



STATE OF HAWAII
DEPARTMENT OF HEALTH
KA 'OIHANA OLAKINO
P. O. BOX 3378
HONOLULU, HI 96801-3378

In reply, please refer to:
File:

March 27, 2026

MEDICAL ADVISORY: POTENTIAL HEALTH IMPACTS FROM MARCH 2026 KONA LOWS STORMS AND FLOODING

In March 2026, two Kona Low storm systems impacted communities across the State with severe winds, historic rainfall, and major flooding that have the potential to significantly impact the health of the people in these communities.

Providers should:

- **Be prepared** to address the broad health risks including injury, infectious diseases, exacerbations of chronic diseases, and illness due to chemical and environmental hazards including molds, as well as the substantial and lasting impacts on mental health in patients and families affected by the storms and flooding.

Dear Healthcare Provider:

In March 2026, two Kona Low storm systems impacted communities across the State with severe winds and historic rainfall. Some communities have experienced major flooding, brown water storm runoffs, wastewater discharges, as well as property and infrastructure damage including loss or disruptions of safe shelter, food, medications, electricity and safe drinkable tap water. Some flood waters and storm runoff may have contaminants from agricultural activities and animal waste as well as human sewage from cesspool overflows and wastewater discharges.

Broad health risks can occur following severe storms and flooding, including injury, infections, mental health morbidity, exacerbation of chronic disease, and acute illness due to chemical and environmental exposures.

To mitigate some of the acute health risks in the immediate recovery period, impacted persons, families, as well as people involved in cleanup efforts are recommended by the Hawaii Department of Health (DOH) to:

- Avoid direct contact with flood waters due to potential for contamination with infectious disease and chemical hazards.

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- Wear an N-95 mask, boots, goggles or safety glasses, and rubber gloves when cleaning structures that were flooded.
- Clean wounds with soap and clean water and seek medical attention if signs of infection develop.
- Hydrate, rest, and if experiencing signs and symptoms of heat stress (excessive sweating, dizziness, headache, nausea, or muscle cramps), stop strenuous activities and go to a cool location.

Additional DOH guidance on post-flood cleanup and health safety can be found [here](#).

In addition to this guidance, healthcare providers should consider the following guidance on specific health hazards when caring for patients and families impacted by the recent severe storms and flooding.

Wound Infections:

Wounds exposed to contaminated floodwater or mud are at high risk for infection in the days and weeks following exposure. *Staphylococcus* and *Streptococcus* commonly cause skin infections after floods. Less commonly, infections with *Vibrio*, *Aeromonas*, and atypical mycobacteria bacteria and other waterborne pathogens may occur and should be considered in severe presentations, or if flood-associated wound infections do not respond promptly to treatment. *Vibrio vulnificus* is associated with saltwater or brackish water exposure and can cause necrotizing fasciitis with hemorrhagic bullae, particularly in immunocompromised or cirrhotic patients. *Aeromonas* infections can also progress to necrotizing fasciitis and sepsis. Atypical mycobacterial infections may develop, producing indolent cutaneous infections.

Healthcare providers should consider bacterial wound culture in patients with wound infections associated with flood exposure to inform antimicrobial treatment, particularly in severe infections and in individuals with significant underlying medical conditions.

The vaccination status of patients presenting with wound infections should be assessed and an age-appropriate tetanus vaccine given, if needed. In some of these situations (e.g., patient with a contaminated wound), the clinician may decide that a tetanus vaccine is needed as early as five years from the last dose.

Leptospirosis:

Leptospirosis is endemic in Hawaii. Cases of leptospirosis can increase after floods. During heavy rain, urine from infected animals can contaminate soil and floodwater and can result in leptospirosis when people are exposed to contaminated water, soil, mud, or flood waters with open cuts in their skin.

Leptospirosis can present with a wide range of symptoms (high fever, headaches, chills, muscle aches, abdominal pain, vomiting, jaundice, and red eyes) and if not treated with antibiotics, progress to complications like meningitis and liver failure and death. Symptoms usually start 5-14 days after exposure but can range from 2-30 days.

Healthcare providers should maintain an increased index of suspicion for leptospirosis among patients presenting with compatible signs and symptoms. Early treatment may decrease the severity and duration of disease. **For patients with high clinical suspicion of leptospirosis, start antibiotic treatment as soon as possible, do not wait for laboratory results.**

Testing for leptospirosis can be performed at Hawaii State Laboratories Division, no prior approval is required. Questions about testing or reporting a case of leptospirosis can be done by calling the Disease Reporting Line at (808) 586-4586.

Gastrointestinal illnesses:

Gastrointestinal illnesses due to enteric pathogens often increase after major storms and flooding. Fecal contamination from sewage overflow and animal waste introducing numerous enteric pathogens into flood waters; contamination of foods; impairment of cold chain and heating/cooking of foods; poor sanitation; and more risky food handling practices can contribute to this rise.

Bacterial (e.g. *Campylobacter*, *Salmonella*, *Shigella*), viral (e.g. norovirus), and parasitic causes (e.g. *Giardia* and *Cryptosporidium*) can be associated with post-flood gastrointestinal illness and should be considered based on the clinical presentation.

Healthcare providers should pursue diagnostic testing in the setting of moderate to severe, or protracted illness based on the clinical evaluation. Specific etiologies may warrant antimicrobial therapy or additional public health investigation.

Vector Control:

Standing water after storms and flooding can increase mosquito populations. Currently Zika and chikungunya are not circulating in Hawaii. However, mosquito bite prevention is a recommended routine practice. Steps to control mosquito populations and prevent bites include draining standing water once a week from containers, tarps, gutters and catchment systems; cover water storage containers, repairing window and door screens; and using an EPA-approved insect repellent and wearing protective clothing when outdoors.

