



Minutes from the  
April 24, 2014

CDC Advisory Committee  
to the Director

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## **Advisory Committee to the Director Record of the April 24, 2014 Meeting**

The Centers for Disease Control and Prevention (CDC) convened a meeting of its Advisory Committee to the Director (ACD) on April 24, 2014 at the Arlen Specter Headquarters and Emergency Operations Center in Atlanta, Georgia. The agenda included reviews and updates of the CDC budget and other current issues, including Advanced Molecular Detection (AMD); leading causes of death, including tobacco and nutrition; CDC's surveillance strategy; and Global Health Security (GHS). The Health Disparities Subcommittee (HDS) of the ACD presented a set of recommendations for achieving health equity, which the ACD approved. The State, Tribal, Local and Territorial (STLT) Subcommittee presented recommendations regarding social determinants of health (SDH), which the ACD approved. The Global Workgroup (GWG) and the Public Health – Healthcare Collaboration (PHHCC) Workgroup of the ACD presented updates. Information was presented regarding CDC's collaboration with the Georgia Institute of Technology.

### **Welcome and Introductions**

ACD Chair, Dr. Alan Greenberg, called the CDC ACD meeting to order at 8:47 am. Those present and on the telephone introduced themselves. A quorum of ACD members was present. The following ACD members disclosed conflicts of interest:

- Dr. Lynn Goldman's institution receives some funding from CDC, but none of the funding is in conflict with the ACD's topics.
- Dr. David Fleming's health department receives funding from CDC.
- Dr. Alan Greenberg's department receives indirect CDC funding.
- Dr. Dileep Bal's department of health receives CDC funding.
- Dr. Georges Benjamin's association receives funding from CDC. A small grant focuses on the Patient Protection and Affordable Care Act (ACA).
- Dr. George Isham said that HealthPartners Institute for Education and Research is a CDC grantee, but he is not involved with the grants.
- Dr. Nisha Botchwey receives CDC funds through her institution.

### **Director's Update and Discussion**

Dr. Thomas R. Frieden (Director, CDC) greeted the group and expressed his appreciation for their advice and input. He presented a "State of the CDC," indicating that CDC's strategic directions include:

- Health security, improving safety at home and around the world
- Preventing the leading causes of illness, injury, disability, and death
- Strengthening collaborations between healthcare and public health as a key means of addressing the first two directions



Global health security (GHS) work focuses on three risks: emerging organisms, drug resistance, and intentional creation. Because of globalization, these serious risks can spread quickly. The current outbreaks of Middle Eastern Respiratory Virus (MERS) and measles have been transmitted globally. There are opportunities to address the health risks through real commitment as societies around the world recognize the significant economic and political risks associated with not controlling outbreaks. Additionally, new technologies that incorporate bi-phasic laboratory and communication approaches address the risks. Successes will lead to more successes, such as the construction of systems for rapid detection, diagnosis, and response. GHS operates with three priorities: prevent wherever possible, detect rapidly, and respond effectively.

CDC works with countries to detect and respond to disease threats and to achieve the International Health Regulations (IHR). As of June 2013, the official deadline for the IHR, only 16% of countries claimed to be compliant. In 2015, CDC will focus on prevention, detection, and response with a group of countries in three key areas: Emergency Operations Centers (EOCs), laboratory networks, and vaccination programs. This work will highlight specific outcomes that make significant differences.

Advanced Molecular Detection (AMD) at CDC was funded at \$30 million in 2014 in response to gaps in the agency's capabilities. AMD is a new way to sequence rapidly and can generate large amounts of data. AMD is not a "magic bullet," so CDC will identify its potential and how it can work most effectively. Combining traditional epidemiology with genomic sequencing and bioinformatics leads to the cutting-edge approaches of AMD. As with big data in other areas, the rate limiting steps will probably not be the generation, transmission, or storage of information, but the thoughtful analysis of the information.

Antimicrobial resistance (AMR) represents a major initiative in CDC's fiscal year (FY) 2015 budget. A landmark report on AMR in the US was released in 2013. Resistant organisms make at least two million people in the US sick per year and kill at least 23,000 people. *Clostridium difficile* (*C. difficile*) accounts for 14,000 deaths per year. AMR represents a threat to economic stability. If progress is not made quickly, the drugs of last resort will be ineffective. Already, serious threats have been associated with Carbapenem-resistant *Enterobacteriaceae* (CRE).

CDC's approach to AMR focuses on detection, response, prevention, and discovery of new interventions, diagnostics, and treatments. CDC finds and solves outbreaks with a community-wide perspective. Outbreaks stretch beyond single facilities to include other settings. The proposed initiative for AMR is \$30 million and will begin in 2015 to accelerate outbreak detection by establishing regional laboratories and supporting the development of new antibiotics and diagnostics. The initiative will also improve infection prevention and antibiotic prescribing. CDC recommends that every hospital in America have an AMR Stewardship Program. These programs will save costs and will be important for patient safety. The initiative incorporates a new resistant-bacteria bank and targets community threats and community antibiotic screening. The AMR goals are ambitious, but achievable. Reducing *C. difficile* and CRE by 50% can prevent 20,000 deaths over the life of the five-year initiative, prevent more than 150,000 hospitalizations, and reduce healthcare costs by at least \$2 billion.



The Emerging Infections Program (EIP) is a network of surveillance, prevention, and control in 10 states that conducts active, population-based surveillance for drug resistance, foodborne illness, influenza, healthcare-associated infections (HAIs), and the interface between HAIs and community interventions and practices. This program has tracked a variety of conditions and has given CDC ideas regarding how to track health in the US most effectively. It is not possible to track every event, but it may be possible to identify a subset of communities where tracking takes place in a sentinel way and to extract information for the country.

Another significant CDC initiative for 2014 is the prescription drug abuse epidemic. A recent summit was convened in Atlanta over several days to address this issue that included 1200 attendees with ties to advocacy and treatment as well as to Congress. A representative from Kentucky, where the problem of prescription drug abuse and overdose is severe, created a community organization called “Unite” 10 years ago. The approach began with enforcement; however, it has evolved to incorporate treatment, education, prevention, and many other programs.

Several years ago, CDC identified that prescription drug abuse and overdose is an epidemic, and it is getting worse. In the past decade, 125,000 Americans, most of them young and otherwise healthy, have died due to the epidemic. Overdose deaths are the “tip of the iceberg” of this problem. For every death, there are admissions, emergency department (ED) visits, people who are addicted, people who are using but who are not yet addicted, and millions of dollars in healthcare costs. Conservative estimates of the healthcare costs associated with prescription drug abuse and overdose over the last 10 years exceed \$500 billion.

The societal costs are considerable as well. In recent discussions with community members from particularly hard-hit areas of West Virginia and Kentucky, I have heard anecdotally that some communities cannot attract new businesses because they do not have enough adults who can pass a drug test. Political leaders are taking notice of the problem. The governor of Kentucky and his administration have been aggressive in implementing different interventions and have observed a 10% reduction in opioid prescriptions in one year. Opioid prescribing is epidemic. In 2012, 288 million prescriptions were written for 18 billion opioid pills—enough to give every adult American 75 opioid pills per year. The more prescriptions are written, the more treatment admissions and the more deaths that occur.

The success in motor vehicle crash deaths can be contrasted with prescription drug overdose. Over the past 30 years, the application of the public health approach to motor vehicle crash deaths has resulted in a reduction in deaths by more than half, while the lack of a public health approach has led to a four-fold increase in prescription drug overdose deaths. A partnership of public health, law enforcement, community organizations, and patients and families can make a significant difference.

A robust public health response to the problem of prescription drug abuse requires resources for improved surveillance to build an evidence base. Resources are needed to identify and scale up effective strategies and to improve clinical care. The proposed FY 2015 budget includes a proposal for \$16 million for states to strengthen their Prescription Drug Monitoring Programs



(PDMPs). PDMPs are effective tools, but they are not adequate because they are not universal, real-time, and actively monitored and managed.

High blood pressure causes widespread damage. Public health and clinical intervention complement themselves in hypertension work. There were reductions in deaths from heart disease from 1980-2000. Some risk factors, including obesity and diabetes, worsened over that time period. Other risk factors, including smoking and blood pressure, improved. Treatment also improved. Overall improvements were chiefly due to better treatment and prevention.

Million Hearts® is CDC's effort to build on the public health–healthcare interface to continue to prevent deaths due to heart attacks and strokes. Sodium reduction, tobacco control, and trans fat elimination are crucial. Saving lives through healthcare relies on cardiovascular care. Controlling blood pressure alone could save more than 70,000 lives per year. For every death prevented, two or three events are likely to be prevented as well. Even so, blood pressure is only approximately 50% controlled, even among those with healthcare coverage and access to primary care. CDC works with colleagues in healthcare to determine effective methods to improve clinical care. The five components of an effective clinical system include consistency, information systems, patient-centered care, team-based care, and innovation.

Protocols are important for the effective management of hypertension. CDC encourages utilizing evidence-based, standardized approaches to blood pressure treatment. Protocols and algorithms reduce clinical variability, clarify treatment options, involve all staff, drive quality improvement, facilitate evaluation of different types of care, can serve as clinical decision support, and send a strong signal that hypertension is a priority.

A striking analysis from Minnesota showed that the state had similar rates of hypertension as the rest of the US approximately 15 years ago. A little more than a decade later, the state saw massive improvements compared to the rest of the country. These improvements came about because treatment was more extensive and more intensive. The number of people with hypertension who did not know it decreased drastically. Among those treated for hypertension, the proportion with disease that was not under control also decreased drastically.

CDC does not have a clear mandate to work on non-communicable diseases (NCDs) throughout the world, and the agency's budget is limited to address these important issues. CDC hopes to support progress on NCDs around the world, where there is great interest in improving health outcomes. High blood pressure kills more people globally than tobacco. Sodium intake is at least twice the maximum recommended level in most of the world. Most of the adults with hypertension worldwide do not have it under control, even in countries with health coverage. Reducing sodium and improving treatment could reduce deaths by 2 million per year.

### **Discussion Points**

The group wished Dr. Lynn Goldman a happy birthday.



Dr. Chu referred to the multi-pronged approach to addressing health problems, including mobilizing communities. There are also opportunities to mobilize providers. Kaiser realized that prescriptions for opioids were high, so they created strict protocols and tracking mechanisms that have reduced the prescription of oxycontin and related drugs. The protocols for pain are algorithm-driven and emphasize less-abusive medications. Kaiser has partnered with Los Angeles County to put the protocols in place county-wide. Patients may move from pharmacy to pharmacy and doctor to doctor, and the EDs need a monitoring function. Kaiser administers its own pharmacy, so they can detect when patients move to different sources to acquire medications. If other large community health providers adopted similar protocols and processes, then they could make inroads into the problem of prescription drug abuse and overdose. Hypertension control must not only rely on providers. The field is moving toward primary care medical homes, and one criterion for medical homes is a population care management tool to identify and track all members with hypertension. Using that information to drive higher percentages of control requires a systems approach because the work lies beyond the primary care doctor's responsibility. The largest gaps of Kaiser members were among people who did not see a primary care doctor. These people had another problem or injury that led to their interface with the health system. In a systems approach, every touch point with the system is an opportunity to address gaps not only in hypertension control, but also in other areas where significant changes are needed.

Dr. Isham expressed appreciation for Dr. Frieden's clear presentation of issues and compelling use of data. Regarding the success in Minnesota, he observed that the state has an excellent public health department with strong leadership. In 1993, the private sector established the Institute for Clinical Systems Improvement, which allows for implementation of protocols. The Regional Data Collaborative is a companion initiative that allows for measurement of the protocols against agreed-to standards. All practices across all organizations are trained to implement and maintain a "culture of quality." Technical assistance (TA) is available for all practices in Minnesota through this system. The achievement of population-wide impact in the private sector relies on closer and better cooperation between the public and private sectors, combined with the effective mechanism for disseminating protocols, measuring, and providing TA across different organizations. When CDC recognized champions for Million Hearts®, a physician practice in Wisconsin was recognized. That practice is part of the collaborative and uses those data points and protocols. Success is achievable on large and small scales, and both are challenging.

Dr. Goldman commented that a number of the CDC priorities involve the linkage between public health/prevention and primary care. Regarding prescription drug abuse, she noted that the California legislature passed a law requiring a certain number of pain management continuing education (CE) hours in order to maintain a license to practice. In her experience, the courses emphasized prescription narcotics and did not transmit concern about overuse, abuse, addiction, or the hazards associated with buying and selling them. CDC can be more involved, especially when state licensing agencies are part of health departments. Continuing education needs to encompass prevention measures.



Regarding the integration of public health and primary care, Dr. Richardson pointed out that EDs and emergency providers play important roles in all of the initiatives described in Dr. Frieden's overview. She agreed that a system-wide approach is crucial. PDMPs that are not in real time, or are in a separate system that requires pre-registration, are not helpful in ED settings. Overdose treatment is an under-studied area. Many patients have been mismanaged, and a number of the deaths are avoidable. Professional organizations could become more engaged in some of these issues.

Dr. Farley asked about reporting of the volume of antibiotics that are used in animals and the control of that use.

Dr. Frieden thanked ACD for sharing their thoughts. At the recent summit on prescription drugs, he was asked how to generate real knowledge and action on prescription drug overdose to address the culture of prescribing and to understand that the risks of these drugs often far outweigh their proven benefits. Mobilizing the provider community and utilizing a systems approach will be important strategies. The organizations that facilitate improvement are very important. The Regional Extension Centers for the Office of the National Coordinator for Health Information Technology (ONC) have done some of this work, but the model is not sustainable. Agricultural extension centers have adopted the approach of teaching people on the front lines to do a better job, but that mechanism is not available at the moment. It may be possible for health departments to gain that skill and bring that strength to clinical medicine. In the area of HAIs, health departments have provided TA in improving hospital care. Regarding Dr. Goldman's experience with CE, industry has sponsored many of those courses. One of the companies paid a \$600 million settlement because they knowingly marketed their drug as non-addictive when it was highly addictive. A major challenge in our society is achieving the right balance between the public and private sectors—between government and industry. We need a vibrant economy, but the self-interest of any one company must be balanced with the public interest. EDs are important partners in battling prescription drug abuse. Regarding AMR, the most resistant organisms resulting from human use in hospitals are in Intensive Care Units (ICUs) where half of admitted patients receive an antibiotic, and approximately 30% of them are inappropriate or unnecessary. The antibiotics are given for too long, with a wide spectrum, and without cultures. Stewardship programs can improve these problems. It is important to reduce the use of antibiotics in all contexts. The US Food and Drug Administration (FDA) and the US Department of Agriculture (USDA) need to do this work, which represents the struggle to balance the interests of individual companies versus the public interest.

## **Budget Update**

Ms. Sherri Berger, Chief Operating Officer, CDC, reported that CDC's FY 2014 program-level allocation is \$566 million above FY 2013. Congress almost fully restored CDC to its 2012 budget authority level. Since 2011, CDC has gradually lost budget authority that was replaced by the Prevention and Public Health Fund (PPHF). The PPHF was created under the ACA and was intended to grow every year, and was to be allocated by the Secretary of Health and Human Services (HHS). Congress capped the PPHF at \$1 billion, so it has not grown in the



past few years. This year, Congress allocated the funds and CDC received almost \$400 million more from the PPHF in FY 2014 than in FY 2013.

This year, CDC implemented the Working Capital Fund, which takes a fee-for-service approach within the agency. The business services appropriation was allocated to all centers based on their FY 2013 consumption data. The Fund is administered by a board mostly comprised of the center directors. The board determines the budget for business service offices, as well as rates and service lines. CDC's funding aligns with its national centers, and most accounts saw growth for FY 2014. Line items for Birth Defects, Developmental Disabilities, Disability and Health, and the Public Health Scientific Services (PHSS) both experienced reductions in 2014. The PHSS account funds some of the Office of the Director (OD) offices.

Other changes in FY 2014 included \$30 million for AMD. The block grant was doubled and moved to PPHF. As a result, block grant recipients will have to complete additional reporting. The FY 2014 budget includes large new investments in chronic disease prevention. Increased resources are also indicated for food safety, polio, global capacity development through the National Public Health Institutes (NPHIs), and an expansion of the National Violent Death Reporting System (NVDRS).

The proposed FY 2015 budget reduces progress made in FY 2014. The FY 2015 request is a \$400 million reduction to CDC's budget authority, offset somewhat by more PHS Evaluation Transfer funds. All HHS operating divisions contribute a percentage of their budget to the Evaluation Transfer. The National Institutes of Health (NIH) has the largest discretionary budget and is therefore the largest contributor. CDC does not pay as much into the fund as it receives when the funds are distributed. Congress decides how much of the fund is distributed and does not want to increase the PHS Evaluation Transfer across HHS.

