



Disease Surveillance and Investigation Plan

May 2020

The Hawai'i Department of Health has developed a systematic disease surveillance, testing, and investigation plan in response to the current COVID-19 pandemic to ensure the state can safely open in phases.

Based on current data, Hawai'i is flattening the curve, and there have been declining numbers of reported new COVID-19 cases.

The surveillance and investigation plan includes ongoing active monitoring, testing, and follow up to ensure the control of community spread. This plan provides recommendations for enhanced surveillance in the event the trends reverse, and there is an increase in the number of cases in the islands.

This plan is based on Hawai'i Administrative Rules governing communicable diseases and epidemiological investigations.

HAR §11-156 directs healthcare providers and laboratories to report diseases and agents declared by the Director of Health to be "communicable and dangerous to the public health." Reporting is required whether a healthcare provider has diagnosed a patient or suspects a diagnosis "in the absence of definitive test results for confirmation."

HRS §321-29 states DOH will "conduct investigations to determine the nature and extent of diseases and injuries deemed by the department to threaten the public health and safety." Every person or entity with information relevant to disease investigations is required to provide that information when requested by DOH.

Core: Maintain Comprehensive Surveillance and Monitoring

The Hawai'i Department of Health's Disease Outbreak Control Division (DOCD) is currently conducting a comprehensive surveillance, monitoring and testing program to control and prevent the spread of COVID-19.

This phase is currently underway and involves the following initiatives:

- **Communication** with other states, federal colleagues, and public health partners to monitor disease activity outside the state.
- **Monitoring** of national and international surveillance reports (CDC or WHO) to better understand and prepare for potential impacts.
- **Daily surveillance activities** to detect pathogens of concern and disease threats in Hawai'i.
 - Investigation of disease reports** from clinical providers
 - Analyzing data** from electronic laboratory reporting
 - Managing the influenza surveillance framework**
- **In congregate settings with a confirmed case**, close contacts who are higher at-risk, such as family households, care homes, and health care facilities, DOH will conduct testing to identify the spread of disease.

Managing the surveillance framework includes:

Influenza-like illness (ILI) sentinel surveillance network: Please refer to page 4 for details.

ILI cluster surveillance: Investigates reports in long-term care facilities or schools

Pneumonia & influenza mortality surveillance: Monitors for increases in mortality compared with average of previous 5 and possibly 10 years to identify potentially increasing severity of disease.

Surveillance for severe, unexplained illness: Investigates reports from emergency departments or intensive care units with patients with severe, unexplained respiratory illness for specimen testing

International air traveler surveillance: Federal law requires airlines report incoming ill passengers from international origins to port of entry; monitor for potential introductions of concern.

Under the current Emergency Proclamation orders, enhanced quarantine measures and follow-up activities are taking place under Department of Transportation, Hawai'i Tourism Authority, and the National Guard.

Core

Process for Investigation of Cases

Follow-up every reported suspect and confirmed case in person, by phone, and/or electronically as appropriate to:

- Verify and confirm potential disease activity. Identify potential case contacts who may be at risk through contact tracing.
- Use digital application (HealthSpace) to augment contact tracing and monitoring.
- Provide technical guidance on infection control and support to healthcare facilities.
- Identify persons who require isolation (confirmed cases) and those who require quarantine (close contacts exposed to the confirmed case).
- Determine potential environmental exposures that may need to be considered.
- Determine scope of pathogen transmission and/or disease activity.

When the disease is circulating in the State, utilize current and available surge staff to continue investigations and contact tracing, especially if community mitigation measures (e.g. extreme social distancing measures such as shelter in place) have been engaged.

When disease spread continues to increase such that the median cases per day continue to at least double each week for 2 maximum incubation periods of the disease, consider limiting investigations to focus on potential introduction in new areas of the State (e.g., island with no previous activity) and/or characterize a large or unusual outbreak of the disease (e.g., affecting a specific group).

