

Association of State and Territorial Health Officials

# Global Infectious Disease

Impact on State and Territorial Health

2013

2231 Crystal Drive, Arlington, VA 22202





## ASTHO Global Health Meeting July 31, 2013, Washington, DC

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The Association of State and Territorial Health Officials (ASTHO) Infectious Disease Policy Committee convened ASTHO's first-ever meeting on global health on July 31, 2013. Growing migration, coupled with global climate change, have expanded the variety, range, and incidence of infectious diseases in the United States at a time of rising healthcare costs and shrinking state and local budgets. This meeting was convened to:

- Provide up-to-date information on migration trends and their impact on infectious disease issues at the state level.
- Identify opportunities for increased collaboration and coordination between states and CDC and other key federal agencies on global infectious disease issues—with a focus on communication systems.
- Identify useful tools for state, territorial and freely associated state health officials (S/THOs) in global infectious disease issues—what they need to know, how they can access the information they need, who they can call for different scenarios, and so forth.

Representatives from state health departments, the Centers for Disease Control, State Department, academia, and relevant national associations participated in the discussions.

For additional information, visit ASTHO's Infectious Disease webpage at <http://www.astho.org/Programs/Infectious-Disease/>. This paper summarizes the discussion and ensuring recommendations from this in-person meeting, in three sections:

- Actions that S/THOs, state and territorial health agencies, and ASTHO can take.
- Immigration, travel pattern, and related disease trends.
- Available resources of value to state and territorial health agencies.

### **The Impact of Global Health on U.S. States and Territories**

- Medical and social concerns transcend national borders, which has increasingly affected the workload of state and territorial and freely associated state health leaders in recent years.
- All states have refugee populations, which often have unique needs and sometimes rare diseases tied to their country of origin.
- Primary quarantine and isolation authority rests with state health officials.
- Sixty percent of new tuberculosis (TB) cases, including 85 percent of multi-drug-resistant (MDR) cases, in the United States occur in foreign-born patients.
- International travel facilitated the spread of public health threats such as the 2003 SARS epidemic and the 2009 H1N1 influenza pandemic.
- Public health's responsibilities vis-à-vis global health includes surveillance, education of providers and the public about infectious disease threats, and quarantine.
- An explosion of demographic, epidemiological, and other data presents opportunities, but the volume can be challenging for SHOs and state and territorial health agencies to identify what items are most relevant.
- S/THOs are expected to "be first, be right, and be credible" in the event of an imported disease outbreak.

### **Suggested Strategies**

- Identify areas that need increased coordination and communication among local, state, federal, and international partners (i.e., quarantine roles and responsibilities).
- Increase understanding of the World Health Organization's International Health Regulations.
- Develop standard operating procedures/protocols for contacting appropriate federal and international authorities about infectious disease cases.
- Strengthen relationships with the CDC Quarantine Station with jurisdiction for that particular state or territory.
- Conduct tabletop exercises on quarantine issues.
- Maintain and enhance public health surveillance systems, including sentinel systems.
- Seek innovative ways to take advantage of alternative mechanisms for surveillance, such as Google and social media.
- Look for opportunities to increase partners' awareness of global health, including:

- Engaging local medical schools to increase awareness about global health’s impact on U.S. public health, including presentations at grand rounds.
- Publishing commentaries in a respected peer-reviewed publication like the *New England Journal of Medicine*.
- Expanding awareness of immigrant populations’ health risks, including communication with diaspora community organizations.

