



United States–México Border Health Commission

**Binational Collaboration and Infectious Disease Surveillance
along the U.S.-México Border**

A White Paper

April 4, 2011



United States – México Border Health Commission

The mission of the United States-México Border Health Commission is to provide international leadership to optimize health and quality of life along the United States - México border.

Providing Leadership on Border Health Issues to—

Facilitate Identification, Study, and Research

Be a Catalyst to Raise Awareness

Promote Sustainable Partnerships for Action

Serve as an Information Portal



Background

The purpose of this white paper is to review some of the challenges and advances made toward binational collaboration in infectious disease surveillance along the U.S.-México border region to inform local, state, and federal public health officials in their efforts to improve binational and cross-border collaboration. This paper also presents a number of cross-cutting issues produced by the work groups formed before and during the initial U.S.-México Binational Infectious Disease Conference, sponsored by U.S.-México Border Health Commission (BHC), in San Antonio, Texas, held on June 28-30, 2010, and reviews the need to support the implementation of the proposed *Guidelines for US-Mexico Coordination on Epidemiologic Events of Mutual Interest*.

The U.S.-México Border Region

The U.S.-México border is approximately 2,000 miles long and includes four U.S. states (Arizona, California, New Mexico, and Texas) and six Mexican states (Baja California, Sonora, Chihuahua, Coahuila, Nuevo León, and Tamaulipas). The border region extends from the international boundary 62 miles (100 kilometers) north and south into the territory of each country. An estimated 15 million people live in the region, with border residents comprising 2.4 percent of the U.S. population and 6.9 percent of México's population.¹

The border region has a highly mobile population that includes 26 ports of entry between México and the United States.² Several conditions that may affect the transmission of infectious diseases or efforts to control them are prominent in the U.S.-México border region, including poverty and high levels of migration.³

Rates of some infectious diseases are notably higher in the border region as well. In 2007 the rate of tuberculosis in U.S. border counties was 9.8 cases per 100,000, well above the national rate of 4.4 per 100,000.^{4,5} México's national level of tuberculosis was 16.4 cases per 100,000 in 2007, compared to 28.3 per 100,000 in the northern border region of México.⁶

Infectious Diseases

The World Health Organization defines infectious diseases as those “caused by pathogenic microorganisms, such as bacteria, viruses, parasites or fungi; the diseases can be spread, directly or indirectly, from one person to another. Zoonotic diseases are infectious diseases of animals that can cause disease when transmitted to humans.”⁷ Examples of infectious diseases under surveillance that cause outbreaks in the U.S.-México border region include influenza, dengue fever, salmonellosis, tuberculosis, and HIV.

Infectious disease surveillance, outbreak investigations, and interventions in binational cases require timely and effective collaboration across borders by public health professionals in epidemiology, laboratories, and health care. Infectious disease events also require the involvement of public health agencies and policymakers at the local, state, and national levels. Border health, particularly in the case of pandemics or potential bioterrorism, can profoundly impact social, economic, and national security.

History of Binational Collaboration in Infectious Diseases

Active U.S.-México collaboration in public health dates back to at least 1936. A list of major initiatives impacting the border region and both countries follows:⁸

- | | |
|----------------------|--|
| 1936: | U.S. Representative R. Ewing Thomason proposes a bill for a U.S.-México border public health district. |
| 1943-present: | The Pan American Health Organization (PAHO) supports border infectious disease activities. |



1942-2010:	The U.S.-Mexico Border Health Association (USMBHA) supports border infectious disease activities.
1991-present:	The earliest binational tuberculosis projects are established.
1997-present:	The Border Infectious Disease Surveillance (BIDS) program is established.
2003-present:	The Early Warning Infectious Disease Surveillance (EWIDS) program is established.
2005:	The U.S.-México Border Health and Infectious Disease Conference is held in El Paso, Texas.
2007:	The Security and Prosperity Partnership of North America (SPP) Trilateral Workshop on EWIDS is held in El Paso, Texas.
2008:	The U.S.-México Binational Infectious Disease Epidemiology and Laboratory Surveillance Meeting is held in El Paso, Texas.
2010:	The U.S.-México Binational Infectious Disease Conference, sponsored by the BHC, is held in San Antonio, Texas.

As indicated by the above events and activities, improved communication and collaboration among binational and cross-border governmental entities and organizations is essential for effective infectious disease surveillance and response systems.

Another step toward improving communication and collaboration among binational and cross-border government entities and organizations included initial discussions around the *Guidelines for US-Mexico Coordination on Epidemiologic Events of Mutual Interest (Guidelines for short)*, which occurred in 1981 by the U.S.-Mexico Binational Commission, and provided a framework for working groups in multiple sectors, including health. The Binational Commission's Health Working Group focused on immunizations, aging, migrant health, substance abuse and tobacco, women's health, and epidemiologic surveillance.

