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DBD BULLETIN

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regards from

Rana...

This end of the year DBD Bulletin is more than just an opportunity to highlight some of our activities. This issue speaks for all the great work going on at the division.

Thank you for all your tireless efforts that have helped controlling outbreaks, preventing disease, accelerating vaccine introduction, monitoring impact of various interventions, thus saving and improving lives all over the United States and the world.

I wish you restful and happy holidays with all your loved ones!

Rana

DIRECTOR'S SPOTLIGHT

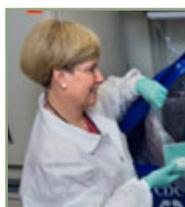
A Year in Review

Best wishes to DBD staff retiring this year. Thank you for your outstanding dedication and contributions that have added tremendously to DBD's success.



DBD Immunology Laboratories Chief **George Carlone**, PhD has done extensive work on evaluation of bacterial vaccines, development of assays for vaccine evaluation, and training on immunologic techniques. He developed and standardized reference assays for vaccine evaluation (e.g., ELISA, serum bactericidal assays, opsonophagocytosis, adherence assays, proteomics, animal models, luminex, flow cytometric applications, analysis models). George was involved early on in the development of the vaccine MenAfriVac™ that is being used with great success to protect against meningitis in Africa—he directed serological evaluations in PATH's sponsored trials for the introduction and licensure of the vaccine. About that work, George has said, "Our tests on serum from nearly 5,000 study participants aided development of this new vaccine—we are all proud to be a part of this global collaboration that has the potential to save thousands of lives." With more than 170 publications, he has received numerous awards and recognitions; his contributions are far reaching with 17 granted patents and 14 patents applied for. He has been with CDC for 32 years.

Scott E. Johnson, MS, is lead of the Serum Bactericidal Antibody Assay Team in MVPDB's Immunology Laboratories. He has participated on various Legionnaires' disease studies, including isolating and identifying Legionella by using chicken egg yolk culturing techniques and cellular fatty acid mapping through gas liquid chromatography analysis. He is the curator for CDC's stock inventories of leptospirosis and anthrax. Scott has worked in the pneumococcal and meningococcal vaccine development for 19 years, where he advanced measurement of functional serum bactericidal antibodies (SBA) for four major meningococcal serogroups including one used for licensure of meningococcal vaccines including MenAfriVac™. He was recognized in 1979 with the CDC Commendation Award "For significant contributions in the isolation of Legionnaires' disease bacterium from inanimate sources;" in 1983 was co-recipient of the Charles C. Shepard Award for "Outstanding contribution to CDC/ATSDR mission and public health," and in 1990 received a Special Service Award for "Contribution to the development of a highly sensitive antibody assay for evaluating vaccines against meningococcal disease." Scott retires this year after 39 years with CDC.



MVPDB laboratorian **Sandy Martin** was one of the HHSinnovates Winners in 2010 for her work with colleagues on the CDC Lab Recycling Pilot Program they designed to help avoid substantial dumping of plastic containers which had held biohazard materials into waste landfills by using a process for cleaning the containers after use to be suitable for recycling. Sandy has been a member of the Sigma Xi Scientific Research Society for several years and was secretary for the CDC Chapter of Sigma Xi from 2010 to 2012. Sandy has been with CDC for 12 years and has always promoted quality as an individual responsibility.

After receiving her PhD in microbiology from Emory University, **Jacquelyn Sampson** decided on a career in research rather than teaching and joined CDC. That was 32 years ago and she has since acquired 8 patents (6 granted and 2 pending). Her career has focused on improving diagnosis and prevention of the leading bacterial cause of pneumonia. Sampson was a key member of the team that received the 2009 CDC Director's Innovation Award in research and technology for her work with development of pneumococcal surface antigen A(PsaA), a protein that is present in all pneumococci and has been evaluated as a vaccine candidate. Jackie says, "I have found a great pleasure in mentoring minority students interested in research careers."



Elizabeth Zell, MStat, is a mathematical statistician in the DBD OD. Elizabeth is credited with helping to develop and implement the [National Immunization Survey](#) and is an internationally recognized expert on methods for vaccine coverage assessment and vaccine evaluation. Among her many projects of note has been her work on early onset neonatal sepsis, a range of studies documenting the effects of PCV7 on pneumococcal disease in the United States, and studies of pneumococcal vaccine effectiveness in Africa. She has been the lead statistician for ABCs, one of CDC's premier surveillance and research platforms, and much of the success of that program is because of Elizabeth's work. Elizabeth says, "Not all statistics is complex data analysis; sometimes the simplest descriptive analysis tells the important story about a disease or outbreak." Elizabeth has been with CDC for 32 years.



Quarter 1



Leonard Mayer recorded a discussion of invasive meningococcal disease based on a study about invasive meningococcal capsular group Y disease in England and Wales in CDC's [Emerging Infectious Diseases](#) ([podcast](#)).