### **Suggested Next Steps: ASTHO**

- Hold quarterly calls with CDC on threat assessments and other issues.
- Conduct an assessment of SHO and state and territorial health agency needs vis-à-vis global health and determine whether data on global disease trends and impacts are already available or if more data need to be generated.
- Work with CDC Division of Global Migration and Quarantine (DGMQ) and partners such as the Council of State and Territorial Epidemiologists to develop educational resources for SHOs and state and territorial health agencies (e.g., 15 minute video talk about the quarantine system by CDC DGMQ Director Martin Cetron, MD; infectious disease quarantine primer).
- Continue to send letters to SHOs and state and territorial health agencies summarizing DGMQ resources/tools (this was last done in 2010).
- Provide resources for new SHO orientation to explain existing surveillance systems.
- Include global health as part of ASTHO’s ongoing education of state policymakers.
- Create and share best practices across states and territories for screening international students and visitors.
- Collect state and territorial-specific global health-focused stories to be included in ASTHO’s Have You Shared initiative.
- Increase awareness of CDC Communicable Disease Response Plans.
- Develop a plan or policy that outlines how patients with TB are handled and coordinated with CDC, the Department of Homeland Security, and the state or territory in question.
- Explore the feasibility of developing a “reverse Yellow Book” (CDC Health Information for International Travel) about conditions in countries of origin.
- Work with CDC to explore how to include automatically generated travel health information when travelers book flights or apply for visas.

# Immigration and Travel Patterns

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International travel and relocation have increased significantly in recent decades and encompass many different kinds of movement. Many types of relocated people may be found in any given state or territory:

- Immigrants (defined as individuals who have been living outside their country of birth for more than a year).
- Migrant workers.
- Internally displaced persons.
- Refugees.
- International students.
- Trafficked persons.
- Temporary travelers.

This mobility represents an opportunity for health interventions. Formal processing of immigrants, refugees, and parolees involves screening for inadmissible health conditions. Reaching migrants who arrive by informal means is more problematic.

Each year, more than 35 million temporary visitors arrive in the United States, and about 60 million Americans travel abroad. More than half of all international travelers to developing countries become ill during their trip, and approximately 8 percent seek medical care for a travel-associated illness either during or after travel.

## Refugee Health

Refugees—who are resettled in virtually every state—are the most vulnerable at-risk population entering the United States due to limited access to food, vaccination, and health services prior to coming to the United States. Many also suffer from mental health problems, often associated with traumatic experiences prior to their displacement. Crowding and poor sanitation in refugee camps contribute to outbreaks of polio, measles, and cholera. CDC and its partners have increased treatment for tuberculosis, malaria, and parasitic infections prior to entry into the United States, improving health and saving money.

## Infectious Disease Trends

The infectious disease landscape is constantly changing, as recent outbreaks—including Middle East Respiratory Syndrome as well as H7N9 influenza in China—demonstrate. Cases of vector-borne diseases like West Nile virus and dengue are on the rise in the United States and are difficult to predict and

control. Importation of vectors into the United States has become more frequent due to the expansion of the global merchandise trade. Rising temperatures (2012 was the warmest year on record) mean that vectors are better able to survive winter and extend their geographic range. Other factors include rapid evolution of viruses, migration to new species, population growth, urbanization, and the elimination of state and local vector control programs in recent years because they were thought to be unnecessary due to ebbs and flows of outbreaks. After West Nile virus was first detected in the United States in 1999, CDC established ArboNET, a national surveillance system for arthropod-borne (arboviral) diseases. It depends on state and local data and is not intended to be source of real-time information to guide near-term policy decisions, such as whether to spend funds on spraying.

## **Tuberculosis**

Sixty percent of new TB cases, including 85 percent of MDR cases, in the United States occur in foreign-born patients. Treating drug-resistant TB is medically and often legally complicated and expensive. One case of MDR or extensively drug resistant (XDR) TB can significantly impact a state's annual operating budget for TB, as has happened in situations ranging from misdiagnosed international students to an adopted child in Mississippi, refugees in Wisconsin, and an asylum-seeker in Texas. No federal appropriation exists for CDC to support long-term isolation, such as in XDR-TB cases. Blurred lines of authority have led to disputes about whether federal or state governments are responsible for covering these high costs.

CDC is implementing new technical instructions for panel physicians who perform immigration medical examinations overseas as of Oct. 1, 2013, requiring TB screening for intending immigrants, refugees, and asylees starting at age two and mandating the use of molecular culture testing to replace sputum smear microscopy. The goal is to treat, not exclude, by detecting more new infections and treating to cure before immigration, as well as to screen and treat class B patients (non-infectious TB patients at risk of relapse and recurrence).