In 2001, México proposed a new work group for epidemiologic surveillance. The Binational Commission Core Group on Epidemiologic Surveillance first met in 2002 and decided to proceed with a set of guidelines for how the Centers for Disease Control and Prevention (CDC) of the U.S. Department of Health and Human Services (HHS) and the Secretaría de Salud (Health Ministry of México) should collaborate on epidemiologic events of mutual interest. Participants from the U.S. side included CDC, the Food and Drug Administration (FDA), border states, and the Council of State and Territorial Epidemiologists (CSTE). Participants on the México side included the Dirección General de Epidemiología (General Directorate of Epidemiology [DGE]), Comisión Federal para la Protección contra Riesgos Sanitarios (Federal Commission for the Protection against Sanitary Risk [COFEPRIS]), and border states.

An updated version of the *Guidelines* was completed in late 2006. Some of the general principles include the following:

- need to share information
- timely sharing and quality of information
- joint action to respond
- respect for sovereignty and national laws

While the *Guidelines* are not proposed to be legally binding, they offer a framework and scope for collaboration on epidemiologic events, specifically in terms of border and binational cases, outbreaks, potential bioterrorist events, laboratory-related issues, and public health communications.



The *Guidelines* take into account the legal requirements of both nations and the need for information exchange at the federal, state, and local levels. The U.S.-México Binational Technical Work Group, formed to provide federal leadership and promote public health collaboration between the United States and México, has taken on the task of developing binational protocols to implement the *Guidelines*. This group, including federal and state members from the United States and México, first met in June 2010. These protocols will facilitate inter-agency information sharing, identification of binational cases, binational investigations, emergency communications, laboratory collaborations, and the coordination of information release to the public.

HHS approved a draft of the *Guidelines* in the summer of 2010, and an updated version is currently undergoing review by both countries. It is anticipated that formal approval by both countries will occur in the near future.

Advances in Cross-Border and Binational Collaboration

Programs such as the Border Infectious Disease Surveillance (BIDS) and Early Warning Infectious Disease Surveillance (EWIDS) have resulted in great advances in cross-border and binational collaboration on infectious diseases. The goal of the BIDS program is to establish a binational surveillance system and network for infectious diseases, fill knowledge gaps on unknown and emerging diseases, and exchange surveillance and epidemiological data, among other related objectives. BIDS accomplishments include enhanced surveillance, improved laboratory and epidemiology infrastructure in the border region, improved cross-border communication, early detection of outbreaks, and the development of the first binational web-based surveillance system. As part of BIDS, CDC has also provided training to lab personnel in México dating back to 1999.

The EWIDS initiative was proposed by the U.S.-México Border Health Commission (BHC) in 2003 and established in 2004 utilizing discretionary funding provided by the HHS Assistant Secretary for Preparedness and Response (ASPR) and administered through CDC. ASPR has provided funding to the four U.S. border states and México to support intrastate, interstate, and binational capacity for active infectious disease surveillance, laboratory testing, and preparedness and response.

Numerous infectious disease surveillance and preparedness and response exercises, laboratory testing and trainings, and real-life response activities have been carried out in the U.S.-México border region. Activities occur at the regional and state levels and in binational settings involving U.S. and México federal health authorities as well as academic and private sector partners. EWIDS investments in México have provided information technology, laboratory equipment, and training that will support the implementation of the Early Warning System for the Sistema Nacional de Vigilancia Epidemiología (National Epidemiological Surveillance System [SINAVE]), to be launched first in México's six northern border states.

Between federal fiscal years 2003 and 2010, the four U.S. southern border states received over \$29 million in funding to implement cross-border activities. EWIDS support has built a foundation for a coordinated binational system for infectious disease epidemiology, surveillance, improved laboratory analyses, notifiable disease reporting, and collaborative health emergency response in the U.S.-México border region. For more information on EWIDS, refer to the BHC's EWIDS project white paper, *U.S. Border States Early Warning Infectious Disease Surveillance Project*, available on the BHC website at www.borderhealth.org.

Cross-Cutting Issues in Binational Health Collaboration

The 2010 U.S.-México Binational Infectious Disease Conference provided an opportunity for border health professionals to revisit priorities and bring new post-H1N1 pandemic perspectives to these challenges and to identify solutions. Experts gathered in interest-specific work groups: (1) tuberculosis, HIV and other sexually transmitted diseases, and hepatitis; (2) foodborne illnesses; (3) acute respiratory diseases; and (4) emerging



diseases, including vector-borne diseases. Each group considered its existing programs and next steps toward improving cross-border collaboration in their field and, as a result, a number of cross-cutting issues were identified:

- ***Binational Technical Work Group*** should establish ongoing subcommittees organized around specific disease categories to continue the work started at the binational meetings in 2008 (El Paso) and 2010 (San Antonio). These work groups would seek solutions and implement actions to improve binational and border collaboration.
- ***Protocols*** are needed to clarify and improve processes for binational cases (case definitions) and outbreak investigations. Communication protocols for local to local, state to state, and federal to federal cross-border exchange of information are also needed to implement the general principles identified in the *Guidelines*.
- ***Communication*** should be more effective and timely in binational cases. One solution may be to develop diagrams of communication pathways. Additional information technology and interfaces for health information systems need to be developed.
- ***Training*** in both epidemiology and laboratory techniques related to existing and emerging infectious diseases is an ongoing need.
- ***Surveillance*** can be improved with innovative strategies. Existing surveillance networks and sites should be evaluated to determine whether additional surveillance efforts are needed in border communities or other areas of high cross-border mobility. Laboratories need to build surge capacity in preparedness for pandemics.
- ***Barriers*** in legal systems and import/export of biologic specimens, reagents, medicines, and medical or laboratory supplies need to be resolved through sharing information and, in some cases, making new policies.
- ***Resources and funding*** need to be utilized effectively and expanded to build infrastructure. In addition to surveillance data, binational counterparts can share resources such as bilingual and bicultural health promotion materials.