Amanda Cohn explained the Advisory Committee on Immunization Practices' (ACIP) fall 2011 recommendation for a booster dose of meningococcal conjugate vaccine for adolescents in the 2012 [Medscape video](#) "Clarifying Meningococcal Booster Dose Recommendations."

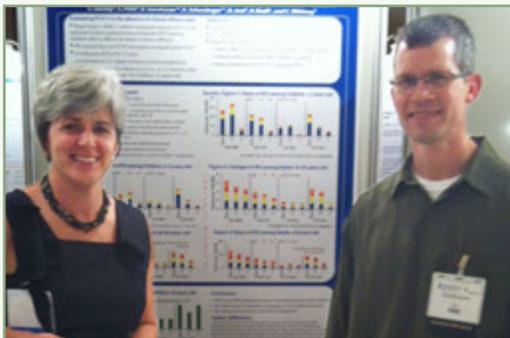
Kathleen Dooling discussed pneumonia, preventive steps, and the need to stay up-to-date on vaccinations in her [podcast on preventing pneumonia](#).

Change in Administration for Anthrax Vaccine

Data from CDC's Anthrax Vaccine Research Program (AVRP) provided the evidence for FDA approval in May of changes to the label for pre-exposure use of anthrax vaccine adsorbed (AVA, BioThrax). Under the new 3-dose primary series recommendation, AVA will safeguard 66% more personnel in one-third the time with an anticipated 50% reduction in local adverse events, and will require only half the number of doses compared with the original licensed schedule. It will also provide a significant cost reduction per schedule. FDA approval of a 3-dose

Cynthia Whitney and Matthew Moore attended the 8th International Symposium on Pneumococci and Pneumococcal Diseases (ISPPD) in Iguacu Falls, Brazil, where RDB staff presented 28 oral and poster presentations. Jennifer

Verani, Lesley McGee, Laura Conklin and Gloria Carvalho also participated in the bi-annual symposium that raises global awareness and improves standards of diagnosis, prevention and treatment of pneumococcal disease.



primary series for AVA (BioThrax) represents the successful culmination of this CDC program. DBD/MVPDB will continue to work with the AVA manufacturer to explore additional reductions in the booster schedule. The Microbial Pathogenesis and Immune Response (MPIR) Laboratory and Brian Plikaytis from the Statistics Office made significant contributions to this research.



Elizabeth Zell with Claire von Mollendorf from the Centre for Respiratory Diseases and Meningitis (CRDM) in Johannesburg, South Africa, helping Claire learn to use IVEware to multiply impute for missing data. Adjusting for missing information on HIV status is needed for monitoring pneumococcal disease trends through the GERMS surveillance system.

Tdap Vote: Streamlining the Adult Recommendation

In February, the Advisory Committee on Immunization Practices (ACIP) voted to recommend that all adults aged 19 years and older who have not yet received a dose of Tdap should receive a single dose. Tdap can be administered regardless of interval since last tetanus or diphtheria-toxoid containing vaccine.



In 2012, DBD staff conducted lab trainings and workshops in 15 international locations, including in Australia, Brazil, Burkina Faso, Central African Republic, Cameroun, DR Congo, Gambia, Ghana, Guatemala, Kenya, Vellore, India, Korea, Mongolia, Mozambique and Thailand.

Quick Facts with Numbers

5 Tuesday Morning Seminars

5 Websites

4 ACIP Votes

55 Human Subjects Actions

6 Podcasts

2 Twitter Chats

4 New EISO Officers

3 Health Observances Celebrated

15 International Lab Trainings

4 CDC Connects Articles

1 Joint Statements

8 Print Materials

300+ Documents Cleared by ADS

Quarter 2

Pertussis - a Never-Ending Story?

Chinese immigrants in Washington (WA) state call pertussis the “100-day cough.” Other ethnic groups in the state, the first in the nation to declare a pertussis epidemic in 2012, have no words in their own language to describe pertussis, or whooping cough.

Pertussis is a highly contagious bacterial disease that affects all ages, but is most dangerous for infants. To prevent pertussis, 5 doses of DTaP vaccine are given to children and Tdap is recommended for everyone 11 years or older, especially pregnant women and those in close contact with infants.

The United States has had record-high numbers of reported cases of pertussis this year, with over 36,000 cases and 16 deaths reported through late November. In April 2012, in WA—where there is a widely diverse ethnic population often isolated by language, customs and location—the state’s Secretary of Health declared a pertussis epidemic. By June 16, there were 2,520 cases reported (37.5 cases per 100,000 residents) in WA, a 1,300% increase compared with the same period in 2011. This is the highest number of pertussis cases reported in WA since 1942. Compared with the incidence in WA, the national incidence for the same period in 2012 was lower overall (4.2 cases per 100,000 population).

In response to this ongoing epidemic, the WA State Department of Health established an incident command structure to coordinate epidemic response and surveillance activities and reached out to CDC for technical support. CDC mobilized very quickly and DBD responded by providing personalized outreach to media, consumers and providers, as well as epidemiologic and laboratory support and leadership on guidelines and policy. Our involvement is on-going.