After storms and flooding, rodent populations can increase. Information about rodent control that can be provided to patients noting increased rodent populations around their home can be found [here](#).

Chemical Exposures:

Chemical exposures may occur after storms and floods. Common irritants in flood waters include fiberglass, detergents, bleach, other cleaning agents, and nitrogenous substances such as ammonia, urea, and pesticides. Exposure to industrial or farming chemicals such as fertilizers and legacy pesticides must also be considered along with heavy metals and other pre-existing soil contaminants.

Exposure to chemical hazards in floodwater or flood debris may lead to health conditions, including skin and eye irritation and respiratory symptoms. Significant exposure through ingestion could lead to acute poisoning or potential long-term health risks.

Wearing personal protective equipment (PPE) during clean-up activities and when in contact with floodwater or mud can reduce exposures to chemical hazards.

Healthcare providers should take a detailed exposure history, encourage PPE use and consult the Hawaii Poison Center at (1-800-222-1222) if concerned about chemical exposures causing health complications.

Mold Exposure:

Mold can grow within 24-48 hours after flooding and healthcare providers should monitor for signs and symptoms of mold exposure among persons living or working in flooded structures. Common symptoms of mold exposure include respiratory symptoms (coughing, wheezing, shortness of breath), allergic symptoms (nasal stuffiness, sneezing, itchy eyes), skin and throat irritation, fatigue, headache, myalgia, and rarely, severe reactions in persons with asthma or an immunodeficiency.

Avoiding exposure and structural remediation is recommended. Wearing an N-95 mask during clean-up activities can reduce exposure and prevent health impacts from mold. Healthcare providers may support families by referring individuals to storm recovery resources in their county, or by contacting the Aloha United Way at 211.

Mental Health:

Severe and prolonged weather events are associated with increased incidence of acute stress reactions, exacerbation of pre-existing mental health and substance use disorders, and disruption in access to care. Providers should anticipate elevated clinical presentations, including anxiety, depressive symptoms, trauma-related distress, sleep disturbances, and increased substance use. Continuity of care remains a priority; providers are advised to implement flexible service delivery models and to conduct proactive outreach to high-risk populations, including individuals with serious mental illness (SMI), those experiencing homelessness, kūpuna, and families with children.

Providers are further advised to utilize trauma-informed and disaster-responsive clinical approaches, including the application of Mental Health First Aid or Psychological First Aid principles. Coordination with emergency shelters, mobile medical units, and community-based organizations is strongly encouraged to ensure integration of behavioral health support within broader recovery operations. Vigilance for individuals requiring higher levels of care, including risk of harm to self or others, decompensation, or inability to maintain safety, is essential, and timely referral to crisis services or emergency evaluation should be initiated as clinically indicated.

Behavioral health resources are available statewide to support response efforts. The Hawaii CARES crisis line (988) operates 24/7 and provides screening, crisis intervention, and referral services. The SAMHSA Disaster Distress Helpline (1-800-985-5990) provides crisis counseling and support services 24/7 to all residents who are experiencing emotional distress related to natural or human-caused disasters. Persons in behavioral health crisis may also walk-in to the Behavioral Health Crisis Center (BHCC) at 806 Iwilei Road, a 24/7 high intensity behavioral health emergency center, for screening and assessment, crisis intervention, substance detoxification and linkage to resources. The DOH, in coordination with federal partners, is working to facilitate access to supplemental crisis counseling services as they become available.

We appreciate your work in caring for the people and communities as they recover from the recent storms and flooding.

Sincerely,



Nathan Tan, M.D.
Deputy State Epidemiologist

References:

- Kona Low Storm - Hawaii State Department of Health: <https://health.hawaii.gov/konalowstorm/>
- Floods and Your Safety | Floods | CDC: <https://www.cdc.gov/floods/about/index.html>
- Leptospirosis | Disease Outbreak Control Division: https://health.hawaii.gov/docd/disease_listing/leptospirosis/
- What to Do After a Hurricane or Flood | Mosquitoes | CDC: <https://www.cdc.gov/mosquitoes/response/index.html>
- Mosquito Control at Home | Mosquitoes | CDC: <https://www.cdc.gov/mosquitoes/mosquito-control/mosquito-control-at-home.html>
- Preventing Mosquito Bites | Mosquitoes | CDC: <https://www.cdc.gov/mosquitoes/prevention/index.html>
- Controlling Wild Rodent Infestations | Healthy Pets, Healthy People | CDC: <https://www.cdc.gov/healthy-pets/rodent-control/index.html>
- Rodent Program | Vector Control Branch: <https://health.hawaii.gov/vcb/rodents/>

DOH Fact sheets:

- Caring for your Mental Health <https://health.hawaii.gov/konalowstorm/files/2026/03/Fact-Sheet-Caring-for-Your-Mental-Health-26.03.26.pdf>
- Keep the Mold Away <https://health.hawaii.gov/konalowstorm/files/2026/03/Fact-Sheet-Keep-the-Mold-Away-26.03.26.pdf>

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- Leptospirosis and Vector Control <https://health.hawaii.gov/konalowstorm/files/2026/03/Fact-sheet-Leptospirosis-and-Vector-Control-26.03.26.pdf>
- Safety Guidelines After Flooding <https://health.hawaii.gov/konalowstorm/files/2026/03/Fact-Sheet-Safety-Guidelines-After-Flooding-26.03.26.pdf>
- Replacing Birth, Death and Marriage Certificates <https://health.hawaii.gov/konalowstorm/files/2026/03/Fact-Sheet-Vital-Records-26.03.26.pdf>