For additional information, please visit the United States–México Border Health Commission (BHC) website at www.borderhealth.org.
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EXECUTIVE SUMMARY


The purpose of this three-day conference was to convene federal, state, and local partners from both sides of the U.S.-México border to address critical infectious disease and emergency preparedness issues impacting the border region and to discuss potential solutions that address those problems.

The areas of concern towards improving binational public health emergency response were enhancing cross-border and global partnerships, global health security, and the international dialogue on biological threats.

The conference addressed the following national strategic objectives through encouraging local, state, and federal participation:

- Enhance processes for sharing epidemiological information across the border.
- Improve protocols for immediate notification across borders when needed by assessing whether the situation requires immediate notification; maintaining updated contact directories; and testing/exercising after-hours contact.
- Improve electronic information sharing capabilities to allow for more rapid and secure information exchange.
- Establish or enhance regional surveillance networks that include binational components where possible.
- Encourage the conduct of joint binational training and exercises related to surveillance, epidemiology, and preparedness.
- Assess the impact of migration on health systems throughout the two countries and review the lessons that non-border states may learn from the long-time experiences of migrants along the border.

Conference participants represented federal agencies, state, and county health departments, and laboratories in all ten U.S. and México border states (Arizona, Baja California, California, Chihuahua, Coahuila, New Mexico, Nuevo León, Sonora, Tamaulipas, and Texas). Also present were representatives from the following organizations: the Pan American Health Organization of the World Health Organization (PAHO-WHO); the BHC; the México Ministry of Health; the Diagnostic and Epidemiological Reference Institute (InDRE) of México; General Directorate of Epidemiology (DGE); the U.S. Department of Health and Human Services’ (HHS) Office of Global Affairs (OGA); the Centers for Disease Control and Prevention (CDC); the Association of Public Health Laboratories (APHL); the Assistant Secretary for Preparedness and Response (ASPR); the University of Texas Health Science Center at Houston, School of Public Health, El Paso Regional Campus; the University of California–San Diego; New Mexico State University; Texas A&M Health Science Center School of Rural Public Health–College Station; the Instituto Politécnico Nacional; the Universidad Autónoma de Tamaulipas in Reynosa; and the Universidad Autónoma de Chihuahua in Cd. Juárez. In total, the conference was attended by 138 participants.
The following recommendations were identified during the 2011 U.S.-México BBID Conference:

- Work towards formal approval of the *Guidelines for US-Mexico Coordination on Epidemiologic Events of Mutual Interest*. While protocols are already being developed for the Guidelines’ implementation, formal approval will aid the implementation process.

- Encourage sustained funding to support binational collaboration in surveillance and epidemiology of infectious diseases. In light of funding reductions, ensure that the most essential work is being conducted to maintain core surveillance and epidemiology capacity. It may also be possible to build on existing work—for example, by adjusting existing surveillance systems to collect better data on binational cases and share information more effectively across borders. Binational reports could be created using data that already exist or that are routinely collected.

- Improve electronic systems for sharing information. Technology offers the promise of fast, lower-cost, and secure ways to share and manage health information. Model systems are available but have not been implemented in all areas.

- Work towards resolving continuing issues with the transportation of specimens, reagents, medicines, and medical or laboratory supplies across borders. Various parties should be involved in this effort, including regulatory agencies and customs enforcement, as well as public health agencies.

It is anticipated that the disease-specific and thematic work groups, which met during BBID 2011, will continue to review issues of border/binational concern. The BHC has committed to sponsoring the Third Annual Border Binational Infectious Disease Conference (May 22-24, 2012) to review progress that will help accomplish improving cross-border and global partnerships as well as global health security.
OVERVIEW OF EVENT

Purpose

The purpose of the Second Annual Border Binational Infectious Disease (BBID) Conference was to convene federal, state, and local partners from both sides of the U.S.-México border to address critical infectious disease and emergency preparedness issues impacting the border region and to discuss potential solutions to address those problems.

Objectives and Methodology

Areas identified towards improving binational public health emergency response were identified as enhancing cross-border and global partnerships, global health security, and the international dialogue on biological threats.

The conference provided the opportunity to address the following national strategic objectives through encouraging local, state, and federal participation:

- Enhance processes for sharing epidemiological information across the border.
- Improve protocols for immediate notification across borders when needed by 1) assessing whether the situation requires immediate notification, 2) maintaining updated contact directories, and 3) testing/exercising after-hours contact.
- Improve electronic information sharing capabilities to allow for more rapid and secure information exchange.
- Establish or enhance regional surveillance networks that include binational components where possible.
- Encourage the conduct of joint binational training and exercises related to surveillance, epidemiology, and preparedness.
- Assess the impact of migration on health systems throughout the two countries and review the lessons that non-border states may learn from the long-time experiences of migrants along the border.

Conference Structure

Dr. Ronald J. Dutton, Director, Office of Border Health, Texas Department of State Health Services, and Dr. Elisa Aguilar, Coordinator, BHC-Chihuahua Outreach Office, were introduced as master and mistress of ceremonies.

The conference agenda was organized using the following structure:

- Panels for local, state, and federal perspectives on border and binational collaborations, including a smaller panel for border legislators featuring Representative Silvestre Reyes from Texas and Melanie Goodman from New Mexico (in representation of U.S. Senator Jeff Bingaman)
- Four plenary sessions: 1) Tuberculosis along the border, 2) Binational communication and protocols for implementation of the Guidelines for US-Mexico Coordination on Epidemiologic
Events of Mutual Interest, 3) Infectious diseases and health security, and 4) Applied infectious disease research

- Lightning talks (short talks) and poster session on various infectious disease issues affecting the U.S.-Mexico border region
- Breakout groups on major border and binational initiatives

Welcoming Remarks

Dan Reyna, General Manager, BHC, U.S. Section
Dr. María Teresa Zorrilla, Executive Secretary, BHC, México Section

Dr. Dutton inaugurated the meeting by welcoming all participants and introduced Dan Reyna, General Manager, BHC, U.S. Section. D. Reyna welcomed all the conference planners and organizers to include Dr. Allison Banicki, Dr. Elisa Aguilar, Dr. Ricardo Cortés Alcalá, Dr. Karen Ferran, Kathie Martinez, Lori Navarrete, Katharine Perez-Lockett, Raul Sotomayor, Dr. Steve Waterman, and Dr. Dutton for their efforts in putting together one of the most critical binational public health events along the border. D. Reyna also welcomed all U.S. and México participants who work on the many aspects of infectious disease in the U.S.-México border region. In addition, he offered a special thanks to Dr. David Lakey, Commissioner, Texas Department of State Health Services, for hosting the conference. He also noted that it is the first time in history that a border binational infectious disease conference has taken place within 12 months of the previous conference with a consistent high level of participation in both years. The previous BBID Conference was held on June 28-30, 2010, in San Antonio, Texas, where it was agreed to continue addressing infectious disease along the border region.

D. Reyna reported that the current and future fiscal challenges require developing a more proactive approach in finding efficient solutions that can help adapt and overcome those fiscal limitations. He paraphrased President John. F. Kennedy, who said, “Some things do not just happen, they are made to happen,” to emphasize that the purpose of the BHC is to help make things happen through the principles of Leadership, Focus, and Venue. He again thanked all for coming to the conference and for their commitment in finding solutions aimed at solving infectious disease problems along the border.

D. Reyna introduced his counterpart, Dr. María Teresa Zorrilla, Executive Secretary, México Section, BHC, who then welcomed all conference participants representing the various federal, state, and local health authorities from México and the United States, as well as the outreach offices in both countries, the Pan American Health Organization (PAHO), and university researchers. She explained that for the next two and half days, the many topics as presented by local experts on the conference agenda will address relevant issues, such as technical guidance documents. Dr. Zorrilla mentioned that other important topics include recent epidemiological issues regarding several health conditions such as tuberculosis, HIV, dengue, hepatitis A, migrant health, and laboratory surveillance.

Dr. Zorrilla reminded the participants that diseases do not recognize borders, so it is important to work on public health issues of common importance to both nations. She stated that the experience of infectious disease experts and public health professionals participating in the various panels and workgroups will help bring concrete solutions that can result in public health improvements in the border region.

Dr. R.J. Dutton introduced Dr. Allison Banicki, Epidemiologist with the Office of Border Health, Texas Department of State Health Services. Dr. Banicki recognized the efforts of the Conference Planning Committee and members of the Technical Committee who helped formalize an agenda and worked to identify the list of speakers scheduled to speak at the conference. Dr. A. Banicki spoke about the history
of past border and binational infectious disease conferences starting in 2003. She spoke about the two avian influenza conferences sponsored by the BHC: the first was held in Hermosillo, Sonora, in 2006, and the second conference on this topic took place in San Diego, California, in 2007.