The FY 2015 request includes increases for AMR, the National Healthcare Safety Network (NHSN), food safety, domestic HIV/AIDS, GHS, polio, prescription drug overdose prevention, NVDRS, a cancer screening demonstration project, gun violence prevention, Rape Prevention and Education (RPE), the National Center for Health Statistics (NCHS), and public health workforce capacity. There are a number of decreases in the FY 2015 budget as well, many of which have been carried forward every year in the President's budget request. The block grant is eliminated and cuts are proposed for immunization, cancer prevention and control, and other areas. The Racial and Ethnic Approaches to Community Health (REACH) program is also eliminated. The FY 2015 priority initiatives are GHS, AMR, prescription drug overdose, AMD, and Million Hearts®. CDC utilizes PPHF funding in three areas: Information for action, improving detection and response, and preventing leading causes of death and disability.

## **Discussion Points**

Dr. Fleming observed "back-and-forth" in the appropriations between the President and Congress. Senator Tom Harkin has been a great prevention champion, and with his impending resignation, there are questions about opportunities for prevention champions in Congress.



Ms. Berger replied that different members of Congress have particular prevention issues of interest, but we are not aware of one member who would be a general public health champion like Senator Harkin has been.

Dr. Bal said that the budget increase is good, but it is important to remember the context that it is still significantly below the 2010 base. The problem is twofold in that the overall amount has decreased and CDC's portfolio has broadened. CDC is able to address new, pressing needs through the broader portfolio, but the base is still low. The Office of Management and Budget (OMB) and the US Government Accountability Office (GAO) look at budgets based on a 10-year time frame, which is problematic. Yields in public health work are far downstream.

Dr. Goldman asked about the impacts of reductions on the National Center for Birth Defects and Developmental Disabilities (NCBDDD) and on the PHSS.

Dr. Coleen Boyle, Director of NCBDDD, said that the center's Division of Blood Disorders experienced a sizeable cut. That division focuses on rare genetic causes of blood-related diseases such as sickle cell, hemophilia, and other bleeding disorders. It also works on major causes of death and disability, such as venous thromboembolism (VTE), and on hospital-associated VTE. They had a "starter program" in sickle cell disease, which is a complicated issue that is related to appropriate healthcare access and ongoing care and management. That activity will likely cease to exist, although CDC will endeavor to complete what they started. VTE is also an important issue that CDC will try to support via proof-of-concept work, but it will have to be scaled back. The center has also experienced erosion within its birth defects line. A few years ago, up to 28 states were funded to conduct birth defects surveillance. Those programs are now in only 14 states. A number of their lines began as earmarks and have grown to be more national in focus. These programs include the Christopher and Dana Reeve Paralysis Center and programs on limb loss. These nationally-based resource centers provide assistance in a variety of settings; for example, the Amputee Coalition was extremely helpful during the challenges after the earthquake in Haiti. The Christopher and Dana Reeve Paralysis Center was moved from CDC's authority to the Administration on Community Living (ACL). The ACL is in the office of the HHS Secretary. CDC has lost the ability to provide a public health approach to paralysis and disability in that area.

Ms. Berger said that as a result of those changes, some staff were let go and others were moved to other parts of CDC. Regarding PHSS, its reduction has affected the *Community Guide to Preventive Services*, partnership grants, and workforce. CDC hopes to make up for some of the workforce reductions by working with the center directors to increase participation in the Public Health Associate Program (PHAP).

Dr. Isham observed that protocols are important elements of the CDC priorities of Million Hearts® and blood pressure control. The *Community Guide*, the US Preventive Services Task Force (USPSTF), and the Agency for Healthcare Reform and Quality (AHRQ) are important for prevention, which can build to protocols. The Institute for Clinical Systems Improvement (ICSI) considers protocols, many of which are created by special societies and which are not very useful, and synthesizes them with evidence statements to create useful tools for quality



improvement. The ACA has stimulated consolidation in the healthcare system. There are opportunities to create tools for these new systems in order to improve. Comprehensive programs for care delivery come from CDC, AHRQ, and the Health Resources and Services Administration (HRSA), and it would be helpful to have protocols and strategies from CDC. For instance, regarding tobacco control and care delivery, the CDC website had a resource detailing the responsibilities of public health and of care delivery. Currently, it is difficult to find similar useful statements, tools, and syntheses for care delivery on the CDC website. There may be opportunities to create tools to support systems to put priorities in place. The syntheses from the USPSTF are very useful. CDC could take the tool a step further by interpreting the strategies and stating potential roles for the public and private sectors. CDC could also create guidelines that are equivalent to the ICSI products to provide tools that will enable a systems approach for anyone to utilize to enable better partnering between the private and public sectors.

Dr. Chu praised the work with the budgets given the political environment. CDC's net gain from the Evaluation Transfer funds is testimony to the value of CDC. One of the reasons for CDC's relative success is Dr. Frieden's clear articulation of the "Winnable Battles" and of CDC's approaches. Success builds on success, and targeting resources for the greatest benefit leads to more resources. The success in hypertension control in Minnesota also illustrates the effectiveness of a strategy that incorporates key approaches and measures. For instance, all hospitals may engage in antibiotic stewardship as a result of a laser focus on *C. difficile*, which can serve as a means for garnering additional dollars from healthcare delivery and to encourage focus on key elements that will make a significant difference for public health and public safety. This work can lead to relatively simple models and tools that work and that can be disseminated quickly. CDC cannot do the work on its own. A coalition of partners is required, including healthcare delivery and other agencies in the federal government. These collaborations and unified approaches will make the most of the resources that they have.

Dr. Frieden reported that CDC's relationship with the Centers for Medicare and Medicaid Services (CMS) is stronger than ever. CDC can help make a significant difference in healthcare costs in the short-, medium-, and long-terms.

### **Advanced Molecular Detection**

Dr. Beth Bell, Director, National Center for Emerging and Zoonotic Infectious Diseases (NCEZID), provided ACD with an overview of CDC's new AMD initiative. AMD is applying the power of recent advances in technology and informatics to transform public health practice, using next-generation sequencing (NGS) of microbes, advanced bioinformatic analysis, and epidemiology.

The challenge lies not in having adequate sequencing capacity, but in managing the data that are produced. In 1993, a single sequencer could provide 500 basepairs per day. In 2003, a sequencer could provide 50,000 basepairs per day. Currently, a sequencer can generate more than 50 billion basepairs per day. Generating these data is becoming less expensive at a faster



rate than is typical for technology. The machines are also getting smaller. A sequencer can now fit in a pocket.

In June 2011, CDC convened a Blue Ribbon Panel on its bioinformatics activities. The panel validated the importance of bioinformatics for CDC's work. The participants on the panel

indicated that compared with other major institutions in the United States that conduct public health-related research, CDC seemed ill-prepared and trailed the rest of the field. They recommended short- and long-term goals to ensure that genomics and bioinformatics capabilities at CDC become sustainable resources for public health.

During the Haiti cholera outbreak in 2010-2011, CDC sequenced the cholera strains but did not have the capacity to analyze the data. The Public Health Agency of Canada generously assisted with the analysis. That experience combined with the feedback from the Blue Ribbon Panel catalyzed CDC to focus attention on AMD, including mobilizing existing funds where possible and making considerable progress. Since 2011, the agency has expanded sequencing capacity, improved high-performance computing, focused on staff development and training, and built external collaborations.

A number of large-scale reference sequencing collaborations have been initiated without additional funding, but much more will be possible with the new funding. Examples of recent applications of AMD to public health problems include:

- ❑ In a tuberculosis (TB) outbreak in a community, whole genome sequencing (WGS) allowed for the resolution of cases into four distinct clusters.
- ❑ A retrospective analysis was conducted of Salmonella Heidelberg cases identified between May and July 2013. They shared the same pulsed field gel electrophoresis (PFGE) pattern. When WGS was applied, it was determined that there were three different outbreaks.
- ❑ There was an outbreak of CRE with the NDM-1 resistance pattern in a hospital in Colorado. The PFGE patterns looked identical and did not provide useful information to understand possible transmission pathways. WGS identified three distinct clusters among the eight CRE cases identified. That information enabled the resolution of the transmission patterns into three distinct clusters that occurred in three distinct units within the hospital, allowing for focus of prevention efforts.

An ongoing project initiated in September 2013 involves real-time listeriosis surveillance using WGS. This ongoing collaboration includes FDA, the National Center for Biotechnology Information (NCBI) at NIH, USDA, and several state public health laboratories. The goal of the project is to achieve near-real-time WGS and analysis of isolates from all US clinical cases of *Listeria monocytogenes* infection, as well as those that FDA identified from food and environmental sources, coupled with epidemiologic data. The goal is a WGS result within one week of receiving the isolate.



CDC receives data, including isolates and patient information, from state health laboratories, and FDA receives isolates from their food and environmental monitoring programs. FDA sequences their isolates, and CDC sequences theirs. NCBI conducts the analysis using their considerable tools and ability to analyze quickly. There is then a mechanism for public release of the data.

The project has already identified five confirmed clusters using WGS, including one that likely would have been missed or delayed without WGS. They have strengthened their collaborations with state and federal partners and are creating a model for real-time, high-resolution comparison of human, food, and environmental isolates interpreted within a sound epidemiological framework. This work has given rise to interesting policy questions pertaining to the release of public health sequence data and associated metadata pertaining to patients. There is significant work to be done regarding interpretive criteria for defining a cluster. Data management and movement are also ongoing issues.

The FY 2014 appropriation includes \$30 million for AMD. This new funding will support AMD across all of CDC's infectious disease programs, and will modernize CDC and state health department laboratory capacities. CDC is grateful and excited about the opportunity to leap forward in this area. The initiative is divided into five objectives, which are to:

- ❑ Improve pathogen identification and detection, with an outcome of rapid progress toward modernizing PulseNet and other critical lab-based surveillance systems
- ❑ Adapt new diagnostics to meet evolving public health needs, leading to the enhancement of CDC's ability to detect outbreaks early, develop new tests during outbreaks, and better characterize infectious disease threats
- ❑ Help states meet future reference testing needs in a coordinated manner, with more effective and better-integrated outbreak response activities
- ❑ Implement enhanced, sustainable, and integrated laboratory information systems so that laboratories inside and outside CDC can share information quickly and seamlessly
- ❑ Develop prediction, modeling, and early recognition tools so that CDC is better equipped to prevent, detect, and respond to infectious diseases

The funding is prioritized into four categories, including scientific information technology (IT) infrastructure and genomics capacity; core bioinformatics capacity; training, partnerships and workforce development; and priority projects. They are strengthening workforce development and training programs, as well as building partnerships. An incipient fellowship program with universities, managed by the Association of Public Health Laboratories (APHL), will grow. Other training opportunities are under development to improve CDC's workforce, as well as workforce in the states. Of 69 submitted proposals, 22 were funded across a broad range of areas.



**Key accomplishments anticipated by the end of FY 2014 include:**

- Increased output for the core genomic sequencing laboratory, with more than 10,000 isolates sequenced
- CDC/APHL Bioinformatics in Public Health Fellowship progress
- Projects in priority pathogens, surveillance networks, curated databases, and pilot projects in states
- Routine use of AMD technologies for outbreak investigations
- Improved data integration, management, and release policies
- Strengthened partnerships within the government and with the private sector
- Gathering ongoing advice from different sources, particularly the Laboratory Working Group of the Office of Infectious Diseases (OID) Board of Scientific Counselors (BSC)

Dr. Bell concluded by seeking ACD's input regarding the following questions:

1. We are looking to build needed capacity while at the same time fostering collaborations to leverage others' investments so we don't duplicate. What advice do you have about how we should approach striking the right balance?
2. We recognize that communication is key to the success of this initiative. How might we best tell our stories and highlight successes while at the same time keeping a focus on longer-term works in progress?

**Discussion Points**

Dr. Greenberg commented on CDC's excellent progress in just a few years. He wondered about lessons learned that could be applied to other arenas from the Blue Ribbon Panel's conclusions and how CDC came to be far behind the technology, where CDC's current status in AMD lies, and the vision for CDC's role in the future.

Dr. Bell answered that CDC's technology lagged due to a number of factors. In general, it is difficult for the government to make the quantum leaps that this work demands. Additionally, CDC has deep expertise in many areas but finds challenges in cross-cutting work. Regarding CDC's progress in AMD, they have made a significant amount of progress and are now "better than outdated," but are not yet cutting-edge. The PFGE technology was first developed by CDC laboratory scientists in the early 1990s, and they are still working with the same technology for most of their cluster detection laboratory-based surveillance now. Regarding CDC's role in AMD in the future, there is a specific and pivotal role for public health that is related to public health's work in identifying and stopping outbreaks, understanding and tracking transmission patterns, and understanding and tracking transmission patterns, and understanding the interplay between the infectious disease organisms to drive prevention. Hiring young people is a challenge because of the market, so creative ideas such as the fellowship program will be important.



Dr. Rima Khabbaz added that they have provided updates and feedback to the Blue Ribbon panel. A number of them have complimented the action and progress. CDC was at the cutting edge of molecular technology in the past. Recently, genomic technologies have developed rapidly. A lesson learned in this experience is the importance of keeping current on innovations and changes in laboratory science so that technologies do not become outdated.

Dr. Goldman commented that leaders of schools of public health tend to focus on NIH, because NIH is the source of funding for their researchers. CDC has no capacity to “bring the outside in” in this area. It is unlikely for OMB to approve an increase in the budget for an extramural grants program, but without that mechanism, CDC is not likely to have access to the “cutting edge.” NIH does not focus on prevention or on outbreak or disease detection.

Ms. Drew Ivie asked about the release of the data.

Dr. Bell said that public health in the US is a partnership with states, local entities, and CDC. The data and specimens that CDC receives do not belong to them, but to the states. CDC receives the data based on agreements or Memoranda of Understanding (MOUs) with state health departments. There is concern about aspects of data that are involved in active outbreak investigations becoming public, and with personal identifying information becoming public. These questions are not unsolvable, and in fact are being addressed in the *Listeria* project. The data should be publicly available as quickly as possible, but issues must be resolved regarding the authority under which the information was collected and regarding what people expect will happen with their data based on that authority.

Dr. Bal said that CDC’s work in AMD is very good, and he suggested that CDC consider Dr. Goldman’s points regarding NIH, which has not translated science to public policy, especially public health policy. Because a great deal of new technology is available, public health needs the tools to understand and utilize it. CDC can “separate the wheat from the chaff” and then add support where NIH supports clinical applications and not public health applications.

Dr. Botchwey wondered about opportunities for CDC scientists to partner with NIH researchers in this area. FOA language could be amended to allow for this structural change.

Dr. Bell said that they are working to strengthen partnerships with NIH and to work on means for achieving that cross-fertilization. They hope to develop reverse fellowships in which fellows come to CDC, but CDC personnel also go to universities for a time. Other ideas include consortia, which could mobilize different diverse groups of researchers without needing a large grant program. CDC is a “small player” from a financial point of view. They need other ways to drive public health uses for this kind of technology.

Dr. Greenberg thanked Dr. Bell and encouraged her to find mechanisms for engaging the private sector and academics to serve as partners in this rapidly-moving area.



## Leading Causes of Death, Including Tobacco and Nutrition

Dr. Ursula Bauer, Director of the National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP), shared with ACD the new initiatives in which NCCDPHP is engaged. As a number of potential applicants for the funding opportunities were present, she provided a “30,000-foot” view of the activities.

NCCDPHP received a slight uptick in funding for FY 2014, but the budget was significantly reorganized and major changes were implemented regarding where the center’s funding is situated. The center and CDC did not anticipate these changes. Considerable effort has been required to implement the new budget. Although there are some unfortunate casualties associated with the new budget, it is overall good for NCCDPHP. If it remains stable, they will be in a strong position.

The FY 2014 budget cut \$146 million for the Community Transformation Grant (CTG) program. CTG launched in 2011 and was meant to be a five-year program that would grow with the growth of PPHF. It did not receive any additional funding, so the numbers of grantees and sites implementing the program never increased. CTG was established to support grantees that were ready to implement programs as well grantees that were building capacity to do this kind of work. The program plan called for increasing funding to the capacity-builders as the budget grew so that they could transition to implementation. A number of the grantees were ready for that transition, but the additional funding never became available. The CTG programs will end in September 2014, two years short of the original cooperative agreement. CTG represents an approximate \$450 million investment by Congress and NCCDPHP in a program that did not have the opportunity to complete its work. Funds are not available in FY 2014 to conclude evaluation of the CTG program. This loss is significant to public health and to CDC’s community health efforts.

