

**Coordinating Center for Infectious Diseases (CCID)  
Board of Scientific Counselors (BSC) Meeting  
Centers for Disease Control and Prevention (CDC)**

**November 4-5, 2009  
Atlanta, Georgia**

## **MINUTES OF MEETING**

The Board of Scientific Counselors (BSC) of the Coordinating Center for Infectious Diseases (CCID) convened a meeting at the Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia on November 4--5, 2009. Dr. Sam Katz served as Chair in the absence of Dr. Richard Whitley; Dr. Jan Nicholson served as the Designated Federal Official.

During the first day of the 2-day BSC meeting, Board members met in small groups that were organized according to the following four CCID National Centers: a) the National Center for Immunization and Respiratory Diseases (NCIRD), b) the National Center for Zoonotic, Vector-Borne, and Enteric Diseases (NCZVED), c) the National Center for HIV, Viral Hepatitis, STDs, and Tuberculosis Prevention (NCHHSTP), and d) the National Center for Preparedness, Detection, and Control of Infectious Diseases (NCPDCID). Each subcommittee was charged with providing input regarding several specific center-related issues. Subcommittee members were encouraged to brainstorm, participate by sharing their thoughts with the group, and help develop recommendations.

During the second day of the meeting, oral updates were given for a few topics, including CDC's recent restructuring effort and the results of and CCID's response to recent program peer reviews. Members from CDC's H1N1 response activity then presented Board members with information about H1N1 influenza --- the topic chosen to serve as the focus for the meeting's discussion. Following these presentations and the accompanying discussion sessions, representatives from the subcommittees summarized the exchange of information that took place within their groups on the previous day and outlined recommendations.

### **INTRODUCTIONS AND WELCOME**

*Dr. Sam Katz*

On the second day of the CCID BSC meeting, Dr. Sam Katz welcomed attendees and Board members, who introduced themselves. Dr. Katz then announced that as a public meeting, comments from any meeting participant, regardless of affiliation, would be welcomed; public representatives were asked to provide any feedback during the "public comment" session scheduled as part of the BSC agenda. Board members were informed that the next CCID BSC meetings have been scheduled for May 19-20 and November 9-10, 2010.

### **UPDATES**

#### **CDC's Organizational Improvement Initiative**

*Dr. Rima Khabbaz*

To open the meeting and provide context for many of the discussions anticipated to take place during the 2009 CCID BSC meeting, Dr. Khabbaz presented information on CDC's recent organizational improvement initiative. She provided background information and discussed the relevance of this initiative to CCID and its programs. Dr.

Khabbaz also announced the upcoming 2010 International Conference on Emerging Infectious Diseases (ICEID) on July 11-14, 2010 and encouraged meeting participants to attend.

CDC's effort to improve its organizational structure was undertaken to help the agency achieve the following goals: strengthening current surveillance and epidemiology capacity at the agency and its relationships with state and local health departments; and providing public health leadership in global health, in health policies (e.g., healthcare reform), and in addressing the leading causes of disease and disability. Underlying both of these goals is CDC's understanding of the need to improve the efficiency of day-to-day functioning in cost-efficient ways.

The organizational improvement initiative began in early 2009 with agency-wide consultations; input collected from this assessment and from CDC's public health partners helped inform the creation of the Organizational Improvement (OI) Team in July. Newly appointed CDC Director Dr. Tom Frieden oversaw the OI Team, charging its members to identify ways to improve a) surveillance and epidemiology, b) the support being offered to state/local health departments, c) global health, and d) policy effectiveness. In addition to these topics, the OI Team recognized the need to initiate organizational changes promptly and to "step up" the recruitment process; it was also determined that the existing Coordinating Center organizational model was not meeting the agency's needs.

By the end of August 2009, the OI Team's proposal for change was presented at a CDC All Hands staff meeting. It was proposed that several centers, including all Coordinating Centers, the Center for Health Marketing, and the Center for Public Health Informatics, be eliminated and realigned. The Team also proposed that several management systems be strengthened to meet the Agency's goals; it was recommended that management officials report to program directors and that leadership strengthen coordination efforts through regularly scheduled meetings (e.g., through Director/Center Director contact, management meetings, scientific sessions, and program reviews). Another component of the proposal was the recommendation that CDC establish, upgrade, or consolidate several offices, including the Office of State and Local Support; Office of Surveillance, Epidemiology, and Laboratory Services; Center for Global Health; CDC Office of the Director; and Office for Public Health Preparedness and Response. The proposed organizational structure was announced the end of September 2009.

OI implementation activities will have an effect on the existing CCID organization. Resources, staff, and functions for many groups will be relocated (i.e., OD, the Strategic Business Unit, and the Strategic Science and Program Units), and several infectious disease units will be moved to the newly created Center for Global Health (CGH). These changes will result in the establishment of a new office – the Office of Infectious Diseases (OID), which will be led by Dr. Rima Khabbaz, Acting Deputy Director for Infectious Diseases.

A transition team was formed to assist in the reorganization effort. A small interim CCID transition team and five cross-center workgroups already have worked to identify proposed realignment options and have drafted roles and responsibilities for OID and its leadership. With the mission of leading, promoting, and facilitating science, programs, and policies to reduce the burden of infectious diseases in the United States

and globally, two primary responsibilities for OID's Deputy Director have been defined: a) serving as principal advisor to CDC's Director on infectious disease issues and b) providing strategic leadership to CDC's infectious disease national centers.

As for OID, several critical functions have been proposed, including the need to assist the CDC Director in formulating and communicating strategic initiatives and policies; developing overall strategic directions; setting priorities; promoting science, policies, and programs related to infectious diseases; and working with infectious disease national centers, other CDC centers and offices, and public health partners to develop and implement infectious disease goals and objectives. In addition, the new OID will be expected to conduct ongoing evaluation and adjustment of infectious disease activities to ensure optimal effectiveness and efficiency; it is anticipated that the Office will a) help promote an environment that increases synergies and efficiencies and reduces duplication and b) provide direction and leadership for external/internal program reviews.

Guiding principles have been created to help inform the CCID transition effort. It is understood that during this transition period, CCID will remain committed to a) ensuring the optimal functioning of CDC's infectious disease programs and operations; b) enhancing excellence in infectious disease science and programs in recognition of the role of ongoing evaluation; c) increasing program effectiveness; d) minimizing duplicative processes to make more efficient use of critical resources; e) decreasing administrative burden on staff; f) ensuring a strong infectious disease workforce; g) recognizing and respecting variability among centers; h) equitably distributing support and resources to the extent possible; i) recognizing the evolving nature of transition; and j) maintaining and enhancing opportunities for collaboration among infectious disease programs both within and outside of the Agency.