## **Travel and Quarantine**

Primary quarantine and isolation authority rests with state health officials. Federal authority to quarantine or isolate is limited to nine specific diseases and preventing the importation or interstate spread of communicable disease. CDC personnel at the 20 U.S. Quarantine Stations are responsible for responding to reports of illnesses at U.S. ports of entry, screening cargo, inspecting animals and animal products, and monitoring the health of and collecting medical information from new immigrants, refugees, and parolees who have either a class A or a class B condition. SHOs and state and territorial health agencies may not be aware of the full range of resources and how the federal "Do Not Board" (DNB) process functions. (See the Resources section below for fact sheets.) To request that a person be placed on the public health DNB list, state or local public health officials should contact the CDC Quarantine Station with jurisdiction over their state or municipality. Primary care providers make requests by contacting their state or local public health agencies, and foreign and U.S. government agencies contact the CDC Emergency Operations Center (EOC).

## Data and Surveillance

Public health officials are expected to “be first, be right, and be credible” in the event of an imported disease outbreak. However, data usually come less quickly than needed to take well-informed actions. SHOs and state and territorial health agencies may not be aware of all the information available to them. Alternative data sources such as Google Flu Trends are intriguing, but they may not match all public health data and cannot yet be relied on completely. Budget cuts have left public health agencies without enough trained data entry staff, and data-sharing laws sometimes impede information transfer.

## Border Health

Four U.S. states border Mexico and thirteen U.S. states border Canada. U.S. federal health officials communicate regularly with counterparts in Mexico and Canada through global health security and public health mechanisms and liaisons. Binational management of mobile TB patients and H1N1 communication are infectious disease priorities for the U.S.-Mexico Border Health Commission (USMBHC). Chronic conditions like diabetes are also high on the USMBHC agenda. Health discussions with Canadian officials tend to focus on emergency preparedness although infectious disease notifications and outbreaks issues are also under discussion.

# Resources

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## **Bio-Mosaic Project: Mapping Demographic and Infectious Disease Trends**

Forty million current U.S. residents (12.5 percent of the population) were born outside the United States in 105 different countries—a record number. Country of origin is more predictive of health than race or ethnicity, and an important new tool has been developed to harness that and other programmatically relevant information. The CDC’s Bio-Mosaic Project maps the demographic, migration and health data of foreign-born populations in the United States and assesses the risk of international spread of infectious diseases. It is expected to launch in 2014. Training videos and other materials will help orient end users. The Bio-Mosaic map of 3,000 U.S. counties will be able to depict age, income, education, speakers of languages other than English, country of origin, and where entrants live now. It will be able to zoom in on any state in detail. For example, it will be able to show the percentage of Canadian-born residents in Washington state, the concentration of Somali refugees in a county in Maine, or where Burmese refugees can be found all over the United States.



CDC Division of Global Migration and Quarantine (DGMQ): <http://www.cdc.gov/nceqid/dgmg/>