Dr. Banicki mentioned that the Early Warning Infectious Disease Surveillance Program (EWIDS) has helped establish and maintain an efficient program of border binational epidemiological surveillance activities. Federal funding for the EWIDS program along the border has steadily decreased since fiscal year (FY) 2004, with a cut of 50 percent in funds scheduled for the next fiscal year. This situation represents a serious challenge to keep the momentum of previously programmed activities along the border.

Dr. Banicki spoke about two main conference objectives: 1) To provide the venue where a binational group of health authorities and representatives at the federal, state, and local levels can meet to share epidemiological information across the border and work to improve protocols for timely notification, and 2) To address various infectious disease issues that affect border residents. These include an assessment about the influence migration patterns have on health systems in the two countries. She also expressed that non-border states may learn important public health lessons from the experiences of border states.

Dr. Banicki spoke about the meeting structure that incorporated breakout groups, plenary assemblies on tuberculosis (TB) along the border, binational communication and implementation of the Guidelines, infectious diseases and health security, updates on applied infectious disease research. In addition, three separate panels focused on federal, state, and local perspectives on border and binational collaborations.

To stimulate further discussion and research in infectious diseases along the border, a session of lightning talks (short talks) and a poster session gave health investigators the opportunity to share their latest findings. Breakout groups convened to discuss border and binational initiatives and shared their conclusions with all the conference participants.

Dr. Banicki announced the 2012 Border Binational Infectious Disease Conference is tentatively scheduled for May 22-24, 2012, and thanked again all conference participants for attending.

**AGENDA DISCUSSION ITEMS**

**State Perspectives on Border and Binational Collaborations**

Representing the U.S. side of the border, Dr. David Lakey, Commissioner, Texas Department of State Health Services, presented on improving the response to infectious diseases along the ten U.S.-México border states, especially on their immediate border regions where both countries are experiencing major population growth combined with higher unemployment, poverty, fewer health care professionals, lower educational attainment, limited access to primary care, high rates of uninsured, and high prevalence of obesity and diabetes. These factors plus the high number of border crossings (184.8 million pedestrians and passengers and 4.3 million incoming trucks in 2009) makes the U.S.-México border region vulnerable to infectious diseases such as tuberculosis, food-borne outbreaks, salmonella, dengue, and influenza pandemics.

Since 2003, the U.S. Department of State Health Services (DHHS) has supported EWIDS along the U.S. northern and southern borders. Funds from this program have improved epidemiology and laboratory capacity and enhanced cross-border surveillance. A bio-safety laboratory level 3 was inaugurated in Laredo, Texas, and a total of 25 public health professionals have been placed in regional and local health
departments. An epidemiological information exchange (weekly notifiable disease counts, binational cases, and outbreaks) between Texas and Mexican border states of Tamaulipas, Nuevo Leon, Chihuahua, and Coahuila was formally established. For 2011-12, U.S. EWIDS funding will be reduced by 50 percent, raising concerns about sustaining U.S.-México border infectious disease surveillance network.

Dr. Lakey mentioned two other examples of binational collaboration in infectious disease management and response: the 2009 H1N1 pandemic and tuberculosis along the U.S.-México border.

With regard to pandemic influenza, all preparation was focused on response to possible avian flu from Asia. Instead, H1N1 was a swine origin strain that first surfaced in México. The first news of this novel disease that quickly spread in all continents accompanied by intense media coverage proved that communication provided a critical role.

A couple of lessons related to this event and infectious diseases on the border were identified:

- A disproportionately higher number of death associated with H1N1 occurred among Hispanics compared to non-Hispanic whites
- A recognized need for improving infectious disease coordination and communication between federal, state, and local governments. For example, while international notifications had occurred at the federal level, Texas first learned of the cluster of respiratory cases in México (which turned out to be pandemic H1N1 influenza) from media reports rather than as a direct notification from federal US officials. EWIDS can help improve coordination of communication channels during public health emergencies

With regard to TB, border rates are higher than non-border rates in the U.S. as well as in México. California and Texas rank first and second in number of TB cases. Challenges to effective TB control and treatment along the border include multi-drug resistant TB cases, continuity of care; cross-border transport of laboratory and medical supplies, and social factors (migratory populations, violence, poverty, and language barriers). The Texas Center for Infectious Disease (TCID) is the largest new construction in the United States in the last 50 years for inpatient care and treatment for TB and provides patient care, scientific investigation, and therapeutic and educational services supporting public health needs.

Optimal infectious disease case management requires communication and collaboration with disease control programs and health care providers on both sides of the border. This can only be accomplished by the state programs together with all the essential partners like Cure TB, which is a U.S.-Mexico Binational TB referral program that since 1997 has facilitated continuity of care of TB patients moving between the two countries, the Texas “sister city” binational TB initiatives, local health departments, and the binational health councils along the U.S.-México border region, regional public health, national (Centers for Disease Control and Prevention [CDC]), international, academia, and the private sector.

According to Dr. Lakey, next steps to infectious disease control include the following: 1) improve binational communications and telecommunications, 2) share epidemiological information, 3) enhance laboratory cooperation, 4) explore opportunities for further collaboration and expanded partnership, and 5) sustain efforts over time.

Representing the Mexican side, Dr. Alfredo Gruel Culebro, Under Secretary of Health for the State of Baja California, on behalf of Dr. José Guadalupe Bustamante M., Secretary of Health for the State of Baja California, presented on the binational collaboration along the border on surveillance, epidemiology, and infectious diseases.
Providing historical background, Dr. Gruel recalled that in all six Mexican border states, binational relationships have been a public health priority for more than 20 years as several projects and initiatives along the entire U.S.-México border can testify. Epidemiological surveillance and information exchange are top priorities to these border states. Each state, together with its counterpart, identifies public health priorities and manages resources to support them. Among these projects, the most sustainable have been tuberculosis, HIV/AIDS, EWIDS, and binational infectious disease surveillance (BIDS). Regarding BIDS, five out of the six Mexican border states also participate in this project. Another important binational initiative, the binational health councils (COBINAS, for its acronym in Spanish), reemerges as a binational forum to drive border specific projects.

Regular partners in public health include state governments, state health services, border state universities, CDC, National Center of Epidemiological Surveillance and Diseases Control (CENAVECE)\(^1\), non–governmental organizations (NGOs), U.S. Agency for International Development (USAID), and HHS. Specific projects these organizations have supported include BIDS, EWIDS, Project Concern International (PCI) in extending finding and follow-up of patients with TB, and project JUNTOS, a TB prevention and control initiative.

Principal results from these projects include positive binational relationships with mutual respect and acknowledgement of differences in both countries’ health systems and broad recognition of the need for better binational planning, collaboration, and communication; better border epidemiology surveillance activities and health personnel training; and stronger lab capacity along the border.

Dr. Gruel mentioned some of the obstacles to binational collaboration as follows: 1) differences in public health legal frameworks; 2) different surveillance systems in U.S. border counties; 3) difficulties with transportation of specimens, supplies, reagents, medicines, etc.; and 4) limited personnel for surveillance activities and public health interventions.

Expressing Dr. Bustamante’s hopes that meetings such as this one can develop practical solutions to public health challenges, Dr. Gruel mentioned several “lessons learned” which are Baja California’s proposals for more efficient BBID surveillance activities.

**Perspectives from Border Legislators**

D. Reyna introduced Melanie Goodman who attended the conference in representation of the Honorable Jeff Bingaman, U.S. Senator from New Mexico. M. Goodman read a letter Senator Bingaman addressed to all conference participants where he commended the BHC for its work on critical infectious diseases and emergency preparedness along the U.S.-México border. Senator Bingaman also mentioned the enormous challenge tuberculosis represents to people worldwide and the efficient manner the BHC has used to deal with this type of infectious disease along the border. The letter also announced the reintroduction of the *Border Health Security Act*, co-sponsored by Texas Senator Kay Bailey Hutchison. The provisions of the Act seek to strengthen the BHC as it enters its second decade of operations by allocating $30 million a year, with provisions to fund border health initiatives, including emergency preparedness and EWIDS.