As part of the CCID transition, it is proposed that a new center be created, representing a union of two existing programs: NCZVED and NCPDCID. The rationale for this proposal includes a) the desire to identify the most effective means of advancing the missions and programs in these centers and b) the strong support for combining these centers voiced at a joint NCZVED/NCPDCID leadership retreat held in October. Combining these programs likely will be advantageous. Such a union facilitates a clear and compelling vision and mission for addressing emerging and zoonotic infections that is easily understood both within and outside of CDC; brings together management and coordination of the major budgetary funding lines for these two centers, facilitating formulation, execution, and allocation of critical resources; enhances opportunities for cross-center scientific cooperation, collaboration, and communication in addressing emerging infectious diseases and zoonotic infections; and enhances the Agency's ability to work with partners to address a broad range of emerging and zoonotic microbial threats.

#### *Discussion:*

- Concern was expressed about separating malaria and leishmaniasis from the other vectorborne diseases under the purview of the center. Dr. Khabbaz was asked how these programs could flourish in light of this separation. Dr. Khabbaz responded that she is personally committed to making the new structure work. Although infectious diseases, including malaria and leishmaniasis, know no borders, when

programs are moved to the new global health office, efforts must be made to maintain links to the vectorborne programs.

## **Update on the Proposed National Center for Global Health**

*Dr. Steve Blount*

Dr. Steve Blount, Acting Director of CDC's proposed Center for Global Health (CGH), provided meeting participants with information about the current global health scenario, CDC's global health strategy, and the functions expected to be undertaken within the proposed CGH.

CDC's global health efforts are now being conducted in the context of President Obama's \$63 billion Global Health Initiative. As such, global health is being addressed by a growing number of diverse global health players who are ethically committed to global health equity. Although morbidity and mortality are increasing around the world, global health issues are expected to be better addressed in light of the availability of numerous effective public health interventions. CDC recognizes its important role in global health efforts and is committed to reducing gaps in the implementation of health interventions and increasing local capacity to achieve lasting solutions.

CDC is regarded as an effective and reliable global health partner; as such, the Agency aims to leverage its accomplishments and strong reputation to advocate for additional global health resources. Although congressional appropriations for CDC's global health programs have decreased over the past few years and dramatic increases in the global health budget are not anticipated within the near future, CDC anticipates partnering with private sector organizations with similar missions to achieve common global health goals.

CDC has developed a global health strategy that involves working in partnerships to achieve several goals. The agency aims to a) assist Ministries of Health in the planning and management of effective health programs, b) contribute to multilateral and USG health efforts that address major causes of global morbidity and mortality, c) eradicate and eliminate disease where feasible, d) create a flexible and responsive portfolio of global health programs at CDC that reflects the changing burden and distribution of disease around the globe, e) generate new knowledge to achieve global health goals, and f) strengthen health systems and their impact.

Key to accomplishing its global health goals is the establishment of CDC's proposed Center for Global Health. The Center is expected to a) enhance CDC's role as a respected global leader; b) leverage CDC's unique capabilities, resources, and global presence for broader impact; c) link and energize programs within the new Center and around CDC to define and focus on global health priorities and objectives; and d) emphasize the needs of the field and of the countries and organizations supported by CDC.

Critical functions for the new CGH have been proposed for several areas, including strategic direction and oversight, science, and program coordination and implementation. Regarding strategy and oversight, it is anticipated that the proposed CGH will guide the implementation of CDC's global health strategy; measure the performance of CDC's global health programs (in terms of public health impact and fiscal accountability); and develop, implement, and coordinate standardized policies and

procedures for overseas operations. Science-based critical functions for the CGH include conducting high-quality, evidence-based global health research and surveillance (and translating findings into policy and programmatic activities); promoting cross-cutting scientific disciplines; and performing science-related regulatory functions. CGH also will function to support program coordination and implementation by facilitating CDC's collaborative linkages between and among its own global health programs and implementing global health programs that align with the global burden and distribution of disease and are consistent with international policies and agreements.

*Discussion:*

- A question was raised regarding parasitic diseases and how this health issue fits into the proposed organization. Dr. Blount informed the group that making decisions regarding where to house parasitic diseases within the agency proved challenging. CDC recognizes the importance of maintaining strong scientific links between the proposed CGH and the parasitic disease division, and the agency is committed to fulfilling international and domestic responsibilities. Dr. Blount stressed that one of the themes of the global health initiative is to better address “neglected” tropical diseases, and the new organizational structure will better position CDC to receive adequate funding for this effort.
- Dr. Cockerill noted that at the Mayo Clinic, several disease-related missions (e.g., cancer cases) are linked to “virtual” centers, where infectious disease specialists collaborate and consult, but remain physically located within different departments. Perhaps CDC can undertake this type of effort – a combination of virtual and “real” collaboration.
- Dr. Cockerill expressed concern in the apparent inconsistency in logic regarding the placement of specific programs. For instance, it is proposed that the TB program be “virtually” linked to the global health center, whereas parasitology would be physically moved to the new center. Dr. Cockerill was informed that much time was spent thinking about these decisions – some of the criteria for determining whether a program would be physically moved to the CGH included line-item funding, opportunities for additional funding, and positioning the agency to make a bigger health impact. Regarding TB, it was determined that the new center can help the TB division without physically moving it from the other domestic activities taking place within NCHHSTP.
- Dr. Beaty asked about the plans in place for strengthening lab capacity and surveillance in developing countries. Dr. Katz informed meeting attendees that CDC plans to assist ministries of health in efforts to build human capacity in their own countries. This activity is outlined as one of the agency's international goals, along with helping developing countries to implement sustainable management.

## **CDC Update**

### ***Dr. Tom Frieden***

CDC Director Dr. Tom Frieden spoke about CDC's strategic directions, discussed the agency's "core" missions, and updated meeting participants about CDC's future H1N1 response plans. Dr. Frieden began by stressing that controlling and preventing infectious disease and elucidating its relationship to diseases that are non-communicable remains one of CDC's core missions. With the new technologies and scientific discoveries that have come to light, CDC is now able to control these diseases in a more complex and powerful way.

CDC's strategic direction is multi-faceted. The agency aims to a) strengthen surveillance and epidemiology for disease; b) improve its ability to support state and local public health; c) increase impact by promoting global health, d) increase prevention effectiveness of health policies (e.g., health reform); and e) better address leading causes of illness, disability, and death. Strengthening its response to the H1N1 pandemic is a CDC goal that can be addressed within the framework of these strategic objectives. As the pandemic evolves, the agency aims to strengthen its existing surveillance and epidemiology efforts concerning this virus, provide support to states and localities in their community-based efforts to control and prevent H1N1, detect global patterns of disease prevalence, and resolve important policy-related issues related to H1N1 response.