A new community prevention grant program is funded with the new budget at an \$80 million level. There are key differences between the new program and the CTG program that will likely put the new program on stronger footing. The new program is funded out of CDC’s base authority and not PPHF. The appropriation language describes what the grant program should look like. Because the new program is not affiliated with the ACA and is not funded by PPHF, they have the potential to create a healthy communities program with strong bipartisan support. Even though CTG funded strong state and local programs that did excellent work, its association with the ACA and PPHF proved to be a stumbling block to progress.

The new budget includes an additional \$37 million for the REACH program. This 15-year program does a “deep dive” into communities to identify and address racial and ethnic health disparities. There have been a number of successes and lessons learned over the 15 years of the program. REACH funding has been on a “rollercoaster” in recent years and was zeroed out in the President’s proposed FY 2015 budget. NCCDPHP received an additional \$73 million in the diabetes budget line and \$73 in the heart disease and stroke prevention budget line. Additional dollars are also provided to the tobacco line. The Division of Nutrition, Physical Activity, and Obesity (DNPAO) was previously funded out of base authority dollars. It is now



funded almost entirely by PPHF. This shift requires a change in how the funds are managed. The International Micronutrient Malnutrition Prevention and Control (IMMPaCt) Program in DNPAO is globally focused, and PPHF is not used to fund global activities. Additional requirements are affecting DNPAO. \$5 million must be spent on a program addressing counties with obesity prevalence rates of 40% or higher through cooperative extension networks. The center did not receive \$5 million to do that work, so the funds must come from elsewhere in the budget. Similarly, DNPAO is charged with \$6 million of new work in breastfeeding, but was not awarded the \$6 million for the work.

Recently, NCCDPHP has endeavored to move away from a disease- and risk-factor-specific focus, with separate and siloed programs addressing major diseases and risk factors, in favor of an approach that implements strategies across the broad portfolio to take advantages of shared strategies, shared intervention points, and shared skills and expertise. The work of the center falls into four domains and each of the programs in diseases and risk factors works in one or more of them as follows:

- ❑ Epidemiology and Surveillance, the foundational work of CDC
- ❑ Environmental Approaches, which includes work in policy and environmental change, often at the community level, to create and strengthen environments that support and reinforce healthful behaviors, particularly through work with healthy communities
- ❑ Health Systems Change, which incorporates the public health–healthcare collaboration and work with health systems, health plans, and provider networks to establish systems and focus areas on better delivery of clinical and preventive services, building demand for the services, and ensuring comprehensive quality care to prevent progression of disease
- ❑ Community–Clinical Linkages, ensuring that communities have the resources necessary to support those who live with or are at high risk for chronic conditions so that when they leave the clinic setting, resources are available to them via specific linkages from clinics to programs and services, and that third-party payment is available for that intervention

The center has worked to strengthen its capacity in the area of health systems change. It is an ongoing effort to bolster CDC's capacity, as well as capacity at the state level. NCCDPHP has 43 budget lines that are specific to diseases and risk factors, and the center aims toward specific disease and risk factor outcomes even as the center looks across its programs.

Approximately six FOAs will be released as part of the FY 2014 budget. The announcements will be crafted as a “family of mutually-reinforcing interventions.” Each one is unique and has a specific niche to fill, but there is a “family resemblance” across them and with the center's existing cooperative agreements. It is expected that each element of the center does its part to drive toward a set of unified outcomes, recognizing that the specific disease and risk factor outcomes are milestones on the way. NCCDPHP took a significant step forward in this coordinated approach in 2013 when a cooperative agreement was released to state health departments that brought together four discrete funding streams. The grantees were asked to craft a single work plan and to identify the activities that would be performed in each of the domains: Diabetes; Heart Disease; School Health; and Nutrition, Physical Activity, and Obesity.



The cooperative agreement included a basic component for which all grantees were funded. It also included a competitive, enhanced component for which 32 departments were funded. Taking a long-term view, it is expected that the basic component can be built over time. Currently, every health department conducts work in the four domains. Over time, as capacity grows and experience with the interventions increases, the enhanced interventions can be incorporated into the basic component to grow state health department expertise and the types of activities that they are implementing. The enhanced component will also grow so that they continually move forward.

Some of the cooperative agreement activities are being funded with the new appropriations for diabetes, heart disease, and stroke. Those funds allow the center to move down the “approved, but unfunded” list of applicants to fund the remaining 19 health departments and the District of Columbia to engage in additional enhanced component work. They are also adding funds to the 32 recipients of the enhanced grant so that they can grow their portfolios as well. In addition, a new FOA will be released for state and large city health departments. The announcement will focus on diabetes, heart disease, and stroke and grantees will be asked to focus on health systems and community-clinical linkages work, with a wraparound of environmental approaches. Grantees will focus on geographic areas and intensively deploy those environmental approaches to improve community health while they develop the tools and expertise to work with health systems in those areas to ramp up quality delivery and the delivery of clinical preventive services specifically focused on diabetes and heart disease, but with the expectation that improving quality will affect many areas. The long-term expectation as the programs demonstrate proof-of-concept is to hone the skill sets and processes to roll them into future work of state and large city health departments.

A new community-focused FOA will be released this year. It will deploy the \$80 million devoted to what Congress called the “Community Prevention Grant Program.” CDC has named the program Partnerships to Improve Community Health (PICH). This program will not replace the CTGs, although current CTG grantees will be competitive applicants for PICH awards. This initiative is not framed around the National Prevention Strategy (NPS), although the work includes the traditional portfolio that has been built through community health work, and will continue to deploy direct grants to communities. PICH will also include work with national organizations that can branch out to smaller communities and provide the intensive TA that smaller communities often need in order to advance this work. As with the CTG program, grantees will be asked to achieve jurisdiction-wide health improvement and to target a specific health disparity to narrow the gap. The center is including this dual focus across its portfolio of funding opportunities and is creating funding opportunities specifically aimed toward reducing health disparities.

NCCDPHP is attentive to the profound health disparities in Indian Country. The center will invest a portion of the diabetes and heart disease allocation, as well as dollars from DNPAO and tobacco, to create a comprehensive approach to chronic disease prevention and health promotion in Indian Country. Tribes will be eligible to apply for direct funding, and tribal-serving



organizations will be eligible to apply for funds to serve their areas, which are the 12 Indian Health Service (IHS) administration areas.

A new REACH FOA will be released. The appropriations language directed NCCDPHP to return to the programs that have been implemented over the last decade and to fund communities directly to identify a population and location of focus to improve health and narrow specific health disparities.

### **Discussion Points**

Dr. Fleming congratulated Dr. Bauer on her leadership as NCCDPHP moves forward in innovative ways in challenging financial times. He noted the limited potential for evaluating CTG and wondered about creative solutions to carry out some objective evaluation activities, both so that the significant investment could be measured in some way, and so as not to create the myth that investments of this kind do not yield benefits.

Dr. Bauer responded that CDC wants to capture the accomplishments of the CTGs. Because they were funded by PPHF, they fulfilled extensive reporting requirements during the three years that the program was active. There was some advance notice that the programs would end, so they expect to be able to harvest some lessons learned and success stories and to report on the reach of the program, the kinds of changes that occurred, the healthier environments that communities have access to, and more. They will not, however, be able to deploy the follow-up surveys that were expected. The grantees completed individual evaluations as well. Foundations may have an interest in harvesting this information. The center cannot use existing dollars to conduct the evaluation work.

Dr. Chu commented on the layering of disease-specific and risk-factor-specific funding and how the funds are assembled for a coordinated approach. There are parallels to this approach in the care delivery system, which is similarly fragmented, but which still needs to recognize the co-dependencies of risk factors from one disease to the next. The framework is strong, and he wondered about how to pull out key “winnable battles” from across the categories. For instance, the key for better diabetes control is the “ABCs” of hypertension control. Even in the categorical granting, a requirement could be built in to assess progress on the most winnable battles. Mental health is a key component of chronic disease. The funding stream for mental health and substance abuse is fragmented, and people do not talk to each other despite the number of co-dependencies in mental health. However, people who work in chronic illness are aware of the mental health and depression components that are barriers to better care and better coordination. Calling the mental health components out in the framework can be important so that people think about these issues. Local health departments could combine funding from disparate sources and try to organize an approach that integrates mental health.

Dr. Bauer said that mental health is mentioned frequently, and it is clearly a barrier to achieving health goals. The center and the agency continue to wrestle with those questions.



Dr. Iton complimented the framework and its inclusion of epidemiology, environment, health systems, and community-clinical linkages. The ACA was signed with the understanding that a radical shift toward prevention is necessary to realize the cost savings and health improvements that the act was designed to bring about. The term “radical shift” is an appeal to the public health community to lead on this issue. Public health can construct a meaningful system of prevention with core elements that deploy at the local and state levels and are articulated throughout the system. He encouraged Dr. Bauer to refine the framework, which includes elements of a system of prevention, and to articulate the framework so that all of the pieces are connected and so that the field can assess the “infill” between upstream, community-level prevention and down- or mid-stream clinical-community interfaces. The concepts of wellness trusts and accountable care communities are among the innovative strategies for social impact bonds to harness the power of the private sector to invest in evidence-based prevention. Leadership in this area is critical for articulating the vision of what a system of prevention should look like. Regarding PICH, he asked whether local health departments or community-based organizations (CBOs) would serve as the leads.

Dr. Bauer thanked Dr. Iton for his comments. They have not articulated the framework exactly in the terms he had, but the intention of the proof-of-concept for the new state and local public health action FOA embraces those ideas. That work will be led through large city and state health departments. It will focus on a geographic area and a wraparound approach to securing environmental changes in place that support healthful behaviors, securing the health systems changes that will reinforce the healthful behaviors, and securing community resources to support those who live with, or at risk for, chronic conditions. They can do a better job of articulating their goals so that people can see that kind of system and see that it can be done at the state and local levels. PICH is a community program, so the jurisdictions will be communities, large and small cities and counties, and Tribes. Governmental and non-governmental organizations and agencies may apply.

Dr. Iton pointed out that when they articulate a bolder vision, enlisting the interest and participation of other sectors will be important. The vision should be bold in order to welcome input from other sectors with real-world experience.

Dr. Frieden commented that the discussion was rich, and some discussions during the break had addressed place-based initiatives. It would be helpful for a sub-group of ACD to have a follow-up meeting with CDC staff to pursue the idea of applying a package of interventions using a community approach. The interventions could be presented at different levels to determine different areas where public health can deliver value to the healthcare system, the educational system, the criminal justice system, and others to affect change.

### **CDC’s Surveillance Strategy**

Chesley Richards, CDC Deputy Director for Public Health Scientific Services and Director, Office of Public Health Scientific Services (OPHSS), described the CDC’s surveillance strategy.



Dr. Frieden charged OPHSS to lay out a plan for the agency to address four key issues, which are to:

- Improve the availability and timeliness of surveillance data to CDC programs, STLT agencies, and other stakeholders
- Advance the effective use of emerging information technology
- Identify and amend or retire ineffective or unnecessarily redundant CDC surveillance systems
- Maximize the effectiveness of available agency resources devoted to surveillance

In addition to this charge, the office received a Congressional request to provide a report to Congress by July 17, 2014 that identifies opportunities for consolidating various data collection systems at the agency and to consider development of a single, Web-based data collection IT platform. CDC's surveillance strategy is a component of the response to Congress and is the foundation of how the agency addresses these questions. The development process began with the creation of a Surveillance Strategy Workgroup with representatives from across the agency. Input was also gathered from deputies and senior leaders at CDC, as well as from external stakeholders and partners such as the Association of State and Territorial Health Officials (ASTHO), the Council of State and Territorial Epidemiologists (CSTE), and others. The strategy was reviewed with Dr. Frieden and presented to senior leadership. The strategy has three goals:

Goal 1: Enhance the accountability, resource use, workforce and innovation for surveillance at CDC and in support of STLT agencies. The strategy is CDC-focused, but recognizes that the agency works within a broader public health world. It would have been presumptive for CDC to set the public health surveillance strategy, but the process included extensive input from partners, which has been helpful.

Goal 2: Accelerate the utilization of emerging tools and approaches to improve the availability, quality, and timeliness of surveillance data. This goal focuses on health information technology (HIT) and other scientific tools.

Goal 3: Through cross-cutting agency initiatives, improve surveillance by addressing data availability, system usability, redundancies, and incorporation of new information technologies in major systems or activities.



The three major efforts that support the first goal are to:

- ❑ Develop a CDC Surveillance Leadership Board that will make recommendations to the director and address strategic issues
- ❑ Create a Workforce Plan principally around informatics, but that will also include other aspects of surveillance workforce
- ❑ Develop a CDC Health Information Innovation Consortium; there is a great deal of energy at CDC and in STLT agencies around innovation, but there has not been a good place to bring that energy together in a transparent manner to share ideas and to tie it to the HIT policy process

The second goal includes:

- ❑ Strengthening HIT policy engagements: Strategies for this goal include hiring a Senior Policy Advisor and a Chief of Public Health Informatics to help the agency leverage HIT and meaningful use in the broader healthcare setting. CDC will also work with policy offices and engage with ONC, CMS, and HHS regarding informatics and data innovation.
- ❑ Create a vendor forum to approach all of CDC's HIT vendors strategically.
- ❑ Support innovative informatics projects, tied to the Innovation Consortium, to develop new approaches.

The third goal for the surveillance strategy focuses on outcomes and has four initiatives in which meaningful progress can be made in the next 12 to 18 months:

Initiative 1: Modernize the National Notifiable Diseases Surveillance System (NNDSS). Improving this platform so that it provides data in a timely way so that it can be analyzed to local health entities and to CDC programs will make a significant impact.

Initiative 2: BioSense Enhancement Initiative. BioSense has gone through several permutations, but still does not deliver the kind of situational awareness that is needed at the national level. The system will be enhanced to that it will support public health decisions and programs at the local, state, and national level.

Initiative 3: Accelerate Electronic Laboratory Reporting. Currently, 55% of laboratory reports from health departments are received electronically. The target percentage of 80% electronic reporting will support notifiable disease efforts and other surveillance efforts.

Initiative 4: Accelerate Electronic Mortality Reporting. Many states already report death certificates electronically. Increasing the percentage of electronic reports to 80% will ensure that mortality reporting can be used for surveillance.



The success of the surveillance strategy depends on several factors, including strategic engagement from senior leaders across CDC. Additionally, it will be important to harness and support programs and STLT agencies regarding innovation. Short-term improvements in cross-cutting systems and platforms will set the stage for migration from siloed systems.

The Congressional response focuses on decreasing the number of systems and consolidating to a single, Web-based platform. The surveillance strategy answers this question by laying the groundwork for reducing the number of systems and improving functionality and utilization in a natural way that will not disrupt programs.

The four initiatives are underway, the Informatics Workforce Planning has begun, and engagements with external partners are strong. An Acting Chief Health Informatics Officer has been named. The Surveillance Leadership Board will be stood up in May 2014, and the Innovation Consortium and Vendor Forum are on track for May and early June 2014. Some small awards for surveillance innovation will be initiated in FY 2014.

Dr. Richards asked for ACD's suggestions and insights regarding the strategy, ideas regarding "early wins" for stakeholders and STLT agencies, and additional areas to explore or address more explicitly. He asked ACD to consider forming a small group to provide specific advice on the strategy as it is implemented and on its progress.

### **Discussion Points**

Dr. Goldman observed that the natural course of evolution in agencies is not toward simplification and streamlining of systems, but rather toward elaboration and creation of new systems. She noted that the surveillance strategy focuses on the collection of data and does not focus on the usability of data. To reverse the natural course of systems evolution, it will be important to create a system that is so much better, faster, and easier that people and agencies do not feel the need to create their own systems. The data should be as usable as possible for CDC, state and local programs, and other clients who care about prevention. She wondered whether BioSense is worth fine-tuning, or whether different approaches should be considered.

Dr. Richardson commented that BioSense works better in her jurisdiction than in others, and it represents an opportunity for improving collaboration with healthcare and securing better investment in HIT systems among institutional providers. The use of electronic health record (EHR) data to inform surveillance has great promise. She agreed that usability of data is crucial to the surveillance strategy's success. She encouraged them to be attentive to opportunities to build capacity to pursue health equity goals as the surveillance systems are built. Further, practicing physicians are frustrated with the current system of death certificates and are skeptical of the quality of data that are collected. The system is dysfunctional, and the data are used in many ways. The system is ripe for improvement. She also asked whether the Innovation Consortium is considering using social media and newer forms of media to enhance public health initiatives.