D. Reyna introduced U.S. Congressman Silvestre Reyes (Texas). He also recognized the Congressman for his support and presented him with the BHC’s Ten Year Anniversary Coin. Congressman Reyes talked about the border infectious disease potential impact on the entire country. He recognized the efforts of Dr. Lakey, Dr. Gruel, and D. Reyna for providing the required leadership to help resolve infectious disease challenges along the U.S.-México border and commended participants for attending

\(^1\) Centro Nacional de Vigilancia Epidemiológica y Control de Enfermedades.
Congressman Reyes mentioned Senator Bingaman’s past and current commitment to border health and of his efforts in helping the BHC secure federal funds to carry out its binational work. Congressman Reyes spoke about his recent conversation with Dr. Ali S. Khan, Assistant Surgeon General, United States Public Health Services (USPHS) & Director, Office of Public Health Preparedness & Response, Centers for Disease Control and Prevention (CDC), about the impact of proposed financial cuts mandated by the federal government and the negative effect these reductions could represent for the detection and prevention of infectious diseases along the U.S.-México border region. He reiterated his commitment to properly fund the BHC so that it may continue with the type of projects necessary to protect the public health, not only along the border but in the rest of the country as well.

Congressman Reyes concluded his remarks by reminding the audience about the positive impact this conference can offer on the ongoing national dialogue about health and security along the border. He anticipated that the data and information generated in this conference may help formulate future political and financial decisions.

**Local Perspectives on Border and Binational Collaborations**

*Michael Hill, Director, City of El Paso Department of Public Health; and, presented in this panel on local perspectives.*

Michael Hill welcomed participant on behalf of the city of El Paso. He stated that communication is vital along the border and technology can help improve it. Because both sides of the border depend on each other, his organization is working on including health care providers within the epidemiological information network. The City of El Paso Health Department is planning to give Cd. Juárez access to El Paso’s disease reporting and health alert systems.

M. Hill state that frequently attended meetings in Cd. Juárez but now cannot because of the violence and restrictions to cross the border. Fortunately, his counterparts are able to attend, and face-to-face meetings have continued without interruption. He mentioned the important role the EWIDS program has had on eliminating communication barriers between these two cities in which epidemiologically is one unit and stated that both sides of the border need to be prepared, as one region, especially for emergencies.

*Dr. Dr. Wilma Wooten, Health Officer, San Diego County*

Dr. Wilma Wooten presented on the importance of coordination, collaboration, and communication for successful border/binational public health activities in San Diego, California. The co-location of agencies such as the San Diego Border Health Office, the CDC Quarantine Station, and Health Initiatives of the Americas facilitates the coordination with each other and with the California Office of Binational Border Health (COBBH) San Diego office. The San Diego County Health Department also collaborates with state and federal partners like EWIDS, the California Queso Fresco Border Task Force, BIDS, CURE-TB with binational referrals and binational observed therapy as well as with Puentes de Esperanza, a binational committee on drug-resistant TB, California-Mexico Border Binational Health Week (BBHW) and National Infant Immunization Week (NIIW). During the H1N1 pandemic, the San Diego County Health Department set up clinics at the border and was able to immunize hard-to-reach vulnerable populations. Open-door communication among different local, binational, state, and federal entities are facilitated by their co-location and proximity.
Dr. Manuel Jesús Acosta Muñoz, Director of the Sanitary Jurisdiction of Ojinaga, Chihuahua

Dr. Manuel Jesús Acosta Muñoz provided a local example of binational collaboration in his region: the flood of September 2008 in Ojinaga, Chihuahua. Public health interventions were developed with the purpose of protecting the population from epidemiologic, sanitary, and entomologic risks. Several actions were developed in the area of civil protection and health emergency including epidemiologic surveillance, vector control, health promotion and preventive care. Once the presence of *vibrio cholarae* was confirmed, the Ojinaga Health Department requested hepatitis A vaccines and cleaning and hygiene kits via the BHC, and these were promptly obtained through the collaboration of the Texas Department of State Health Services, Office of Border Health, and PAHO, which also provided technical support. As a result, in spite of the great material loss, no death was attributed to the flood, and no epidemic outbreaks have occurred.

Dr. Gloria Leticia Doria, Epidemiologist, Sanitary Jurisdiction of Reynosa, Tamaulipas

For Dr. Gloria Leticia Doria, border collaboration between Tamaulipas and Texas has a history of more than fifty years dating from the installation of PAHO’s border office in El Paso, the U.S.-Mexico Border Health Association, and the U.S.-México COBINAS. Its main focus has been strengthening the collaboration and communication between health authorities at the local level in coordination with binational state and federal levels, with the purpose of identifying public health risks and problems that affect population on both sides of the border.

Paul Dulin, OBH, New Mexico, asked beyond funding, what other actions do you feel are necessary to improve the coordination?

For Dr. Wooten, from her experience with CureTB, legislation can be improved for a better health information exchange system. M. Hill indicated that meetings like BBID are very important. With less funding, more collaboration is needed. Dr. Hector F. Gonzalez, Director of the City of Laredo Health Department and moderator of the panel, stated that lab information exchange is important, but also trained personnel. Dr. Gonzalez also suggested that the BHC can help develop the formal agreements to facilitate binational work. Dr. Doria suggested there is a need for more federal- and state-level support and attention to local jurisdictions, also a more efficient use of available resources. For Dr. Acosta, binational communication is invaluable. Good personal relationships can lead to develop better binational protocols.

Federal Perspectives on Border and Binational Collaborations

Dr. Ricardo Cortés Alcalá, Director, Inter-Institutional Liaison Office, General Directorate of Epidemiology, Federal Ministry of Health, México

Dr. Ricardo Cortés explained how the General Directorate of Epidemiology in México is currently undergoing a restructuring of its functions. He reviewed the previous system and the new structure that took effect beginning in 2011. The General Directorate now organizes work by process: epidemiology surveillance and early warning, inter-institutional liaisons, and laboratory support.

He also provided comments on territorial and virtual borders, with the virtual borders including international flights. Dr. Cortés recognized the border region for its leadership in public health communication and cooperation. He also referred to the recent influenza pandemic as an example of effective binational cooperation. From his perspective, opportunities exist to improve binational information sharing, implementing a binational code in surveillance systems to help identify binational cases, automated information sharing, lab analysis enhancement (InDRE-LESP), and in International Health Regulations (IHR) implementation.
Dr. Katrin Kohl, Office of the Director, Division of Global Migration and Quarantine (DGMQ), Centers for Disease Control and Prevention (CDC)

Dr. Katrin Kohl showed several maps illustrating how the United States, México, and other countries are linked through flight and migration patterns. This interconnectedness of countries and people has implications for infectious disease transmission. The United States and México are connected through national and international agreements like IHR and the North American Leaders Summit (NALS). The IHR provide guidance on how to best standardize and harmonize detection, reporting, and treating infectious diseases. Dr. Kohl also reviewed the Guidelines for the U.S.-Mexico Coordination on Epidemiologic Events of Mutual Interest and the steps towards their implementation. She then reviewed the Binational Technical Workgroup’s (BTWG) goals, member representation, and topics covered, mentioning that the initial objectives of the cross-cutting team are to develop communication protocols. Dr. Kohl also reviewed components of binational communication pathways and referred to a flowchart for proposed pathways. She then reviewed the proposed list of potential binational notifiable diseases and gave examples of outbreak investigations. She suggested in the future that binational reports be developed on binational problems like previous surveillance reports on TB, HIV, influenza, and others. She provided an overview of the vision of a binational data system and mentioned examples of using technology like Skype and other ways to improve communication. Challenges that remain include the timeliness of information sharing, movement of specimens and reagents across borders, integration of efforts, resources for training, and IT equipment requirements. Dr. Kohl noted that additional resources are unlikely to be provided at this time.

Future directions include making binational surveillance systems more comparable across borders and better integrating binational border surveillance initiatives.

Nicole Fitzpatrick, DGMQ, CDC, who served as moderator for this session, mentioned the congruency from both presentations on the relative ease that diseases move across borders, and the importance of timely vertical and horizontal information sharing. Both countries are also using technology to aid in information sharing. She asked about the use of formal versus informal processes or procedures for communication at the federal level.

Dr. Kohl responded that one formal way is the simultaneous notifications to Canada and México in addition to the official notification to PAHO whenever an event is assessed under the IHR. Also, the BTWG meets regularly and is working towards implementing the Guidelines. She also stated that often logistical difficulties in communication such can occur, which is why it is necessary to use whatever formal or informal mechanisms are in place.

Dr. Cortés stated that no written document from both countries exists that mandates formal communication, but México also notifies Canada and the United States simultaneously when an official IHR communication is made to PAHO. He said informal communications are necessary and important, citing the Migrant Clinicians Network (MCN) as an example of informal communications that has been in place for many years and has been instrumental in many events, including the H1N1 pandemic.

N. Fitzpatrick asked how to continue collaborations in the midst of big funding cuts.

Dr. Cortés responded indicating that although funding for epidemiology has increased substantially over the past ten years, México has long been accustomed to working with little funding. He indicated that México could share suggestions on how to operate with fewer resources.

