

Health Advisory

Arrival of People Displaced by Recent Hurricanes into Philadelphia and Potential for Importation of Communicable Diseases

November 1, 2017

Recent hurricanes affecting Puerto Rico and other island communities in the Caribbean have led to severe prolonged disruption of infrastructure and electricity increasing the risk of several infectious diseases. People from this part of the world have been gradually resettling to Philadelphia over recent weeks and more may arrive in the coming months. The Philadelphia Department of Public Health (PDPH) Division of Disease Control is issuing this Health Advisory to raise awareness among clinical providers for the potential for importation of rare, tropical diseases and other enteric and waterborne conditions due to loss of electricity and flood waters.

SUMMARY POINTS

- People from Puerto Rico and other locales recently affected by hurricanes are arriving in Philadelphia
- Tropical and other communicable diseases may be imported into Philadelphia
- Clinicians should always ask about recent travel when taking a patient's history
- Clinicians should become familiar with infectious diseases occurring in these locations to expedite diagnosis, treatment and reporting to PDPH

Diseases of Heightened Concern:

Natural disasters like Hurricanes Irma and Maria that result in extensive flooding and prolonged power outages, disrupt sewage treatment and access to clean drinking water, and cause food spoilage increasing the risk of gastroenteritis due to microorganisms. Diseases can include **leptospirosis, hepatitis A, typhoid and paratyphoid fever, and vibriosis**. Other, more typical pathogens should also be suspected and tested for based on clinical presentation and exposure histories (salmonella, shigella, *E. coli*, etc.). Diseases transmitted by mosquitos can also increase following prolonged periods of standing water. These include **dengue, zika and chikungunya**, viruses that are all endemic in Puerto Rico. Other presentations of illnesses associated with disasters and relocation of people through crowded shelters or transportation hubs include **tetanus, pertussis and influenza**, all of which can be prevented through vaccination. Clinicians treating patients from a disaster affected area should increase their understanding of these risks and management strategies.

Specific Recommendations for Clinicians:

- Become familiar with infectious diseases endemic to Puerto Rico and conditions caused by infrastructure disruption and flooding (listed above and in the table on page 2 of this advisory)
- Take a travel history for all patients especially those who present with fever, rash, GI or severe respiratory illness to identify recent exposure to a disaster affected area
- Order appropriate diagnostic tests and follow treatment and disease control recommendations
- Report suspect and confirmed diseases to PDPH promptly
- Review immunization histories for all new patients and work to provide appropriate vaccines as soon as possible

Clinicians are encouraged to call the PDPH Division of Disease Control to report suspect cases, coordinate clinical specimen testing or for additional consultation to manage suspect and confirmed communicable diseases. Call during business hours (8:30 – 5:00) at 215-685-6740. Report urgent cases after hours by calling 215-686-4514 and ask for the Division of Disease Control person on call. Additional information for these diseases can be found from the CDC at: <https://emergency.cdc.gov/han/HAN00408.asp>

INFECTIOUS DISEASES OF CONCERN FOR PEOPLE DISPLACED BY RECENT HURRICANES

Disease	Mode of Transmission	Clinical Syndrome	Incubation Period	Diagnostic Samples	Diagnostic Test	Infection Control Precautions	Treatment	Comments
Chikungunya	Mosquito-borne	Fever, joint pain (multiple joints), headache, muscle pain, joint swelling, rash	3-7 days; Range 1-12 days	Serum	Serology; RT-PCR Also test for Zika & dengue	Standard	Supportive	Avoid mosquito bites during first week of symptoms
Dengue	Mosquito-borne	Fever, joint pain/swelling, headache, muscle pain, rash, bleeding from nose & gums Dengue hemorrhagic syndrome: shock, respiratory distress, severe bleeding, organ failure	3-14 days	Serum	Serology; RT-PCR Also test for Zika & chikungunya	Standard	Supportive	Avoid mosquito bites during first week of symptoms
Hepatitis A	Person-to-person by the fecal-oral route	Jaundice, fever, fatigue, gastrointestinal symptoms, dark urine, elevated LFTs	28 days; Range 15-50 days	Serum	Serology (IgM only)	Standard Contact precautions if patient is diapered (gloves, gown)	Supportive	PDPH will coordinate post-exposure prophylaxis (PEP) for household & sexual contacts* Hepatitis A IG (<1 & >60 yrs) Hepatitis A vaccine (1-59 yrs)
Leptospirosis	Ingestion of/contact with contaminated soil, vegetation, water, urine, fluids, or tissues of infected animals	Influenza-like illness, vomiting, diarrhea, jaundice, rash, conjunctivitis Complications: renal failure, hemorrhage, hepatomegaly, meningitis, pulmonary hemorrhage, respiratory distress	5-14 days; Range 2-30 days	Serum; blood; CSF; urine	Microscopic Agglutination Test (MAT); PCR; culture	Standard Disinfection of articles soiled with urine	Antibiotics (Doxycycline or Penicillin G)	PDPH can assist with laboratory testing*
Typhoid & Paratyphoid Fever	Foodborne; water-borne; sexual contact	Fever, headache, malaise	1-10 days; Range 3-60+ days	Blood; urine; feces	Culture	Standard	Supportive; antibiotics	Verify family, household, & nursing contacts
Vibriosis	Foodborne; water-borne	Watery stools, vomiting, nausea, abdominal pain, cramping, fever, wound infection	2-3 days; Range of a few hours-5 days	Stool	Culture	Standard	Supportive; antibiotics for severe cases	
Zika	Mosquito-borne; sexual contact; in utero; blood transfusions	Fever, rash, joint pain, conjunctivitis, muscle pain	3-12 days	Serum; urine; wound culture	PCR; IgM Also test for dengue & chikungunya	Standard	Supportive	Discuss prevention of sexual transmission (condom use) Reporting required for pregnant women Avoid mosquito bites during first week of symptoms

*Contact the Philadelphia Department of Public Health (PDPH) Division of Disease Control (DDC) at 215-685-6748 (215-685-4514 if after hours) to report suspected cases, access diagnostic testing, or obtain more information.

For disease-specific resources, review the CDC Health Alert Network (HAN) Advisory: <https://emergency.cdc.gov/han/han00408.asp>

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