During the height of the declared epidemic, DBD assisted WA by checking the accuracy of the lab testing performed in local hospitals and laboratories. To further confirm *Bordetella pertussis* as the etiology and evaluate the contribution of other *Bordetella* species, multi-target PCR assays were performed on a subset of specimens submitted to CDC by WA Public Health Laboratories and a commercial laboratory.

Last spring, CDC collaborated with the WA State Department of Health on a series of media roundtables about the pertussis epidemic, health risks, and the importance of vaccinating children and adults. Media outlets serving WA Native American, Asian American, Chinese, Japanese, Korean, Vietnamese, Filipino, Hispanic and African immigrant communities participated in the media roundtables that were designed to drive home to ethnic communities the critical importance of getting vaccinated.

Stacey Martin (left) took part in the media roundtable to help educate WA’s very diverse media about the devastation of pertussis so that they could inform their audiences—in their own languages—of how important it is to protect babies and young children—really everyone in the family—through vaccination. She helped to put a human face on the pertussis epidemic.



Information about pertussis was translated into multiple languages and made available on the Internet. Roadside billboards still dot the WA

skyline and colorful poster ads on mass transit remain in place. Our healthcare provider education is focusing on clinical presentation, appropriate diagnostic testing, and treatment and prevention recommendations with specific emphasis on vaccination to prevent transmission.

Nationally, and in WA, pertussis is being reported in teenagers. DBD took advantage of the



EIS Officer Sarah Meyer (left) and Julia Chang (right), a CDC experience fellow, reviewed medical records at a Seattle, WA, hospital.

opportunity to learn how well and for how long Tdap vaccines protect teenagers against pertussis by collaborating with the health department on a large-scale evaluation conducted by rotating teams of epidemiologists who looked at the state’s vaccine database and made visits to doctors’ offices to review vaccine histories of teenagers with and without pertussis.

By the end of September, 4,190 cases of pertussis had been reported in WA, almost 10 times more than the same time period in 2011 when 427 cases were reported. Given the number of cases, it is

fortunate that there have been no reported fatalities.

Tom Clark appeared on CNN and WebMD to discuss the WA outbreak and, in his editorial commentary published in the journal *Pediatrics* in August, Tom noted, “92 to 95% of the population must be protected in order to halt transmission of pertussis. While childhood diphtheria, tetanus toxoid and acellular pertussis vaccine (DTaP) coverage is 95%, the vaccines currently in use are approximately 85% effective overall; the evidence is increasing that immunity may wane more rapidly than anticipated.”



The ongoing pertussis epidemic in WA reflects the evolving epidemiology of pertussis in the United States. The collaboration between the agency’s staff in DBD and WA is a success story for what can be accomplished working at the state and local level to address disease outbreaks. The focus of prevention and control efforts has to be the protection of infants and others at greatest risk for severe disease and improving vaccination coverage in adolescents and adults, especially those who are pregnant. Pertussis vaccination remains the single most effective strategy for prevention of infection.

DBD continues to keep the Advisory Committee on Immunization Practices (ACIP) informed of our findings on outbreaks and surveillance activities in WA. ACIP will consider this information to carefully help guide discussions on how best to use vaccines to control pertussis, and whether additional vaccine doses might be needed.



Spanish-language billboard about pertussis in Washington state

Quarter 2 (cont.)



DBD staff Pam Cassiday, Amanda Faulkner, Cindy Hatcher, Lauri Hicks, Stacey Martin, Alison Patti, Tami Skoff, Emily Weston and Jonathan Wortham helped to raise funds for Children's Healthcare of Atlanta in The Color Run.

Rana Hajjeh attended the Nigerian National Vaccine Summit in Abuja, Nigeria. The high-level meeting of national and international delegates, including the First Lady of the Federal Republic of Nigeria, was organized to join forces with the international community to expand vaccine access nationwide with the goal of achieving universal vaccine coverage for all Nigerian children by the year 2015. Over one million Nigerian children under age 5 die annually from vaccine-preventable diseases.



Amanda Cohn, **Rana Hajjeh**, and **Chris Van Beneden** participated in the WHO annual NUVI meeting (New and Underutilized Vaccines) meeting in Marrakech, Morocco. Chris presented the talk "Measuring the impact of *Streptococcus pneumoniae* and *Haemophilus influenzae* type b conjugate vaccination: An introduction to WHO's Vaccine Impact Manual" and Rana was part of an expert panel that discussed vaccine introduction in low middle income countries.

The Epidemic Intelligence Service (EIS) hosted its 2012 annual scientific conference for the national and international public health community in Atlanta. Completing the two-year post-graduate training program of service and on-the-job learning in the practice of applied epidemiology are **Alicia Demirjian**, a graduate of the American University of Beirut, and **Aaron Harris**, a graduate of Tufts University, in the RDB while **Hajime Kamiya**, a graduate of the Mie University School of Medicine, and **Stephen Ko**, a graduate of the Medical College of Georgia, are stationed in the MVPDB.