N. Fitzpatrick commented that regardless of budget concerns, the commitment remains to move forward with initiatives to improve binational communications and collaborations.
**Tuberculosis along the Border: An Example of Border and Binational Collaboration**

*Diane Fortune, New Mexico Department of Health, “Binational Communication: Coordination of TB Case Management within Otero/El Paso ICE Facilities.”*

Diane Fortune provided an overview of current collaboration as well as communication protocols to improve TB case management at the Otero and El Paso Immigration and Customs Enforcement (ICE) processing facilities. She presented a specific case study, where Project Juntos and MCN were involved, to illustrate what happens to treatment and follow up on TB patients who move between México and the United States. The “meet and greet” trial program failed in this case, but the outcome was successful because the patient’s TB treatment was completed. D. Fortune outlined steps being taken to improve the protocol for management of binational TB cases.

*Dr. Federico Alberto Castro López, Universidad Autónoma de Ciudad Juárez, “Cure Rate of Drug-Resistant Tuberculosis Patients in the Paso del Norte Region treated by Project Juntos.”*

Dr. Castro provided a demographic profile of patients with drug-resistant TB at some point between 1994 and 2008. The most common co-morbidity was diabetes present in more than half of the patients. About two-thirds of the drug-resistant patients were successfully cured.

*Andy Heetderks, Division of Tuberculosis Elimination, CDC, “Strategies for Binational Collaboration in Tuberculosis Prevention and Control.”*

Andy Heetderks provided an overview of the current U.S.-México TB landscape and reviewed current initiatives to address TB along the border. New active cases are at an all time low but foreign-born are affected disproportionately in the United States. While a stable TB rate was evident for several years among foreign-born persons in the United States, the decline in 2009 may be due to changing migration patterns. He reviewed the reasons why MDR and XDR TB should be given more attention and suggested effective priorities for TB control. A. Heetderks also suggested that the TB strategies of the United States Associated Pacific Islands (USAPI) may provide useful lessons for U.S.-México binational coordination.

*Dr. Miguel Ángel Reyes López, Laboratorio de Medicina de Conservación del Centro de Biotecnología Genómica del Instituto Politécnico Nacional, “Molecular Genotyping of Mycobacterium Spp around Tamaulipas, México.”*

Dr. López provided an overview of the TB epidemiology at the global, national, and state (of Tamaulipas) levels. He presented a detailed study of molecular genotyping isolates in Tamaulipas using ribotyping techniques, REP-PCR (Repetitive Extragenic Palindromic Sequence PCR), and ERIC-PCR (Enterobacterial Repetitive Intergenic Consensus PCR).

The first day of the conference ended with a special session of short talks on coccidioidomycosis, also known as “Valley Fever,” an emerging respiratory disease that may benefit from examining the approaches used by TB researchers along the border.

Dr. Park explained that Valley Fever is a common cause of community-acquired pneumonia along many areas of the U.S.-Mexico border. Although coccidioidomycosis is the third most-commonly reported infection to the Arizona Department of Health Services, it is still greatly under-diagnosed.

He stated that coccidioidomycosis prevention is challenging, so public health strategies focus on improving diagnostic capacity, treatment, and clinical education for this infection, as well as studies to better estimate the burden of this disease in border populations.

*Katharine Perez-Lockett, “Results of the 2010 New Mexico Coccidioidomycosis Knowledge, Attitudes and Practices Survey of New Mexico Clinicians.”*

K. Perez-Lockett presented on an assessment of knowledge, attitudes and practices (KAP) of clinicians in New Mexico conducted in 2010. A majority of respondents indicated they were not confident in diagnosing or treating coccidioidomycosis, and a majority of respondents did not consider coccidioidomycosis when diagnosing patients with respiratory disease.

In response to a question, Dr. Park replied that the common name of coccidioidomycosis (Valley Fever) is derived from the San Joaquin Valley of California where the early epidemiological studies were conducted.

Dr. Victor Cardenas asked whether data from military recruits has indicated a change in the rate of coccidioidomycosis. Dr. Park responded that the number of coccidioidomycosis cases has increased dramatically in recent years—for example from about 7,000-8,000 cases in 2008 to 10,000 cases in 2009 in Arizona. Increases have also been documented elsewhere—for example, in a recent *Morbidity and Mortality Report* (MMWR) about data from California. The reasons for the increase are unknown, but climate changes are thought to play a role. Seasonally, coccidioidomycosis is most common when periods of heavy rain are followed by drought and high winds, and droughts have become more prolonged in the southwest. Another factor may be activities such as construction and home building in areas where the soil was previously undisturbed, such as parts of the Phoenix metropolitan area. The construction activity may be causing aerosolization of the spores and an increase in the disease rate.

Dr. Mark Kittleson from New Mexico State University asked if one would be at risk from activities such as hiking in the mountains and desert of New Mexico. Dr. Park confirmed that people and animals such as dogs are susceptible in endemic areas of the southwest. Most cases occur in people with no known exposure to dust or soil. The spores are widely spread in dust and wind, and residents of endemic areas may be exposed simply in the course of normal activities. For this reason, prevention is difficult, so the public health message focuses on early detection and treatment to reduce morbidity.
DAY 2

Lightning Talks and Poster Session

A session of lightning talks, or short five-minute presentations, were offered as a forum for public health professionals to learn more about work being done to address other infectious disease issues. Ten lightning talks were provided and the topics ranged from rabies to food borne botulism.

A poster session also provided another opportunity for professionals to showcase and discuss their work and network with colleagues. Twenty posters were included in the sessions and ranged in topics from epidemiological information exchange to tuberculosis.

Presenters for both the lightning talks and poster sessions were selected through an open call. The criteria used to select presenters included the topic and its relevance to the conference objectives.

Keynote Speaker

Dr. Ali S. Khan, Assistant Surgeon General, United States Public Health Services (USPHS) & Director, Office of Public Health Preparedness & Response, Centers for Disease Control and Prevention (CDC)

On behalf of the BHC, Dr. J. Manuel de la Rosa welcomed Dr. Ali Khan to the conference and cited this event as an example of the BHC’s dedication to promoting meetings that bring together public health professionals to discuss border and binational issues of common interest.

Dr. Khan defined public health preparedness and explained how public health emergencies can have high economic, political, and social costs. He discussed Hurricane Katrina and the SARS epidemic as examples of public health emergencies with great impacts nationally and globally because infectious disease know no borders, so international public health networks are necessary to respond adequately to this type of threat.

For Dr. Khan, the EWIDS program is an important global health component. EWIDS seeks to improve early epidemiological surveillance, which allows for efficient detection and reporting of infectious diseases across borders states and countries. The EWIDS program seeks to improve interoperable public health systems by funding public health provider training and increasing diagnostic laboratory capacity that facilitates identification and disease information sharing.

In México, EWIDS spent $5.4 million to help improve capacity and links between U.S. and México’s laboratories that culminated with the installation and certification of a BSL3 Lab. Unfortunately, due to the current fiscal situation in the country, EWIDS program funding has been reduced by about 50 percent but will continue to fund some cross-border activities through next summer. Dr. Khan suggested that Public Health Emergency Preparedness (PHEP) funding will be available to support cross-border activities beyond 2011. He shared with the audience a conversation he had with Congressman Reyes, who emphasized the importance of real human risks over theoretical economic risks, to illustrate that unadvised negative public health program cuts can affect people’s lives. Dr. Khan discussed challenges to cross-border surveillance and preparedness work, including difficulties aligning priorities between countries, different public health systems, legal issues, travel restrictions, language, and bureaucracies and politics.
Dr. Khan discussed the Public Health Emergency Preparedness Grant Program, which supports all states’ routine public health public threats and has identified 15 priority capabilities with an element of measurement and analysis for each capability. This program has been reduced by 12 percent but still remains a viable option for U.S. states and selected cities. Dr. Khan suggested that these funds could be applied to cross-border work.

Dr. Khan posed a series of challenging questions, including “How can we do more with less?” which he proposed should really be phrased as, “How do we do less with less?” The most urgent priorities must be identified to determine what activities can no longer be funded. Dr. Kahn identified a number of CDC’s core priorities as they relate to public health preparedness and response: setting priorities in a shared border binational environment, making efficient use of information technology to automate information sharing, linking to sustainable syndromic surveillance systems, linking or messaging between various systems, enhancing systems for sharing laboratory reagents and specimens, and training and exchanging personnel. Immediate goals include implementing the Guidelines for US-Mexico Coordination on Epidemiologic Events of Mutual Interest, making Epi-X and other information systems available at the border and binational level, and working on outbreak response systems. More important is the continued effort to identify funding sources that can strengthen binational epidemiological programs.