At this point, disease control should focus primarily on strict community-wide mitigation measures.

Testing of Close Contacts

The Department of Health may test close contacts of positive cases in households and those in congregate settings who are at risk of serious illness. This includes elderly patients in care homes and healthcare workers.

Household contacts of confirmed cases are treated as probable cases and would be managed as a confirmed case.

Core

ILINet/COVID Sentinel Surveillance

The U.S. Outpatient Influenza-like Illness (ILI) Surveillance Network, or ILINet, is a nationwide network of healthcare providers that report information on outpatient visits for ILI to CDC.

ILINet sentinel providers report the number of patient visits for ILI by age group (0–4, 5–24, 25–49, 50–64, and 65+ years) each week throughout the year.

Clinical providers including physicians and nurses in most clinical practice settings are eligible.

In addition to reporting ILI patient numbers, sentinel providers submit respiratory specimens from their patients with ILI symptoms to the Hawai'i Department of Health (DOH) for testing at no cost.

Most sentinel providers submit patient specimens to a clinical lab for initial testing, which are then forwarded to the State Lab for further confirmatory testing and surveillance purposes.

With the increased use of telemedicine, DOH has recently offered the assistance of “**swab teams**” to collect specimens from sentinel provider patients at their homes to then be tested.

Specimens forwarded through a clinical laboratory or received directly from a sentinel provider are tested within one business day of receipt at the State Lab.

Hawai'i's ILINet program sentinel providers span all counties in the state and include family practice, internal medicine, pediatricians, student health, urgent care, and emergency medicine.

Number below show registered providers per county as of May 2020. **These numbers will increase as DOH actively recruits more providers.**

Honolulu County:	17
Hawai'i County:	6
Maui County:	5
Kaua'i County:	4

Challenge:

Although Hawai'i has a good range of registered ILINet sentinel providers, there are some areas and populations that may not be fully represented. DOH has actively reached out to community healthcare partners and Federally Qualified Health Centers (FQHC) to recruit more sentinel providers into our ILINet program for the surveillance of ILI and COVID.

Augment: Expand Surge Capacity Staffing

When the threat of disease is imminent, DOH will ramp up staffing by mobilizing DOH employees from different program areas for surge support.

DOH currently has at least 23 epidemiological specialists or other related in-house positions working who can conduct more than 100 case investigations per week. As many as 45 public health nurses in the department are available to assist with contact tracing. These numbers reflect statewide staffing.

DOH will initiate surge staffing in-house, starting with the Immunization Branch Epidemiology Specialists, then Public Health Nursing (PHN) Branch, and then the STD/HIV Program, if calls and requests continue to increase with 2-1-1 activation and/or the burden of disease investigation exceeds 5 new case assignments/investigator/day.

Surge staff will be arranged in a hub and spoke model.

- **Hubs:** Epidemiological Specialists will be the hubs coordinating the spokes, which includes in-house volunteers such as Public Health Nurses. Use of the Surveillance Epidemiologists would only be as needed for surge staffing.
- **Spokes:** Each hub will ideally have 3 in-house volunteer extenders with up to a maximum of 5 to 7 extenders.

The same hub-spoke model will be used for the Infection Control and Prevention Team for contact tracing in healthcare facilities when cases among healthcare workers are identified.

If the pace of new case assignments per day continues at 5/investigator for >1 week or increases, DOH will seek surge staffing **beyond or outside of DOH.**

- **Medical Reserve Corps and universities** (student nurses, medical residents, etc.)
- **Federal or other emergency funds anticipated** to support response
- **Rapid hire staff** (The Research Corporation of the University of Hawai'i, contract staffing) identified through the UH Community Health Worker program

Number of maximum investigation and monitoring staff statewide:

- **In-house epidemiological specialists:** up to 23 from all areas of DOH
- **Ideal number of additional staffing:** 69 surge staff or volunteers
- **Maximum additional staffing:** 200

Maximum staffing could handle contact tracing for up to 1,000 new cases per day. At 25 new cases per day, strict social distancing measures will be required to control disease activity.

