

MODULE I COVID-19 CURRICULUM

History of Infectious Diseases in Hawai'i and the Pacific: Caring for People Past, Present, and Future



View of Smallpox
Hospital, c. 1853-59
(Wikipedia Commons)

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Why Study the Pacific's History of Introduced Infectious Diseases?

TO ADDRESS THE ESSENTIAL QUESTION:

What can we learn from the experiences, values, and actions of Hawaiians and Pacific Island peoples to guide us in the current COVID-19 pandemic?

In this module you will:

1. Study the impacts of introduced diseases in the Pacific up to 2019 measles outbreak and COVID-19 pandemic.
2. Learn terms and concepts related to Hawai'i's past and present public health practices.
3. Learn why 90% of the Hawaiian population died from introduced infectious diseases between 1788-1900.
4. Study Princess Lili'uokalani's 1891 quarantine of O'ahu to stop a smallpox epidemic.
5. See how 6 Tongan teenagers survived on a kapu island through cultural values, knowledge, and practices.
6. Consider how Polynesian values and actions apply to the COVID-19 pandemic.
7. Take a 10-question quiz to check your learning. You may retake it for a higher score.

Deadly Foreign Diseases in the Pacific

Infectious foreign diseases both devasted and destabilized isolated Pacific Island nations. First exposure often killed 20-70% of the population.

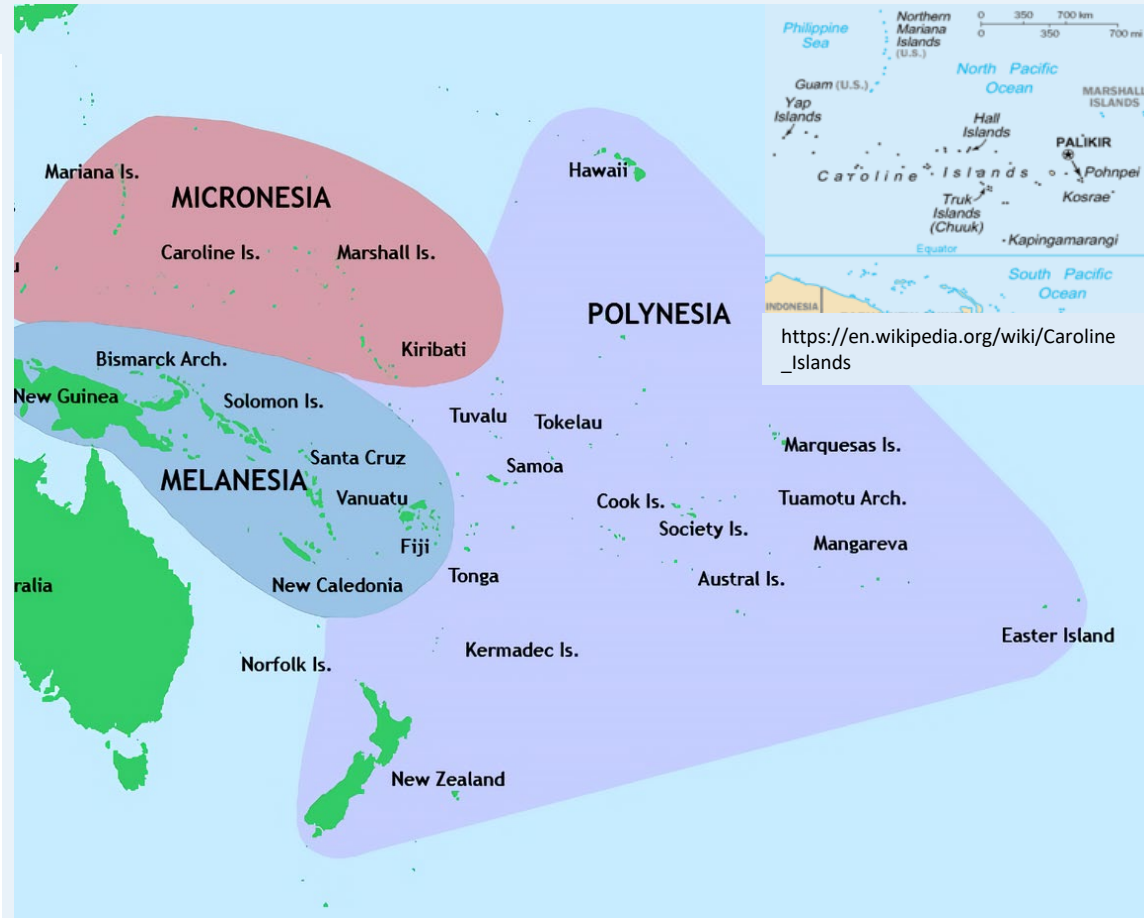
In 1854 the whaleship Delta stopped at Pohnpei to drop off two crew with smallpox and bury a third. Contact with the men and clothes spread smallpox, killing 4,000, 40 percent of its people.

