, utility of occupational

health indicators for state-based surveillance, utility of MarketScan data for occupational lung disease surveillance. In addition, there are surveillance project opportunities in specific workplaces with ongoing NIOSH investigation of longitudinal health indices. These include field projects in a coffee processing facility and a metal working operation.

Range of Opportunities: All work-related lung diseases including asthma, dust diseases, hypersensitivity diseases, chronic obstructive lung diseases, and rare diseases such as alveolar proteinosis and constrictive bronchiolitis; all industries across the U.S. with inhaled toxins; surveillance and analytic studies; collaboration across other branches/divisions; and supervisory support for international details apart from NIOSH work.

Position Strengths: On the banks of the Monongahela River with scenic mountain views, Morgantown provides a Center position outside Atlanta, home to a large university with adjunct faculty opportunities; in-depth expertise of mentors; international recognition of world-class science and potential impact at individual workplaces and nationally; proximity to Pittsburgh, PA and Washington, D.C.; four seasons of outdoor recreational activities. Travel typically planned weeks in advance.

Special Skills Useful for this Position: Field work benefits from personal skills in communication with workers from a wide variety of educational levels and racial/ethnic groups. Research benefits from quantitative and logical thinking. Depending on skills, EISOs pick among projects playing to their skills, interests, and need for experience.

Available Data: See project opportunities. We have data from old and current health hazard evaluations, longitudinal research studies in beryllium and coal workers, National Health and Nutrition Examination Survey 2007-2012 spirometry, exhaled NO, respiratory disease and symptom data, that can be linked with occupation and industry.

Recent Publications: See recent EIS publications given as examples.

Domestic Travel: 10% **International Travel:** 0%

Available Support: 90-person multidisciplinary division devoted to exposures causing occupational lung disease; clerical and statistical programming support; field teams to collect medical and exposure data; laboratory collaboration for genetics, animal toxicology, and exposure characterization.

Current/Recent EIS Officer: Megan Casey, RN, BSN, MPH, (EIS 2014), Nurse Epidemiologist, ydg7@cdc.gov

Current/Recent EIS Officer: David Blackley, DrPH, (EIS 2013), Epidemiologist, xdc2@cdc.gov

Current/Recent EIS Officer: Cara Halldin, PhD, (EIS 2011), Epidemiologist, vgx5@cdc.gov

Current/Recent EIS Officer: Anna-BinneyMcCague, MD, (EIS 2012)

Officer Projects: Field investigations of lung disease in pet food, snack food, chemical, windblade manufacturing facilities; evaluation of work-related asthma surveillance; analysis of respiratory disease Workers' Compensation claims; analysis of NHANES 2007-2010 data; case-series of surface coal miners with lung disease; longitudinal evaluation of respiratory health of fire fighters.

Officer Recent Publications: Blackley DJ, et al. Rapid intervention to reduce Ebola transmission in a remote village—Liberia, 2014. *MMWR* 2015;64(07):175-178.

Blackley DJ, et al. Mine size is associated with lung function abnormality, pneumoconiosis, and progressive massive fibrosis among underground coal miners. *Occup Environ Med.* 2014;71(10):690-694.

Casey ML, et al. Potential exposure to Ebola Virus from body fluids due to ambulance compartment permeability in Sierra Leone. *Prehosp Disaster Med.* 2015;30(6):625-627.

Casey M, et al. Work-related asthma cluster at a syntactic foam manufacturing facility - Massachusetts 2008-2013. *MMWR* 2015;64(15):411-414.

Halldin CN, et al. Debilitating lung disease among surface coal miners with no underground mining tenure. *J Occup Environ Health.* 2015;57(1):62-67

Halldin CN, et al. Increased respiratory disease mortality at a microwave popcorn production facility with worker risk of bronchiolitis obliterans. *PLoS One.* 2013;8(2):e57935.

McCague AB et al. Obliterative bronchiolitis in workers in a coffee-processing facility – Texas, 2008-2012. *MMWR* 2013;62(16):305-307.

McCague AB, et al. Styrene-associated health outcomes at a windblade manufacturing plant. *Am J Ind Med.* 2015;58(11):1150-1159.