Dr. Benjamin reinforced the “need for speed” and the optimization of speed and accuracy to enable timely decisions to be made. Public health needs to generate data that is useful to other sectors.

Ms. Drew Ivie commented that at the LA County level, several motions have been made for different departments to coordinate child death data. They have not yet succeeded. This work poses a challenge at the national level.

Dr. Richards thanked ACD for the honest responses. He expressed his hope that they would consider creating a small group to provide input. He acknowledged the difficulty of his task, but emphasized that there is excitement around CDC and with partners. The NNDSS is not currently usable by many people. This initiative focuses on making it usable so that programs do not have to submit a parallel data request because of processing issues. He expressed concern about BioSense, despite some success stories that have emerged from it, both when it was centrally managed and more recently, when it is locally managed. CDC staff do not have ready access to BioSense data. He struggles with whether they have the ability to change it, or whether they should go in a different direction. CDC spends \$400 million on over 100 different systems, and the agency has to do a better internal job of managing them.

Dr. Greenberg thanked Dr. Richards and noted that several potential workgroups have been suggested. They are limited in the number of workgroups that they can create, given the relatively small number of ACD members, but they are able to bring in expertise from the private sector and academia.

## **Global Health Security**

Scott Dowell, MD, MPH, Senior Advisor on Global Health Security, Center for Global Health (CGH) presented the ACD with the rationale for global health security as a priority; successes in GHS that show how global efforts make a difference in a short period of time; and challenges and reasons why the pace of GHS has not progressed as it should.

Dr. Dowell shared his experience with an outbreak of Ebola in Uganda in 2000. CDC’s work focused on contact tracing and vaccinations. He recalled that many of the deaths were doctors and nurses who were the breadwinners of their families. The impacts are not only emotional, but also are economic. The Ebola outbreak represented individual tragedies, but also public health failures. If measures were in place to prevent the movement of the virus from the animal reservoir to humans, the outbreak would never have started. If the hospitals had infection control measures in place, then the outbreak would not have amplified to the point of chaos. If a surveillance system had been in place that could detect clusters of hemorrhagic fever, if a laboratory were available, if an EOC had been in place, then the outbreak could have been controlled earlier.

Since 2000, CDC has worked with partners in Uganda to boost their capacity, and the progress has been tremendous. The country now has the ability to detect and confirm Ebola, Marburg, and other hemorrhagic fever viruses. More outbreaks are detected and confirmed, but they are



smaller than in the past and are detected and responded to earlier. This experience is not unique to Uganda, as good progress is being made in other countries to shorten the time from an outbreak's start to its discovery.

The understanding that it is possible to make a difference informed the revision of the IHRs and other documents and strategies, as well as the creation of CDC's Global Disease Detection (GDD) program. Ten GDD centers are increasing outbreak response capacity steadily by supporting outbreak response, training public health leaders, detecting new pathogens, and building laboratory diagnostic capacity.

GHS is in a "perfect storm" of vulnerability with the emergence of new pathogens, the rise of AMR, intentional engineering of microbes, and globalization. The IHRs provide a critical framework for GHS, but of the 194 countries committed to them, only 16% were fully prepared to detect and respond to pandemics as of the June 2012 deadline. The IHRs do not incorporate transparent, objective, external assessments of countries' progress, so it is difficult to know which countries are making progress and which are not, or the details of where more progress is needed.

CDC embarked on two GHS demonstration projects—one in Vietnam and one in Uganda. The projects focused on strengthening laboratory systems, establishing and strengthening EOCs, and advancing the IT that knit the two together in emergency response.

In Uganda, the focus on laboratory systems was on the transfer of specimens and the distribution of reagents. A system for transporting Ebola specimens piggybacked on a system for HIV/AIDS diagnosis that was funded by the President's Emergency Plan for AIDS Relief (PEPFAR) and implemented by the Division of Global HIV/AIDS (DGHA). In Vietnam, a main area of focus was the EOC. CDC's work included training key Ministry staff, upgrading the physical layout and equipment, and conducting an exercise with the EOC.

The work in Uganda and Vietnam will expand beyond the initial demonstrations to address other areas, such as surveillance and workforce. The GHS demonstration projects will expand to 10 additional countries in 2014 jointly with CDC and the US Department of Defense (DOD) Defense Threat Reduction Agency (DTRA). The projects will seek to broaden US government engagement and work with other countries and the World Health Organization (WHO) to accelerate similar work.

A number of US government departments and agencies are involved in GHS, and the US investment level is approximately \$500 million per year. It is challenging to ensure that they work is effective and well-coordinated. The GHS Agenda was publicly launched on February 13, 2014. The US set a target of working with at least 30 partner countries over the next five years to prevent, detect, and effectively respond to infectious disease threats. The US called on other countries to join the effort so that the world's population is protected effectively.

The US set 12 individual targets that aim to provide specificity and metrics that will drive progress. For instance, to prevent avoidable catastrophes, the target is to conduct surveillance



to monitor and slow AMR, with at least one laboratory in each country being capable of detecting at least three of the seven WHO priority pathogens using standard, specific criteria. Another target addresses immunization against epidemic-prone disease and aims for including at least 90% coverage of one-year-olds with measles vaccine.

Five targets address the need to detect threats early. One of the targets is for nationwide laboratory systems with modern diagnostics, with at least 5 of 10 core tests able to be conducted from outbreak specimens in at least 80% of districts. In order to respond effectively, the targets are specific to EOCs and assuring that each country will have a public health EOC that can fully activate within two hours, deploy rapid response teams to outbreaks within 24 hours, and coordinate local response.

CDC's International Assignees came to CDC for a meeting on GHS in March 2014. The meeting included the development of a technical guidance document translating the 12 US government targets into specific actions for CDC and others to take.

There has been some progress toward meeting the GHS targets. The President's Budget request includes lines for CDC and other US government agencies and departments. International commitments are increasing, with 28 countries expressing their commitment to GHS acceleration. Several upcoming meetings will address these issues.

Dr. Dowell asked for ACD's feedback regarding whether objective external assessments of country GHS status will help to drive progress, where CDC should focus GHS efforts to be most effective, and what partnerships may help advance GHS.

### **Discussion Points**

Dr. Benjamin suggested that they expand their thinking regarding non-governmental organizations (NGOs) beyond traditional development NGOs to the many non-governmental public health associations, such as the World Federation of Public Health Associations (WFPHA). WFPHA often represents the practice community in public health as opposed to academics in countries.

Dr. Greenberg commented on CGH's work with WHO to develop metrics for grading laboratories as they evolve. This approach has been a great motivator for countries and laboratories. Concrete benchmarks and a report card approach could also be applied in GHS in collaboration with WHO.

Dr. Dowell agreed that the process for working with accredited laboratories across Africa has been valuable. The GHS metric stipulates that the core tests will be conducted at certified laboratories. The IHRs include agreements with member states, and the aim of the GHS agenda is to help WHO to accelerate IHR progress without being constrained. The vision is for a member-state driven initiative that will accelerate progress.



Dr. Iton asked about the workforce challenges in some of these countries and the potential applications of technology to training public health workforce, as well as leveraging public health university resources in the US and elsewhere to create virtual training programs. The danger that this work represents to health workers must represent a barrier to bringing workers to the discipline.

Dr. Dowell said that they have tried to promote quality as well as quantity. One of the measures for the workforce goals is one field epidemiologist per 200,000 population. Innovative ways to accelerate training are greatly needed, as are approaches that will help train more people “at the bottom of the pyramid.”

Dr. Frieden asked ACD to think about how to bring these issues “home to Americans” so that people understand how these problems affect them.

### **Recognition of ACD Members Rotating Off of the Committee**

Dr. Frieden thanked Ms. Drew Ivie and Dr. Isham for their service on the ACD and indicated that their guidance, input, and advice would be welcome on a continuing basis.

### **Health Disparities Subcommittee Update and Discussion**

Dr. Lynne Richardson, Chair of HDS, presented for ACD’s approval the HDS recommendations for ways that CDC can move forward in health equity. She reminded ACD that a set of recommendations was presented to them for consideration during the last in-person ACD meeting. Some minor revisions were made to the recommendations based on feedback from ACD. She thanked the STLT Subcommittee of ACD, which endorsed the HDS recommendations, and acknowledged the important work that is conducted across CDC on health equity.

### **Recommendation #1**

Develop a CDC framework for action to achieve health equity that includes:

- Indicators, measures, and tools for monitoring trends in health equity
- Evidence-based or promising approaches and essential program components to address health equity
- Clarifying organizational structures within CDC that facilitate the integration of health equity into programs and research
- Promotion of policies that support reducing health disparities and achieving health equity (e.g., as referenced in the National Prevention and Health Promotion Strategy)



## **Recommendation #2**

Identify and monitor indicators of health equity.

The CDC Health Disparities and Inequalities Report (CHDIR) is an important resource for the nation in monitoring health disparities and inequalities; however, there are gaps in the data that we have, particularly for certain groups. Identifying additional data sources is important to allow more complete reporting on disparities experienced by racial and ethnic minorities. It will also be useful for CDC to be able to report on these indicators as new data become available, as opposed to every few years, to track progress by CDC programs and by state and local grantees.

## **Recommendation #3**

Align *universal interventions* that promote better public health, with more *targeted, culturally tailored interventions* in communities at highest risk to reduce health disparities and achieve health equity.

It is clear that interventions designed to improve the health of all populations are not sufficient to reduce persistent, population-specific health disparities. Dr. Bauer's description of the REACH program fits this recommendation, as the FOA will require both jurisdiction-wide improvement in certain metrics as well as improvement on a specific disparity. HDS recommends incorporating this approach through CDC's programs and funding announcements.

## **Recommendation #4**

Support the rigorous evaluation of both universal and targeted interventions and, where indicated, the use of culturally appropriate evaluation strategies to establish best practice approaches to reduce health disparities and achieve health equity. All programs and initiatives should devote resources for rigorous evaluation to determine the health equity impact.

## **Recommendation #5**

Build community capacity to implement, evaluate, and sustain programs and policies that promote health equity, especially in communities at highest risk.

- Expand provision of technical assistance, toolkits and other technical resources.
- Expand funding to support community capacity building to reduce health disparities and achieve health equity.
  - how to address the social determinants of health
  - how to improve health literacy
  - how to build cultural competence within the public health workforce



- how to sustain health equity programs when federal funding ends

### **Recommendation #6**

Support training and professional development of the public health workforce to address health equity.

This recommendation refers not only to the diversity of the public health workforce, which is important, but also to the cultural competence of the existing workforce to provide services, programs, and policies that promote health across all racial and ethnic groups, sexual orientation and gender identity groups, immigrant populations, and disabilities. The public health workforce may not understand how to do this work and how to measure it. CDC has the opportunity to take a leadership role in promoting improved cultural competence of the public health workforce.

### **Vote**

Dr. Lynne Richardson moved that ACD approve the recommendations from HDS. Ms. Sylvie Drew Ivie seconded the motion. The motion carried unanimously with no abstentions.

### **Discussion Points**

Dr. Richardson acknowledged Leandris Liburd, Associate Director for Minority Health and Health Equity, CDC, for her help in formulating the recommendations. She thanked Dr. Nisha Botchwey, ACD member, for her participation and noted that the subcommittee would welcome additional ACD member participation. She pointed to Dr. Iton as a potential new member.

Dr. Liburd thanked HDS members for their leadership and noted that they are in a good place to build on the foundation of the recommendations.

Dr. Greenberg thanked Dr. Richardson and HDS for their thoughtful work on these issues.

Dr. Isham asked how CHDIR relates to the National Disparities Report from AHRQ. Dr. Richardson answered that the AHRQ report is a national healthcare disparities report that looks specifically through a healthcare lens at quality and access to healthcare services. The CDC report looks at health indicators, not only healthcare indicators. CDC releases additional information annually that is broken out by some subgroups of interest, but the CHDIR is a “deeper dive” into all data available to CDC to look at health indicators across all of the groups of interest.

Dr. Isham said that it might be helpful to specify for those who are not inside public health what these various sources of information can yield and how they do or do not work together in order to use the resources effectively.



Dr. Richardson said that there had been discussion regarding developing a toolkit to guide state and local health agencies as well as other stakeholders who might use the data to move forward. The first step is to obtain the data and then to make it available to people who are in a position to take action, and to lay out what the actions are for various sectors.

Dr. Chu endorsed the recommendations. Monitoring data should be real-time and actionable. Disparities work is difficult because there is not agreement on defining disparities and categorizing the population into different groups. Some of the categorization is self-reported, and everyone does not collect the data in the same way. Also, the reports are received one year apart, so there is no way to know which strategies actually work. The call for scouring the environment to find effective strategies will be a good start to address this problem. The approach to disparities and chronic diseases is similar to global health: prevent, detect, respond. The shorter the timeframe for all three, the better the results will be. Kaiser has tried to provide real-time feedback on certain indicators, broken down by racial and ethnic groups, and the work is difficult but important.

Dr. Richardson agreed. HDS hopes that the adoption of these recommendations will be the beginning of the conversation regarding how to implement them throughout the agency. The act of making data available is itself an intervention, as people can focus on what is happening and what needs to occur. There are challenges associated with collecting the data, but there are opportunities with increased use of EHRs by healthcare organizations if those practices and organizations can collect accurate, patient-level data.

Dr. Goldman added her support to the recommendations. She addressed the linkage with environmental health, including disparities in environments and environmental justice. Other agencies work on these issues and struggle with indicators and tools, and with how to interpret the data. She encouraged partnership with other agencies such as the US Environmental Protection Agency (EPA) and the US Department of Housing and Urban Development (HUD) to address health equity issues.

Ms. Drew Ivie thanked HDS for their work. As the work moves forward, she hoped to find ways to bring community members themselves into partnerships. Groups have been left out and have not moved forward at equal rates, but there are ways for populations to participate in this work by their own actions and behaviors. Addressing the actors without addressing those who are acted upon has not been as effective as a partnership. Now they can say to populations, "We're doing our part. Now you do yours," because everyone has responsibility.

### **State, Tribal, Local and Territorial Subcommittee Update and Discussion**

Dr. David Fleming, Chair, STLT Subcommittee, thanked the staff of the Office of State, Tribal, Local and Territorial Support (OSTLTS). He and Dr. Judy Monroe presented updates and recommendations from the STLT Subcommittee. The STLT Subcommittee has created or anticipates creating working groups focused on the following:



- ❑ Social Determinants of Health/SDOH (inaugurated February 2014), recognizing that these issues cross over all categories of diseases at the STLT level
- ❑ Finance/Budget (under development for Spring 2014), related to CDC's budget to the STLT community
- ❑ Information Sharing/Informatics/Surveillance (anticipated for summer 2014), recognizing the need for an advisory process to inform the surveillance effort; the STLT Subcommittee could help populate a working group at the subcommittee level, populating it with additional expertise beyond the STLT community

The SDOH Workgroup of the STLT Subcommittee is chaired by John Auerbach. The STLT Subcommittee approved their recommendations followed by endorsement from the HDS. The STLT Subcommittee will continue to work with HDS. The STLT Subcommittee proposes adoption by the ACD of the following recommendations:

In support of HDS Recommendation 2 to "Identify and monitor indicators of health equity:"

- ❑ CDC should explore the available non-health data sources from other domains (e.g., housing, human services, education, transportation, public safety, income) that are readily available and that offer insights into the impact of the social determinants of health. CDC should also explore ways STLT health agencies can collect and incorporate such data in their planning.

In support of HDS Recommendation 6, "Support training and professional development of the public health workforce to address health equity:"

- ❑ CDC should develop a plan to either leverage existing informational and skill-building training opportunities for STLT agencies on how to incorporate SDOH practices or develop new training opportunities where needed. Trainings might be directed toward:
  - Project officers
  - New and mid-career public health workforce
  - Public health leadership
  - Non-traditional public health workforce (e.g., social workers, community health workers)
  - Local Boards of Health

Dr. Judy Monroe, Director, OSTLTS, and DFO, STLT Subcommittee, provided updates on the office's actions in response to recommendations from the STLT Subcommittee and ACD.

Work on Community Health Needs Assessment (CHNA) has been ongoing. A Technical Package Framework for Community Health Improvement (CHI) is expected to be completed by the end of 2014. It will assist nonprofit hospitals for the 2015 corporate tax year. It will support a unified framework to improve health outcomes and reduce health disparities.



One of the recommendations focused on the cross-jurisdictional sharing of public health services. A website is in clearance that will feature how CDC encourages cross-jurisdictional sharing. This strategy has been critical for quality and efficiency throughout public health. OSTLTS continues to collaborate with the Center for Sharing Public Health Services, funded by the Robert Wood Johnson (RWJ) Foundation, which supports 16 demonstration sites.