Dr. Khan concluded by reminding all present that the challenge is to make efficient use of diminishing resources to save lives. He quoted Goethe: “Life belongs to the living, and he who lives must be prepared for change.”

Dr. Hector Gonzalez, Director of the Laredo Health Department, stated that advances made toward the control and detection of infectious diseases along the border must continue, suggesting that further funding reduction will negatively affect vulnerable communities.

Dr. Victor Cardenas asked how to improve surveillance methods. To this question, Dr. Kahn responded that routine surveillance is the foundation for public health emergency preparedness.

Karla Alvarado from the City of El Paso’s Department of Public Health Emergency Preparedness asked Dr. Khan about how to ensure the money dedicated to public health response grants are properly spent.

Dr. Kahn responded that funds should focus on the primary tier of core activities that builds routine systems for epidemiology, laboratory surveillance, information management, and emergency operations management. Once the core activities are well established, agencies can focus on the second tier activities with concrete outcome measures. He also recognized that a degree of confusion came about during funding to respond to the past H1N1 pandemic, but that valuable lessons were learned to improve the process by which money is assigned to various emergency and preparedness activities.

Dr. Cortés asked Dr. Kahn for recommendations on how to establish public health as a core issue for the National Security Agency in México. Dr. Kahn suggested that the focus should be on monitoring and addressing public health events at the local and state levels because these have important implications for the nation’s economic, social, and political security. Strong local and state public health systems are also important in ensuring timely response. Dr. Khan recommended that México use the health seat on its National Security Agency to advocate for additional state and local public health funding.
Binational Communication and Protocols for Implementation of the Guidelines


Before reporting on the Guidelines’ present status, Dr. Cortés mentioned the importance of seeing each other as one public health community with sister cities, sister states and brother countries. As background information to the Guidelines, he recalled that many drafts of this document exist, and on occasion the two countries disagreed on some terminology, but that both countries want to use epidemiological surveillance to increase national security. The goal is to develop an equitable and egalitarian relationship and share information in a two-way manner.

Regarding the status of the Guidelines, Dr. Cortés stated that it is presently being revised by the technical and legal areas of both countries and will be soon authorized and ready for implementation. He mentioned the importance of these Guidelines to eliminate interruptions on information sharing when changes in personnel occur. He also mentioned that present cooperation such as BIDS, Binational Technical Work Group (BTWG), North American Plan for Avian and Pandemic Influenza (NAPAPI), Arizona-Sonora Comission, the Four Corners, and other initiatives have not stopped working while waiting for the Guidelines.


Dr. Banicki stated that although the Guidelines are not yet signed, the BTWG cross-cutting team has conducted meetings for the past year to discuss communication protocols.

She presented the proposed flow chart for U.S.– México Communications Pathways for Routine or Emergency Events. Dr. Banicki presented hypothetical scenarios and questions that need to be answered in each scenario such as the following: Is there a risk for both countries? Is an immediate control intervention needed? How should the notification be made? What information should be exchanged?

She concluded her presentation by listing the next steps for the implementation of the Guidelines that included the following:

- Sign the Guidelines.
- Submit U.S. Council of State and Territorial Epidemiologist position statement on binational communication pathways.
- Agree on a list of binational notifiable infectious diseases.
- Identify specific points of contact.
- Incorporate binational case fields into surveillance systems.
- Establish a uniform and efficient procedure for movement of specimens, reagents, and supplies.
- Develop a format for exchanging routine epidemiological data.

Dr. Esmeralda Iñiguez-Stevens, California Department of Public Health, “Communication Protocols for the Four-Corners (CA, Baja CA, AZ, Son) Region.”

The Four Corner Regional Epidemiology Working Group (FCREWG) was established in 2010 by public health officials from Arizona, Sonora, California, and Baja California and was created as a platform to
discuss and plan bilateral and multilateral surveillance, epidemiology, and preparedness and response related issues via a collaborative and regional approach.

The working group identified the need for enhanced binational and multijurisdictional communication and information exchange. No written communication protocol was achieved between the Four Corners. The International Health Regulations and the Guidelines for US-Mexico Coordination on Epidemiologic Events of Mutual Interest served as guidelines for developing a communications protocol for the region. Four Corner summits have been held in 2010 and 2011 to develop and test a multijurisdictional communications protocol for the region.

*Herminia Alva, Texas Department of State Health Services, Public Health Region 11, “Notifiable Disease Reporting between Texas and Tamaulipas.”*

Herminia Alva stated that the Texas-Tamaulipas Agreement includes an exchange of surveillance data for notifiable infectious diseases and binational case reporting. The Texas Surveillance Report aims to provide timely surveillance data to Tamaulipas. One of the challenges is that data entry into Texas electronic surveillance systems is not necessarily timely because investigators have 30 days to complete investigation before entering data. These reports provide a weekly epidemiological picture of the Texas-Tamaulipas border which has increased awareness of disease burden in this region. The reports also triggers implementation of the dengue response plans and can help clarify misunderstanding generated by the media.

H. Alva shared the binational case reporting flowchart which illustrated the flow of information and also discussed the proposed Binational Epidemiology Bulletin, which will provide incidence and baseline rates for selected notifiable conditions and include case definitions to aid comparability of Texas and Tamaulipas data.

*Dr. Santos Daniel Carmona Aguirre, Ministry of Health, Tamaulipas, “Tamaulipas-Texas Binational Information System.”*

Dr. Carmona described several factors that in his view justify the establishment of a binational information system for epidemiologic surveillance; the global risks shared in the border such as bioterrorism, biocrime, reemerging diseases and epidemics; and other circumstances that influence health conditions such as migration, proximity to the United States and the high concentration of population in border cities and its risk to disease transmission. These facts have led to the establishment of a binational format report, with a specific number of notifiable conditions to be exchanged periodically.

Tamaulipas and Texas worked collaboratively with the vision of identifying health risks and threats, committed to public health and with the desire to impact disease prevention and control and strengthen epidemiological surveillance and information sharing. As a result, a border binational epidemiological bulletin is now in place between Texas Region 11 and Tamaulipas, as well as an early warning report. These efforts provide a permanent information exchange and timely identification of events and emergencies.

*Paul Dulin, New Mexico Department of Health, “Report on Four-Corners (NM, Chih, AZ, Son) Initiatives in Influenza Surveillance and Coccidioidomycosis Diagnosis and Treatment.”*

P. Dulin explained that dust is a common feature of the southwestern landscape of North America. Inhaling this dust, even in small amounts like during construction work, excavation, or outdoor activities, exposes the regional population to potentially deadly *coccidioides* spores due to simple dispersion in the winds. Coccidioidomycosis (Valley Fever) is prevalent along the entire U.S.-México border.
He reported on the Four Corners’ project objectives as follows: 1) develop regional capacity to improve the diagnosis, and reporting of coccidioidomycosis in border states; 2) determine the burden of disease in the binational region of Sonora, Chihuahua, and New Mexico; and 3) forge partnership between the various federal, state, and local authorities to address the disease.

Actions thus far include training and conceptual meetings between New Mexico, Arizona, Sonora, and Chihuahua. Actions underway or to be undertaken include developing a strategic-operational plan for the project, conducting an incidence and/or prevalence study on coccidioidomycosis in the states of Sonora and Chihuahua, and extending a binational network to report coccidioidomycosis and influenza. Other important actions include raising public awareness about the risks of coccidioidomycosis and training doctors to recognize the disease.

*Dr. Francisco Javier Navarro Gálvez, Health Ministry of Sonora, “Successful Experiences with Binational Communication in Epidemiological Surveillance.”*

Arizona and Sonora have 50 years of binational activities, including the epidemiological data exchange of binational interest, state and federal epidemiological warnings, collaboration for epidemiological case investigation of binational interest, and follow-up investigations and monitoring of cases that meet the operational binational case definition.

The information exchange includes the weekly notification of 39 diseases of binational interest and follow-up and monitoring for cases and outbreaks that constitute a risk to the binational health. Sonora also has border influenza monitoring health units (USMIs, or Unidad de Salud Monitoras de Influenza). Information system activities include the online platform Medsis, a secure system for clinic and epidemiological information exchange, case notification, outbreaks, etc. Among the successful examples of binational epidemiological surveillance, Dr. Navarro discussed a binational measles outbreak investigation.

