

This is an official
CDC Health Advisory

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Advice for Health Care Providers Treating Patients in or Recently Returned from Hurricane-Affected Areas, Including Puerto Rico and the US Virgin Islands

Summary

The Centers for Disease Control and Prevention (CDC) is working with federal, state, territorial, and local agencies and global health partners in response to recent hurricanes. CDC is aware of media reports and anecdotal accounts of various infectious diseases in hurricane-affected areas, including Puerto Rico and the US Virgin Islands (USVI). Because of compromised drinking water and decreased access to safe water, food, and shelter, the conditions for outbreaks of infectious diseases exist.

The purpose of this HAN advisory is to remind clinicians assessing patients currently in or recently returned from hurricane-affected areas to be vigilant in looking for certain infectious diseases, including leptospirosis, dengue, hepatitis A, typhoid fever, vibriosis, and influenza.

Background

Hurricanes Irma and Maria made landfall in Puerto Rico and USVI in September 2017, causing widespread flooding and devastation. Natural hazards associated with the storms continue to affect many areas. Infectious disease outbreaks of diarrheal and respiratory illnesses can occur when access to safe water and sewage systems are disrupted and personal hygiene is difficult to maintain. Additionally, vector borne diseases can occur due to increased mosquito breeding in standing water; both Puerto Rico and USVI are at risk for outbreaks of dengue, Zika, and chikungunya.

Health care providers and public health practitioners should be aware that post-hurricane environmental conditions may pose an increased risk for the spread of infectious diseases among patients in or recently returned from hurricane-affected areas; including leptospirosis, dengue, hepatitis A, typhoid fever, vibriosis, and

influenza. The period of heightened risk may last through March 2018, based on current predictions of full restoration of power and safe water systems in Puerto Rico and USVI.

In addition, providers in health care facilities that have experienced water damage or contaminated water systems should be aware of the potential for increased risk of infections in those facilities due to invasive fungi, nontuberculous *Mycobacterium* species, Legionella species, and other Gram-negative bacteria associated with water (e.g., *Pseudomonas*), especially among critically ill or immunocompromised patients.

Cholera has not occurred in Puerto Rico or USVI in many decades and is not expected to occur post-hurricane.

Recommendations

These recommendations apply to healthcare providers treating patients in Puerto Rico and USVI, as well as those treating patients in the continental US who recently traveled in hurricane-affected areas (e.g., within the past 4 weeks), during the period of September 2017 – March 2018.

- Health care providers and public health practitioners in hurricane-affected areas should look for community and healthcare-associated infectious diseases.
- Health care providers in the continental US are encouraged to ask patients about recent travel (e.g., within the past 4 weeks) to hurricane-affected areas.
- All healthcare providers should consider less common infectious disease etiologies in patients presenting with evidence of acute respiratory illness, gastroenteritis, renal or hepatic failure, wound infection, or other febrile illness. Some particularly important infectious diseases to consider include leptospirosis, dengue, hepatitis A, typhoid fever, vibriosis, and influenza.
- In the context of limited laboratory resources in hurricane-affected areas, health care providers should contact their local health department if you need assistance with ordering specific diagnostic tests.
- For certain conditions, such as leptospirosis, empiric therapy should be considered pending results of diagnostic tests— treatment for leptospirosis is most effective when initiated early in the disease process. Providers can contact the local health department or CDC for consultation.
- Local health care providers are strongly encouraged to report patients for whom there is a high level of suspicion for leptospirosis, dengue, hepatitis A, typhoid, and vibriosis to your local health department, while awaiting laboratory confirmation.
- Confirmed cases of leptospirosis, dengue, hepatitis A, typhoid fever, and vibriosis are **urgently** reportable in South Carolina within 24 hours by phone to your local

health department to facilitate public health investigation and, as appropriate, mitigate the risk of local transmission.

Resources for Additional Information

- General health information about hurricanes and other tropical storms: <https://www.cdc.gov/disasters/hurricanes/index.html>
- Information about Hurricane Maria: https://www.cdc.gov/disasters/hurricanes/hurricane_maria.html
- Information for Travelers:
 - Travel notice for Hurricanes Irma and Maria in the Caribbean: <https://wwwnc.cdc.gov/travel/notices/alert/hurricane-irma-in-the-caribbean>
 - Health advice for travelers to Puerto Rico: https://wwwnc.cdc.gov/travel/destinations/traveler/none/puerto-rico?s_cid=ncezid-dgmqtravel-single-001
 - Health advice for travelers to the U.S. Virgin Islands: https://wwwnc.cdc.gov/travel/destinations/traveler/none/usvirgin-islands?s_cid=ncezid-dgmqtravel-leftnav-traveler
 - Resources from CDC Health Information for International Travel 2018 (the Yellow Book):
 - Humanitarian Aid Workers: <https://wwwnc.cdc.gov/travel/yellowbook/2018/advising-travelers-with-specific-needs/humanitarian-aid-workers>
- Post-travel Evaluation: <https://wwwnc.cdc.gov/travel/yellowbook/2018/post-travel-evaluation/general-approach-to-the-returned-traveler>
- Information about infectious diseases after a disaster: <https://www.cdc.gov/disasters/disease/infectious.html>
 - Dengue: <https://www.cdc.gov/dengue/index.html>
 - Hepatitis A: <https://www.cdc.gov/hepatitis/HAV/index.htm>
 - Leptospirosis: <https://www.cdc.gov/leptospirosis/>
 - Typhoid fever: <https://www.cdc.gov/typhoid-fever/index.html>
 - Vibriosis: <https://www.cdc.gov/vibrio/index.html>
- Information about other infectious diseases of concern:
 - Conjunctivitis: <https://www.cdc.gov/conjunctivitis/>