Darcia Johnson was the featured speaker for the spring NCIRD Director's Call to discuss plans for the 2012 Get Smart About Antibiotics Week activities. Public and private partners from around the country participate in the quarterly calls.



Claressa Lucas was featured in a CDC Connects story after she used her beekeeper skills to help remove a swarm of honey bees from CDC Health Rider Donnie Powell's Harley-Davidson bike in the Building 16 parking deck one afternoon last spring.

Stacey Martin (DBD/MVPDB) was the speaker for "[Coughing up the Facts on Pertussis—Emerging Trends and Vaccine Recommendations](#)," a Current Issues in Immunization NetConference.

NCIRD and many partners joined ABC News' senior health and medical editor Dr. Rich Besser for a live Twitter chat for World Meningitis Day, which had more than 4.5 million impressions. **Amanda Cohn** and **Jessica MacNeil** answered questions about meningitis and meningococcal vaccines.

NCIRD Director **Anne Schuchat** and MVPDB's **Ryan Novak** are pictured with Tiga Felix Tarbangdo,



a surveillance epidemiologist with the Burkina Faso Ministry of Health, whose visit to the United States was funded by the International Conference on Emerging Infectious Diseases ICIED Leaders program as part of the group's 8th meeting in Atlanta in April. Mr. Tarbangdo met with MVPDB staff working on meningitis and attended an Intermediate Epi Info training program along with MVPDB's **Amanda Faulkner**, **Sema Mandal** and **Jessica MacNeil**.



Emily Weston (on right), ABCs, along with **Melony Fortuin-de Smidt** from The Group for Enteric, Respiratory and Meningeal Diseases Surveillance (GERMS SA) in South Africa at the 2012 ABCs Surveillance Officers' Meeting where Melony

presented on *Haemophilus influenzae* in South Africa.

The National Center for Public Health Laboratory Leadership of the Association of Public Health Laboratories (APHL) selected MVPDB's **Jarad Schiffer** to join the fifth Cohort of the Emerging Leaders Program. Jarad will participate for a year in team building, skill development and interactive social and professional networking to address the current issues and problems characteristic of the current laboratory environment.

PCV13 Licensed for Adults and Recommended for Immunocompromised Adults

FDA licensed PCV13 for adults age 50 years and older in December 2011. At its June meeting, ACIP voted to recommend that adults 19 years of age or older with immunocompromising conditions, functional or anatomic asplenia, CSF leaks or cochlear implants, and who have not previously received PCV13 or PPSV23 receive a single dose of PCV13 followed by a dose of PPSV23 at least 8 weeks later.

Chris Van Beneden provided expert guidance for an interview with TeleMundo on necrotizing fasciitis.

Quarter 3



CDR Jennifer Rabke Verani (USPHS) MD, MPH, a medical epidemiologist in RDB, was one of [two CDC scientists](#) who received the [2011 Presidential Early Career Awards for Scientists and Engineers \(PECASE\)](#), the highest honor bestowed by the US government on science and engineering professionals in the early stages of their independent research careers. Jennifer visited the White House before the awards

ceremony. Jennifer received the PECASE award for innovative public health research to improve child survival worldwide through enhanced perinatal disease prevention and advances in the prevention of parasitic diseases and pneumonia in the world's poorest countries.

2012 NCIRD Honor Award Recipients

The NCIRD Honor Awards are awarded annually from peer-submitted nomination narratives that thoroughly describe the nominee's achievements. Nominations were reviewed and ranked for the 38 CDC/ATSDR Award categories by a NCIRD Awards Committee. The highest ranking nominations were sent forward to the agency. DBD staff members honored this year are listed below:

Enhancing Laboratory Capacity—recognizing outstanding commitment to enhance the capacity and build sustainability of global laboratories to diagnose, treat and prevent bacterial diseases through training, consultations and collaborative research by laboratory staff across the division—a cast of 34.

Robert Gertz for Outstanding Team Player Award—During a time of high Streptococcus Laboratory team attrition, Robert voluntarily assumed vacated essential tasks with a high level of professionalism and production.

Gail Langley for Innovation in Surveillance Award—Gail's award was in recognition of outstanding creativity, innovation, and persistence with leading CDC's ABCs in new directions.

Tamara Pillishvili for Rising to the Challenge Award—This award was presented in recognition of Tamara's work in rising to the challenge of leading ACIP's first discussions on adult pneumococcal conjugate vaccine use and coordinating a cross-center cleaner-burning stove assessment in Kenya.



DBD microbiologist Carla Talarico helps laboratorian Ranjith Jeyaraman don personal protective equipment before testing specimens for *Streptococcus pneumoniae* at the WHO Regional Reference Laboratory in Vellore, India, where she conducted lab capacity-building training for staff. *Streptococcus pneumoniae*, or pneumococcus, is a leading cause of morbidity and mortality among children worldwide and particularly in developing countries.