Consultant: Megan Casey, RN, BSN, MPH, (EIS 2014), Nurse Epidemiologist, ydg7@cdc.gov

Consultant: Jean Cox-Ganser, PhD, Research Team Lead, jjc8@cdc.gov

Consultant: Jacek Mazurek, MD, MPH, (EIS 2002), Epidemiologist, acq8@cdc.gov

Consultant: Eileen Storey, MD, Branch Chief, eps4@cdc.gov

Office of Public Health Preparedness and Response

The Office of Public Health Preparedness and Response (OPHPR) oversees programs that comprise CDC's public health preparedness and response portfolio, including the CDC Emergency Operations Center (EOC). The Division of State and Local Readiness (DSLRL) administers CDC's Public Health Emergency Preparedness (PHEP) program. DSLRL includes the Applied Science and Evaluation Branch, which analyzes nationwide preparedness data and the Field Services Branch, which manages the Career Epidemiology Field Officer (CEFO) program. Additionally, when the EOC is activated, DSLRL establishes the State Coordination Taskforce (SCTF) to coordinate activities between CDC and health departments across the United States. SCTF has established nationwide active monitoring of persons with risk of exposure to Ebola virus, a comprehensive healthcare response plan for persons with suspected Ebola virus disease, and regional Zika virus response desks to coordinate with CDC field teams and health departments.

Division of State and Local Readiness/Applied Sciences and Evaluation Branch

OPHPR-DSLRL-ASEB-GA-2016-01

Agency Name: CDC

Division/Branch/Team/Section: Division of State and Local Readiness/Applied Sciences and Evaluation Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Tanya LeBlanc, PhD, MS, (EIS 2000), Sr. Lead Health Scientist, tq33@cdc.gov

Secondary Supervisor: Sara Vagi, PhD, MS, (EIS 2008), Health Scientist, svagi@cdc.gov

Background: The mission of the Applied Science and Evaluation Branch (ASEB) is to strengthen public health preparedness, response, and recovery through science and evaluation. ASEB collects and analyzes data related to performance accountability including relevant information during an EOC activation and post event after-action reports. ASEB offers an EISO epidemiology experience through applied science and evaluation focused on state and local preparedness. The ASEB EIS officer is well positioned to conduct applied epidemiology to ascertain public health consequences of large scale events and to inform readiness and resilience science. Additionally, the ASEB EISO will participate in real-world experiences through our direct linkage to staffing the State Coordination Taskforce (recently activated in response to Ebola, Zika, and the Flint, MI water crisis) and can participate in field investigations in collaboration with our state and local embedded CEFOs (many of whom are EIS alumni).

Proposed Initial Projects:

1. Assess capabilities in preparedness for the rapid delivery of medical countermeasures during a large-scale public health emergency. Data include information gathered using a structured evaluation tool for over 130 US state and local jurisdictions. EISO could perform descriptive analyses, data reduction (e.g. principal components analysis) to inform improvement of tool, and/or design analyses of their own interests. Officer could also accompany a specialist to a site visit to conduct a medical countermeasures - operational readiness review.
2. Use national public health response after-action reports to develop health promotion and resiliency. Collection of over 200 after-action reports from emergency response exercises and events over the past 5 years. EIS Officer could conduct qualitative descriptive and thematic analyses to identify promising practices in emergency response. EISO would design own analyses with direction from supervisor and other subject matter experts. Site visits to discuss certain reports could be arranged.
3. Using the BioSense national medical record data system, conduct a social ecological analysis of emergency department morbidity trends following large-scale public health events like Ebola.
4. Evaluate impact of large scale public health events (e.g. Hurricane Sandy) on vulnerable populations using large medical claim data sources such as Marketscan (for private coverage), and Medicare/Medicaid available for data mining.
5. Collaborate with Field Services Branch on a project with a state or local health department under the supervision of a CEFO. Examples include design and implementation of a Community Assessment for Public Health Emergency Response (CASPER) to prepare for or respond to a disaster, an infectious disease outbreak investigation, and an emergency preparedness exercise or training event.

Proposed Surveillance Projects: Evaluate the national system for the active monitoring of persons potentially exposed to Ebola. All 50 states, two local jurisdictions, and eight territories submitted weekly reports to CDC with counts of persons monitored for Ebola Virus Disease during November 2014–December 2015. This system represents the first nationwide monitoring of its type. Evaluation will incorporate information from jurisdictions monitoring large numbers and guide implementation decisions for a similar system in future events.

Range of Opportunities: Broad range of opportunities for research and program projects, training and hands-on development in emergency preparedness and response. Applied field opportunities exist through SCTF and with DSLR Field Services Branch.