In 1856 smallpox reached Guam, killing 4,000, 40% of its people.

In 1859 the first traders brought influenza to the Marshall Islands. Missionaries wrote about bodies wrapped in mats with small sails attached being released at sea. Epidemics of measles and influenza in 1861 and typhoid fever in 1863 killed many more.

A fifth of Samoans died in the 1918 Spanish flu pandemic. None died in American Samoa due to a strict quarantine.

In 2019, 85 Samoans died from measles as 31% were vaccinated. An antivaccination activist was arrested for “incitement against a government order.” In American Samoa no one died as almost everyone was vaccinated.



Vaka Moana: Voyages of the Ancestors-the discovery and settlement of the Pacific, Ed K.R. Howe, 2008, <https://commons.wikimedia.org/w/index.php?curid=61904861>

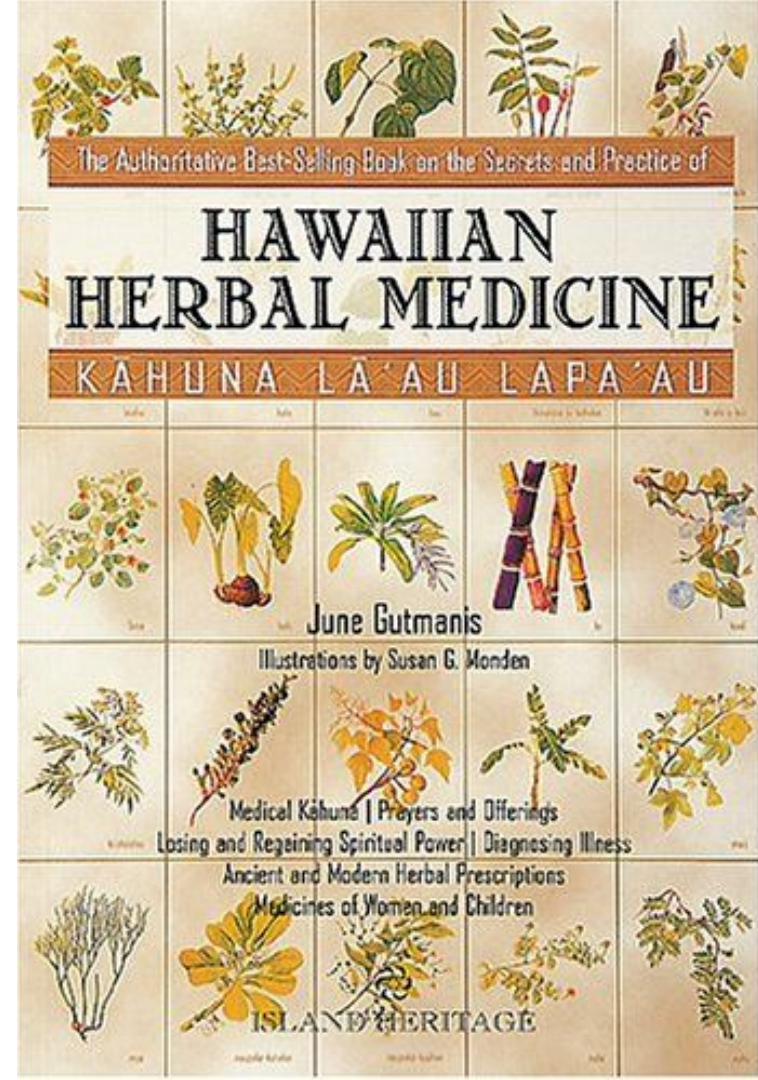
Lawe li'ili'i ka make a ka Hawai'i, lawe nui ka make a ka haole. Death by Hawaiians takes a few at a time; death by foreigners takes many. (No.1960, Pukui)

Overall, Hawaiians enjoyed good health before western contact. People were active, food was organic and mostly plant-based, strict rules kept water clean, isolation kept out diseases (Abbott, 1992).