Regarding core services, RWJ has funded an initiative to examine core services through RESOLVE. Version 1 of a report was released in March 2014 and is available for broader vetting and discussion. The STLT Subcommittee is providing feedback on the report and will consider implications for impacts on funding defined foundational capabilities and areas.

Dr. Fleming described the Conceptual Framework for Foundational Capabilities that was developed by RESOLVE. The problem lies in the fact that the public health system in the US is profoundly broken, because there is no dependable financing for foundational aspects of public health departments. Rather, funding streams through individual projects and programs. Often, financing comes from different funders that do not communicate with each other, and they assume the public health foundation on which the work rests is funded by someone else. This approach is a problem, partly because the public health system has never defined the foundation that needs to be in place in order to do the work that needs to be done.

The RESOLVE-developed framework reflects a general consensus that there is a foundation for public health that consists of two parts: 1) foundational capabilities, and 2) core functions that need to be resident in a health department independent of programs, including assessment, preparedness, policy development and support, communications, developing and managing community partnerships, and organizational competencies such as IT and human resources. Health departments also need key, innate capabilities in critical health programs, including communicable disease control; chronic disease and injury prevention; environmental public health; maternal, child, and family health; and access to and linkage with clinical care. If the health department is a tree, then these areas are the tree's trunk. Specific competencies and abilities within each of the foundational elements have been identified so that costs can be specified at the state and local level in these areas. RESOLVE continues to work on a system to help cost out these areas.

Dr. Monroe described population health funding streams. The streams come from traditional healthcare funding sources, such as health insurance, as well as non-traditional funding such as private and public-private partnership funds, as well as traditional public health funding. Other sources include funding for upstream social determinants of health in non-health sectors, such as subsidized housing.



A report of budget proposals from the National Association of State Budget Officers (NASBO) was released recently, and Pew Charitable Trusts released an analysis of that report. Some of the findings include:

- Tax revenue at the state level has increased for 16 months.
- Most governors are proposing 1% to 5% in spending growth in their budgets.
- Many of the increases are focused on education, economic development, and infrastructure.
- Public health lost thousands of jobs in the recession. Massachusetts is the only state that specifically proposes increasing funding for public health.
- Other states propose funding for healthcare or health and human services offices, and some are expanding Medicaid.

Given these facts, Dr. Monroe asked ACD for their thoughts regarding how the STLT Subcommittee should respond to these trends at the state level and how CDC can help STLT entities leverage more state funds to support public health. The STLT Subcommittee has also created a Finance/Budget Workgroup to examine opportunities to enhance support for foundational public health functions. This workgroup can be a vehicle through which ideas can be considered.

#### **Vote**

Dr. Fleming moved that ACD approve the recommendations from the STLT Subcommittee regarding SDOH. Dr. Richardson seconded the motion. The motion carried unanimously with no abstentions.

#### **Discussion Points**

Dr. Iton expressed hope that CDC would partner with other federal agencies to develop consistency regarding how the non-health-related data sets are collected, standardized, and analyzed. HUD has been a partner in this area in California. HUD has access to enormous data resources that are not publicly available. Through its federal relationships, CDC can facilitate greater access to some of these federal data sets that are relevant to SDOH.

Dr. Botchwey commented that while having non-health data available is valuable for public health, it is also valuable for the non-health sectors to have access to health data. She suggested creating an essential clearinghouse for relevant indicators across geographies to help other sectors make appropriate decisions. Community Commons, for instance, provides resources that non-profit hospitals use, she noted.



Dr. Fleming said that it is apparent on the front lines that the neighborhoods that experience the most disparity are also points of interest for their colleagues in community development, economic development, and the education system. The different sectors have similar looking maps allowing opportunities for synergy.

Dr. Richardson pointed out that CDC has a role to play in convening these groups, as local and state public health agencies can serve as conveners at the local level.

Dr. Botchwey said that the Sustainability Tools for Assessing and Rating (STAR) Communities system presents another opportunity. The STAR system collects a great deal of data and could create other synergies.

Dr. Benjamin suggested creating a White Paper about how public health is funded and to propose future options.

Dr. Iton appreciated the work in defining the conceptual framework for foundational capabilities. He asked about the graph, which depicts the different foundation areas at different heights.

Dr. Fleming answered that the graphic heights do not indicate specific differences. Programs are not uniform across health departments, as some health departments need some constant elements while responding to local needs. The differences in heights are intended to reflect variability across health departments.

Dr. Iton noted that public health infrastructure arguments are a “rear-guard action.” The arguments will be successful if they focus on what the infrastructure will allow public health to do going forward. Like the concept of a system of prevention, articulating core elements is important to make the case for the value of public health as the nucleus of local systems of prevention.

Dr. Chu agreed and noted that infrastructure for public health is not treated as a budgetary issue; whereas, it is treated as an entitlement for healthcare. A strategy to bolster public health infrastructure may be found in the healthcare delivery system, which seeks to integrate population health and build larger systems. Healthcare defines population health in different ways, however. Public health is not absolutely synonymous with population health, but the case can be made that there is enough significant overlap that population health could include the need for public health infrastructure. The funding stream for global capitation could drive more funding toward community and public health efforts, but no roadmap has been created for the healthcare delivery system to move down that path. CHNA could be a vehicle for the discussions about what population health means and how the public health sector can intersect and provide leadership.



Dr. Bal observed that form follows function and infrastructure means that money is needed to support a core group of services without which public health does not exist. The CHNA could be a significant intervention, but it has failed to be effective thus far. Many hospitals have not followed the letter and spirit of the law, and health departments have not been able to “hold their toes to the fire.”

Regarding the need to encourage states to reinvest in public health after cutbacks, Dr. Frieden said that they could look for money from different sources, including grants, fees, Medicaid, the healthcare system, and CHNA. He asked about the specific per capita cost for public health that the analysis by RESOLVE has yielded and whether CDC should generate that figure for the entire country. When CDC created a figure for states to invest in tobacco control, it served as a tool for defending and advocating for budgets.

Dr. Fleming answered that for public health infrastructure in Washington State, the per capita cost is approximately \$28. RESOLVE’s work is not yet complete. There are nuances to that number, however. For example, some states have mandated restaurant inspections and other programs. Such services will inflate that figure. Even if such programs are not truly part of the public health foundational services in a given public health jurisdiction, they should be included from an advocacy standpoint at the state level. In many health departments, the foundational funding represents the minimum of needed funding. In Washington State, linking that figure to the notion of foundational services that should be available to every resident has brought some traction in the legislative arena. The figure helps decision-makers understand what the money is buying and why it is needed. The figure also provides an accountability measure to illustrate the capabilities at the local and state levels.

Dr. Benjamin expressed some skepticism, as the tobacco per capita figures were helpful for discussion and for new investments; however, the allocations were not sustained. It will be difficult to generate a per capita figure, but it must have relevance and sustainability. The number is more than how funds are spent. It needs to have power, perhaps through accreditation.

Dr. Fleming agreed and added that the accreditation board is intensively engaged. There is a crosswalk between the foundation and its definition and the accreditation standards. The next version of accreditation could include a link between what is needed for accreditation and how much it costs.

### **Global Workgroup and Discussion**

Dr. Fleming, GWG Chair, described the work of GWG, which has been in existence for several years. It serves as a sounding board for the Center for Global Health (CGH) to provide informal feedback and input as opposed to formal recommendations through the ACD.



GWG has met twice by teleconference since the last ACD meeting, in November 2013 and April 2014. CGH has strong staff that does outstanding work. The leadership transition to Dr. Tom Kenyon has been smooth.

GWG addresses different issues in its meetings. The November 2013 meeting included discussions of polio, CDC Country Offices, the development of a global Maternal and Child Health strategy, as well as CDC's Global TB Strategy. GWG encouraged more focus on the Global TB Strategy. They also discussed the emerging concept of NPHIs. There is no better agency than CDC to foster the development of NPHIs in other countries.

The April 2014 meeting included discussions about GHS, Ebola, MERS, and an exciting partnership between CDC and the World Bank. The President's Budget for 2015 does not include support for NPHIs, but GWG strongly recommended that CDC continue that work, which could serve as one of the strongest legacies that CDC can contribute to the world. GWG also discussed NCDs across CDC in other countries and the unfortunate reality that funds do not flow to CDC to do this work in a coordinated manner. GWG offered help and suggested funding dedicated financing for NCD activity to enable CDC to better build capacity. There was also a discussion of antibiotic resistance that requires global-scale strategies.

Dr. Tom Kenyon, Director, CGH, added that GHS work is a top priority and a tremendous opportunity. It is important to link global health to domestic concerns. The two are intertwined, and GHS is an opportunity to convey and act upon that concept. Historically, CDC's global work has been humanitarian in nature. GHS is linked to domestic issues. If the problems are addressed on the global stage, then they will not emerge in health departments and emergency rooms.

It is difficult to increase the US government footprint in countries, even when resources are available to do so. CDC has a presence in many countries, as well as laboratory partnerships, existing infrastructure, deep and longstanding partnerships with Ministries of Health (MOHs), surveillance work, and workforce development. GHS can advance in places where there is that strong presence.

These efforts are connected to the NPHI work. CGH called on countries to engage in readiness assessments, and 33 responses were received. Thirty of the countries were prepared to move forward with a public health institute. As the budget is only \$7.5 million, CGH will move forward with implementation in at least five countries and assist with strategic planning in at least three countries. They hope for a line item to continue the work. The preferred model is working with MOH colleagues, but global health is conducted in many ways and through different partnerships with organizations and agencies. There is tremendous subject matter expertise at CDC. The DGHP will rely on these experts.

April 2014's GWG meeting included presentations from centers outside CGH, which illustrates the strong global health work at CDC.



## **Discussion Points**

Dr. Greenberg said that since its inception, GWG has emphasized that CDC can have an impact on public health infrastructure on a global level as it has domestically. The approach is value-added to CGH and CDC.

### **Vote**

Dr. Fleming moved to approve the minutes from the November 2013 and April 2014 GWG meetings. Dr. Greenberg seconded the motion. The motion carried unanimously, with no abstentions.

## **Public Health–Health Care Collaboration (PHHCC) Workgroup Update**

Dr. Corinne Graffunder, Acting Associate Director for Policy, CDC, and DFO, PHHCC Workgroup, thanked the ACD members and other participants on the workgroup. During the last in-person ACD meeting, Mr. Andrew Rein presented opportunities for public health–healthcare engagement in the construct of “data, delivery, and drivers.” CDC has spent the past year working to better articulate, coordinate, and understand those opportunities and goals. Input from the PHHCC Workgroup has been important in this process. The long-term goal is to improve health outcomes, improve delivery of care, reduce the cost of care, and eliminate disparities by linking health to non-health interventions.

Three 2017 goals regarding data, delivery, and drivers for high-burden, preventable conditions are articulated:

- Align measures for high-burden preventable conditions to a measurement infrastructure that allow all payers to monitor improvement in health and cost outcomes.
- Describe cost implications associated with and increase uptake of a standard set of clinical and community preventive services in all care settings and states to 80% of the Healthy People 2020 targets.
- Demonstrate rapid improvement in health outcomes and reduction in health care costs by linking clinical care, risk factor control, and improvements in physical environment and social determinants of health.

The discussion about place-based data and upstream opportunities is important.

Dr. Benjamin recalled ACD’s discussion during its last meeting about the interface between the core public health community and the medical care community. This discussion resulted in the charge to create a workgroup, the PHHCC Workgroup, which is expected to make recommendations to the ACD prioritizing the highest value opportunities for CDC that will advance and sustain collaboration between public health and the health care system.



The Workgroup includes representation from a variety of sectors. The process for reaching draft recommendations for consideration began with focusing on prioritized actions:

- ❑ Identify specific gaps and high-priority opportunities for joint Public Health–Health Care activities.
- ❑ Improve capacity for new groups and systems such as Accountable Care Organizations, Patient-Centered Medical Homes, and other evolving systems of care, including new Medicaid models, to incorporate public health practices and principles.
- ❑ Improve the use of proven clinical preventive health services and community-based preventive health services across the health sector.

The draft recommendations were aligned with CDC’s public health–health care collaboration strategy for health system transformation.

CDC’s first goal of engagement is to align measures with conditions. The workgroup discussed: focusing on alignment across all payer systems; assisting with the development of quality and performance measures for the federal and state Health Marketplaces and developing a bi-directional framework for healthcare organizations and public health agencies integrating data resources to enhance system-wide capabilities. The workgroup noted that there are opportunities to develop and identify best practices for linking clinical EHRs to a range of local health interventions that will ultimately improve population health. This work can take place in partnership with the ONC, which drives IT activity at the national level. The workgroup also identified an opportunity for CDC to work with AHRQ to promote and update the use of an aggregate prevention measure.

CDC’s second engagement goal is to increase clinical and community prevention. The workgroup discussed defining the spectrum of services that both healthcare and public health should collaboratively manage and determining the appropriate role for each sector.

It is important to build the capacity of the clinical and public health workforce to understand population health, develop economic models that value prevention and develop the business case, and be inclusive of cultural sensitivities and health disparities. CDC can define key roles and messages for public health practitioners to facilitate better integration of public health and healthcare and to motivate public health organizations to connect to health systems. The public health community needs a definition of its role.

The workgroup felt that it is important to determine population-level cost and the health implications realized from better uptake of a set of clinical and community-based interventions. The group discussed public health’s role in service delivery, recognizing that a mix of models is available. It is important to model community-based interventions by focusing on modifiable risk factors with a holistic, population-based focus as opposed to a single-disease focus. CDC is already moving in this direction in different ways. The *Guide to Community Preventive Services* has value, and its use should be promoted within the acute care community as well as the public health community. The workgroup discussed a range of activities regarding payment and



potential collaborators, such as CMS and the National Association of Medicaid Directors (NAMMD).

CDC's third engagement goal is to link clinical care to prevention and social determinants of health. The workgroup's discussions focused on community needs highlighting CDC's unique strength to add value. There are opportunities to better understand a partnership between the health system and public health from a business and economic perspective. Working with CMS, CDC can draft a proposal that links community health to hospitals and other healthcare delivery settings and addresses social determinants for specific high-burden preventable conditions. Public health and healthcare should both see their roles in this work. It will be important to improve the linkage between behavioral health and mental health systems and public health, as well as to develop the business case for this work.

There are models, funding systems and novel finance mechanisms being developed and tested. The group discussed social impact bonds and how to learn from and leverage this work. The community health needs assessment (CHNA) can be further leveraged to illuminate problems, craft local decisions, and establish accountability for the decisions and their outcomes. With its partners, CDC can serve as a convener and a facilitator to accelerate the adoption of sustainable models that promote the implementation of a range of evidence-based prevention activities.

Dr. Benjamin explained that the workgroup will refine the concepts to create focused recommendations, which will be presented for ACD's approval during the next meeting. The workgroup can serve as a "think tank" to support the agency as it implements the recommendations before dissolving. He asked ACD for input regarding the workgroup's direction and whether the discussion should include any other major issues.

### **Discussion Points**

Dr. Iton suggested that graphics would help illustrate the continuum from "upstream to downstream" and show the opportunities for interventions along the continuum. The notion of workforce integration and the overlap of public health, public education, and clinical care presents meaningful interfaces, such as public health nursing, school nurses, public health nurses, and clinical nurses.

### **Workgroup/Subcommittee Discussion**

Dr. Greenberg suggested that it would be helpful for the next ACD meeting to see a matrix of the current ACD subcommittees and workgroups and their members. He explained the levels of subcommittees and workgroups of the ACD. The highest level is subcommittees of the ACD, which can have workgroups within them. ACD workgroups require only two ACD members. There are also options for "gatherings."



The two ACD Subcommittees are active: Health Disparities and STLT. The two workgroups, GWG and PHHCC, are also active. Three new ideas for small group topics were suggested in the course of this ACD meeting:

- ❑ “Place-based,” which could be addressed by an ad hoc workgroup
- ❑ Surveillance, which can be addressed by a working group of the STLT Subcommittee or as its own working group
- ❑ AMD, utilizing a workgroup with advice from technology and academic to advise CDC on keeping pace with evolving technology

Ms. Villar noted that as the ACD approved recommendations from the SDH workgroup of the STLT Subcommittee, the SDH workgroup is approved as part of the STLT Subcommittee. If a separate surveillance group is formed, then it will be important to be clear about what each is doing to avoid duplication.

Dr. Iton recalled the need to define the notion of what a system of prevention looks like, which could be related to the place-based efforts. Leadership is needed in this area.