The agency also plans to focus on laboratory science, which is key to the success of CDC's effectiveness as the leading public health agency and serves as a "key line of defense" in protecting the public from diseases and environmental health hazards. CDC's laboratory science initiatives include coordinating, complementing, and empowering program-specific laboratory programs; ensuring registration, safety, and quality control for laboratories; advocating for and enhancing policy effectiveness to ensure robust laboratory systems; strengthening connections with state, local, and private-sector health programs, laboratories, and other groups; maintaining and promoting laboratory safety and biosecurity; and providing laboratory-related training to internal and external professionals.

#### *Discussion:*

- Dr. Katz expressed gratitude for Dr. Frieden's update, noting that it is difficult to fathom the challenges being faced by CDC's leadership on a daily basis.
- Dr. Boulton stated his desire for CDC to continue to be sensitive to the new reorganization effort when dealing with local/state health departments. Reorganization at the federal level creates complexities in terms of interaction at these levels of public health. It is important to keep local/state partners informed about the implications associated with CDC's organizational changes. Dr. Frieden responded that a Deputy Director for State and Local Support position has been created to facilitate communication and collaboration; this staff member will serve as a "one stop" source of information for professionals at the state and local levels by helping to identify and communicate best practices and lessons learned, raise the quality of program reviews, and ensure more accountability. In addition

to creating this position, CDC decided to limit disruption at the state and local level by leaving grants with their original programs. Ideally, collaboration between CDC and its public health partners at the state and local levels will entail assigning additional federal staff at these levels.

- Dr. Katz commented that state health departments can enhance their utilization of 317 funds by changing their approach.
- Dr. Cockrill from the Mayo Clinic stressed the importance of standardizing CDC's approach to working at the state/local levels, as major cultural differences exist at these levels of public health. Dr. Frieden responded that public health is a state affair; legislatures and governors must remain responsible for protecting the health of their constituents.
- Dr. Hadler asked Dr. Frieden about his commitment to strengthening epidemiology and surveillance as a core mission and reminded him of his previous comment about the need to expect the unexpected when it comes to the next public health emergency. He stressed that the preparedness money that has been coming to state/local jurisdictions has boosted lab/epi capacity -- CSTE surveys show that funding increased capacity by 20%. However, as the funding has dropped, capacity has dropped. It is estimated that capacity is down 10% since 2006. Dr. Hadler emphasized the need to ensure that lab and epidemiology capacity doesn't further erode as the preparedness funding stream is examined. Dr. Frieden responded by stating that CDC plans to use existing resources for preparedness funding, and that he doubts that any "gaping holes" in resources and capacity will be created. He asked local and state public health representatives to provide CDC with honest, critical feedback regarding ways to ensure that work is done effectively.
- Dr. Frieden stressed that in light of the proposed federal health care reform, CDC is approaching an "interesting" period of time. CDC has proposed that it receive \$3 billion in funding for public health, and it is anticipated that these funds will translate to significant dollars for local and state public health departments.

## **REVIEW AND APPROVAL OF RECENT PROGRAM PEER REVIEWS**

### ***Dr. Jan Nicholson and Program Representatives***

Dr. Jan Nicholson facilitated discussion regarding the review and approval of recent CCID program peer reviews; she began by providing meeting participants with the rationale for the process, which has spawned from a new CDC policy.

For many years, CDC has had a policy in place that requires all major scientific programs at the agency to be reviewed by a peer-review process at least every 5 years. CCID has strived to remain in compliance with this policy since its inception and has included at least one BSC member in each of its program reviews. Recently, however, the Agency recognized the need to ensure more consistency in the way that these reviews are conducted throughout CDC's centers and the role that BSC members play in the review process. As such, the Agency endeavors to use the input provided by BSCs in a more meaningful way; specifically, BSC members are now expected to formally approve each program engaging in the review process.

With the objective of updating all CCID Board members on recent program review activities to provide them with the knowledge needed to formally approve the program's responses to the reviews, Board members were provided with written results and responses during individual, center-specific breakout group sessions. CCID leadership also dedicated time on the 2009 CCID BSC agenda for such a discussion; these center-specific summaries were presented during the second day of the CCID BSC by center representatives. Afterwards, a formal vote was taken for each program; the Board unanimously voted to approve all of the Center's responses to recent peer reviews.

The following paragraphs reflect the center-specific material presented during this segment of the BSC meeting, along with any associated discussion that took place.

### ***NCHHSTP***

*Dr. Jim Hadler*

BSC member Dr. Jim Hadler, who participated in an NCHHSTP-based peer review, updated the group about that Center's recent efforts. He began by noting that because NCHHSTP's Division of HIV/AIDS Prevention (DHAP) had not been reviewed in a long time and has recently derived new AIDS incidence data, the Center determined it was time for an overarching review. As part of this effort, a total of 73 people reviewed different programs within DHAP (e.g., surveillance); each program was reviewed by about six outside consultants and at least one BSC representative. A report summarizing this program review effort was generated, and each individual reviewer was given the opportunity to comment; all reviewers were satisfied with the report, in which many recommendations were outlined.

Dr. Hadler noted that DHAP has taken the review seriously; the Division ensured that each of the units evaluated through this process received a copy of the program review report. In addition, these units were asked to establish a "score card" to keep track of their responses to all outlined recommendations. In the near future, unit-specific responses of each of the recommendations will be posted electronically, along with a broad response to the review.

### *Discussion:*

- Dr. Ed Hook, who has co-chaired two NCHHSTP reviews in the past (DHAP and the Division of STD Prevention), shared his experiences about an earlier DSTDP review. In the review of that program, review committee co-chairs visited the division after recommendations were made. This visit enabled reviewers to quickly determine which recommendations were adopted and accepted and which suggestions were ignored.
- Dr. Hook suggested that there is value in "cross fertilization" of reviews; some of the recommendations made for the STD programs also pertained to activities housed within DHAP.
- Dr. Hook encouraged centers to think about mechanisms by which there is follow up; defining such a mechanism ensures that the reviewers' report doesn't go on the shelf. He also noted that action items should become more dynamic and important.

- According to Dr. Hook, engaging in larger review efforts involving multiple center-based units is likely more rewarding because it enables the interactions between smaller divisions and branches to be evaluated. Ultimately, this type of evaluation helps inform the effectiveness of the centers.
- NIH's Dr. Carole Heilman asked Dr. Nicholson to comment on who receives the recommendations from reviewers. According to Dr. Nicholson, the review report is given to the Association Director for Science. Dr. Heilman commented that in her experiences at NIH, it has been important for each program to articulate to the Board how recommendations are being addressed. Such a requirement encourages programs verify the direction and take action.