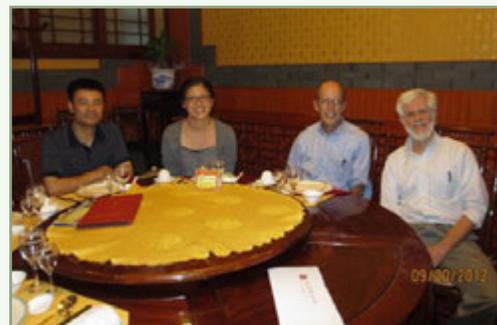
Stephanie Schrag for Excellence in Leadership Award—Stephanie provided key input to several activities that were new for CDC, including evaluations of better cookstoves to reduce indoor air pollution, an evaluation of the causes of neonatal sepsis using cutting edge techniques and development of an app to help clinicians use CDC's guidelines for neonatal group B strep disease (NCIRD nominated Stephanie for the 2012 CDC Excellence in Leadership Award.)

Maureen Marshall (NCIRD) joined Alison Patti and Jonathan Wortham at the CDC National Conference on Health Communication, Marketing and



Media to review RDB's poster on Mobilizing Group B Strep Prevention—GBS App for Obstetric and Neonatal Guidance that highlights design of a mobile web application to increase implementation of the Guidelines for Prevention of Perinatal Group B Streptococcal Disease by neonatal and obstetric clinicians.

DBD's "Phlegm Fighters" helped NCIRD capture the much coveted Healthiest MEDIUM SIZED CIO Challenge Award in the CDC's Healthiest CIO Challenge competition last summer! NCIRD eked out a victory ahead of archrival NCCDPHP by about one-hundredth of a percentage point. Anne Schuchat, who championed the center's participation, in her note thanking NCIRD for participating said, "...we can all feel like competitive swimmers for this close a triumph." Matt Moore was captain of the DBD "Phlegm Fighters," with Chris Van Beneden, Kathleen Dooling, Laurel Garrison, Ruth Link-Gelles, Marsenia Harrison, Lauri Hicks, Natalia Kozak, Gayle Langley, Melissa Lewis, Jennifer Loo, Stacey Martin, Londell McGlone, Lesley McGee, Jenny Milucky, Alison Patti, Lucia Pawloski, Tamara Pilishvili, Tracy Pondo, Becky Roberts, Stephanie Schrag, Emily Weston, Cyndy Whitney, Jennifer Verani and Jeni Vuong making up the team. There was a lot of involvement in the challenge by other DBD staffers as well—many were inspired to participate on their own and record their activity on-line and in activities with other co-workers and not as a member of an official group.



Steve Hadler (far right) with Cui Fuqiang from the CDC China National Immunization Program, DBD's Jennifer Liang and former ISD Director Lance Rodewald (now detailed to WHO China Office) share dinner in Beijing, China in September, following participation in a national workshop on surveillance for meningococcal meningitis and pertussis, hosted by the China CDC National Immunization Program (NIP), Lanzhou, China in September.

Quarter 4

Helping the World Get Smat about Antibiotics

[Get Smart About Antibiotics Week 2012](#)

highlighted the threat of antibiotic resistance and the importance of appropriate antibiotic use nationally and globally. Promoting good antibiotic stewardship and collaborating with a host of partners to educate and inform the public about appropriate antibiotic use is a year round activity of the staff of DBD's [Get Smart: Know When Antibiotics Work](#) campaign, which works in partnership with DHQP's [Get Smart for Healthcare](#) campaign and state-based appropriate antibiotic use campaigns and partners to increase awareness of antibiotic resistance and the importance of appropriate antibiotic use. For the past 5 years, annually in November, the program collaborates with domestic and global partners to focus even more attention on the need for appropriate antibiotic use. [Get Smart About Antibiotics Week 2012](#) highlighted the threat of antibiotic resistance and the importance of appropriate antibiotic use nationally and globally.



Cake promoting Get Smart Week at Children's Hospital of Philadelphia.

DBD highlights of this year's activities in the United States included launch of the [CDC/ IHI Driver Diagram and Change Package for Antibiotic Stewardship](#), a conceptual model to improve antibiotic use in hospitals that will reduce resistance and complications related to antibiotic use (e.g., *Clostridium difficile* diarrhea); Twitter chats; launch of a new 5-week [television and YouTube campaign](#) about only

using antibiotics when necessary for parents of young children; release of a joint policy statement on antibiotic use; results of a Pew Health Group Poll; and information in various professional journals.

The program collaborated with the [Pew Health Group](#) on a poll to gauge Americans' understanding of proper antibiotic use. Poll findings, released in a media briefing during Get Smart About Antibiotics Week, emphasized the importance of broad dissemination of Get Smart's educational messages on appropriate antibiotic use and antibiotic resistance. The Pew Poll showed that nearly 9 in 10 Americans recognize antibiotics as effective treatments for fighting bacterial infections like strep throat, but more than a third mistakenly believe antibiotics are also appropriate treatments for viral infections like the common cold. The poll also showed that most Americans (79%) understand that taking antibiotics when not needed may endanger their own health, but only 47% understand that doing this can also harm others. It is important that the public understand that antibiotic-resistant bacteria can quickly spread to family members, schoolmates, and co-workers—threatening the community with a new strain of infectious disease that is more difficult to cure and more expensive to treat. Most Americans (58%) have heard either a "fair amount" or a "great deal" about antibiotic resistance. Of those who have heard a great deal, 68% believe it is a "very big problem."