Training is essential

Training and certification programs are being established to expand the pool of workers within and outside of DOH.

This training plan will prepare as many as 200 contact tracers. While DOH is working to recruit and fill 16 critical vacancies in DOCD, DOH is partnering with the University of Hawai'i to train up to 200 persons through a certificate program to ensure a pool of appropriate persons to rapidly hire.

Build: Enhanced Surveillance

If the current situation in Hawai'i changes, and there are indications that a second wave of COVID-19 is an imminent threat, Phase III will be activated for stepped up surveillance.

Planning for some of these activities is already underway to prepare for quick implementation.

Some key triggering events that warrant shifting to Phase III include: the burden of disease investigation exceeds five new case assignments per investigator per day and calls and requests to 2-1-1 continue to increase.

The Hawai'i Department of Health will provide guidance to other state and county agencies to initiate enhanced surveillance activities, which would include:

Port of entry surveillance. Further monitor for potential introductions of concern.

- **Air:** Actively screen all air passengers as part of routine surveillance system beyond the emergency proclamation orders and expand to include all airports as well as domestic flights.
- **Water:** Current federal law requires all ships to report any health issues to the Coast Guard in advance of arriving at the intended seaport.

Passenger ships must also report disease activity to CDC (international) or the US FDA (interstate). This activity may be expanded to include screening or testing.

Hospital admission and emergency department syndromic surveillance. Collect hospital admission and emergency department data based on defined set of symptoms and/or criteria.

Emergency Medical Services encounters surveillance. Collaborate with the DOH Emergency Medical Services and Injury Prevention System Branch to monitor trends.

Long-term care facilities. Expand surveillance as needed; actively monitor illness among healthcare workers, staff, and patients, and consider testing.

Serological surveillance. Should an FDA-approved, and CDC-validated serological (antibody) test become available, consider a statewide serosurvey between pandemic waves to determine scope of disease spread. Follow CDC guidance and include sampling on all islands targeting vulnerable population and densely populated areas.

Nontraditional data sources. Monitor internet and social media activity.

Digital Monitoring of COVID-19 Contacts

The Hawai'i Department of Health (DOH) has a new tool (HealthSpace) to expand contact monitoring.

Contacts of cases can now provide their health information through a secure link that will direct them to a cloud-based survey and transmit their responses directly to DOH.

The tool serves as a secure portal, protecting individual privacy.

Volunteers are given limited permission accounts allowing them to securely access and manage information for the contacts assigned to them.

The tool increases the reach and capacity of disease investigators and their volunteer staff by augmenting efforts to investigate and prevent the spread of disease. The application provides investigators the ability to monitor 20 contacts or persons per investigator with the capacity to expand up to approximately 160 contact tracers who have the capability to monitor 3,200 persons/day.

When a person has been identified as a close contact, they will receive an initial phone call

from DOH to explain they are at risk of COVID-19 disease, are required to remain at home for 14 days, and will need to monitor their health. The contact of the case will provide an email or cell phone number to automatically receive a daily survey. The survey will ask if they have symptoms that could be signs of COVID-19. Anyone can opt-out of receiving these messages, and DOH will call them to collect their health information.

The application requires the user has access to a smartphone or email and internet access. People who are unable to complete the survey will be contacted by telephone.

The tool does not require the user to download any third-party applications and can be accessed from any device that has an internet connection and browser.

There are no costs to the end-user.

The tool is provided by HealthSpace, a cloud-based platform with more than 20 years of experience in data solutions for local and state public health agencies in the US and Canada. HealthSpace has contracts with more than 500 health departments, and their platform is being used for the COVID-19 response. All data collected and stored is protected with a confidentiality and non-disclosure agreement and is the sole and exclusive property of DOH.