### ***NCZVED***

*Dr. Matthew Boulton*

BSC reviewer Dr. Matthew Boulton updated the group about the recent reviews of NCZVED's Lyme disease, West Nile, and foodborne illness programs. He noted that the workgroup was uniformly impressed with the highly positive nature of the external review comments for the Lyme disease and West Nile program reviews. There was high level of agreement between recommendations and CDC's strategic direction. For the West Nile virus program, the CDC program response to the peer-review panel prioritized funding and maintenance of CDC's epidemiology and laboratory capacity grant programs to support core infectious disease epidemiology and laboratory capacity in the states. The Workgroup recommended that CDC critically reevaluate current funding and resource allocation to states in support for bioterrorism preparedness relative to that allocated for infectious disease programs. This recommendation is based on CSTE's recent national epidemiology capacity assessment, which revealed continued erosion of state epidemiology capacity in infectious diseases and other important program areas.

In regard to the foodborne illness review, Dr. Boulton noted that the review report was highly detailed, containing more than 45 recommendations to CDC. Although NCZVED has worked to address many of these recommendations, many responses are complicated by efforts to balance state and federal regulations, consumer's needs, and industry standards. Overall, the Division of Foodborne, Bacterial, and Mycotic Diseases is responding positively to those recommendations. Many of the recommendations received can be implemented by CDC, while others will involve collaboration with state/local public health agencies, industry partners, and other federal agencies (e.g., FDA) to address or remediate specific program challenges.

### *Discussion:*

- Dr. Katz inquired whether Chronic Fatigue Syndrome was deliberately excluded from review. According to Dr. Boulton, who was part of the CFS peer review, many of the recommendations for this program have already been actively implemented and addressed by CDC; therefore, a formal review of that report was not undertaken.

## ***NCIRD***

*Dr. Alison Mawle and Sam Katz*

Drs. Alison Mawle and Sam Katz discussed the December 2008 peer review of NCIRD's global measles and rubella elimination program. Dr. Katz informed the group that during the November 3rd NCIRD breakout group session Dr. Alan Hinman discussed CDC's global work in the area of measles and rubella. Based on Dr. Hinman's update, it appears that the program responded "very faithfully" to reviewers' recommendations.

## **H1N1 INFLUENZA**

### **CDC's H1N1 Research Agenda**

*Dr. Dixie Snider*

Dr. Dixie Snider presented BSC members and other meeting attendees with information about CDC's H1N1 research agenda. He began by providing the background and rationale associated with the development of this agenda.

At the start of September 2009, an IOM panel released a letter report titled "Respiratory Protection for Healthcare Workers in the Workplace Against Novel H1N1 Influenza," in which the panel noted the need for research in a number of areas. In response to this report, on September 30, 2009, CDC leadership tasked Dr. Snider with creating an internal working group to develop a broad, cross-cutting influenza research agenda. The objectives of the group would be to create a "fast-track" research agenda to address gaps in knowledge (e.g., hand-washing effectiveness and the effectiveness of other infection control practices in healthcare settings) related to CDC's interim infection control guidance (released October 14, 2009) and to develop a comprehensive influenza research agenda.

The purpose of the "fast track" agenda would be to enable CDC and its partners to gain the knowledge needed to allow the agency to develop revised, evidence-based guidance for appropriate infection control measures in healthcare settings. CDC leadership recognized that findings from this effort would likely be applicable to other settings as well.

CDC's Influenza Research Agenda Working Group has already developed the fast track agenda it was tasked with creating. In this agenda, the Working Group stated the need to identify and review ongoing, funded research projects that can provide answers to unanswered infection-control-related questions. The group also recommended that recently approved infection-control-related projects that have not yet been funded be identified, along with projects awaiting review for funding within the next few weeks. Several specific project categories were identified by the Working Group, including a) viral shedding and transmission; b) respiratory protection; and c) administrative, environmental, and other infection control interventions (including non-pharmaceutical interventions).

CDC's fast-track agenda addresses several specific topic areas and proposed projects within each project category. For the viral shedding and transmission category, proposed projects include studying a) the transmission of influenza viruses in humans

using a human exposure model and b) the persistence of viable influenza virus in aerosols. Regarding respiratory protection, several specific questions were identified as needing to be answered, including a) what is the effectiveness of masks and/or respirators relative to other infection-control measures, b) what is the risk of infection related to used masks and respirators, and c) can respiratory protection be redesigned to enhance safety/comfort and improve compliance? The agenda identified several ongoing, funded projects in the area of respiratory protection, including transmission studies in healthcare and household settings; one proposed project, a clinical effectiveness trial involving the use of respiratory protection, also was included in the agenda.

Guidance-related questions and proposed research projects were identified for other categories, including “administrative, environmental, and other infection control interventions.” For this research category, important research questions included a) what is the relative benefit of exclusion from work or school for different timeframes, b) what is the effectiveness of non-pharmaceutical interventions, and c) does antiviral treatment of infected persons reduce influenza transmission among household contacts? Several studies examining these types of infection control interventions are underway, including studies of hand washing in community settings, studies to better define risk factors for disease transmission, and studies of antiviral treatment and secondary transmission in households. Other projects have been proposed, including studies to examine a) airborne influenza ultraviolet inactivation and b) the differences in exclusion policies in healthcare settings.

Next steps for CDC’s H1N1 influenza research agenda have been identified. These include conducting the proposed projects identified within the “fast track” agenda and developing the broader influenza research agenda, which will entail a review of all ongoing projects and the identification of gaps in existing research.

#### *Discussion:*

- BSC member Dr. Dele Davies asked for clarification about the ongoing studies. Are the studies examining H1N1 exclusively or do they also involve seasonal influenza? He emphasized that the answers to research questions (e.g., the effectiveness of antivirals) likely would be very different depending on the type of virus being studied. According to Dr. Snider, CDC aims to examine different influenza viruses over the course of many seasons, as there is much to be learned about the transmission of all types of influenza viruses. He discussed recent studies, which indicate that many people who have evidence of infection have no clinical illness; ideally, CDC would like to further investigate this phenomenon to determine why some individuals remain healthy despite infection. He also indicated an interest in learning more about whether the infective dose changes from year to year depending on previous exposure. Dr. Snider then emphasized that several questions need to be answered over multiple seasons; because anticipating next year’s circulating strains is challenging, the research agenda must remain broad.
- Dr. Mary Wilson asked whether CDC’s proposed studies will enable an examination of specific individuals in the disease transmission process. Dr. Snider informed the group that CDC currently does not have a proposal that

would allow the Agency to look at a huge range of patients. An exception to this may be one particular proposed study, which involves the use of impingers in emergency room waiting areas and individual patient rooms. This study will attempt to examine the distance that viable virus can travel within the healthcare setting; secondarily, the study will enable the examination of individual patient characteristics in viral transmission.