Well-trained *kahuna la'au lapa'au*, herbal doctors, prepared 12 commonly used medicinal plants, 8 brought by Polynesian voyagers.

Diagnosticians, *kahuna hāhā*, memorized the characteristics and history of diseases from the place and time of first appearance to the present. We use this process, [contact tracing](#), to identify persons who may have been in contact with someone infected with COVID-19.

Foreign ships brought new diseases: smallpox, [measles](#), flu. With no prior exposure and no immunity, many people died. These observations led to a new 'ōlelo no 'eau, "*Lawe li'ili'i ka make a ka Hawai'i, lawe nui ka make a ka haole. Death by Hawaiians (diseases) takes a few at a time; death by foreigners (diseases) takes many.*"

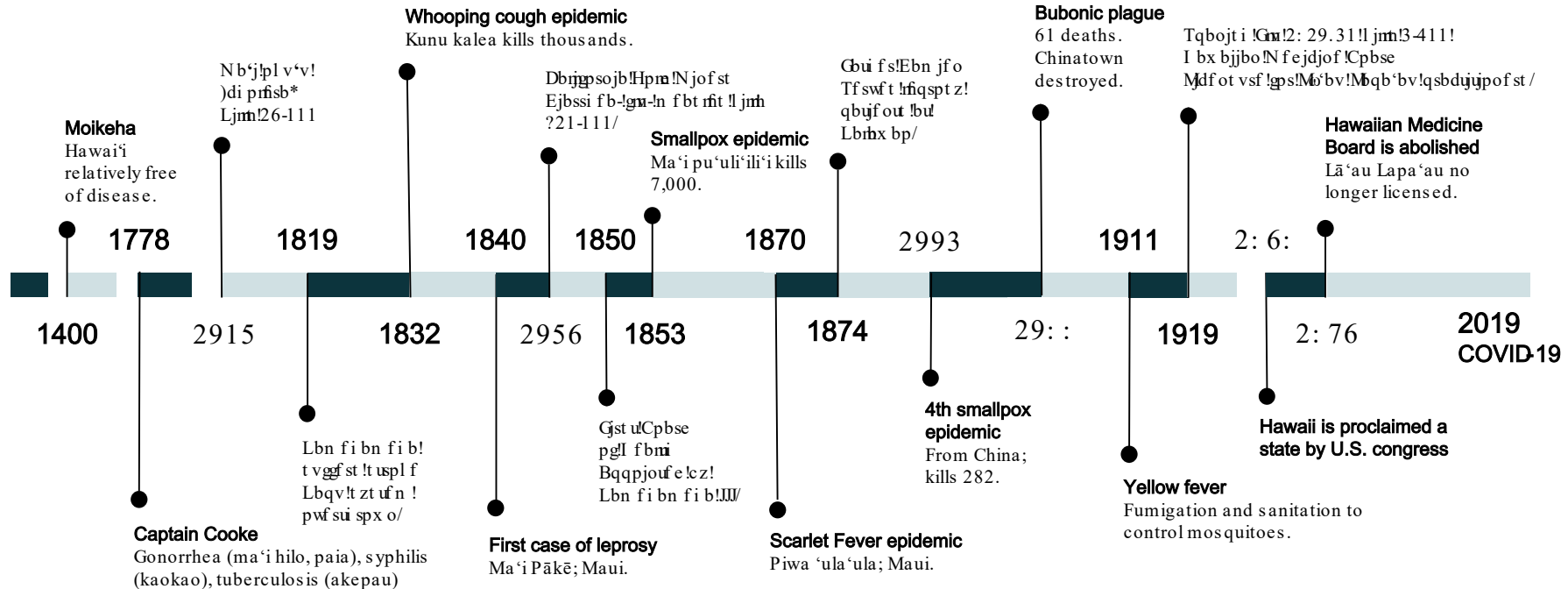


Hawai'i's historical relationship with introduced disease

Centuries of isolation left Native Hawaiians with no [immunity](#) to introduced diseases.