The disease-specific work groups formed during the 2010 U.S.-México Binational Infectious Disease Conference, or other work groups which may be formed by the BHC in conjunction with the border states, will ensure appropriate follow-up on the proposed programs and priorities as well as implementing action items such as developing the necessary protocols that will serve to improve cross-border and binational communication and coordination.

These findings are intended to guide the established work groups in implementing the proposed *Guidelines for US-Mexico Coordination on Epidemiologic Events of Mutual Interest*. The work groups, whether binational or border/binational, are expected to report on their progress at the 2011 U.S.-México Border Binational Infectious Disease Conference and further advance those specific plans that will benefit improved communication and coordination of all critical border/binational infectious disease events.



¹ U.S. Census Bureau. (n.d.) *Population Estimates Vintage 2009*. Retrieved February 2, 2011 from <http://www.census.gov/popest/counties/counties.html>.

Instituto Nacional de Estadística y Geografía. (2011). *Censo de Población y Vivienda 2010*. Retrieved February 2, 2011 from <http://www.inegi.org.mx/sistemas/TabuladosBasicos/preliminares2010.aspx>.

There were 7,449,024 residents of the 44 U.S. border counties and 7,709,765 residents of the 80 México border municipios, using the border counties and municipios as defined by the U.S.-México Border Health Commission. The national populations were 307,006,550 for the USA (50 states plus the District of Columbia) and 112,322,757 for México (32 federal entities).

² U.S. Customs and Border Protection. (2008). *List of 8 CFR Vessel and Land Ports for Alien Entry and 8 CFR Ports of Entry for Aliens Arriving by Aircraft*. Retrieved February 1, 2011 from <http://www.cbp.gov/xp/cgov/toolbox/ports/>.

³ United States-México Border Health Commission. (2010). *Border Lives: Health Status in the United States-México border region*. El Paso, TX: United States-México Border Health Commission. Retrieved from http://www.borderhealth.org/files/res_1534.pdf.

⁴ Centers for Disease Control and Prevention. (2008). *Reported Tuberculosis in the United States, 2007*. Atlanta, GA: U.S. Department of Health and Human Services, CDC. Retrieved from <http://www.cdc.gov/tb/statistics/reports/2007/default.htm>.

⁵ Texas Department of State Health Services. (2010). *Infectious Disease Control Unit-Tuberculosis Statistics*. Retrieved from <http://www.dshs.state.tx.us/idcu/disease/tb/statistics/default.asp>.
New Mexico Department of Health. (n.d.) *New Mexico Health Data*. Retrieved from http://nmhealth.org/ERD/HealthData/tb_data.shtml.

Arizona Department of Health Services, Bureau of Epidemiology and Disease Control, Office of Infectious Disease Services. (2009). *Tuberculosis Surveillance Report Arizona 2007*. Phoenix, AZ: Arizona Department of Health Services. Retrieved from http://www.azdhs.gov/phs/oids/tuberculosis/pdf/2007_Tuberculosis_Surveillance_Report.pdf.

California Department of Public Health. (2010). *Tuberculosis Disease Data*. Retrieved from <http://www.cdph.ca.gov/data/statistics/Pages/TuberculosisDiseaseData.aspx>.

⁶ United States-México Border Health Commission. (2010). *Frontera Saludable 2010. Reporte de Medio Plazo. Frontera Norte de México*. Tijuana, México: United States-México Border Health Commission. Retrieved from http://www.borderhealth.org/files/res_1637.pdf.

⁷ World Health Organization. (2011). *Infectious Diseases*. Retrieved from http://www.who.int/topics/infectious_diseases/en/.

⁸ Opening remarks by R.J. Dutton, Director, Office of Border Health, Texas Department of State Health Services, at the U.S.-México Binational Infectious Disease Conference. San Antonio, TX. June 28, 2010.

The United States–México Border Health Commission

Providing Leadership on Border Health Issues to –

Facilitate Identification, Study, and Research

Be a Catalyst to Raise Awareness

Promote Sustainable Partnerships for Action



For additional information please visit our website at www.borderhealth.org.

United States–México Border Health Commission

211 N. Florence, Suite 101
El Paso, TX 79901
Tel: (915) 532-1006
Fax: (915) 532-1697
Toll Free (866) 785-9867
www.borderhealth.org

Comisión de Salud Fronteriza México-Estados Unidos

Avenida Durango No. 247, 4^o piso
Col. Roma Norte, Delegación Cuauhtémoc
C.P. 06700 México, D.F.
Tel./Fax (01152-55) 3611-0765
www.saludfronteriza.org.mx