- NIH representative Dr. Heilman complimented CDC for its research agenda, noting that the agency appears to be on the same page as NIH; approximately 90% of the projects listed in the “fast track” agenda have also been identified by the Institutes. CDC should remember to focus on transmission studies rather than challenge studies.
- BSC consultant Dr. Julio Sotelo shared Mexico’s H1N1 experience with the Board. Currently, Mexico is facing a second wave of disease. This wave appears to have lower rates of mortality; only 150 people have died from the disease compared with 250 during the first wave of the epidemic. Also, unlike the Spanish Influenza outbreak, clusters of very sick patients have not been seen; deaths have been isolated rather than “clustered.” Dr. Sotelo also informed the group that research is being done to examine the unusual risk factors associated with this disease, including obesity, diabetes, and pregnancy. Additional research in his country has revealed that seasonal influenza vaccination likely provides some level of cross protection, although the results of this study remain controversial.
- Dr. Sotelo discussed the use of infection-control measures in Mexico, noting that social distancing and hand washing have been associated with lower H1N1 transmission. Dr. Snider commented, noting that CDC also has been attempting to learn why pregnancy and morbid obesity are risk factors for disease. In addition, although hand washing and social distancing appear to be effective infection control measures, CDC would like to fund studies that could provide the hard data needed to support anecdotal evidence.
- Dr. Frank Cockerill, who disclosed to the Board that he develops laboratory tests as part of his job as President and CEO of Mayo Collaborative Services, emphasized that diagnosing illness is critical to all of these efforts. Currently, available diagnostics face many challenges, and it is unclear which methods are the most sensitive and specific. He asked Dr. Snider to discuss the diagnostics that CDC will use in its influenza studies. Dr. Snider responded that CDC plans to further examine the available diagnostics to determine which are the most useful; this effort is crucial to CDC’s research agenda. From a clinical standpoint, it is helpful to know whether patients have influenza and to distinguish the strain that is circulating at the community level. Because current diagnostics are not ideal, the agency has had to project disease incidence data based on models and estimates; rapid testing has not provided accurate disease counts.
- CDC’s Dr. Steve Redd informed meeting attendees that a rapid diagnostic test was responsible for finding the first case of H1N1 influenza in San Diego. CDC developed this test as part of its pandemic preparedness activities, and this work paid off by leading to the discovery of the pandemic. In the future, using this test

in the clinical setting in addition to the laboratory would lead to better disease detection.

- Dr. Kris Ehresmann expressed concern that some important questions were excluded from the “fast track” agenda. Specifically, research must be done to determine the effectiveness of N95 masks. She recommended that this research be added to the fast-track agenda.
- Dr. Karmali asked whether CDC plans to study severe outcomes and death. A recent study in Utah examining death in first degree relatives likely could be informative. Dr. Snider agreed that severe outcomes and mortality are important issues; as such, they are also included in the “fast track” agenda.

## **2009 H1N1 Influenza: Next Steps**

### ***Dr. Stephen Redd***

Incident Commander Dr. Steve Redd presented a snapshot of CDC’s short-term priorities regarding H1N1. He began by providing a brief overview and timeline of the Agency’s response to the pandemic and presented several maps and figures detailing disease incidence across the country, disease in pediatric populations, and vaccine supply information.

CDC’s H1N1 influenza response began in April 2009, when the first cases of this novel influenza virus were discovered. During June through mid-August, the agency examined influenza data from the Southern Hemisphere to help inform U.S. vaccination efforts. A second wave of the pandemic occurred from mid-August through early October, at a time when vaccine was not yet widely available. Currently, CDC is focusing on ensuring that vaccine is produced in a timely manner, and that the formulation is safe and available to those seeking protection from the disease. Within the next few months, CDC will enter an “investigative” phase to evaluate response efforts.

Data regarding the percentage of visits for influenza-like illness (ILI) for the past three influenza seasons reveal that for 2009, a higher percentage of patients have sought medical care (8%) for ILI than in previous recent seasons; these visits also occurred much earlier in the year those during other influenza outbreaks. Weekly data on influenza activity also have been collected to help determine geographic trends in disease incidence. The Council of State and Territorial Epidemiologists (CSTE) reported that as of the end of October, all states except one (South Carolina) reported having widespread influenza activity. Other data corroborate the CSTE data: cases of ILI reported to the US Outpatient ILI Surveillance Network also reveal widespread influenza activity across the country.

Compared with recent seasonal influenza strains, H1N1 influenza appears to be more severe in children. Since April 1, 114 deaths attributed to H1N1 influenza have occurred in pediatric patients during the 2009-2010 influenza season, whereas in the 2006-07 and 2007-08 seasons, only 78 and 88 children died from seasonal strains, respectively.

Distribution of the H1N1 vaccine began during the first week of October 2009. As of November 3<sup>rd</sup>, a total of 32,329,600 doses of the vaccine had been allocated and ordered. Of these allocated doses of vaccine, over 1.5 million have arrived at state and local health departments, about 300,000 have arrived at these public health departments

but remain quarantined (i.e., being checked and accounted for), and another approximately 25 million doses have been allocated but have not yet been shipped.

CDC has conducted ongoing polling to obtain public opinion regarding seasonal influenza and H1N1 influenza vaccination. These polls have revealed that of persons surveyed, more have confidence in the seasonal vaccine than the new H1N1 vaccine. Persons who indicated an unwillingness to receive vaccine cited several reasons for this attitude, including fear that the vaccine will cause influenza rather than prevent it.

In light of the current vaccine shortage, CDC administered a survey to elucidate patients' feelings about their failed attempts at obtaining H1N1 vaccination. Of persons who tried but could not get H1N1 vaccine, more than half indicated that they had some level of frustration. About 43% of these patients, however, were not frustrated at the vaccine availability challenges. Despite these findings, the vast majority (91%) of those surveyed indicated that they plan to seek vaccination again at some point during the year.

CDC has defined several next steps in their H1N1 response efforts. First, the Agency is committed to supporting state and local efforts to vaccinate their constituents. In addition, CDC will continue to stress early treatment with antivirals for patients who are at high risk or are severely ill and will continue to communicate important influenza-related information (e.g., H1N1-related data, the activities being undertaken to prevent and control disease, and information about what specific groups of individuals and organizations can do to help ensure a successful H1N1 response effort) to partners and the public.