A media telebriefing was held to release a ["Joint Statement on Antibiotic Resistance with the U.S. Centers for Disease Control and Prevention \(CDC\) and 25 National Health Organizations"](#)



RDB's Lauri Hicks is interviewed by Jeff Hullinger of Atlanta's 11 Alive News during Get Smart About Antibiotics Week.

that outlines strategies to conserve and replenish antibiotic resources. In the statement, representatives from a range of fields concerned with human health jointly recognized a collective responsibility to protect the effectiveness of all antibiotics, calling for a greater coordination

among all stakeholders in antibiotic effectiveness, including healthcare personnel, hospital administrators, policymakers, patients, and individuals working in medical centers, universities, and pharmaceutical companies to promote knowledge sharing and a mutual commitment to improving antibiotic use, a practice referred to as antibiotic stewardship.

In Australia, Antibiotic Awareness Week was officially supported by the Australasian Society for Infectious Diseases, the Australian Society for Antimicrobials, the Australian Commission for Safety and Quality in Health Care, and by NPS MedicineWise as part of a 5-year campaign to address antibiotic resistance in Australia.

In Canada, an ongoing initiative, AntibioticAwareness.ca, coordinated by numerous health-related organizations across the country that had partnered last year to promote the first Antibiotic Awareness Day in Canada extended its activities to hold a Canada Antibiotic Awareness Week.

As part of European Antibiotic Awareness Day 2012, experts from the European Centre for Disease Prevention and Control (ECDC), the World Health Organization Regional Office for Europe, the Directorate-General (DG) for Research and Innovation and the DG for Health and Consumers of the European Commission held a live Twitter chat to answer questions on antibiotic resistance. Dr. Marc Sprenger, Director of ECDC, and Dr. Tom Frieden joined forces to tweet messages to mark global action to slow the spread of antimicrobial resistance threats. This is the 5th year that ECDC has held an antibiotic awareness day.

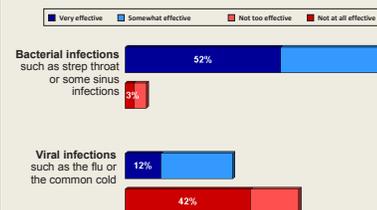


Teneva Hardy (right) acted as keyworker for the annual Combined Federal Campaign (CFC) at CDC. She has promoted campaign participation among staff in buildings 23 and 24 for 2 years to support NCIRD's efforts to raise funds for the world's largest and most successful annual workplace charity campaign. Here, Teneva reviews contribution options with DBD's Tracey Pondo (left), who looks forward to supporting the campaign every year. The CFC allows federal employees and contractors to donate to a variety of organizations ranging from medical research to community improvement to youth development. NCIRD staff contributed \$33,604 to the campaign this year.

Stephen Hadler worked in the Polio Eradication Emergency Operations Center (EOC) much of the year as team lead for the Eastern Mediterranean Region, helping to guide CDC support for Pakistan and Afghanistan to implement emergency action plans to eradicate polio. Steve traveled to Afghanistan 3 times during the year to support this global health emergency. Other staff members from DBD involved in the polio eradication efforts include Sarah Meyer, who made two trips to DRC Congo and Burkina Faso, and Cindy Hatcher, who went to DRC Congo.

Nearly Nine In 10 Believe Antibiotics Are Effective In Treating Bacterial Infections

How effective are antibiotics for treating these kinds of infections?



Lauri Hicks and Arjun Srinivasan recording audio quotes for the Get Smart About Antibiotics Week digital press kit.



Quarter 4 (cont.)

Helping to deliver a life-saving vaccine to 100 million

DBD has [a long history of involvement](#) in Africa's meningitis belt and under the guidance of MVPD branch chief Nancy Messonnier (pictured below 4th row, 2nd from left) activities continue to expand. Last spring, the Bill and Melinda Gates Foundation funded a meeting in Dakar, Senegal co-hosted by CDC and the London School of Tropical Hygiene and Medicine during which DBD subject matter experts helped to develop research priorities for meningococcal disease in Africa. Current activities include working with ministries of health and global partners on post vaccine evaluations, lab training and other technical assistance. Staff are extremely proud to be a part of helping MenAfriVac® (the vaccine to protect against meningococcal A disease epidemics in sub Saharan Africa) to reach the 100 millionth person. The historic achievement came in early December during a seasonal immunization campaign in northern Nigeria—just two years after the vaccine was first launched in Burkina Faso. Since then, nine other countries have held vaccination campaigns to protect people from ages 1 to 29 against meningitis A. The vaccine can now be transported and stored for as long as four days without refrigeration or even an icepack—making it the first vaccine intended for use in Africa approved for this type of use, potentially setting a regulatory path that other heat-stable vaccines can follow. With the vaccination campaigns planned in Nigeria, Cameroon and Chad, by the end of this year, MenAfriVac® will have reached more than 112 million people, providing widespread and long-awaited protection against meningococcal A disease epidemics.