Dr. Frieden said that an external group has been formed to advise CDC on AMD. Ideas for groups or individuals to include on that group are welcome. Dr. Khabbaz added that the external group is a working group of the OID BSC.

Dr. Bal supported the idea of a “place-based” gathering and volunteered to participate on it to work on the idea that “your Zip code is more important than your genetic code.”

Dr. Bauer said that a short-term focus on fleshing out the core domains into a core package would be helpful in thinking about creating a preventive system.

Dr. Richardson added that HDS discussed place-based initiatives and their centrality to health equity work. HDS plans to continue work with the STLT Subcommittee and their SDH Workgroup. A short-term effort to produce a tangible product might be in order.

Dr. Frieden said that materials already exist on this topic and will be sent to volunteers.

Dr. Bauer emphasized that NCCDPHP has an urgent need regarding its portfolio, where place-based issues are larger and potentially more complicated. A short-term effort could consider the NCCDPHP portfolio and a longer-term effort could consider place-based.

Dr. Frieden suggested a preliminary outline by July 1, 2014 and a final plan by the end of December. Drs. Botchwey, Bal, Farley, Iton, and Fleming indicated their interest in participating.

It was agreed that the Surveillance Workgroup created as part of the STLT Subcommittee would work with Dr. Richards on those issues. That workgroup can include non-ACD members and could bring expertise from outside the STLT community, as well as Dr. Goldman.



The STLT Subcommittee SDH Workgroup will work jointly with HDS.

## **Collaboration with Georgia Tech**

Dr. Harold Jaffe, Associate Director for Science at CDC, explained the collaboration between CDC and the Georgia Institute of Technology, which grew out of discussions regarding how to incorporate the engineering and computing expertise at Georgia Tech, CDC's Atlanta neighbor, to solve emerging health problems within the agency. This initiative is approached through joint research activities, including both short- and long-term projects and incorporates training opportunities such as internships and fellowships, educational opportunities such as seminars and workshops, and student-led activities.

Georgia Tech has several opportunities for their students to engage in specific types of projects in which CDC can play a role. The "Capstone Design Programs" are typically conducted by teams of undergraduates who work together to propose a solution to a specific problem. The problems may be generated internally by professors at Georgia Tech or by industry, government, NGOs, and CDC. The final projects and solutions are presented at a Design Expo. The Vertically-Integrated Projects (VIP) Program includes longer-term projects that tend to involve more faculty and graduate students.

To date, CDC has held a Public Health Grand Rounds on CDC's campus collaboratively with Georgia Tech. It focused on healthy aging in place. An introductory meeting was hosted by the president of Georgia Tech in September 2013, and a joint symposium with more than 100 participants was held in March 2014. The symposium covered a number of topics of joint interest to CDC and Georgia Tech, including bioinformatics, big data, public health informatics, policy analytics, data visualization, and the built environment.

Six proposals have been submitted for Capstone Design Programs that will have CDC co-supervisors working with students for the fall of 2014. CDC will participate in one VIP project called "Predictive Health." It will be led by a computer scientist at Georgia Tech who was recruited from the IBM Watson laboratories. The project will apply computational methods, such as data mining and natural language processing, to help predict public health outcomes. It could lead to more novel approaches to surveillance.

The next steps will be to identify specific research projects that Georgia Tech and CDC can conduct together. They will hold workshops at CDC to familiarize CDC supervisors with the Capstone Design and VIP programs and to encourage establishing internship and fellowship opportunities, as well as opportunities for faculty exchanges between Georgia Tech and CDC. Another Public Health Grand Rounds is also planned.

Dr. Botchwey introduced a report that grew out of relationship-building with Georgia Tech. ACD has previously discussed the need for a multi-sector approach to address health issues. Funding from the NPS supported an expert panel in October 2012, which led to the report and the most recent launch of the Built Environment and Public Health Clearing House. It provides



resources for architecture, transportation engineering, planning and health impact assessment at the intersection of public health for current students and current practitioners.

### **Discussion Points**

Dr. Greenberg supported the idea of the collaboration. ACD frequently raises the issue of how academic institutions and potential partners could help CDC with its mission, if asked to do so. He asked whether there are other models for federal agencies that have partnered with academic entities.

Dr. Jaffe replied that they created their approach. Dr. Greenberg suggested that there could be lessons learned from other federal partners that have engaged academic institutions. Dr. Jaffe clarified that this initiative is focused on engaging a specific academic institution with specific expertise. It is not a school of public health.

### **Concluding Remarks / Public Comment**

Dr. Richardson thanked ACD for approving the HDS recommendations and offered HDS's assistance as CDC thinks through how to implement the recommendations. She hoped for a progress update at the next ACD meeting, as passing the recommendations is just the beginning.

Dr. Botchwey congratulated Dr. Frieden, ACD, and CDC leadership on the progress that they have made as a group.

Dr. Farley agreed and noted that he feels that he gets more out of the meeting than he contributes because of the high-level discussion of important and difficult issues.

Dr. Iton expressed appreciation for CDC, Dr. Frieden, CDC's leaders and senior staff, and all of its personnel for navigating the extremely difficult political and fiscal environment. He was amazed at their continued optimism and focus on their priorities.

Dr. Bal agreed that CDC has done excellent work in the past few years. He especially thanked Ms. Carmen Villar, CDC Chief of Staff.

Dr. Benjamin added his thanks to CDC for the incredible work. CDC has built excellent trust in the US and around the world.

Dr. Greenberg remarked on how to market CDC's GHS mission. The US public is supportive of a larger US government global presence in the military. This appreciation could be translated to the public health sphere. He extended his thanks to CDC leadership for being flexible to adapting the structure of the meeting and Gayle Hickman for her work in organizing the meeting.



Dr. Greenberg called for public comment at 2:57 pm. No public comments were offered. Dr. Frieden thanked ACD members for their participation, noting that the high-level discussion is extremely helpful to CDC leaders and staff. CDC has staff like no other agency in the world. They are the world's experts in their areas who are also mission-driven and can think strategically about how to make progress in their areas and in public health in general. He shared a story about CDC's Ebola team, which investigated Ebola and Marburg in bats in Python Cave in Uganda. The cave has not only a giant python and bats, but also cobras. That group is an example of the dedicated and caring people that move CDC forward.

A video depicting CDC's "24/7" response to protect the US and the world from health and safety threat was shown.

Dr. Greenberg officially adjourned the meeting at 3:04 pm.



## Certification

I hereby certify that, to the best of my knowledge and ability, the foregoing minutes of the April 24, 2014 meeting of the Advisory Committee to the Director of CDC are accurate and complete.

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Date

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Alan Greenberg, MD, MPH

Chair, Advisory Committee to the Director, CDC



## **Attachment #1: Attendance**

### **ACD Members Present:**

**Dileep G. Bal, MD, MS, MPH**  
District Health Officer  
Hawaii State Health Department

**Georges C. Benjamin, MD, FACP, FNAPA, FACEP (E), Hon FRSPH**  
Executive Director, American Public Health Association

**Nisha D. Botchwey, PhD, MCRP, MPH**  
Associate Professor, School of City and Regional Planning  
College of Architecture, Georgia Institute of Technology

**Benjamin K. Chu, MD, MPH, MCAP**  
Group President, Southern California and Hawaii; Regional President, Southern California  
Region  
Kaiser Foundation Health Plan and Hospital

**Sylvia Drew Ivie, JD**  
Executive Liaison  
Commission for Children and Families, Los Angeles County

**Thomas A. Farley, MD, MPH**  
Joan H. Tisch Distinguished Fellow in Public Health  
Hunter College

**David W. Fleming, MD**  
Director and Health Officer for Public Health  
Seattle-King County, Washington



**Lynn R. Goldman, MD, MS, MPH**

Dean, Milken Institute School of Public Health  
Professor of Environmental and Occupational Health  
George Washington University

**Alan Greenberg, MD, MPH (ACD Chair)**

Professor and Chair, Milken Institute School of Public Health  
Department of Epidemiology and Biostatistics  
George Washington University

**George Isham, MD, MS**

Senior Advisor, HealthPartners  
Senior Fellow for Education and Research, HealthPartners Institute

**Anthony B. Iton, MD, JD, MPH**

Senior Vice President, Healthy Communities  
The California Endowment

**Lynne D. Richardson, MD, FACEP**

Professor and Vice Chair of Emergency Medicine  
Professor of Health Evidence and Policy  
Mount Sinai School of Medicine

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## Attachment #2: Acronyms Used in This Document

Acronym	Expansion
ACA	(Patient Protection and) Affordable Care Act
ACD	Advisory Committee to the Director
ACL	Administration on Community Living
AHRQ	Agency for Healthcare Reform and Quality
AMD	Advanced Molecular Detection
AMR	Antimicrobial Resistance
APHL	Association of Public Health Laboratories
ASTHO	Association of State and Territorial Health Officials
BSC	Board of Scientific Counselors
<i>C. difficile</i>	<i>Clostridium difficile</i>
CBO	Community-Based Organization
CDC	Centers for Disease Control and Prevention
CE	Continuing Education
CGH	Center for Global Health
CHDIR	CDC Health Disparities and Inequalities Report
CHI	Community Health Improvement
CHNA	Community Health Needs Assessment
CMS	Centers for Medicare and Medicaid Services
<i>CRE</i>	Carbapenem-resistant <i>Enterobacteriaceae</i>



<b>Acronym</b>	<b>Expansion</b>
CSELS	Center for Surveillance, Epidemiology and Laboratory Services
CSTE	Council of State and Territorial Epidemiologists
CTG	Community Transformation Grant
DCH	Division of Community Health
DFO	Designated Federal Officer
DGDDER	Division of Global Disease Detection and Emergency Response
DGHA	Division of Global HIV/AIDS
DNPAO	Division of Nutrition, Physical Activity, and Obesity
DOD	(United States) Department of Defense
DSEPD	Division of Scientific Education and Professional Development
DTRA	Defense Threat Reduction Agency
ED	Emergency Department
EHR	Electronic Health Record
EIP	Emerging Infections Program
EOC	Emergency Operations Center
EPA	(United States) Environmental Protection Agency
FDA	(United States) Food and Drug Administration
FY	Fiscal Year
GAO	Government Accountability Office
GDD	Global Disease Detection
GHS	Global Health Security



<b>Acronym</b>	<b>Expansion</b>
GTCB	Global Tobacco Control Branch
GWG	Global Work Group
HAI	Healthcare-Associated Infection
HDS	Health Disparities Subcommittee
HHS	(United States Department of) Health and Human Services
HIT	Health Information Technology
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HRSA	Health Resources and Services Administration
HUD	(United States) Department of Housing and Urban Development
ICSI	Institute for Clinical Systems Improvement
ICU	Intensive Care Unit
IHR	International Health Regulations
IHS	Indian Health Service
IT	Information Technology
MERS	Middle Eastern Respiratory Syndrome
MOH	Ministry of Health
MOU	Memorandum of Understanding
NAMD	National Association of Medicaid Directors
NASBO	National Association of State Budget Officers
NCBDDD	National Center for Birth Defects and Developmental Disabilities
NCBI	National Center for Biotechnology Information



<b>Acronym</b>	<b>Expansion</b>
NCCDPHP	National Center for Chronic Disease Prevention and Health Promotion
NCD	Noncommunicable Disease
NCEZID	National Center for Emerging and Zoonotic Infectious Diseases
NCHS	National Center for Health Statistics
NDM-1	New Delhi metallo-beta-lactamase-1
NGO	Non-Governmental Organization
NGS	Next-Generation Sequencing
NHSN	National Healthcare Safety Network
NIH	National Institutes of Health
NNDSS	National Notifiable Diseases Surveillance System
NPHI	National Public Health Institute
NPS	National Prevention Strategy
NVDRS	National Violent Death Reporting System
OADP	Office of the Associate Director for Policy
OD	Office of the Director
OID	Office of Infectious Diseases
OHSC	Office of Health System Collaboration
OMB	Office of Management and Budget
OMHHE	Office of Minority Health and Health Equity
ONC	Office of the National Coordinator for Health Information Technology
ONDIEH	Office of Noncommunicable Diseases, Injury and Environmental Health



<b>Acronym</b>	<b>Expansion</b>
OPCB	Obesity Prevention and Control Branch
OPHSS	Office of Public Health Scientific Services
OSH	Office on Smoking and Health
OSTLTS	Office of State, Local, Territorial and Tribal Support
PDMP	Prescription Drug Monitoring Program
PEPFAR	President's Emergency Plan for AIDS Relief
PFGE	Pulsed Field Gel Electrophoresis
PHAP	Public Health Associate Program
PHHCC	Public Health – Health Care Collaboration (Workgroup)
PHS	Public Health Service
PHSS	Public Health Scientific Services
PICH	Partnerships to Improve Community Health
PPHF	Prevention and Public Health Fund
REACH	Racial and Ethnic Approaches to Community Health
RPE	Rape Prevention and Education
RSEB	Research, Surveillance, Evaluation Branch
RWJ	Robert Wood Johnson (Foundation)
SDH	Social Determinants of Health
SDH	Social Determinants of Health
STAR	Sustainability Tools for Assessing and Rating (Communities)
STLT	State, Local, Tribal, and Territorial



<b>Acronym</b>	<b>Expansion</b>
TA	Technical Assistance
TB	Tuberculosis
USDA	United States Department of Agriculture
USPSTF	United States Preventive Services Task Force
VIP	Vertically-Integrated Projects
VTE	venous thromboembolism
WFPHA	World Federation of Public Health Associations
WGS	Whole Genome Sequencing
WHO	World Health Organization



## MEETING SUMMARY

### **Global Work Group**

Advisory Committee to the Director of CDC  
Centers for Disease Control and Prevention

Roybal Campus, Building 19  
9:00 AM – 3:00 PM  
April 24, 2013

### Meeting #6

David Fleming, GWG Chair

Pattie Simone, CGH Principal Deputy Director  
and Acting Designated Federal Officer (DFO)



On April 24, 2013, the Advisory Committee to the Director (ACD) of CDC's Global Work Group (GWG) convened in Atlanta, Georgia from 9:00 am until 3:00 pm. In addition to updates on GWG's previous meeting and from the Center for Global Health (CGH), the meeting included presentations on global health security, laboratory medicine progress in Africa, the reorganization of two CGH Divisions, CDC's Global Health Strategy, and general GWG discussion and feedback.

## **I. Welcome and Introductions**

Dr. David Fleming, GWG Chair, welcomed the group and asked those in attendance to introduce themselves. A list of meeting attendees, in person and on the telephone, is provided with this document as Attachment A.

## **II. Highlights of October 2012 GWG Meeting**

Dr. Fleming reviewed highlights of the October 2012 GWG Meeting, which was held via teleconference. GWG appreciated the opportunity to have contact with CGH staff between their in-person meetings. Dr. Anne Schuchat has been a strong interim leader for CGH. GWG looks forward to interacting with the new CGH Director, Dr. Tom Kenyon. Two issues were discussed:

- A new communication plan for CGH, recognizing that CDC is very good at providing information to the media on global health issues, but not as good at promoting why and how CDC is a player in global health; and
- CGH's Organizational Improvement Review.

## **III. Center for Global Health Updates**

Dr. Simone provided an update and noted the importance of Dr. Schuchat's leadership during the transition to a new director. Dr. Tom Kenyon, a pediatrician with a wide array of senior public health positions in global and domestic health, will begin in his role as CGH Director on May 18, 2013.

The report from CGH's Organizational Improvement (OI) Review was released in October 2012. CGH's response to the report included announcing the OI recommendations to CGH employees and GWG; identifying a CGH lead for each recommendation; establishing cross-Center work groups to address the recommendations; and reorganizing two Divisions to reduce overlap and integrate programs for building capacity and enhancing global health security.



Dr. Simone provided updates regarding the CGH Division of Global HIV/AIDS (DGHA) annual meeting in March 2013; World Malaria Day; the Vaccine Summit and progress in polio eradication; and CDC's efforts in tuberculosis (TB) elimination, including development a CDC-wide Global TB Strategic Framework and Susan Maloney as the new Global TB Coordinator.

CGH has developed a global health communication strategy to raise visibility, perceived value, and the unique contribution of CDC. The strategy includes: 1) relentless messaging using core, cross-cutting key messages; 2) engaging in proactive outreach to Washington, DC-based news media; and 3) distributing CDC messages through domestic partners who work in global health.

CGH is involved in National Public Health Institutes (NPHIs), as many countries seek CDC's help in "building a CDC." The new CGH division will be a focal point for this work and also include a Noncommunicable Disease (NCD) unit. Additional updates included the CDC Global NCD Strategic Framework, and CDC's responses to H7N9 influenza and novel coronavirus.