Position Strengths: ASEB is a dynamic branch with a diverse cadre of professionals eager to teach and mentor. Supervisors and Branch Chief are committed to EIS as demonstrated by over 20 years combined experience, and will provide a flexible experience tailored to the EIS officer's unique goals and interests. The Branch Chief has previously served as the Associate Director of the EIS program and is committed to providing a high quality environment for learning. The EIS officer will leave this position with strong epidemiology skills, a scientific portfolio, and experience in public health emergency preparedness and response.

Special Skills Useful for this Position: The following skills would be useful but not required for this position:

- Critical thinking and application of scientific principles to complex problems
- Data management and analysis (strong quantitative and/or qualitative)
- Applied program evaluation
- Written and oral communication skills
- Research project organization and management
- Strong ability to work independently and in groups
- Self-motivation and the ability to meet deadlines

Available Data: ASEB is rich in both quantitative and qualitative data. Datasets include PHEP application, performance, and evaluation data; data from all 62 PHEP awardees on Pandemic Influenza Readiness; qualitative and quantitative survey data on community recovery and mental health; national active monitoring data of persons potentially exposed to Ebola virus; medical countermeasures assessment of state and local health departments.

Recent Publications: • Stehling-Ariza T, Fisher E, Vagi S, et al. (2015) Monitoring of Individuals with Risk of Exposure to Ebola Virus Disease — United States, November 3, 2014–March 8, 2015. *MMWR Morb Mortal Wkly Rep*, 64(25), 685–689.

- 2010 H1N1 Response related manuscripts (*The Lancet Infectious Diseases*, *Pediatrics*, *Journal of School Health*, *PLoS One* *Prehospital Disaster Medicine*)
- Household preparedness and differences in special subpopulations (*American Journal of Public Health*, *Disaster Medicine and Public Health Preparedness*)
- Translating public health research to public health practice (*Journal of Public Health Management and Practice*, *Prehospital Disaster Medicine*)

Domestic Travel: 10% **International Travel:** 10%

Available Support: Multi-disciplinary branch of epidemiologists, program evaluators, psychologists, sociologists/anthropologists, data managers, clinician, and economist.

Current/Recent EIS Officer: Tasha Stehling-Ariza, PhD, MPH, (EIS 2014), EIS Officer - 2nd year, ydi9@cdc.gov

Officer Projects: • SCTF: Data lead for domestic active monitoring of persons at risk of exposure to Ebola virus

- Ebola Deployments: Sierra Leone (6 weeks) epi/contact tracing; Ghana (6 weeks)/epi-surveillance focus
- SE US TORNADOS: Research, community recovery and mental health of Alabama and Mississippi residents affected by 2011 severe tornados

Officer Recent Publications: Stehling-Ariza T, Fisher E, Vagi S, Fechter-Leggett, E, Prudent, N, Dott, M, Daley R, Avchen RN. (2015) Monitoring of Individuals with Risk of Exposure to Ebola Virus Disease — United States, November 3, 2014–March 8, 2015. *MMWR Morb Mortal Wkly Rep*, 64(25), 685–689.

Stehling-Ariza T, Rosewell A, Moiba SA, et al., The impact of active surveillance and health education on an Ebola virus disease cluster—Kono District, Sierra Leone, 2014–2015. Submitted to *International Journal of Infectious Disease*

Stehling-Ariza T, Vagi SJ, Rose, D, Carbone, E. Long-term emotional and behavioral effects of the 2011 tornados on children in Alabama and Mississippi. [In process]

Buttke, D., Vagi, S.J., Bayleyegn, T., et al. (2013). Communication, information seeking, and evacuation plans for a disaster using Community Assessment for Public Health Emergency Response in the Gulf Coast counties of Alabama and Mississippi, 2011, *Journal of Emergency Management*, 11(3): 213-223.

Buttke, D., Vagi, S.J., Bayleyegn, T., et al. (2012). Mental Health Needs Assessment after the Gulf Coast Oil Spill—Alabama and Mississippi, 2010. *Prehospital and Disaster Medicine*, 27(5): 401-408.