#### *Discussion:*

- Dr. Boulton asked for clarification about the data presented for pediatric deaths. Are these deaths occurring in otherwise healthy children, and does age play a role in mortality within this population? According to Dr. Redd, most of the children whose deaths were attributed to H1N1 had high-risk conditions (e.g., neurological disorders, asthma, and cystic fibrosis). However about 10%-20% of these children had no underlying risk factors. Regarding the age distribution of severe disease, infants seem to be less affected; otherwise, H1N1-related deaths have occurred across the age spectrum up to 18 years of age.
- Dr. Katz inquired about the development of resistance to Oseltamivir. Dr. Redd responded that although some isolates have shown resistance to this antiviral, no clusters of resistance have been detected, which is "good news."
- Dr. Jim Hadler commented on H1N1-related deaths. Having had the opportunity experience the public health response to H1N1 in NYC, Dr. Hadler noted that one of the biggest factors affecting mortality rates among hospitalized patients appears to be the timing of antiviral administration. Those receiving antivirals early on in the course of illness were less likely to have severe outcomes or die as a result of disease.
- Dr. Hadler asked what steps CDC is taking to counter negative public perceptions about the H1N1 vaccine. Has this topic been "fast tracked?" Dr. Redd informed the group that many efforts are underway to better elucidate the adverse events associated with H1N1 vaccination. To date, most reactions have not been serious. An NVAC working group will meet every 2 weeks to provide recommendations

about the vaccine based on any reports of adverse reactions. Thus far, no adverse event has been occurring at an unusual rate as a result of vaccination. In addition to this working group, four universities around the country are currently conducting vaccine effectiveness studies, the results of which will be shared with and examined by CDC.

- Dr. Snider noted that several Workgroup discussions have taken place about the need to release VAERS data quickly. Although releasing these data in a timely manner is easy to do, persons who do not understand background rates will have a hard time interpreting these data. He also noted that CDC plans to examine adverse event reports daily; any extreme event that appears to be related to the vaccine would be further investigated. It has been suggested that vaccine-related adverse events be published in the *MMWR* to enable the general public to review the data. However, any effort to communicate information about vaccine safety must be approached carefully; placing unneeded emphasis on adverse events may cause the public to question CDC's confidence in the safety of the H1N1 vaccine. Although the Influenza Research Agenda Workgroup agrees that this information must be communicated, the format and "rhythm" of these communications have not yet been determined.
- Dr. Katz emphasized the inherent difficulty in separating temporal data from data that is causal, particularly in the case of influenza vaccination. These issues underscore the importance of CDC's communication and public education efforts.
- Dr. Snider informed attendees that the public has access to and is viewing VAERS reports online. To ensure an informed interpretation of these data by the public, CDC has considered creating narrative interpretations to accompany the VAERS reports, in which background rates and temporal associations would be explained.
- Dr. Wilson asked Dr. Redd about recent evidence suggesting that patients receiving statins are at higher risk for mortality from H1N1 influenza. According to Dr. Redd, one report from the IDSA addressed this link; more information likely can be gathered through emerging infections programs.
- Dr. Davies asked whether children with H1N1 have a higher case fatality rate compared with children infected with other influenza strains in past seasons. Dr. Redd explained that this fall, case fatality rates in this population are reflective of what is usually seen during a spring seasonal outbreak. However, experts recognize that cases of H1N1 likely are being underreported. Cases were easy to track at the start of the pandemic, but now that it has become so widespread, identifying all cases has become impossible. CDC currently is working to elucidate reliable methods for estimating total cases, hospitalizations, and deaths.
- Dr. Redd was asked whether the Agency is conducting case-control studies to help ease thimerosal concerns. He responded that many such studies have already been conducted and have provided scientific answers to these questions. All confirm that thimerosal is safe. However, more attention should be given to communicating these scientific findings.
- Dr. Cockerill inquired about FDA's role in adverse event-related surveillance. Dr. Redd informed him that CDC and FDA (along with other HHS agencies) are working together to address adverse-event-related issues. He stressed that each

HHS agency is working well together and has a good understanding of agency-specific roles and responsibilities.

- It was noted that CDC is also using the vaccine safety data link to ascertain vaccine-related outcomes.
- Dr. Cockerill expressed concern about using the *MMWR* as a medium for conveying adverse events; vaccine-related information for the public should be written on an 8<sup>th</sup> grade level. Dr. Redd stressed that any communication through *MMWR* would be aimed at people who are more informed about the epidemiology of disease.
- Dr. Snider noted that the NVAC Working Group is another way to ensure interagency coordination, because most working group members represent non-governmental organizations; other ex officio members include representatives from HRSA, NIH, FDA, CDC, and other governmental agencies that have an interest in safety data. CDC's Immunization Safety Office has been working to collect information about background rates of different conditions for different age groups; this Office leverages the vaccine safety data link to do hypothesis strengthening. As soon as the H1N1 vaccine gets into this system, CDC can use this mechanism to gather robust data.
- Dr. Katz emphasized that CDC examines Guillian-Barre Syndrome (GBS) incidence for all vaccines. He stressed the importance of finding any potential links between GBS and the H1N1 vaccine in a timely manner.
- A question was raised about viral shedding from infected persons who are asymptomatic. Is CDC examining the infectiousness of asymptomatic patients? Dr. Redd noted that this type of research is currently underway. Based on this research and studies revealing significantly reduced disease transmission after fever subsides, CDC's policy decisions have focused on reducing the duration of exclusion to 24 hours for patients who are febrile.
- Dr. Katz inquired about why Europeans have chosen to use adjuvants in their vaccine formulations. Is CDC considering adjuvants in light of vaccine shortages? Dr. Redd responded that the Agency has looked into this option; however, a balance must be achieved between safety concerns and the benefit of vaccinating more people. The decision to exclude adjuvants from the U.S. H1N1 vaccine formulation was based on perceptions that adjuvants might be associated with adverse events. However, this decision was made before vaccine shortages were faced. In light of current vaccine shortages, CDC is discussing the option of adding adjuvants to the formulation, recognizing that making such a change would be difficult because of regulatory issues and the safeguards currently in place.
- Dr. Katz noted that if Europeans were to use the same surveillance mechanisms for adverse events, data collected in European countries could inform U.S. decisions regarding the use of adjuvants.
- A representative with NACCHO asked how public concerns about thimerosal can be assuaged; of the vaccines received at state and local health departments, providers have been returning doses because they contain this preservative. Accurate messages must be delivered to the public and to healthcare professionals. Dr. Redd agreed that this is a challenging issue. Although the

thimerosal issue often is not discussed at the national level, this issue is substantial at the community level. CDC should provide the media and state/local health departments with talking points to address these issues; CDC should be more aggressive in its efforts to provide health departments with this type of assistance.

## **SUMMARIES FROM WORKING GROUP MEETINGS** *National Center Representatives*

### **Board Recommendations for NCPDCID, NCIRD, and NCZVED** *Dr. Elissa Passiment*

Board members and program representatives from NCPDCID, NCIRD, and NCZVED worked together to address the topic of environmental microbiology research at CDC and the National Interagency Biodefense Campus. Specifically, these working group members aimed to provide answers to four questions related to environmental microbiology. The following recommendations (organized by specific question) resulted from this discussion.