Rana Hajjeh (center) with CDC and hospital staff in Jeddah, Kingdom of Saudi Arabia (KSA), in October 2012. Rana led a team from CDC that included epidemiologists and microbiologists to assist KSA in investigating a case of a novel coronavirus diagnosed for the first time in the Kingdom. CDC worked with WHO and other international experts to determine the public health implications of this new virus. CDC assisted in building diagnostic capacity for this novel virus and provided technical guidance to health authorities, in preparation for the upcoming annual Muslim Hajj pilgrimage—the world's largest annual religious gathering to the city of Mecca—that brings millions of people to KSA, to ensure early detection of additional cases and implementation of adequate prevention measures. No additional cases were reported during the Hajj season.



Marsha Houston represented the agency on the Global Coalition against Childhood Pneumonia, lending technical assistance to global activities for the 4th Annual World Pneumonia Day (<http://worldpneumoniaday.org/>). DBD's work on pneumonia was highlighted in a [CDC Connects article on November 9](#). **Alison Patti** coordinated CDC Internet and social media exposure and the November issue of [CDC's Emerging Infectious Diseases Journal](#) featured a commentary by **Rana Hajjeh** and **Cynthia Whitney** titled "Call to Action on World Pneumonia Day", as well as articles on results of recent research on pneumonia.

Lauri Hicks presented "How to improve antibiotic prescribing practices" for grand rounds at The Pennsylvania Medical Society in Harrisburg, PA.

Fabiana Pimenta, a microbiologist in DBD, conducts a training session on pneumococcal detection and serotyping with lab staff at the Universidad del Valle in Guatemala City.



Melissa Lewis presented "Improving disease measurement in pregnant women: a simulation approach" and **Elizabeth Zell**

participated as a Governing Council representative for the statistics session at the 140th American Public Health Association Annual Meeting and Exposition in San Francisco, CA.

Claressa Lucas presented "The CDC Legionella Lab: 35 years of surveillance" for a seminar series at Clemson University in Clemson, SC.

Lara Misegades was interviewed by JAMA about her DTaP vaccine effectiveness paper published in late November. The video story was distributed to US and Canada television. JAMA also recorded an author monologue video with Lara that was shared with JAMA subscribers.

Matt Moore presented "Pneumococcal vaccines across the lifespan" at the National Foundation for Infectious Diseases (NFID) Vaccinology Course in Miami, FL.

The 1st International Conference of the African Society for Laboratory Medicine (ASLM) was held December 1-7, 2012 in Cape Town, South Africa. **Leonard Mayer** (DBD/MVDPB) presented "The use of real-time PCR for laboratory diagnosis of bacterial meningitis." **Lesley McGee** (DBD/RDB) presented "*Streptococcus pneumoniae*, detection in bacterial meningitis."

Leonard Mayer presented "Innovations for enhancing laboratory diagnostic capacity for vaccine-preventable diseases" at an AFRO Regional Meeting on Immunization in Dar es Salaam, Tanzania.



Tamara Pilishvili recorded a Medscape video discussing recommendations for pneumococcal conjugate and polysaccharide vaccine use for adults with high risk medical conditions.

Tami Skoff was a keynote speaker and presented "Coughing up the facts—pertussis epidemiology and emerging trends in the U.S." at the Annual NY Emerging Infection Program Network 2-day roadshow in Buffalo, Rochester and Albany, NY.

During the Global Meeting on Immunization Monitoring and Surveillance in Washington, DC, **Chris Van Beneden** presented "Use of sentinel surveillance vs. population-based surveillance to accurately monitor the impact of pneumococcal conjugate vaccine" and "How best to present data from the IB VPD network? Common mistakes and suggestions for improvement." For the Scientific Symposium on the Introduction of New Vaccines held in Haiti, Chris presented "Accelerating life-saving vaccine introduction—lessons from the Hib Initiative" and "Impact of pneumococcal conjugate vaccines in the U.S. following universal vaccine introduction."

A new manual, *Measuring impact of Streptococcus pneumoniae and Haemophilus influenzae type b conjugate vaccination (WHO/IVB/12.08)*, that describes approaches to measuring vaccine impact and a framework for determining the best methodology for use in different settings was posted on the WHO website (http://www.who.int/iris/bitstream/10665/75835/1/WHO_IVB_12.08_eng.pdf). The manual was written by experts from the GAVI AVI-TAC Special Studies consortium and led by CDC/NCIRD scientists.

Quarter 4 (cont.)

Rana Hajjeh, Vance Dietz (GID/CGH), Peter Bloland (Director, CGH/DPHSWD) David Mekontso (Cameroun), Regis Mbarydaba (CAR) on a surveillance site visit to a district regional hospital in Cameroun in October.