Consultant: Judy Kruger, PhD, MS, (EIS 2001), ASEB Epidemiologist, ezk0@cdc.gov

Consultant: Rachel Avchen, PhD, MS, (EIS 2000), ASEB Chief, rja5@cdc.gov

Consultant: Randolph Daley, DVM, MPH, (EIS 1997), Field Services Branch Chief, wcd0@cdc.gov

Consultant: Theresa Smith, MD, MPH, (EIS 1997), DSLR Associate Director for Science

Consultant: Mary Dott, MD, MPH, (EIS 1999), Field Services Branch CEFO Supervisor, mud9@cdc.gov

Consultant: Brant Goode, MPH, BSN, (EIS 2004), Field Services Branch CEFO Supervisor, bwc2@cdc.gov

Consultant: Eddie Weiss, MD, MPH, (EIS 2004), Field Services Branch CEFO Supervisor, bwj0@cdc.gov

Consultant: Victor Caceres, MD, MPH, (EIS 1995), Field Services Branch TEFA Supervisor

Consultant: Sam Groseclose, DVM, MPH, (EIS 1991), OPHPR Associate Director for Science

National Center for Birth Defects and Developmental Disabilities

Division of Congenital and Developmental Disorders/Birth Defects Branch

NCBDDD-DCDD-BDB-GA-2016-03

Agency Name: CDC

Division/Branch/Team/Section: Division of Congenital and Developmental Disorders/Birth Defects Branch

Physical Address: Atlanta, Georgia

Primary Supervisor: Sarah Tinker, PhD

Secondary Supervisor(s): Jill Glidewell, RN, MSN, MPH (EIS '10)

Secondary Supervisor(s): Suzanne Gilboa, PhD, MHS

Background: Birth defects are common, costly, and critical. The work of CDC's Birth Defects Branch begins before a child is conceived and continues throughout life. The officer(s) assigned to this position use surveillance and research to understand how to prevent birth defects and improve the lives of those affected. CDC has a unique and critical role in the national effort to address birth defects through state-based tracking and public health research and has become increasingly involved in international efforts. When the increase in the prevalence of microcephaly was first recognized in Brazil in late fall 2015, the Birth Defects Branch became involved with the public health response to examine a potential link between Zika virus infection during pregnancy and microcephaly in infants. When the Emergency Operations Center (EOC) was activated, Branch 179 staff were officially brought in to lead the response. Subsequently, several staff deployed to the EOC and traveled to assist other countries or U.S. territories with implementation of emergency response measures and longer-term investigations. Zika virus is a worldwide public health crisis, and it is likely that Zika virus-related activities will be ongoing for several years. EIS officers in the Birth Defects Branch are sure to be involved. Other opportunities for EISOs in this position include data analysis projects in our Branch's priority research areas, including modifiable prenatal risk factors (medication use during pregnancy; www.cdc.gov/treatingfortwo) and birth defects that are common (e.g., congenital heart defects) or on the rise (e.g., gastroschisis). Data are easily accessible as soon as the officer identifies a project and fulfills a brief data training requirement. Field investigation opportunities are available in response to requests from state and governmental agencies in investigating birth defects or other topics related to the Center's and CDC's missions. EISOs have also assisted other Centers in field studies.

Proposed Initial Projects: Choice of analytic, surveillance, and field projects is flexible and depends on the interests of the officer in discussion with the supervisors. Potential initial projects include:

- 1) Describe medication trends among women of childbearing age, using "big data" from healthcare and pharmacy systems
- 2) Analyze the risk of birth defects associated with use of antipsychotic medication during pregnancy
- 3) Model the potential public health impact of shifting prescribing practices from higher to lower risk medications (in terms of fetal risk) for a specific maternal condition (e.g., antidepressants, antibiotics)
- 4) Examine comorbidities and outcomes among adolescents, adults, and/or pregnant women with congenital heart defects (CHD) using surveillance data
- 5) Evaluate state implementation of a national policy of screening newborns for critical CHD
- 6) Assess racial/ethnic disparities in birth defects prevalence and/or survival
- 7) Describe maternal reports of fetal surgery in National Birth Defects Prevention Study (NBDPS)
- 8) Assess risk factors for VACTERL association of birth defects using NBDPS

Proposed Surveillance Projects: Evaluate a pregnancy drug registry; evaluate the integration of the Bronx into the New York State birth defects surveillance program; evaluate a birth defects or stillbirth surveillance system.

Range of Opportunities: Field investigations have included an outbreak investigation of influenza at a residential facility for people affected by neurologic/neurodevelopmental conditions, a cluster investigation of gastroschisis in a tribal community, and a multi-state investigation of the association between cochlear implants and meningitis. In addition to typical opportunities to complete CALs, opportunities exist to learn about innovative approaches for public health–health care integration (e.g., informatics).