CDC Information for Travelers: <http://wwwnc.cdc.gov/travel/>

International Health Regulations: <http://www.who.int/ihr/en/>

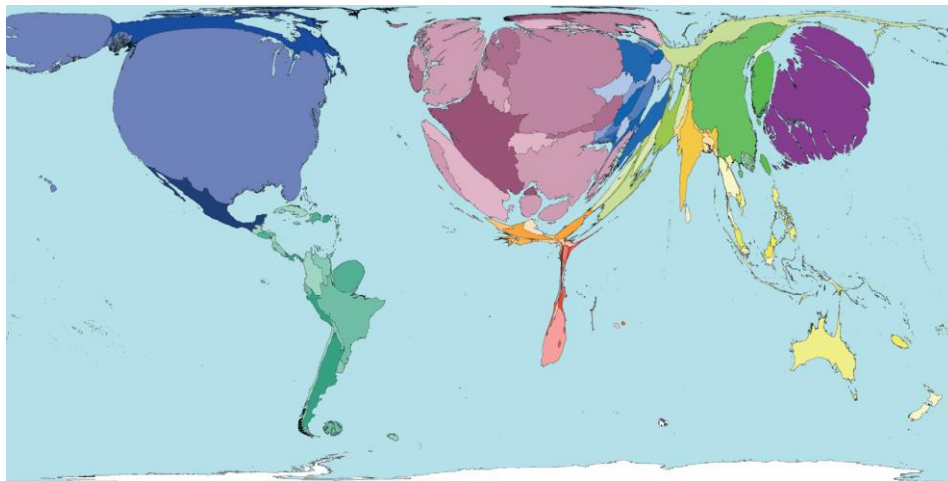
United States-Mexico Border Health Commission: <http://www.borderhealth.org>

GeoSentinel: GeoSentinel is a worldwide communication and data collection network for the surveillance of travel-related morbidity. <http://www.istm.org/geosentinel/main.html>

MMWR report, *Surveillance for Travel-Related Disease—GeoSentinel Surveillance System, United States, 1997–2011*: [http://www.cdc.gov/mmwr/preview/mmwrhtml/ss6203a1.htm?s\\_cid=ss6203a1\\_w](http://www.cdc.gov/mmwr/preview/mmwrhtml/ss6203a1.htm?s_cid=ss6203a1_w)

Refugee Health Profiles: CDC is working with international agencies to develop health profiles of refugees resettling in the United States to help inform resettlement agencies, clinicians, and public health providers in receiving states. The Bhutanese profile, the first to be released, can be found at <http://www.cdc.gov/immigrantrefugeehealth/profiles/bhutanese/index.html>. Profiles are being prepared for Iraqi, Burmese, and Congolese refugees. The health profile includes specific information about refugees' health conditions and medical screening prior to travel to the United States.

Worldmapper: Worldmapper creates cartograms that depict thematic variables, including health indicators: <http://www.worldmapper.org/>. For example, a public health spending map is below:



Global Burden of Disease Study: The University of Washington's Global Burden of Disease Study provides new estimates measuring the impact of hundreds of diseases, injuries, and risk factors in 21 regions around the world over two decades: <http://globalhealth.washington.edu/project/4237>

Pew Research Center Hispanic Trends Project's report, *A Nation of Immigrants*: <http://www.pewhispanic.org/2013/01/29/a-nation-of-immigrants/>

New Binational Variable: A binational variable was passed by the Council of State and Territorial Epidemiologists for addition to the National Notifiable Diseases Surveillance System to facilitate

binational case identification and sharing of actionable information with Mexico and Canada as well as determining the magnitude of binational cases:

<http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/PS/13-SI-02.pdf>

Binational Communication Pathway Pilot: A binational communication pathway pilot project is being conducted by CDC DGMQ, southern U.S. border states, and Sonora, Mexico, to share data on selected communicable diseases: <http://www.cdc.gov/ncezid/dgmg/feature-stories/mexico-us-connects.html>

American Community Survey: Instead of collecting decennial census data every 10 years via the long-form U.S. census questionnaire, detailed socioeconomic information is now collected by the U.S. Census Bureau on an ongoing basis in the American Community Survey. This data can be applied to the public health arena. The Census Bureau hopes to release a mobile version of this data on iTunes this year, as well as a more complex version on a web platform:

[http://www.census.gov/history/www/programs/demographic/american\\_community\\_survey.html](http://www.census.gov/history/www/programs/demographic/american_community_survey.html)

*The Age of Migration: International Population Movements in the Modern World*, by Stephen Castles and Mark J. Miller, PhD:

[http://books.google.com/books/about/The\\_Age\\_of\\_Migration.html?id=P5O8QgAACAAJ](http://books.google.com/books/about/The_Age_of_Migration.html?id=P5O8QgAACAAJ)