- Influenza: <https://www.cdc.gov/flu/index.htm>
- Scabies: <https://www.cdc.gov/parasites/scabies/index.html>
- Tetanus and wound management:
<https://www.cdc.gov/disasters/emergwoundhcp.html>
 - Tetanus in Areas Affected by a Hurricane: Guidelines for Clinicians
<https://emergency.cdc.gov/coca/cocanow/2017/2017sept12.asp>

The Centers for Disease Control and Prevention (CDC) protects people's health and safety by preventing and controlling diseases and injuries; enhances health decisions by providing credible information on critical health issues; and promotes healthy living through strong partnerships with local, national, and international organizations.

DHEC contact information for reportable diseases and reporting requirements

Reporting of **Urgently reportable conditions** is consistent with South Carolina Law requiring the reporting of diseases and conditions to your state or local public health department. (State Law # 44-29-10 and Regulation # 61-20) as per the DHEC 2017 List of Reportable Conditions available at: <http://www.scdhec.gov/Library/CR-009025.pdf>

Federal HIPAA legislation allows disclosure of protected health information, without consent of the individual, to public health authorities to collect and receive such information for the purpose of preventing or controlling disease. (HIPAA 45 CFR §164.512).

Regional Public Health Offices – 2017

Mail or call reports to the Epidemiology Office in each Public Health Region

MAIL TO:

<p style="text-align: center;">Lowcountry</p> <p>4050 Bridge View Drive, Suite 600 N. Charleston, SC 29405 Fax: (843) 953-0051</p>	<p style="text-align: center;">Midlands</p> <p>2000 Hampton Street Columbia, SC 29204 Fax: (803) 576-2993</p>	<p style="text-align: center;">Pee Dee</p> <p>145 E. Cheves Street Florence, SC 29506 Fax: (843) 661-4859</p>	<p style="text-align: center;">Upstate</p> <p>200 University Ridge Greenville, SC 29602 Fax: (864) 282-4373</p>
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CALL TO:

<p style="text-align: center;">Lowcountry</p> <p>Berkeley, Charleston, Dorchester Phone: (843) 953-0043 Nights/Weekends: (843) 441-1091</p> <p>Beaufort, Colleton, Hampton, Jasper Phone: (843) 322-2453 Nights/Weekends: (843) 441-1091</p> <p>Allendale, Bamberg, Calhoun, Orangeburg Phone: (803) 268-5833 Nights/Weekends: (843) 441-1091</p>	<p style="text-align: center;">Midlands</p> <p>Kershaw, Lexington, Newberry, Richland Phone: (803) 576-2749 Nights/Weekends: (888) 801-1046</p> <p>Chester, Fairfield, Lancaster, York Phone: (803) 286-9948 Nights/Weekends: (888) 801-1046</p> <p>Aiken, Barnwell, Edgefield, Saluda Phone: (803) 642-1618 Nights/Weekends: (888) 801-1046</p>	<p style="text-align: center;">Pee Dee</p> <p>Chesterfield, Darlington, Dillon, Florence, Marlboro, Marion Phone: (843) 661-4830 Nights/Weekends: (843) 915-8845</p> <p>Clarendon, Lee, Sumter Phone: (803) 773-5511 Nights/Weekends: (843) 915-8845</p> <p>Georgetown, Horry, Williamsburg Phone: (843) 915-8804 Nights/Weekends: (843) 915-8845</p>	<p style="text-align: center;">Upstate</p> <p>Anderson, Oconee Phone: (864) 260-5581 Nights/Weekends: (866) 298-4442</p> <p>Abbeville, Greenwood, McCormick Phone: (864) 260-5581 Nights/Weekends: (866) 298-4442</p> <p>Cherokee, Greenville, Laurens, Pickens, Spartanburg, Union Phone: (864) 372-3133 Nights/Weekends: (866) 298-4442</p>
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For information on reportable conditions, see
[http://www.scdhec.gov/Health/FHPF/ReportDiseasesAdverse
Events/ReportableConditionsInSC/](http://www.scdhec.gov/Health/FHPF/ReportDiseasesAdverseEvents/ReportableConditionsInSC/)

DHEC Bureau of Disease Control
Division of Acute Disease Epidemiology
2100 Bull St • Columbia, SC 29201
Phone: (803) 898-0861 • Fax: (803) 898-0897
Nights / Weekends: 1-888-847-0902

Categories of Health Alert messages:

Health Alert	Conveys the highest level of importance; warrants immediate action or attention.
Health Advisory	Provides important information for a specific incident or situation; may not require immediate action.
Health Update	Provides updated information regarding an incident or situation; unlikely to require immediate action.
Info Service	Provides general information that is not necessarily considered to be of an emergent nature.