Dr. Simone discussed the US government sequestration and its effects on CDC and CGH. The 2014 President's Budget does not assume sequestration, but the outlook is uncertain. CDC has committed to making administrative cuts in order to avoid making cuts to programs.

### **GWG Discussion**

The effort to link all of CDC's global health activities is commendable. In the past, it was difficult to understand the various responsibilities in global health held by the different CIOs. A Global Health Leadership Council meeting is held quarterly to help address cross-cutting issues. GWG asked about the feasibility of creating a compendium of all of CDC's global health activities. CGH is creating country-based fact sheets, and they have information from different programs, but keeping that resource up-to-date is challenging.

When the new division is finalized, GWG would like an organizational chart in order to better understand how the new division fits into the overall Center structure.

GWG discussed whether Country Directors (CDs) conduct regional meetings. Countries with President's Emergency Plan for AIDS Relief (PEPFAR) activities hold some regional meetings, and some country platforms have regional aspects. The approaches are not consistent, as different programs within countries are involved in different regional systems.

There was discussion on the relationships between CGH and other CDC centers with specific expertise. There is interest in collaborating across centers, and CDC leaders are committed to this collaboration. Different models are appropriate for different issues; for instance, a considerable expertise in NCDs lies within CDC's domestic programs.

GWG suggested creating a brief report or reassessment one year after the OI review to document the work that has been accomplished and that is ongoing. CGH is committed to assessing progress with the standing work groups in the fall of 2013. Additionally, the annual employee survey will provide an opportunity to receive input.



Regarding polio, GWG inquired about the completeness of surveillance in countries such as Afghanistan, given the challenges in working in those countries. Dr. Simone replied that important progress is being made and staff is monitoring the situation closely.

GWG raised the role of chronic disease, especially diabetes and susceptibility to TB. GWG commended CDC on its leadership and working with WHO NCD Action Plan to set specific targets and performance indicators. There has been more country-level interest and request for technical assistance on NCDs than was expected. Having sufficient staff and resources will remain a challenge for CDC and countries. One approach that CGH will use to build NCD country capacity is through the Field Epidemiology Training Program (FETP).

GWG commended CGH for keeping NCDs and capacity-building on the agenda, and believes that CGH should continue to play a leadership role. Over the next two decades, NCDs will cost about \$47 trillion. Industries affected by NCD issues could be effective partners. Given limited resources, it may be advisable to explore public-private partnerships. A future GWG meeting could devote time to discussing how to mobilizing resources and develop partnerships.

It appears that the target for voluntary medical male circumcision will not be met on time. GWG asked for feedback on this issue. New technologies are making it possible to accelerate progress in some countries, but challenges remain. The Division of Global HIV/AIDS (DGHA) is working with AIDS advocates and indicating that the other treatment targets will be met. National governments are increasing services for antiretroviral therapy. Treatment costs are decreasing, partially due to the availability of more generic drugs.

TB is an area of great interest to GWG. In many ways, the TB work at CDC can serve as a model for all of CDC's global health strategy. GWG would welcome more discussion on the CDC Global TB Strategic Framework as it develops with coordination across CDC.

There was discussion on how the Field Epidemiology and Laboratory Training Program (FELTP) relates to CGH's work with NPHIs. Due to differences across countries, each country will need a tailored plan to reflect its priorities and systems. There was discussion on whether other countries may provide technical and financial assistance to the developing NPHIs. There are some examples of this type of assistance, but there remains much to be accomplished.

Communication plans should not only consider traditional media, but also should include long-term strategies for communicating more widely and to new populations, using new technologies. CGH primarily focuses on policymakers and partners but is also using social media channels to disseminate messages and new information more broadly. CGH also coordinates with the many different communication structures already in place throughout government.

Regarding H7N9 influenza, GWG asked about the completeness of China's surveillance system. The number of contacts being traced and followed carefully is high, and CGH is confident that the surveillance is comprehensive.



Regarding the budget, GWG offered to assist CGH and CDC in providing advice regarding minimizing the effects of sequestration. It was noted that funds appropriated to the US Department of Health and Human Services (HHS) and CDC through the US Department of State (DoS) and USAID are protected from sequestration.

USAID is leading the MDG consultations and is ensuring that HHS and CDC are involved in the process, which includes many constituencies. Bill Gates is interested in the MDG process and has expressed concern that the post-MDG goals are too broad and are, therefore, not measurable or useful. GWG expressed interest in learning more about how CDC is approaching this process so that the goals will be achievable and measurable.

#### **IV. Global Health Security**

Dr. Dowell presented an update on global health security. There is concern across the US government about the use of the word “security” because of a lack of clarity about what the term really means and the perceptions among different partners around the world. The CDC Director has made global health security a priority. CDC uses new technologies in combination with traditional epidemiology and basic laboratory science to react to increasing global health threats. These threats include the spread of new pathogens; the globalization of travel, food, and medicine; the rise of drug resistance; and the intentional engineering of microbes. Inter-agency collaboration is critical, as these threats can happen at any time.

As of the July 2012 deadline, only 20% of the countries that committed to the International Health Regulations (IHR) were fully prepared to detect and respond to pandemics. However, the requirements are self-reported and do not have concrete measures attached to them. Most countries have requested extensions with the possibility of another extension until 2016. An inter-agency group considered IHR implementation and promulgated four concrete measures in the areas of human resources, surveillance, laboratory, and response.

CDC believes that now is the time for a bold effort to create a world safe from the threat of global epidemics. Detecting threats early requires surveillance systems, strong laboratory systems, trained staff, and high-quality facilities. Responding effectively relies on an efficient emergency management system connected with Emergency Operations Centers (EOCs) and improved border safety. To prevent avoidable catastrophes, it is important to secure a safer food and drug supply, reduce the pace of drug resistance, and ensure safe and secure laboratories. To pursue these ideas, CDC is engaging in pilot studies in fiscal year (FY) 2013 to leverage resources to focus on three areas: EOCs, an Information Technology (IT) platform, and a National Laboratory System.

Dr. Tappero provided an update on CDC activities in Uganda, where an EOC facility and incident management system are planned. They have selected three diseases of public health concern: TB (particularly multi-drug resistant), cholera, and viral and hemorrhagic fevers (including the Ebola and Marburg viruses). CDC has worked in Uganda to build capacity in the laboratory, surveillance, transportation and IT systems. This important work builds on the health system components developed with PEPFAR investments since 2000.



## **GWG Discussion**

GWG discussed use of the word “security” and encouraged CGH to consider how different terms “play” to different audiences in the global community. It should be clear whose security is being addressed when CDC engages in global health security work. It is important that CDC reinforce its partnership with each country. GWG encouraged CGH to work directly with key intended audiences to develop messages. A mini focus group, for example, could shed light on the kind of language that will resonate with different groups.

GWG asked if public health in other countries is recognized to be part of the emergency response system. CDC is working with WHO on the IHR implementation process, and WHO is developing standards and resources for EOCs. Many countries recognize the priority of a public health response in an emergency. There could be an opportunity to integrate this concept into the International Association of National Public Health Institutes network, as emergency response is a core function of a NPHI.

Regarding the lack of quantitative indicators for IHR, GWG noted that WHO’s Framework Convention on Tobacco Control (FCTC) was also vague at the outset. WHO eventually worked with countries to reinforce the importance of reporting and indicators, and while FCTC still relies on self-report and more work needs to be done, the area of tobacco control has made progress. WHO promulgated guidelines to accompany FCTC, and there could be an opportunity to create similar guidance to help countries quantify their IHR efforts and progress.

## **V. Laboratory Medicine Progress in Africa**

Dr. Ballard provided a progress report on laboratory strengthening efforts in Africa. Laboratories in Africa tend to be under-appreciated and inadequately resourced, leading to poor services, unreliable results, lack of trust in the results and the under-utilization. This cycle can be broken by strengthening laboratories as part of IHR compliance and support of Global AIDS Program.

There is overlap between the IHR-centered efforts and PEPFAR. The laboratory systems that underpin both initiatives need support. A general strengthening of laboratory systems is needed in order to avoid creating silos of technologies and programs. The new CGH division will bring a unified approach to laboratory strengthening across the center and across CDC.

Dr. Ballard described efforts in Kenya and South Africa. The process of Strengthening Laboratory Management Towards Accreditation (SLMTA) occurs over approximately one year and includes three workshops. Since 2010, the process has been applied to 356 laboratories in 21 countries across Africa and leads to improvement in the quality of testing and the approach to laboratory work. SLMTA utilizes the Stepwise Laboratory Quality Improvement Process Towards Accreditation (SLIPTA) checklist. By gradually improving quality and measuring that improvement over time, laboratories will aspire to full, internationally-recognized accreditation. Two-thirds of the laboratories that have completed the process have realized an increase in at least one SLIPTA star level.



One limitation of this work is the relatively small number of certified auditors in Africa. Even as more auditors are trained, the demand for them is high. The African Society for Laboratory Medicine (ASLM) was launched in 2011 in Addis Ababa, Ethiopia. Its mission is to advance professional laboratory medicine needed to support preventive medicine, quality patient care, and disease control in Africa through partnerships with governments and relevant organizations. The society's vision encompasses training, enrolling more laboratories, raising regulatory standards for diagnostic products, and developing public health reference laboratories and a network. Long-term sustainability is one of the society's challenges.

### **GWG Discussion**

GWG asked how trainees who spend time in the US are able to apply what they learned in their home countries, and how they build capacity in a very different setting. The training is an ongoing mentoring process that takes place in Africa and is adapted to local traditions, which makes the training much more useful and practical.

GWG recognized the lack of resources for laboratories and asked if the situation might change. There was discussion about a potential model for these activities, especially given challenges in diagnostics. Africa has had trouble with outdated and/or low-quality diagnostic tests.

ASLM is focusing on the need for regulatory bodies regionally or within countries. ASLM is funded by several groups, countries, and companies. It is important to sustain that support and to enhance revenue generation. A regional organizational structure is envisioned to pool resources and promote a spirit of sharing.

GWG observed that this work can serve as a model for CDC taking on a capacity-building role internationally as it has done domestically. The laboratory enhancement work thus far has been an unqualified success and has accomplished a great deal in a short amount of time. Countries need continued support and interaction to continue to make progress. This work is also a good example of how PEPFAR's funding can serve as a foundation for a broader system.

### **VI. Reorganization Update on CGH Divisions**

Dr. Messonnier shared the progress on the creation of a new division by merging the Division of Public Health Systems and Workforce Development (DPHSWD) and Division of Global Disease Detection and Emergency Response (DGDDER). A transition team was formed to learn about the synergies and priorities of the two divisions. Both divisions work on building sustainable capacity, surveillance and response, assessment of current capacity, supporting SMEs in-country, and health systems strengthening. The team also engaged field staff to identify issues and conducted an online survey. Communication and coordination emerged as important themes. Each division has important programs that focus on cross-cutting issues and they serve as facilitators and conduits across CDC.

The new division will have four branches and one unit. The proposed name will be the Division of Global Health Protection (DGHP). It will consolidate the two divisions' existing branches and



programs, as well as include the new unit for global NCD activities and the Laboratory Systems Development Branch from the National Center for Emerging Zoonotic and Infectious Diseases.

Dr. Messonnier shared the proposed mission statement for the new division and the activities of its branches, including the programs such as FETP and Water, Sanitation, and Hygiene (WASH). The Global Health Security Branch represents the most significant change for the new division. This branch brings together IT, preparedness, and response expertise.

### **GWG Discussion**

GWG congratulated CGH on the reorganization process, which represented a great deal of thought and work. GWG noted that the concept of “protection” in the proposed division name does not convey all aspects of the division’s work. Alternative terms could include “global health delivery” or “global health implementation.”

GWG asked how the new division interacts with laboratory systems. The new division is intended not to be “silo-based” and each branch has a laboratory aspect. The new structure creates one laboratory “hub” branch on which each of the branches can rely. The groups that engage in laboratory activities will also engage in capacity development. Going forward, the division will learn and adjust to the approaches work best.

GWG suggested that CGH create a shorter vision statement for the division that is easy to remember and recite. The vision statement presented follows reorganization requirements, but a shorter one will be developed for external use. It was suggested that the next GWG meeting include an update from the new division’s director. The GWG also suggested building accountability for cross-cutting work into job descriptions and performance evaluations

The process of reorganization has resulted in opportunities for the existing branch chiefs to talk and work together. They were involved in making decisions about the new division structure.

## **VII. CDC Global Health Strategy**

Dr. Simone provided an update on the CDC Global Health Strategy for 2012-2015 which was launched in July 2012. The strategy has 17 objectives across 4 key goals: Health Impact, Health Security, Health Capacity, and Organizational Capacity. Following the launch, CGH convened 17 objective workgroups with representation from across CDC to create performance measures and targets. The workgroups developed the measures and targets, and the first annual (calendar year) report is nearing completion in June. The workgroups are documenting their 2012 progress and accomplishments. A Global Health Strategy Executive Committee will be convened to monitor progress, provide oversight and make recommendations. Additional efforts will include developing an external report and communication plan.

A number of important lessons were learned in this process. Dr. Simone was personally involved with each of the workgroups, and that leadership visibility was positive. The workgroups were diverse and representative, with joint leadership from within and outside CGH.



Input from the GWG and the Global Health Leadership Council was valuable. The framework of the strategy has provided a strong, memorable foundation to the work. It was general enough to encompass all of the different aspects of global work across CDC. It is also important to keep the strategy helpful and relevant.

## **GWG Discussion**

GWG emphasized the importance of having a means to assess CDC's global work and congratulated CGH on creating the strategy and the implementation plan. It is important to collect specific data, but the potential downside of this approach is that "only what gets measured, gets done." CGH might consider inviting more expansive commentary in the reports so that the assessment is broader than just data.

The positive aspects of the measurement process include motivation and recognizing the importance of measurable work. A concern is balancing the amount of bureaucratic work so that the reporting requirements do not interfere with the actual work. The annual report is designed not to be burdensome to complete. Some of the workgroups may not meet more than twice per year, but others may need more meetings. They will find, and likely adjust, the balance over time.

GWG discussed whether the implementation plan is primarily a means for documenting CDC's global work, a tool for advocacy, or a management tool. If the measures truly represent priorities, then it can serve as a means for learning whether the center is working properly. For instance, the objectives could be color-coded to flag potential problems or barriers to center leadership. The objectives could be monitored on an ongoing basis, rather than annually. The Executive Committee could be helpful in this regard. Cross-cutting areas may need more attention to ensure that they do not return to their "silos." The objectives can serve to point out missed opportunities, neglected areas, and/or whether priorities should be re-examined.

The workgroups will remain engaged if they perceive benefits in the work. Keeping workgroups engaged will depend on the owners of the objectives and how they are integrated into daily activities. Structuring the objectives into ongoing workflow will ensure that the process will remain useful.

GWG discussed an external annual progress report that could highlight CDC's activity. It should be clear and readable, but also substantive. The Task Force for Global Health releases an annual report. Specific rules govern the report's length and the concepts included in the content. The report is not internal, but is a means for the task force to share its accomplishments externally. Utilizing writers and editors helps ensure standard language. Graphics and infographics can illustrate progress clearly, and their format can repeat in successive reports. There are examples of similar reports from other areas in CDC.

GWG commented on the emphasis on outcomes. CDC may not have the global resources to impact some targets, such as tobacco reduction. Sometimes not meeting a target can be a positive event, as it can energize efforts.



GWG cautioned CGH to ensure that that Executive Committee is constructed so that it will add to the process.

### **VIII. Summary, Recommendations, Next Meeting**

GWG observed that the meeting included good presentations with sufficient depth and detail, and that the agenda was well-organized. Many organizations slow down or lose direction during a leadership change. CGH has not only maintained its course, but also sped up and produced extraordinary results. The center has “come into its own,” and the Global Health Strategy is coming to fruition.

GWG discussed its role within the center and the agency. GWG, and similar workgroups, were created to advise new centers that were created when CDC was reorganized under Dr. Frieden. GWG is a workgroup of the ACD. The workgroups can make official recommendations to CDC through the ACD, and they can provide informal advice to the centers.

Suggested topics for future meetings included the following:

- A discussion of the new division, with updates from division and branch leadership
- Keeping the “spotlight” on NCDs and how CGH’s activities in this area are progressing
- A discussion on how to capitalize on the PEPFAR infrastructure by building capacity beyond the HIV/AIDS program including laboratory, women’s health and initiatives
- Additional updates regarding the effects of sequestration and cross-CDC coordination
- CDC’s engagement with post-Millennium Development Goals
- Perhaps in 2014, an update on how the laboratory capacity efforts are evolving.
- CGH’s interactions and relationships with the Country Directors.