#### ***Question 1. What are some of the areas of environmental microbiology that CDC should invest in?***

##### *Recommendations:*

The working group determined that some of the key areas of environmental microbiology worthy of further investment include a) the significance of facility/physical structure in healthcare-acquired infections, b) guidelines/science for the engineering of HVAC systems and filtration, and c) effective isolation engineering and infection controls through research in aerobiology.

#### ***Question 2. Is CDC's environmental microbiology research mission unique, and does it justify seeking expanded activities to provide the evidence basis for public health recommendations?***

##### *Recommendations:*

The working group determined that the mission is unique in that no other agency is doing this type of research for public health purposes. However, because related activities are occurring at EPA and the Department of Homeland Security, CDC should ensure coordination of efforts. The working group also agreed that CDC must engage in public advocacy work with other organizations and that CDC should approach its mission with coherence to justify expanded activities.

#### ***Question 3. How can CDC leverage opportunities at the national Interagency Biodefense Campus to address needs in environmental microbiology?***

##### *Recommendations:*

According to the working group, CDC can use the new campus to research select agents (e.g., tularemia, viral hemorrhagic fever, and ebola). The members also noted that the NIAID facility has capabilities that can advance the mission of CDC's environmental microbiology program and emphasized the need to evaluate the added value of each specific research question.

***Question 4. How can CDC develop and fund a “proactive” environmental microbiology research agenda instead of one that has currently been described as “reactive?”***

*Recommendations:*

The working group advises that CDC's environmental microbiology program a) focus and prioritize its mission and research agenda by utilizing metrics, b) determine what type of information is needed before engaging in an actual outbreak response effort, and c) increase education and communication efforts across disciplines. In addition, based on the recent experiences with H1N1 response, the program should identify more effective response activities that will be useful in other outbreaks. Ultimately, the development of a “proactive” research agenda also requires support from CDC leadership and the assurance of adequate resources.

*Discussion:*

- Dr. Boulton wondered why NIOSH was not mentioned in the discussion of outbreak investigations, particularly in light of the substantial amount of microbiology research they are engaged in. According to Dr. Passiment, NIOSH collaborates with other CDC programs on facility-design-related issues. In addition, although NIOSH focuses primarily on the worker and the workplace, public health synergies exist. It has been recommended that NIOSH review its charter to ensure better focus.
- Working group participant Dr. Berns noted that the group discussed the idea of having some environmental microbiology activities take place at Ft. Detrick; CDC is looking into how the facilities at this location can fit into the overall program and is determining how best to access the high-containment facilities needed to study various airborne select agents.
- Dr. Boulton suggested that a partnership with NIH would be advantageous for CDC's environmental microbiology efforts. For example, both NIH and CDC could collaborate to better research the pathogens that are found in airplanes. Dr. Berns concurred, noting that the Ft. Detrick facility would not be useful for this type of research.
- According to working group member Dr. Hospenthal, the group was unclear about what the term “environmental microbiology” encompasses. He suggested that although the programs seem to be engaging in effective collaboration, it might be advantageous to engage additional groups. For instance, more work on healthcare-associated infections could be undertaken in collaboration with hospitals, and food contamination research could be done in partnership with USDA. Dr. Hospenthal clarified that the discussion about the Ft. Detrick facility

centered on whether environmental microbiology-related research should be taking place at Ft. Detrick in the absence of CDC. Group members were then asked to identify which types of activities CDC could engage in within this unique setting.

- Dr. Karmali noted that several environmental microbiology-related activities (e.g., GIS mapping) are cross-cutting. He stressed the need to determine how to make the most efficient use of GIS and other cross-cutting tools.
- Dr. Berns emphasized that most funding for environmental microbiology projects does not come directly from CDC but from other agencies that have related interests; however, ideally, these activities should be given a core function and budget.
- Dr. Katz summarized the discussion, noting that the Board recognizes the need for improved coordination and additional funding.

### **Board Recommendations for NCZVED**

#### ***Dr. Matthew Boulton***

CCID Board member Dr. Boulton presented recommendations to NCZVED. He began by commending the group for achieving such high scientific merit despite the larger agency's recent reorganization. He informed the group that Board members attending the NCZVED working group meeting were charged with examining three externally peer-reviewed programs (i.e., West Nile virus, Lyme disease, and foodborne illness detection) and the National Center's responses to these reviews. After receiving the necessary updates and relevant information, the NCZVED working group recommends formal approval of these programs' responses to external peer-review recommendations.

Regarding the foodborne illness detection and investigation peer review, the NCZVED working group recognizes that some of the many recommendations included in the peer review of the program can be implemented by CDC. However, others will require the involvement of agency leadership in fostering an ongoing dialogue with state and local health departments, industry partners, and others to appropriately address or remediate specific program challenges.

For West Nile virus, the program response to the peer-review panel accorded a high priority to the continued funding and maintenance of CDC's epi-lab capacity grant program in supporting core infectious disease epidemiology and laboratory capacity in the states. Given this, the NCZVED working group recommends that CDC critically re-evaluate the current funding and other resource allocation to states in support of bioterrorism preparedness relative to that provided for infectious disease programs, particularly in light of the most recent findings of CSTE, which revealed continued erosion of state epidemiology capacity in infectious disease and other important program areas.

Based on the discussions that took place during the working group meeting, the NCZVED working group made the following recommendations for the program.

### *Recommendations:*

- The NCZVED working group recommends formal approval of the West Nile virus, Lyme disease, and foodborne illness detection programs' responses to external peer-review recommendations.
- The working group strongly encourages the continued commitment of CDC to the utilization and active promotion of "One Health" as a unifying conceptual framework. This concept is uniquely appropriate for NCZVED in their approach to disease prevention and control.
- Despite the possibility of future organizational consolidations in CCID that could involve NCZVED, the working group urges CDC to consider formal adoption of NCZVED's Strategic Framework 2009-2014 titled, "Confronting Infectious Diseases in an Interconnected World: People, Animals, and the Environment," which clearly articulates the center's vision, mission, planned actions, and intended impact in improving the health of the public.
- The NCZVED working group recommends that CDC critically re-evaluate the current funding and other resource allocation to states in support of bioterrorism preparedness relative to that provided for infectious disease programs

