

Quarantine

1. Information about program area:

The CSTE fellowship will be based in Minneapolis-St Paul (MSP), MN at the Centers for Disease Control and Prevention (CDC) Minneapolis Quarantine Station (QS) located at the MSP International Airport and at the Minnesota Department of Health (MDH) in the Immunization, Tuberculosis, and International Health (ITIH) Section located in downtown St Paul. The Minneapolis QS (Mpls QS) is one of 18 QSs in the Quarantine and Border Health Services Branch (QBHSB) within the Division of Global Migration and Quarantine (DGMQ) in the National Center for Infectious Diseases. MDH, a highly respected and progressive state health department, has one of the best immunizations programs in the country, and is widely recognized as a public health leader in many areas. The fellow will gain a well-rounded field epidemiology experience by the unique setting of the CDC Mpls QS along with the conventional public health environment of the MDH ITIH Section.

The mission of the QBHSB is to protect the health of the public from communicable diseases through science, partnerships, and response at U.S. ports. Primary roles and responsibilities of the QSs include illness surveillance, response, and communicable disease prevention activities at the ports of entry, including airports, marine ports and land border crossings. QSs monitor health documents of immigrant and refugees entering the US for conditions that would lead to notification of local health departments in the resettlement community, and monitor shipments of certain animals, biologic agents and cargo of public health interest. QSs also participate in planning for community emergency public health and bioterrorism responses that cross jurisdictions, and in exercises to ensure community preparedness. QS staff work closely with several key partners, including state and local health departments, Customs and Border Protections (CBP) and other federal agencies, such as U.S. Fish and Wild Life Service and U.S. Department of Agriculture, port authorities, and airline and cruise industries.

The MDH ITIH Section has primary responsibility for the immunization program, surveillance for vaccine-preventable disease, surveillance and case management of tuberculosis (TB), medical screening and follow-up of refugee and asylee arrivals to MN, and follow-up on immigrants with Class A or B conditions.

2. CSTE Fellow's s anticipated day-to-day activities:

As the lead for DGMQ's aviation illness investigation team (AIIT), the CDC Mpls Quarantine Medical Officer (QMO) and primary fellow mentor serves as a national consultant and subject matter expert on issues related to communicable illness and air travel, develops related policies, procedures, surveillance activities and research, and works closely with other staff within QBHSB and DGMQ, public health authorities (state, national, international) and the airline industry. The primary focus for the fellow at the QS will be to participate in all aspects of communicable illness investigations involving air travel, including development and revision of policies, procedures and research protocols. The fellow will also participate in and become familiar with the routine QS activities including responding to reports of illness on inbound flights,

monitoring medical information on refugees, immigrants and asylees, inspecting animals and animals and human products that pose a threat to human health, and participating in public health preparedness activities at the airport and in the community.

At MDH the fellow will participate in activities involving the immunization program, surveillance and reporting for vaccine-preventable diseases and TB, contact tracing, TB case management, and refugee and immigrant health. The fellow will also participate in outbreak investigations and interesting infectious disease situations regarding new refugee arrivals - recent examples have involved measles in Eastleigh, Kenya and polio at the Dadaab camp in Kenya.

3. Examples of potential projects that demonstrate opportunities for data analysis, outbreak field investigations, and opportunities to work on interdisciplinary teams:

- Identify gaps and weaknesses in the current system DGMQ's uses to communicate with state health departments about illness contacts on flights and their outcomes and provide recommendations for improvement (will require working with other QS and health department staff nationwide and CSTE).
- Develop and implement research protocols for specific illnesses and air travel (e.g., varicella)
- Assess potential infrastructure for implementing more widespread QuantiFERON-TB testing in MN and provide recommendations
- Conduct a population-based evaluation of the completeness of TB reporting in MN
- Participate in disease outbreak investigations with MDH

4. Program or surveillance system evaluation component:

- Evaluate data collected regarding notification and outcomes of persons exposed to illnesses during air travel using DGMQ's quarantine activity reporting system (QARS) and make recommendations for improving data collection and quality. Analyze data to learn more about transmission of specific illnesses during air travel and provide recommendations for changes in current CDC disease-specific protocols.
- Evaluate long term outcomes for HIV+ refugee arrivals in MN and make recommendations based on the evaluation.
- Evaluate MDH's latent TB infection (LTBI) medications program- such as who is served, therapy completion rates, barriers for completion, potential for increasing insurance reimbursement, and ways to streamline or better target its use.

5. Role of fellow in State Emergency Preparedness plan

- Work with MDH to complete their section (isolation and quarantine for large numbers of passengers/crew) of the MSP Airport Communicable Disease Response Plan and participate in table top exercises that will include a large multi-disciplinary group at the airport and from the community.
- Work with MDH Pandemic Influenza coordinator on non-pharmaceutical interventions (NPI) aspects of their Pandemic Influenza Plan, and participate in exercises.

Assignment Location: St. Paul, MN

CDC Minneapolis Quarantine Station

Primary Mentor: Karen Joy Marienau, MD, MPH
Lieutenant Commander
US Public Health Service (USPHS)
CDC Minneapolis Quarantine Station

Degrees: MD, University of Minnesota (1993)
MPH, University of Washington (2000)

Secondary Mentor: Kristen R. Ehresmann, BSN, MPH
Section Chief
Immunization, Tuberculosis and International Health Section
Minnesota Department of Health

Degrees: BSN, St. Olaf College (1984)
MPH, University of Minnesota (1990)