Position Strengths: Strong support for epidemiology training, with award-winning scientists and mentors; unique opportunity to network and collaborate with colleagues across CDC, various partner federal agencies (e.g., FDA), and clinical and public health organizations (e.g., March of Dimes).

Special Skills Useful for this Position: Interest in maternal and child health, and strong communication skills are important. Clinical (OB/GYN, pediatrics, family practice, nursing), pharmaceutical, or pharmacological experience would be helpful, but not necessary. Although data analysis experience will enable the EISO to begin analytic projects earlier, supervisors will ensure that any EISO without this experience receives substantial support and training in statistical programming, epidemiologic methods, and statistics. EISO will be encouraged to attend additional training as needed and/or desired for professional development, including trainings offered to Center EIS officers (usually epidemiology-focused).

Available Data: Several national databases (e.g., NHANES, Medicaid); case-control data from the National Birth Defects Prevention Study (www.nbdps.org); surveillance data from the Metropolitan Atlanta Congenital Defects Program and the network of state-based surveillance programs.

Recent Publications: Jones AM, et al. Increasing Prevalence of Gastroschisis — 14 States, 1995–2012. *MMWR* 2016;65:23–26.
Dawson AL, et al. Antidepressant Prescription Claims Among Reproductive-Aged Women With Private Employer- Sponsored Insurance — United States 2008–2013. *MMWR Morb Mortal Wkly Rep* 2016;65:41–46.

Reefhuis J, et al. Specific SSRIs and birth defects: bayesian analysis to interpret new data in the context of previous reports. *BMJ* 2015;351:h3190.180

Simeone RM, et al. Diabetes and congenital heart defects: a systematic review, meta-analysis, and modeling project. *Am J Prev Med* 2015; 48(2):195-204.

Domestic Travel: 10% InternationalTravel: 10%

Available Support: Supervisors will work closely with the officer to strategically plan the 2-year fellowship, and are supportive of the officer pursuing additional opportunities that arise. Statistical and analytic support are readily available. EISOs are encouraged to collaborate with any of the consultants listed in this position description (e.g., clinicians, pharmacists, economists); supervisors will help facilitate such collaborations.

Officer Projects: Field: Investigation of neural tube defects cluster in Washington; epi/econ-aids assessing newborn screening for critical congenital heart defects (CCHD)

Analytic: Antibiotics for urinary tract infections and risk for birth defects; modeling impact of CCHD screening Surveillance evaluations: Pregnancy Flu Line; Iowa Early Hearing Detection and Intervention Data System

Officer Recent Publications:

Ailes EC, et al. Estimated number of infants detected and missed by screening for critical congenital heart defects through pulse oximetry. *Pediatrics* 2015.

Peterson C, Ailes E, et al. Late detected critical congenital heart disease among US newborns: estimating the potential impact of proposed universal screening. *JAMA Pediatr.* 2014;168(4):361-370.

Ailes EC, et al. Maternal report of prenatal diagnosis of congenital heart defects, National Birth Defects Prevention Study, 1997-2005. *Prenatal Diagnosis* 2014;34(3):214-222.

Ailes E, et al. CDC Pregnancy Flu Line: Monitoring Severe Illness among Pregnant Women with Influenza, *Matern Child Health J.* 2014;18(7):1578-82.

Ailes E, et al. Assessment of Current Practices and Feasibility of Routine Screening for Critical Congenital Heart Defects — Georgia, 2012, *MMWR* 2013; 62(15):288-91.

CDC. Notes from the field: investigation of a cluster of neural tube defects - central Washington, 2010-2013. *MMWR* 2013; 62(35): 728.

Gill S, et al. The Effects of Opt-out Legislation on Data Collection and Surveillance of Birth Defects by the New Hampshire Birth Conditions Program- New Hampshire, United States, 1997-2007. *J Registry Manag* 2012; 39(1):19-23.

Consultant(s): Drs. Margaret (Peggy) Honein (EIS '97), Jill Glidewell (EIS '10), Jennifer Lind (EIS '12), Janet Cragan (EIS '91), Katie Arnold (EIS '92), Suzanne Gilboa, Sarah Tinker, Matt Oster, Cynthia Moore, Coleen Boyle, Stuart Shapira, Scott Grosse, Ms. Kara Polen (communications), and Mr. CJ Alverson (statistician).