**Border and Binational Technical Work Groups**

*Dr. Steve Waterman, US-México Unit, Division of Global Migration and Quarantine DGMQ, CDC, “Update on U.S.-Mexico Binational Technical Work Group, Infectious Disease Section.”*

Dr. Waterman explained the structure of the Binational Technical Work Group, with representation from both sides of the border. He identified that while most members are federal employees, there are also representatives from state and local agencies, as well as professional associations. The purpose of the groups is to provide a structure to identify mutually agreed upon priorities and assure follow-up. The goal is to put forward sound technical proposals for binational and border collaboration with input from state to CDC and the Secretariat of Health leadership for support or consensus on using existing resources. The main Infectious Disease Section has convened four meetings or video/web conferences thus far as follows: June 21, 2010; September 23, 2010; February 7-9, 2011; and June 7-9, 2011 (as part of the BBID Conference). The cross-cutting team has been an active sub-group, and its progress on developing implementation protocols for the Guidelines has been described elsewhere in the conference. There have also been several areas of binational collaboration in food-borne issues, including training for Pulsed Field Gel Electrophoresis (PFGE) software as well as a review of cholera surveillance methodology. Dr. Waterman then turned the floor over to Dr. Eduardo Azziz-Baumgartner and Dr. Angela Hernandez of CDC to review binational collaborations in influenza and HIV/AIDS.

*Dr. Eduardo Azziz-Baumgartner, Influenza Division, CDC, “México-U.S. Influenza Disease Prevention and Control Collaborations: Focusing on the Border.”*
Dr. Azziz-Baumgartner reviewed the impact of pandemic and seasonal influenza, noting that a disproportionate impact (measured by hospitalizations and/or deaths) has been documented for some populations, including Hispanics in the United States and indigenous populations in at least four countries including the United States and Canada. He gave an overview of influenza surveillance and displayed a map showing numerous surveillance sites in border counties and municipios. Dr. Azziz-Baumgartner suggested productive future directions for influenza surveillance, intervention, and burden studies.

Dr. Angela Hernandez, Division of HIV/AIDS Prevention, CDC, “HIV Surveillance.”

Dr. Hernandez reported that the number of new HIV diagnoses along the U.S. border has been increasing in recent years. She stated that racial and ethnic minorities are disproportionately represented in the HIV epidemic and tend to die sooner than whites. CDC will soon release a report on suggestions for border states to help improve HIV surveillance and prevention interventions among migrant communities. HIV specialists from both sides of the border are collaborating on several initiatives focused on addressing treatment and prevention and establishing programs.

**Day 3**

**Infectious Diseases and Health Security**

Dr. Martha Vasquez Erlbeck, California Department of Public Health, “Lessons Learned from Binational Agroterrorism Exercise.”

Dr. Vasquez Erlbeck explained that agroterrorism can attack livestock, food supply, crops, industry, and workers. Route of transmission include animal to animal and also between animal and human. There are thousands of cattle and other livestock along the U.S.-México border, making the area at risk for agroterrorism such as the intentional introduction of foot-and-mouth disease (FMD). She also stated that the California EWIDS program has worked with other partners to host binational agroterrorism workshops in 2010 and 2011. These workshops have included training and tabletop exercises to test plans for animal disease emergencies. A third workshop is planned for 2012 to continue binational efforts to improve animal disease preparedness and response.

In response to a question from Paul Dulin, Dr. Vasquez Erlbeck stated that the exercise was only completed in Baja California and was not completely binational because they did not have contact with all of the relevant agencies. Next year, a binational exercise/study will be conducted in Mexicali. Dr. Vasquez Erlbeck also confirmed that the initiative is connected to the OneHealth initiative. The objective is to create a multidisciplinary group of epidemiologists, veterinarians, zoonosis control experts, and vector control officials to work together.

Dr. Luis Leucona of USDA mentioned the Mexico-United States Commission for the Prevention of Foot-and-Mouth Disease and suggested including discussion of foot-and-mouth disease in future workshops.

Raul Sotomayor, Division of International Health Security, Assistant Secretary for Preparedness and Response (ASPR), “International and Border Aspects of the National Health Security Strategy of the United States.”

Raul Sotomayor discussed the National Health Security Strategy (NHSS) document published in 2009, which was the first quadrennial national strategy focused on people’s health in the case of an incident with potentially negative health consequences. NHSS is required by the Pandemic and All Hazards Preparedness Act and is aligned with other guidance documents such as the Quadrennial Homeland Securi...
Security Review (QHSR) and Homeland Security Presidential Directive 21: Public Health and Medical Preparedness (HSPD-21). NHSS is a national plan, not a federal plan, and encompasses all sectors and communities. NHSS has two main goals: to build community resilience and to strengthen and sustain health and emergency response systems. The biennial implementation plan describes activities to achieve the NHSS. The Division of International Health Security’s (within the ASPR Office of Policy and Planning) goals and mission are well aligned with NHSS’ objectives. For example, one of the NHSS objectives is to work with cross-border and global partners to enhance health security.

Dr. Steve Waterman mentioned that the health security strategy establishes a number of working groups and that the agenda primarily centers on information sharing. In light of these centers, how can information be shared with México and how can both countries work toward achieving a common operating procedure during an emergency?

R. Sotomayor confirmed that there are agenda centers on information sharing, joint risk assessment, capacity building, risk communication, emergency capacity coordination, and mutual assistance. While a common operating picture is nonexistent in terms of health security at this point, there is an integration system, but it is not developed. What is known about what impacts the common biological operating picture is communicated with México and trilateral partnership through many channels. If an incident triggers an event, that information will be shared with México and coordinated actions will be taken.

Irma Hernández Monroy, InDRE, General Directorate of Epidemiology, Federal Ministry of Health, México, “Cholera in México: Beyond the 90’s Epidemic.”

Irma Hernández-Monroy described the profile of cholera surveillance in México from 1990 to the present time. Surveillance capacity has been enhanced through the robust laboratory network; all state public health laboratories can perform confirmatory analysis for cholera. The toxigenic strains of *Vibrio cholerae* O1 Inaba that are circulating now belong to the same clone that circulated during the 1990s epidemic. The toxigenic strains of *Vibrio cholerae* O1 Ogawa circulating now in México are different from the toxigenic *Vibrio cholerae* O1 Ogawa strain causing the outbreak in Haiti.

In response to a question from Dr. Steve Waterman, I. Hernandez provided more details on laboratory procedures and epidemiological investigations when type O1 cases are identified.

**Updates on Applied Infectious Disease Research**

Dr. Victor Cardenas, University of Texas School of Public Health, El Paso Regional Campus, “Occurrence, Risk Factors, Diagnosis, Eradication and Consequences of *H. pylori* Infection in the Paso del Norte Region of the U.S.-México Border.”

*Helicobacter pylori* is a relatively common infection worldwide as well as along the U.S.-México border. Dr. V. Cardenas summarized several epidemiological and clinical studies of *H. pylori* infection from both sides of the border in the Paso del Norte region.

Dr. Fátima Muñoz, University of California–San Diego and University of Xochicalco, “A binational Study of Patient-Initiated Changes to Antiretroviral Therapy Regimen among HIV-Positive Latinos Living in the U.S.-México Border Region.”

Dr. Muñoz reported that Baja California ranks second in HIV prevalence among the Mexican states, and Latinos in the southern part of San Diego, California, accounted for more than half of HIV cases. Adherence to prescribed antiretroviral therapy (ART) is essential for individual health and for reducing
HIV transmission, but little is known about adherence to ART among HIV+ Latinos in the United States. This study examined factors associated with patient-initiated changes to the ART regimen among HIV+ Latinos on both sides of the border in the San Diego–Tijuana region. Only 5 percent of study participants reported no health insurance coverage, and 93 percent reported an HIV-related health visit in the past six months. A sizeable proportion of respondents reported initiating changes to their ART regimens—40 percent indicated making small changes, and 19 percent reported initiating major changes. Persons with at least one current sex partner were significantly more likely to report making changes to their ART regimens. Future work should consider clinical indicators of adherence (as opposed to self-reported adherence) and include more Latinos with limited or no access to health care.

In response to a question about the way in which treatment adherence was measured and the risk factors for failure to adhere to treatment, Dr. Muñoz replied that the Schneider scale was used to measure adherence. At present the exact reasons why patients initiate changes to treatment are not known, but the issue will be addressed in future studies. Focus groups suggest that major reasons include difficulties in transportation to clinics as well as reluctance to keep taking time off work to attend appointments.

Dr. Maria Elena Ruiz from UCLA asked why the patients were crossing the border. Dr. Muñoz responded that the three major reasons were to buy medications (not necessarily HIV medicines), to seek medical care and to fulfill work obligations.


