State of Alaska Epidemiology Bulletin

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Infections Associated with International Travel in Alaska Residents

Background

From 2000 to 2009, United States residents made, on average, over 61 million international visits each year, and more than 50 million of these were to developing regions of the world.[1,2] Health problems are reported by 22%–64% of travelers visiting developing countries, and approximately 8% of these persons become sick enough to seek health care annually.[2] Examples of travel-associated diseases that have been recently reported to the Alaska Section of Epidemiology (SOE) include brucellosis, cholera, dengue fever, legionellosis, Lyme disease, malaria, and zika virus infection.

The purpose of this *Bulletin* is to raise awareness about travel-associated infectious disease threats through the presentation of several recent travel-associated infections and the provision of some travelers' health reminders.

Infection Reports

Dengue Fever

In January 2013, SOE was notified of two cases of suspected dengue fever in unrelated Alaskan residents. Both persons were born in the Dominican Republic (DR) and had traveled to the DR during December 2012 and January 2013. Symptoms experienced by one or both of the patients included abdominal pain, fever, headache, maculopapular rash, muscle aches, and vomiting. SOE coordinated submission of serum specimens to the U.S. Centers for Disease Control and Prevention (CDC), where dengue was confirmed. One person was hospitalized, and both survived.

Hepatitis A

In Alaska, the transmission of hepatitis A virus (HAV) has been nearly eliminated through routine childhood vaccination efforts; as such, most recent cases have been associated with international travel. Eight confirmed cases of hepatitis A were reported to SOE during 2010–2012. Of those, four were infected while travelling internationally, and three were contacts to travelers who had not traveled themselves. The source of infection in the eighth patient was not determined. At least two patients were hospitalized, and none died.

Malaria

Seventeen confirmed cases of malaria were reported to SOE during 2010–2012. Of these, 7 (41%) were caused by *Plasmodium falciparum*, 6 (35%) by *P. vivax*, and 3 (18%) by undetermined *Plasmodium* species. Travel destinations were reported by 14 of the patients; they included Africa (9, 64%), Afghanistan (4, 29%) and South East Asia (1, 7%). Military service was the most commonly reported reason for travel. Prophylaxis status was known for six (35%) of the patients; of these, two did not take any prophylaxis, three took some prophylaxis but missed doses, and one reported taking all prophylaxis doses. Hospitalization information was known for nine (53%) of the patients; of these, three were hospitalized. One case was fatal.

Travel Reminders

1. *The incidence of travel-associated infections is higher in travelers visiting friends and relatives compared to other international travelers*. Many factors contribute to this, including lack of awareness, longer trips, infrequent pre-travel health consultations, and the misconception (by either providers or travelers) that travelers visiting friends and relatives have acquired immunity to illnesses endemic in their home country.[2] Additional pre-travel guidance for these travelers is available in *The Yellow Book*, an excellent CDC resource that provides health information on international travel.[2]

2. *Travelers should be advised to take precautions to prevent infectious diseases.*

- Schedule an appointment to see a health care provider 4–6 weeks before travelling.
- Get the appropriate travel vaccines. Examples of travel-associated vaccines that might be indicated in addition to the routinely recommended vaccines in the United States include rabies, typhoid, and yellow fever vaccines.
- Use insect repellent, cover exposed skin, avoid high-risk areas, and take malaria prophylaxis (if indicated) to reduce the chances of contracting vector-borne diseases.
- Avoid foodborne illnesses by only consuming safe foods and beverages.[2,3]
- Additional precautions can be found in *The Yellow Book*.[2]

3. *Infected travelers can, upon returning home, infect non-travelers.* In 2010, an Alaska resident traveled to North Africa, developed hepatitis A shortly after returning to Alaska, and was the source of a hepatitis A outbreak involving at least three contacts in Alaska.[4]

4. *Considerations for laboratory testing.*

- Testing for HAV, *Brucella* spp., malaria, and *Vibrio cholera* is available in-state at the Alaska State Public Health Laboratories (see the Laboratory Services Manual: http://dhss.alaska.gov/dph/Labs/Documents/publications/Lab_Svcs_Manual.pdf).
- Commercial laboratories can process samples for many other travel-associated diseases.
- SOE can assist with coordinating the referral of specimens to CDC for specialized testing of less common diseases such as dengue.

5. *Extended travel histories may be useful.* Some travel-associated illnesses have long incubation periods or nonspecific clinical signs. In 2005, a case of brucellosis in a 16-year-old female was diagnosed and reported to SOE. The patient obtained the infection in the DR almost 1 year prior to symptom onset.

Recommendations

1. Health care providers should refer to *The Yellow Book* and CDC's *Traveler's Health* online resources for pre-travel consultations, including vaccine recommendations and malaria prophylaxis.[2,3]
2. Providers should refer patients who need yellow fever vaccine to clinics authorized by CDC to offer the vaccine. A list of such clinics is available at: http://wwwnc.cdc.gov/travel/yellow-fever-vaccination-clinics/state/alaska.htm
3. Providers should familiarize themselves with Alaska's reportable infectious diseases list (available at: http://www.epi.alaska.gov/pubs/conditions/default.stm), and promptly report all notifiable infectious diseases and unusual clusters of illness to SOE via fax at 907-561-4239 or telephone at 907-269-8000.

References

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