### **GWG Additional Comments**

CGH should carefully consider the term “health security” and to be aware of the sensitivities of the different governments and partners. GWG encouraged CGH to engage in a thoughtful communications strategy process that involves their different target audiences.

The progress in NCDs is remarkable, and these efforts should continue. NCDs have an impact on a range of other issues; for instance, diabetes has an impact on depression.

The laboratory capacity program is impressive and represents a perfect example of how to leverage PEPFAR’s infrastructure. GWG encouraged CGH to seek other partners, such as by leveraging industry involvement.

GWG asked CGH not to “be bashful” regarding how the workgroup can help them. There was also discussion regarding how they can make contact between meetings and work together on topics of global health interest. GWG should be of value to the center, and CGH should bring issues to the workgroup for feedback and advice.



The second authorization of PEPFAR allows it to expand its reach. There is a danger, however, because of static budgets. PEPFAR should not lose its focus on AIDS.

GWG mentioned the emerging issues of universal health coverage and access to medicines, and their impact on NCDs. Given goals for universal coverage, public health has a role on a population basis and in other discussions.

Antimicrobial resistance is a significant global health issue, and there are health security implications associated with it.

GWG commented on the number of young people who are interested in global health and international careers. It is important to expand job opportunities to take advantage of this energy.

GWG hopes to continue conversations about the notion of global health as a “two-way street,” considering transferring knowledge and expertise from global to domestic work, and from domestic to global work. Individuals at the state and local public health levels have experience in health disparities, for instance, that can translate to other arenas.



## Attachment A: Meeting Attendees

### GWG Members Present

David Brandling-Bennett

Alan Greenberg, MD, MPH (ACD Member) (via telephone)

Walter Dowdle, PhD

David Fleming, MD (ACD Member) (GWG Chair)

Kelly Henning, MD (ACD Member)

Ambassador Jimmy Kolker, MPA

Joseph McCormick, MD, MS

Herminia Palacio, MD, MPH (ACD Member)

Wade Warren

### GWG Members Absent

Willis Akhwale

Mickey Chopra, MD, PhD

Andrew Weber, MS

Zijan Feng

### CDC Staff Present

Steve Albert

Ron Ballard

Scott Dowell

John Fitzsimmons



Rubina Imtiaz

Bassan Jarrar

Abbey Johnson

Namita Joshi

Eric Kasowski

William Levine

Susan Maloney

Nancy Messonnier

Michael Pratt

Pattie Simone

Larry Slutsker

Nicole Smith

Bob Spengler

Jordan Tappero

General Public

Kendra Cox (Cambridge Communications)



## MEETING SUMMARY

### **Global Work Group (GWG)**

Advisory Committee to the Director (ACD)  
Centers for Disease Control and Prevention (CDC)

via teleconference  
9:00 AM – 11:00 AM  
November 21, 2013

### Meeting #7

David Fleming, GWG Chair

Tom Kenyon, Center for Global Health (CGH) Director and  
GWG Designated Federal Officer (DFO)



On November 21, 2013, the Global Work Group (GWG) of the Centers for Disease Control and Prevention (CDC) Advisory Committee to the Director (ACD) convened a teleconference from 9:00 am until 11:00 am EST. The meeting agenda included updates from the Center for Global Health (CGH), CDC-wide Global Tuberculosis (TB) Coordination Activities, and development of National Public Health Institutes (NPHIs).

## **I. Welcome and Introductions**

Dr. David Fleming, GWG Chair, welcomed the group. Those in attendance introduced themselves. A list of meeting attendees is provided with this document as Attachment A.

## **II. Center for Global Health Update**

Dr. Tom Kenyon, Director, CGH, greeted the group and thanked Dr. Anne Schuchat for her interim leadership of the center. He noted his appreciation of GWG's contributions to CGH. He provided updates on many different topics and highlights are provided in this summary.

### Global Health Security

CGH is involved in two proof-of-concept demonstration projects in Uganda and Vietnam to address how CDC can best engage with inter-agency (DoD, USAID) and country partners in global health security. The demonstration projects have resulted in an effective model, including improvements in laboratory detection and platforms, information systems, and using an Emergency Operations Center approach. Each country selected targeted diseases and conducted exercises to assess their capabilities to prevent, detect and respond to the public health disease threats. A lesson learned was that one approach will not fit all countries.

### Polio

CDC is part of the Global Polio Eradication Initiative (GPEI) along with the United Nations (UN), other US government partners, and the Gates Foundation. The trend in 2012 was favorable, but there have been setbacks in 2013, when polio-endemic countries (Afghanistan and Nigeria) have seen progress, but polio has escalated in Pakistan and other countries, particularly in the Horn of Africa. If left unchecked, this situation will require additional protective health actions, more complex screening and detection approaches, and additional vaccination efforts to minimize the risk of additional polio cases.

The GPEI Strategic Plan takes outbreaks into account and incorporates approaches for them. GPEI is prepared for these events, although 2013 has experienced more of them than



anticipated. The recent outbreak in Syria underscores the importance of interrupting transmission in endemic countries. Achieving eradication will require continued commitment and perseverance.

### CDC Global Health Strategy

The 2012 Annual Report was recently finalized and is being condensed for external distribution.

The Global Health Strategy Executive Committee has provided recommendations, and meetings are ongoing with objective workgroups that focus on each of the objectives, next steps and completion of the 2013 annual report.

### Parasitic Diseases and Malaria

The Division of Parasitic Diseases and Malaria (DPDM) worked on multistate cyclosporiasis outbreaks with CDC partners: one from bagged salad mix from México, and another from a cilantro product from another part of México. They hope to develop technology for molecular testing for cyclosporiasis so that the sources of future outbreaks can be identified earlier.

DPDM is part of a global effort to develop a malaria vaccine. A recent vaccine trial in Kenya reduced malaria incidence in children by half, and in young infants by a third. This work is ongoing, and future work will assess the durability of the vaccine's protective efficacy. If successful, the vaccine can be part of a toolkit for malaria control, elimination, or eradication.

### Global HIV/AIDS

The Division of Global HIV/AIDS (DGHA) recently awarded a research study to maximize the implementation of combined community-level interventions to decrease population-level HIV incidence in Botswana. This effort will maximize biomedical interventions and behavioral approaches to increase results. This study is parallel to a National Institutes of Health (NIH) study, and both are supported by PEPFAR.

### CGH Organizational Structure and Country Offices

There are now clearer reporting lines within CGH for Country Directors: they report through their applicable program and also report on cross-cutting issues directly to the Office of the Director. The new proposed fourth division in CGH, the Division of Global Health Protection, should be official in the next week.

### CDC's Maternal and Child Health Strategy

CDC lacks a specific Maternal and Child Health (MCH) Division and MCH activities are scattered across the agency. The agency's new MCH Strategy incorporates a range of input, including from countries and Country Directors, to better articulate where CDC can be supportive of these global efforts, in which USAID has been a leader.



## Improving Public Health Management for Action (IMPACT)

CDC can have an impact on global health by generating information for decision-making and by helping to improve the management of global health programs and public health programs. The IMPACT project is a planning grant funded by the Gates Foundation to assess feasibility and country interest in developing public health managers similar to Public Health Advisors in the US. Strong managers are needed in the field in order to achieve public health goals. The first step will be to determine the need and best model for doing this work in countries.

## CGH Actions in Response to Organizational Improvement (OI) Review

The OI process is ongoing. CGH is following through on the OI recommendations, including an update assessment that will be shared with GWG in April 2014.

### **GWG Discussion**

Regarding global health security, there is interest in building on the success in Vietnam and Uganda to expand to 12 additional countries in 2014. Success will depend on full-time personnel “on the ground” who can work with existing vertical programs to build horizontal institutions. DoD looks forward to continuing its cooperation.

GWG praised the approach in the CDC Global Health Strategy that highlights key activities in different CDC centers. GWG members were encouraged to forward comments regarding the recent Annual Report via email. The Annual Report includes a number of activities, but it will be challenging to tease out CDC’s impact among the work of other agencies. The report could describe successful global initiatives in which CDC participates and specify how CDC contributes to them.

Dr. Pattie Simone directed the group’s attention to and asked for comments on a handout regarding how CGH works with Country Directors, country programs, and across CDC.

Regarding the development of management training, there may be opportunities for cross-learning between state and local public health managers in the US and their international counterparts.

### **III. Update on Global TB Coordination Activities**

Dr. Susan Maloney, Global TB Coordinator, provided an update on CDC’s Global TB Coordination activities. An external peer review of CDC’s global TB activities was conducted in 2012 and provided findings and recommendations. The panel noted that CDC is a leader with passionate commitment to global TB, and the agency performs a range of activities across several divisions with a relatively small workforce and limited budget. The panel provided two major recommendations: develop a CDC-wide Global TB Strategy and improve internal/external coordination to optimize resources and impact.



The Global TB Coordination Office has coordinated regular meetings of global TB stakeholders at CDC as well as workgroups. It serves as a CDC-wide focal point for global TB and provides unified global TB strategic information.

The Global TB Working Group is working on the CDC Global TB Strategy and unified global TB measures and targets. A steering group will focus on the Global Health Strategy and Global TB Strategy, regional and local coordination and collaboration, and infection control (IC) and TB BASICS: Building and Strengthening IC Strategies. Improving global TB IC is imperative given the dual epidemics of HIV and MDR- and XDR-TB, and Dr. Frieden has called for the prioritization and acceleration of efforts to strengthen TB IC.

## **GWG Discussion**

GWG praised the progress that has been made in TB and agreed with the focus on TB IC. It is a great cause to unite CDC, as the agency has strong capacity in IC and domestic experience to share, as well as experience in TB and TB/HIV. There was discussion regarding the proportion of the total TB burden that is attributable to a lack of IC and the impact of better IC on the total TB burden. FETP could provide an excellent opportunity for trainees to conduct assessments and to inform TB and HIV control programs regarding IC

GWG discussed the major findings of the Global TB external peer review group, in particular the lack of an overall, coherent agency-wide strategy. The strategy should not create an “umbrella strategy” as CDC cannot do everything in global TB. Given its very limited resources, the agency would be better served to select a few things to do well. The explicit funding streams present challenges, but CDC’s TB-related groups should come together and pare down their activities to focus on the priorities while optimizing programmatic synergies. Assistance from GWG will be welcome as they move to the next phase of the Global TB Strategy.

## **IV. National Public Health Institutes**

There is real interest in many countries to create NPHIs. The countries seek ideas, technical assistance, and engagement, not necessarily funding. This work is important, even in a resource-constrained environment. CDC’s long-term global engagement will be with NPHIs and similar institutions. CDC has learned many lessons and can make important contributions.

Ms. Shelly Bratton further described CDC’s efforts regarding NPHIs. NPHIs are science-based organizations. They can also be networks of organizations that provide national scope and leadership, bringing public health focus and functions together for long-term impact. NPHIs focus on major public health problems facing a country. They vary from country to country. Some have limited functions, while others implement all of public health’s core functions. In low-resource countries, NPHIs tend to focus on infectious diseases. They are beginning to incorporate noncommunicable conditions into their work.

The International Association of National Public Health Institutes (IANPHI) is CDC’s main partner in this effort. IANPHI was founded in 2006, supported by funding from the Gates



Foundation. Now there are over 80 members, each with a different scope. CDC partners with IANPHI to focus in-country on larger projects, such as establishing NPHIs and strengthening existing NPHIs.

CDC's NPHI focus is on supporting the development of essential core public health functions. CDC also coordinates engagement of specific technical expertise from across the agency and from other sources including global security and the goals to detect, respond, and prevent. FETP helps countries build a public health workforce, and CDC also works with the systems strengthening group. The team is focusing on developing a monitoring and evaluation framework to measure the staged development of NPHIs. CDC is also focusing on a systems approach and how NPHIs can serve as a legacy for US government investment in the future.

## **GWG Discussion**

GWG commended CGH for the NPHI work, which represents a great example of CDC's unique "value-added" to building public health capability. The idea of CDC translating its legacy in building domestic state and local departments into the international arena has been one of GWG's strategic themes. GWG encouraged CGH to continue to make this work a priority.

The proposed Division of Global Health Protection (DGHP) brings NPHI, Global Disease Detection (GDD), health disparity, and FETP work together with global security to support the development of NPHIs. As NPHI strategies are developed, they are closely aligned with the global health security group and their strategies. DGHP (proposed) also includes the NCD unit, which has improved engagement and synergy. Capacity has already been built in countries through GDD platforms. They are not duplicating efforts, but are bringing public health programs together in countries.

There is potential for including workplace safety and health, especially protection of healthcare workers, into this dialogue. Healthcare workers are often forgotten, and protecting them can serve as an entrance point. Workplace safety is part of the NPHI development in South Africa.

There was discussion regarding the Central Reference Laboratory under construction in Kazakhstan and the operational laboratory in Georgia. CDC has a GDD office in Kazakhstan. They can initiate dialogue with the MOH as the new laboratory is built. DoD provided assistance with the GDD center in Georgia. These developments will support the development of an NPHI. It is important to emphasize engagement and dialogue. Dr. Andy Weber, DoD, offered to assist with these efforts at the political level.

Response to NCDs has evolved as work has shifted to focus on policy and environment as opposed to health education and promotion activities. As NCD capacity improves at NPHIs, CDC can assist in efforts that are now recognized to generate the best return on investment. At the same time, low- and middle-income countries need to invest in prevention through providing treatment for specific risk factors such as hypertension and diabetes. There is potential for impact with this approach, but some countries focus on policy interventions that are viewed as more cost-effective.



GWG encouraged CGH to consider external partners, including academic institutions and state and local health departments, to provide support in other ways. CGH is carving out modest capacity to engage in NPHI work, but they will likely continue to have limited internal resources. CDC works hand-in-hand with IANPHI, which has established relationships and networks with strong NPHIs that could provide assistance. CDC also has established relationships with NPHIs in Europe and elsewhere. CDC is working with the Association of Public Health Laboratories (APHL) on “twinning projects” to pair states with countries that are creating NPHIs.

## **V. Summary and Recommendations**

GWG noted CGH’s progress and CDC’s ability to accomplish a great deal with limited resources and a broad mandate. CGH and CDC are making significant contributions to advancing global health. While it is challenging to claim credit for achievements, it is possible to describe global health accomplishments and CDC’s position in them.

GWG praised the thorough, yet concise, presentations and materials and noted that the Global Health Strategy and Annual Report are good. Dr. Pattie Simone was commended for her work.

CDC’s work with IANPHI is strong. NIOSH can contribute to the efforts regarding NPHIs, particularly with programs focused on healthcare workers.

Suggested topics for future meetings included the following:

- An update on NCD work
- A discussion of CDC’s Global Health Strategy
- Additional information regarding global TB efforts, particularly impacts and outcomes, and about consolidating TB resources to make CDC’s impact even greater
- Consideration and discussion of the Global TB Strategy; GWG can provide a “sounding board” for development of the strategy
- A discussion of issues surrounding global health cooperation and information-sharing across CDC
- Additional details regarding IANPHI. For instance, is it a standard-setting organization, and is it being utilized to its full advantage?
- Information regarding the OI review and organizational structure of CGH
- A discussion of global health security, which represents a strong movement with strong partnerships, such as with DoD
- A discussion of how GWG can be maximally helpful to CGH, given that the center is evolving

Dr. Kenyon thanked GWG for their thoughts and input. He suggested posing additional questions to work group members before the April meeting.

The meeting adjourned at 10:59 AM EST.



## ATTACHMENT A: Meeting Attendees

### GWG Members Present (all via telephone)

David Brandling-Bennett, MD

Alan Greenberg, MD, MPH (ACD Member)

Walter Dowdle, PhD

David Fleming, MD (ACD Member) (GWG Chair)

Andrew Weber, MS

### GWG Members Absent

Willis Akhwale

Mickey Chopra, MD, PhD

Ambassador Jimmy Kolker, MPA

Joseph McCormick, MD, MS

Herminia Palacio, MD, MPH (ACD Member)

Wade Warren

Yu Wang

### CDC Staff Present

Sonia Angell

Amanda Bodfish

Ron Ballard

Shelly Bratton



Kashef Ijaz

Thomas Kenyon

William Levine

Susan Maloney

Angel Roca

Anne Schuchat

Pattie Simone

Nicole Smith

Bob Spengler

Jordan Tappero

Mary Wettrich

General Public

Kendra Cox (Cambridge Communications)

NIOSH Representative

USAID Representative