Jonas Winchell and **Stephanie Schrag** presented at the ANISA (Aetiology of Neonatal Sepsis in Southeast Asia) Third Investigators' Meeting in Phuket, Thailand. Jonas discussed further optimizations of the molecular testing procedures and TAC cards and Stephanie discussed progress on the Technical Advisory Group recommendations and presented on the project's preliminary analysis of the multisite data. **Cynthia Whitney** and **Lesley McGee** also attended. ANISA is currently enrolling pregnant women and their newborns in Pakistan, Bangladesh, and India.

Elizabeth Zell and **Tamara Pilishvili** presented at the Vaccine Effectiveness (VE) Methods meeting in London, England. **Rana Hajjeh**, **Jennifer Loo**, **Jennifer Verani**, and **Cindy Whitney** attended sessions that discussed sources of bias in case control VE studies (Hib, pneumococcal, influenza and rotavirus vaccines), relevant studies, datasets and partners for future analytic work to understand biases, developing evaluation plans on important biases, and approaches to developing and disseminating recommendations.

DBD was well represented during **ID Week in San Diego, CA**, this year: **Anna Acosta** presented "Preventing pertussis in older adults: cost effectiveness analysis of a one-time tetanus toxoid-reduced diphtheria toxoid-acellular pertussis (Tdap) dose in adults

aged 65 years and older"; **Kathleen Dooling** presented the poster "Investigation of a prolonged group A streptococcal outbreak among residents of a skilled nursing facility, Georgia, 2009–2011"; **Jennifer Liang** presented "Rationale for changes to the Advisory Committee on Immunization Practices (ACIP) recommendations on the use of tetanus toxoid-reduced diphtheria toxoid-acellular pertussis (Tdap) vaccines for pregnant women in the United States"; **Matt Moore** presented "Impact of 13-valent pneumococcal conjugate vaccine on invasive disease in the US"; **Manisha Patel** presented "Persistence of serogroup C antibody responses following quadrivalent meningococcal conjugate vaccination in US military personnel"; **Jennifer Verani** presented "Potential for further reduction of early-onset group B streptococcal disease in neonates"; and **Jonathan Wortham** presented "Burden of ambulatory visits and antibiotic prescribing for adults with community-acquired pneumonia—United States, 1998–2009."

Leonard Mayer at the December African Society for Laboratory Medicine (ASLM) Conference in Cape Town, South Africa congratulates Dr. Rasmata Ouedraogo Traore, a professor of bacteriology-virology and close collaborator with DBD on its meningitis activities in Burkina Faso on receipt of an award. DBD nominated Dr. Rasmata for the ASLM Best Practice in Laboratory Medicine in Africa Award for 2012. Dr. Rasmata says about the honor, "This recognition has been possible thanks to the CDC partners and commitment of Burkina Faso particularly technical players in the labs." MVPDB has a long and on-going relationship with the Ministry of Health in Burkina Faso where CDC is conducting vaccine effectiveness studies following the introduction of MenAfriVac® in 2010, and lending technical support and training for the country's laboratories among other activities.



Mark Your 2013 Calendar

- » Advisory Committee on Immunization Practices (ACIP) Meetings: February 20–21; June 19–20; October 23–24 at CDC in Atlanta, GA
- » National Foundation for Infectious Disease [Clinical Vaccinology Course](#), March 8–10 in Chicago, IL
- » International Meeting on Emerging Diseases and Surveillance, (IMED) February 15–18 in Vienna, Austria: <http://imed.isid.org/>
- » [Epidemic Intelligence Service \(EIS\) Conference](#), April 22–26 in Atlanta, GA
- » [16th Annual Conference on Vaccine Research](#), April 22–24 in Baltimore, MD
- » [World Meningitis Day](#), April 24
- » [American Society for Microbiology \(ASM\) 113th General Meeting](#), May 18–21 in Denver, CO
- » [2013 APHL Annual Meeting & Seventh Government Environmental Laboratory Conference](#), June 2–5 in Raleigh, NC
- » [National Immunization Conference](#), June 3–6 in Atlanta, GA
- » [Group B Strep Awareness Month](#), July 2013
- » [American Statistical Association Joint Statistical Meetings](#), August 3–8 in Montreal, Quebec
- » [Interscience Conference on Antimicrobial Agents and Chemotherapy \(ICAAC\)](#), September 10–13 in Denver, CO
- » [IDWeek 2013™ Joint Meeting of IDSA, SHEA, HIVMA, and PIDS](#), October 2–6 in San Francisco, CA
- » [World Pneumonia Day](#), November 12
- » [Get Smart About Antibiotics Week](#), November 18–24

Reminders for 2013

- » Please help DBD maintain its history in photos...
- » Save posters presented at meetings and conferences to display during a DBD All-Hands Meeting.
- » Take photos of work activities here and in the field. Action shots are always great!
- » Submit articles accepted for publication to NCIRD's Advance Media Report. Send to Alison Patti prior to online or print publication.
- » Make sure DBD OD knows about any awards you receive. Please forward these items to Alison Patti.