Dr. Flores provided an overview of zoonotic diseases, including their potential economic impact. He then reviewed data for specific zoonotic conditions in Tamaulipas, including brucellosis, rabies, and leptospirosis. Dr. Flores also mentioned binational initiatives related to wildlife diseases in Tamaulipas and Nuevo León.

Dr. Cortés commented on the relevance of animal health to human health concerns. He outlined new collaborative projects in animal-human interactions and ecosystems to develop epidemiological information needed for preventive work. Dr. Andres Velasco commented on the concept of OneHealth and its application to rabies prevention.

**Breakout Groups Discussion on Border and Binational Initiatives**

The breakout groups were divided into two sessions with four groups per session. During the first breakout session, participants were divided into disease specific groups: 1) TB, HIV, STD, hepatitis; 2) food security and public health (including food-borne and diarrheal diseases); 3) acute respiratory diseases including pandemic influenza; and 4) emerging infectious threats (including vector-borne diseases). These topics were also the basis for the breakout groups during the 2010 BBID conference. The purpose of including these topics again was to review the actions and next steps from 2010 in addition to identifying how surveillance data is currently being shared, what actions can be taken to improve the exchange of surveillance information, and identifying how to improve cooperation on disease control measures related to binational cases and outbreaks.

Each disease specific breakout group was provided matrices completed by each breakout group during the 2010 BBID Conference as a reference and starting point for discussion. These matrices include information to assist in identifying current resources, partners, pending issues, and priorities in various areas of infectious disease such as surveillance, laboratory, information exchange, education, health promotion, and legal issues.
During the second breakout session, participants were divided into groups based on the following themes: 1) binational communication and the implementation of the Guidelines; 2) laboratory integration with surveillance systems; 3) health security; and 4) migrant health. These themes were identified by the technical organizing committee as emerging and relevant issues based on feedback and discussion from the 2010 BBID Conference. The discussion for these groups focused on identifying the most promising future directions for binational collaboration and identifying areas not being addressed.

Work groups were asked to consider the following issues/initiatives: 1) TB, HIV, STD, hepatitis; 2) food security and public health (including food-borne and diarrheal diseases); 3) acute respiratory diseases including pandemic influenza; 4) emerging infectious threats (including vector-borne diseases); 5) binational communication and the implementation of the Guidelines; 6) laboratory integration with surveillance systems; 7) health security; and 8) migrant health. Each conference attendee had the option to choose to participate in one disease-specific group and one thematic group.

Brief summaries of the findings of each group are provided below.

**Disease Breakout Groups**

**TB, HIV, STD, Hepatitis**

Dr. Miguel Escobedo reviewed the 2010 matrix and presented the main findings. He reported that no formal surveillance system is in place to share information and follow patients with HIV. While current communication and data sharing for TB is working well, creating similar formal protocols for HIV and hepatitis may be more challenging. However, it is important to notify the appropriate jurisdiction in advance so staff can prepare for appropriate treatment upon patient arrival.

Dr. Escobedo also provided an overview of the group activity plan for 2011-2012. The group is planning to form small workgroups and subgroups to follow-up on sharing HIV and hepatitis data and to coordinate better with other agency work groups.

**Respiratory Diseases**

Irma López Martínez reviewed existing influenza surveillance projects. She noted that the North American Plan for Avian and Pandemic Influenza (NAPAPI) should be reviewed and revised with conference calls held every other month to accomplish this review. The cross-border transport of specimens was also mentioned as a continuing concern. The group also suggested promising directions for future work, such as studying influenza vaccine coverage along the border.

**Food Security**

Sonia Montiel reported several updates from the 2010 matrix, and reviewed three main issues: data-sharing procedures, ways to improve cooperation and communications, and disease control measures. The group suggested strengthening the communication between regulatory services and epidemiology and conducting joint binational trainings. The group also recommended developing border enteric surveillance and testing (BEST) programs and protocols for rapid communication of potential binational cases.

**Emerging Infectious Threats**

Orion McCotter noted several points of follow-up on from the 2010 matrix. The group reviewed updates on rabies, dengue, and rickettsia. Informal information exchange methods are currently most common, though more formal mechanisms are being developed. To improve information exchange, the group...
agreed that a system of consistent binational case definitions is needed and that federal partners should sign agreements to formalize and recognize binational/border reporting.

The work group plans to communicate regularly and conduct face-to-face meetings when possible, and team members will share information about both successful and unsuccessful control efforts. The group also recommended developing standardized protocols for specimen and reagent transfer between countries with a binational report discussed as another future goal.

**Thematic Breakout**

**Binational Communication**

Dr. Fátima Sánchez reported on the current status of binational collaboration, including formal methods pertaining to specific projects like BIDS and EWIDS as well as informal collaboration such as local agreements. The group discussed key areas that need to be addressed, such as working with regulatory and customs agencies to facilitate the transfer of specimens, reagents, and medicines across borders. The group recommended approval of the Guidelines. Future planned activities for the cross-cutting team of the BTWG include refining a list of binationally notifiable conditions and variables to be shared as well as conducting a pilot test of a protocol to implement the Guidelines.

**Laboratory Integration with Surveillance Systems**

Dr. Liz Hunsperger discussed the current status of binational collaboration. She identified potential future directions for binational collaboration include building on existing platforms like TB and influenza; formalizing a method for participation of U.S. and México LRN labs in border lab testing and outbreak investigations; and facilitating methods to sequence pathogens for molecular epidemiology purposes.

Several key areas were identified that require additional attention. A major area of discussion included the movement of specimens and reagents. Since each region contains its own process, a formal process between both countries would be beneficial. The group activity plan for 2011-2012 includes actions to build capacity, incorporate laboratory subject matter experts into technical work groups, and engage other resources such as the private sector or academia for data or lab support.

**Health Security**

Raul Sotomayor discussed several examples from the federal, state, and local levels on the current status of collaboration. Future directions include approving and implementing the Guidelines and engaging other agencies outside of the public health sector such as the FBI, and Customs and Border Protection CBP. Specific activities include formalizing protocols for the transportation of specimens, medicines, and reagents across borders. The Juarez/El Paso transporting mechanism was used as an example for expanding a similar process border wide. Other areas that need to be addressed include funding and mutual aid protocols.

**Migrant Health**

Joanna J. Nichols discussed examples of current collaborations from the public and private sectors. Key areas that need to be addressed include HIV surveillance for migrants along the border, deportation of migrants without health information or records, surveillance gaps for migrants, and “dumping” of migrants at U.S. hospitals. Future directions include exploring existing data on migrants from surveys such as the Encuesta sobre Migración en la Frontera Norte de México (EMIF NORTE) and standardizing migration-related variables collected in various surveillance systems. The Ventanillas de Salud could also be expanded to offer more comprehensive health services to migrants. Government
health agencies could also partner with faith-based organizations and nongovernmental organizations to address migrant health concerns.

**Action Items**

Dr. Waterman and Dr. Cortés identified five major issues that emerged from the breakout groups. These concerns were expressed by multiple groups, suggesting priority areas to address in the coming year:

1. **Binational communication**—a need exists to improve binational communication. Even without a formal signing of the *Guidelines*, conceptual support from both countries is still evident. As a result, implementation protocols are being developed even before the *Guidelines* are signed; however, the intention is to sign the *Guidelines* by end of the year.

2. **Cross-border transport of specimens, reagents, and medical countermeasures**—Dr. Waterman discussed a recent pilot in which specimens were transported between San Diego and Tijuana. Valuable lessons were learned, but more coordination with Homeland Security and other agencies must take place. More attention is also needed in considering both directions of transport (United States to México, and México to the United States). The BHC and other organizations can help keep political decision makers aware of this important issue so that Homeland Security and other partners will make it a priority.

3. **Binational reports**—Dr. Waterman stressed that even though significant efforts have been made to share surveillance data between states, more binational reports are needed on specific topics. Local and federal levels need to work together more effectively and harmoniously to produce reports that can help illustrate topics and geographic areas of concern, which may also help agency leaders argue for resources.

4. **Electronic systems for sharing information**—Another common issue is making better use of electronic technology. The Arizona-Sonora model is a good one to follow, and steps to replicate it could be developed. The Epi-X system is also a good useful, confidential, and secure way to share information, which can be helpful to organize forums for various interstate and binational or trinational groups.

5. **Training and capacity building**—Continuing efforts are needed to improve training and capacity building for the public health workforce in both countries.

Conference participants were invited to share their experiences and concerns related to the continuing activities of the workgroups.

P. Dulin emphasized the importance to ensure the *Guidelines* are officially approved and signed. Dr. Cortés reiterated the intention of Dr. Lopez-Gatell to sign the *Guidelines* before the end of 2011, a point earlier made by Dr. Waterman with regard to the intentions of the U.S. federal government.