### *Discussion:*

- Dr. Jack Bennett informed the group that the "One Health" concept is not the unique property of NCZVED, agreeing that this important concept should not get buried in CDC's reorganization activities. NCZVED working group member Dr. Beaty re-emphasized the need to preserve the funding being given to the states for surveillance-related activities. CDC should ensure funding for this line item.
- It was noted that about 20% of the infectious disease epidemiologists working in state health departments are supported with bioterrorism funding. With budget cuts, states might preferentially eliminate these epidemiologists, which might result in a highly undesired outcome. Perhaps having a new, separate line item for preparedness epidemiology should be revisited.
- Dr. Jim Hadler also addressed the topic of public health preparedness, stressing that although bioterrorism and preparedness funding is supporting surge capacity, it is also supporting outbreak response at the state level, allowing states to deal with new public health problems as they emerge. Although bioterrorism may sound like an obscure issue, the funds are also being spent on emergency response to other problems and obtaining critical information about emerging problems. To assume that BT funding is no longer needed at the state level is misguided.
- According to Dr. Boulton, studies reveal that states have been using BT money to supplant rather than augment funding.
- Dr. Hadler informed the group that at the state level, it is often challenging to identify and respond to disease outbreaks in a timely manner. He asked whether the issue of timeliness was discussed. According to Dr. Boulton,

recommendations for the foodborne illness program addressed this issue by emphasizing the importance of investigating new approaches to outbreaks that are more aggressive, complete, and timely. Much discussion has taken place about the need for these activities to be done in a timely manner.

## **Board Recommendations for NCHHSTP**

### ***Dr. Jim Hadler***

Dr. Hadler began by discussing NCHHSTP's charge to the workgroup, which involved reviewing and providing feedback regarding the National Center's proposed strategic plan. He also provided meeting attendees with an overview of the goals and objectives associated with the NCHHSTP's newly defined strategies.

During the CCID BSC breakout session, BSC reviewers formulated several specific recommendations regarding NCHHSTP's strategic plan. The following recommendations were offered, organized by specific question posed by National Center leadership.

#### ***Question 1: Do the stated goals target the most appropriate strategic areas?***

##### *Recommendations:*

- The goals appear to target the most appropriate strategic areas, but:
  - The processes are stated independently of their relationships with the objectives of prevention, control, and elimination of disease. NCHHSTP needs to be careful that process doesn't become the endpoint - process is only valuable if it enhances outcome.
  - The plan is internal, but has relevance to partners and needs their perspective. To ensure broad perspective, more vetting is needed from experts outside CDC. This should include a broader spectrum of experts within the public health sector and from other groups (e.g., the Chlamydia Coalition and Association of Schools of Public Health).

#### ***Question 2: Are the corresponding specific objectives for each goal the correct focus?***

##### *Recommendations:*

- In general, the specific goal objectives are reflect adequate focus, but they need to:
  - Emphasize translation of research into practice and programs where applicable.
  - Ensure that each objective is measurable.
  - Prioritize the most important objectives with timeframes where possible. For example, programs need to select and implement a key SES measure and display data using it as soon as possible

***Question 3: Are the corresponding specific objectives for each goal comprehensive?***

*Recommendations:*

- Yes, the objectives are comprehensive, but:
  - more granularity in their execution will be needed at the Division level based on the specific outcome objectives in each division
  - the current DTBE strategic plan is a possible model for other Divisions

***Question 4: Do the stated goals and objectives address key priorities of the current social climate and public health environment?***

*Recommendations:*

- The goals and objectives do not entirely address such key priorities, as the outcomes of healthcare reform remain unknown. Such reform may result in inadequate resources and policies to manage some programs that currently are managed effectively (e.g., TB treatment).
- The new priorities of CDC haven't been fully integrated into this process. For instance, the document still refers to generic "partners" instead of focusing on specific groups to take specific action (e.g., state/local health departments vs. private partners).

***Question 5: Are the stated goals and objectives sufficiently bold?***

*Recommendations:*

- Given the current climate, these goals and objectives are sufficiently bold.
- To be bolder, the function-form dynamic should be reexamined. Ideally, function should drive form. Some language seems more "form" oriented. Process-outcome relationship also should be reexamined and processes prioritized that are most likely to affect outcome.
- The National Center should recognize and communicate its leadership role in the public health aspects of healthcare reform.

***Other Recommendations***

- Restate goals so that it is clear that they support disease reduction outcomes and are not an end unto themselves.
- To ensure broad perspective, more vetting of plan is needed from experts outside CDC.
- Emphasize translation of research into practice and programs where applicable.
- Ensure that each objective is measurable.
- Prioritize the most important objectives with timeframes where possible.
- Revisit the "partners" goal and target objectives at specific partner groups – particularly public health "partners" at the state and local levels.

- The Center should recognize and communicate its leadership role in the public health aspects of healthcare reform.
- Evaluation of each objective as it contributes to disease reduction will be needed.

## **Board Recommendations for NCIRD**

*Dr. Sam Katz*

Dr. Katz presented the Board recommendations for NCIRD. He began by commending the National Center for meeting its goals and clearly articulating them for the future. The working group also was impressed by NCIRD's unique, creative, and well-researched approach to supporting vaccine-related state activities by using monies received through the section 317 of the Public Health Service Act. The National Center is enabling states to build immunization infrastructure, a critical component to ensuring the administration of needed vaccines, and is making good use of funding granted through the stimulus plan. State-based public health agencies also should be commended for their judicious use of 317 funding.

The working group also was asked to provide feedback on several specific NCIRD vaccine programs, including those associated with varicella zoster, pneumococcal conjugate, HPV, and rotavirus; the group agreed that although progress is being made, several issues should be addressed. The value of the National Center's global measles and rubella program was acknowledged by the working group. Specifically, the group commended CDC for its role in supporting the epidemiologic and laboratory capacity for measles in sub-Saharan Africa.

Though the NCIRD working group was not specifically tasked with reviewing the center's environmental microbiology efforts, this topic was discussed during the program review session. Reviewers suggested that the term "environmental microbiology" be better elucidated and that the National Center enhance its efforts to collaborate with other agencies when planning for and engaging in environmental microbiology research.

### *Recommendations:*

- Additional funding should be allocated to vaccine-related communication and education. All immunization programs are being compromised by misinformation, and CDC could play a critical role in providing accurate, relevant information to the public.
- All existing efforts associated with the global measles and rubella program should be continued into the future.
- NCIRD should ensure that state-based activities made possible through section 317-related funding are sustained into the future; these funds help states provide vaccines that are not covered by the Vaccines for Children (VFC) program.
- Additional funding and better collaboration is needed to support environmental microbiology efforts at the state level.

## **CONCLUDING REMARKS**

Despite the recent reorganization activities at CDC, it is anticipated that the CCID BSC will continue to convene throughout 2010; although the format of these meetings remains unclear as of now, the Board will continue to be pivotal to the peer-review process. CCID board meetings are scheduled for May 19-20 and November 9-10, 2010. Dr. Dele Davis stressed that regardless of how the center is reorganized, it is important that BSC reviewers are given the opportunity to examine not only specific CCID programs, but the way these programs operate within the larger center structure.