Dr. Alfonso Rodriguez-Lainz suggested each group prioritize action items, identify concrete work products, determine the responsible parties, and establish time lines for activities. Dr. Miguel Angel Reyes of Tamaulipas agreed with the points made by Dr. Rodriguez and also mentioned the need to identify funding sources and learn from best practices in other areas.

Dr. José Ramirez of Nuevo León asked how can locals collaborate or use agreements and protocols if these are not supported by some higher level administrators. Dr. Ramirez stated that public health workers want to collaborate, but the secretaries of health are not always informed about binational issues or aware of the *Guidelines* and other procedures and policies to encourage binational communication and collaboration. Dr. Ramirez also discussed how since conferences are usually viewed mainly as a place to
network with colleagues, learn new information, and exchange ideas; it may be difficult to assign responsible parties and complete action items in a conference setting.

Dr. Cortés responded that the BHC is the ideal way to communicate advances in the Guidelines and other events of border interest to the secretaries of health and others. The BHC also has a seat on the Mexican National Health Council, which provides an additional venue to inform public health leaders of progress on the Guidelines and other updates. Dr. Fátima Sánchez Espejo also mentioned that a meeting was planned to inform Mexican public health headers on the latest protocols for binational communication.

Responding to the earlier comments by Dr. Ramirez, Dr. Irma Ortiz mentioned that each border state has an office of border health with the responsibility of reporting to state public health officials on each of the BHC activities.

Herminia Alva, from DSHS Region 11 in Texas, mentioned that she is working with Mexico’s state of Nuevo León to establish an information exchange consistent with the Guidelines and that future meetings have already been scheduled. She also asked about federal policy for sharing information about binational cases of HIV infection. H. Alva referenced a recent binational case for which they were told that internal CDC policy prohibited sharing case information with other countries.

Dr. Miguel Escobedo responded that HIV is not currently an internationally notifiable disease according to CDC guidelines, but the need to share case information exists for treatment purposes. The TB/HIV/hepatitis group recommended forming a small work group to develop guidelines and procedures to exchange HIV patient information in a secure and confidential manner.

Dr. Daniel Carmona of Tamaulipas commented on the need for border state and local public health officials to be apprised of advances on the Guidelines, since they are the persons who will be working within the Guidelines.

Dr. Karen Ferran of California asked how each work group can eliminate duplication since there are several common themes, such as transporting specimens across the border. She also expressed concern about disseminating information from the meeting and ensuring follow up on activities. Last year Dr. Ferran volunteered for a group that agreed to meet, but never did meet.

Dr. Cortés confirmed the need for groups to designate who will be responsible for follow up. Dr. Allison Banicki suggested that a cross-cutting team is already established to address common themes, and if the workload is too much for the cross-cutting team, another interdisciplinary group could be formed to address issues such as cross-border transportation of items.

Dr. Steve Waterman said that cross-border transportation could be addressed either by the cross-cutting team or by the laboratory workgroup. With regard to follow up, he mentioned the existing BTWG and called for better communication and coordination regarding local, state, and federal efforts. In order to better inform state secretaries of health and state epidemiologists, Dr. Waterman suggested better utilizing the internet and conducting special webinars to address the proposed protocols for binational case reporting.
SUMMARY OF PRIORITY ISSUES, OBJECTIVES, AND RECOMMENDATIONS

Summary of Priority Issues and Objectives

Dr. Banicki provided a meeting summary that including themes, best practices, and highlights from breakout groups. Among the meeting themes, she mentioned funding cuts and implementation of the Guidelines. Another major point was the need to cultivate more partners and expand beyond public health agencies to academia, NGOs, faith-based organizations, and others. Lightning talks and posters described best practices. Breakout groups included discussion on communication channels, approval of the Guidelines, the technology use, the import/export challenges, and migrant concerns.

Summary of Recommendations and Next Steps

During the 2011 BBID Conference, panels, presentations, posters, and group discussions focused on key issues of border and binational concern. The following recommendations emerged from the meeting:

- Work towards formal approval of the Guidelines for US-Mexico Coordination on Epidemiologic Events of Mutual Interest. Protocols are already being developed for implementation, but formal approval will aid the implementation process.
- Encourage sustained funding to support binational collaboration in surveillance and epidemiology of infectious diseases. In light of funding reductions, ensure that the most essential work is being conducted to maintain core surveillance and epidemiology capacity. It may be possible to build on existing work—for example, by adjusting existing surveillance systems to collect better data on binational cases and share information more effectively across borders. Binational reports could be created using data that already exist or that are routinely collected.
- Improve electronic systems for sharing information. Technology offers the promise of fast, lower-cost, and secure ways to share and manage health information. Model systems are available but have not been implemented in all areas.
- Work towards resolving continuing issues with the transportation of specimens, reagents, medicines, and medical or laboratory supplies across borders. Various parties should be involved in this effort, including regulatory agencies and customs enforcement as well as public health agencies.

Throughout the rest of 2011-2012, it is anticipated that the work groups will continue to review issues of binational concern. The products of these work groups will be reported and further elaborated at the Third Annual U.S.-México Border Binational Infectious Disease Conference in 2012.
Closing Remarks

Dr. Dutton thanked and recognized all Texas OBH staff, including the Texas EWIDS workers, and the BHC staff. He also thanked the individuals who worked behind the scenes with Dr. Banicki on the program and with Kathie Martinez and Dr. Elisa Aguilar on logistics.

Dr. Zorrilla thanked all participants representing the three levels of the health care sector: federal, state, and local, including representatives from the legislative sector. She joined Dr. Banicki in recognizing the presenters. She assured that with the help and leadership of Dr. Cortés, the binational Guidelines will be fully implemented soon.

D. Reyna congratulated Dr. Dutton, Dr. Elisa Aquilar, Dr. Allison Banicki, and Dr. Maria Teresa Zorrilla for putting together this conference. He then read some excerpts of a chapter2 of the book The Impacts of NAFTA on North America. Challenges outside the Box, edited by Imtiaz Hussain and published in 2010, before making his own comments. One of the authors of the chapter he quoted, Tim Lynch, had personally contacted the BHC office to let them know he had written about the BHC as a model for the implementation of binational international health regulation. The following chapter sections were quoted:

Viruses and bacteria do not recognize political borders that economic instruments like NAFTA perpetuate. Furthermore, such instruments tend to obliterate the intra and inter culture disparities that prevail among partners of such agreements. Under these government agreements, the economies of public health care, tends to be treated more in terms of cost than in the interest of promoting global health. […] The BHC is the classic international government organization […] with an emphasis on local matters, but interaction with universal international concerns […] The Commission, in collaboration with affiliated U.S. and Mexican federal and state health agencies, serves as a platform for innovative practices in public health among states on both sides of the border […] The existence of such an infrastructure that deals with infectious disease issues across such a complex international border provides a valuable resource for contributing to public health organization and management between countries around the world.

D. Reyna also quoted the following appropriate to the border region:

Cross-border communication at the ground level is critical in the fight against communicable diseases. Guidance is needed at the local, state and national levels on both sides of any international border in how to identify unusual presenting symptoms with related histories that may be potential pandemic influenza, followed by the reporting of such observations to regional public health authorities […] The critical part in this chain of events is the establishment of communication protocols between frontline clinical workers […] This relationship [between those workers and public health authorities] has to be a cooperative effort involving a two-way communication process. Early warning by public health authorities should sensitize frontline […] workers to be on the lookout for specific symptoms and related patient histories. The reporting of such observations has to be supported by a collaborative team process.

D. Reyna concluded by stating that public health workers need to understand two important ideas: first that this is a small world and second, that the economy is central to all activity.

In conclusion, D. Reyna reminded participants of the binational cooperation present along the border that can provide assistance. He stated that the BHC is also a platform for action and for using and developing

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infrastructure as well as strong and sustainable local and cross-border communication. However, the following are still needed: Guidelines; clear border and binational protocols; and a clear and transparent collaborative process to arrive at the needed measurable results that can validate mutual effort and capture the resources needed.

D. Reyna concluded by stating the following: “Things don’t just happen. They are made to happen and they are happening because of everyone present and their perseverance in continuing with this discussion.”

After D. Reyna’s remarks, the BHC’s Tenth Anniversary commemorative coins were presented to selected conference participants.
APPENDICES

Appendix A: Participant Directory
Appendix B: Presentations
Appendix C: Meeting Agenda
Appendix D: List of Posters Presented
Appendix E: Lightning Talk Summaries
Appendix F: Breakout Groups and their Participants
Appendix G: Summary Slides from the Breakout Groups