[La'au lapa'au](#), traditional herbal medicine, worked for familiar illnesses but was ineffective against introduced diseases.

Learn more about [cholera](#), [measles](#), [smallpox](#), [leprosy](#), [Spanish flu](#), [whooping cough](#), [bubonic plague](#), [scarlet fever](#).



"Hawaiian Health Timeline and Events." Kekuni Blaisdell, 1998. Updated by Papa Ola Lokahi, 2016

Minamina 'ia ka 'ike Hawai'i | Hawaiian language, health, leadership

mina.mina

1. nvt. To regret, be sorry, deplore; to grieve for something that is lost; regret, sorrow.

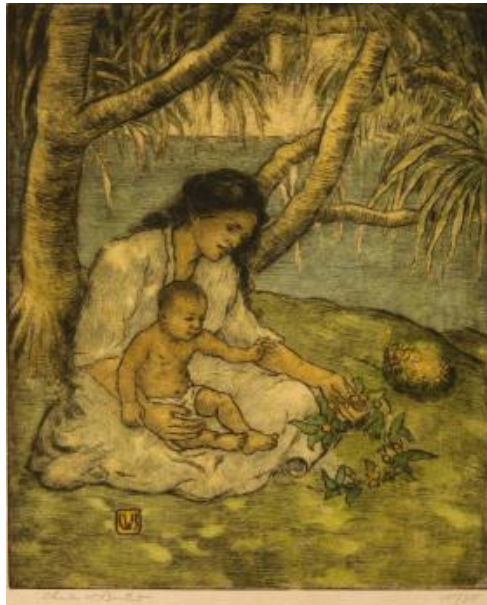
'A'ole minamina 'o lākou i ke ola. They do not set much value on human life.

2. To prize greatly, value greatly, especially of something in danger of being lost; to value, place great value on.

He mea minamina 'ia ke keiki. A child is to be prized.

Source: Ulukau: Nā Puke Wehewehe 'Ōlelo Hawai'i

Hawaiian Mother and Child,
ca. 1920. C. W. Bartlett
(Honolulu Museum of Art)



We expect our leaders to make [decisions based on best information](#) to care for the people and the land, but it is our *kuleana*, responsibility, too.

- Read “Shutting Down Hawai’i: A Historical Perspective on Epidemics in the Islands” [here](#).
- Read Hawaiian language newspaper articles on epidemics [here](#).
- Read [American Samoa repatriation program detects 5 coronavirus cases on Oahu](#)

We **all** must take informed actions to avoid COVID-19 regrets, *minamina*.

- [Community spread](#), not travel, causes most COVID-19 cases in Hawai’i.
- Updated daily: [COVID-19 Dashboard](#) with race, age, gender, county, source of contagion.
- Current information: [What You Should Know](#), Get the facts on COVID-19.



The Kingdom prioritized public health by monitoring (kilo) and acting to prevent disease.
The Kingdom passed a Quarantine Law in 1839, the US followed in 1878.

1836 First documented public health measure: Kūhina Nui Kīnaʻu orders the Honolulu harbor pilot to screen all foreign-arriving vessels for small pox.

1839 The Quarantine Law is signed by Kamehameha III, Kāuikaʻaouli, and the first Vital Statistics Act is passed.

Hawaiian Population | 82,035

1851 The first legislative appropriation in public health is made by the Hawaiian government: \$10,000 to prevent cholera. The funds are later used for small pox victims.

1853-54 First smallpox (maʻi puʻuliʻiliʻi) epidemic from California takes estimated 7,000 lives.

1854 Smallpox vaccination is made compulsory; vaccine imported from London and New Zealand. Kamehameha III, age 42, dies after convulsions and delirium at Hoʻihoʻikeʻea, Honolulu.

1861 A second smallpox epidemic causes 282 deaths.

Hawaiian Population | 49,000

1873 Garbage collection & street cleaning begin in Honolulu. A 3rd small pox epidemic takes 11 lives.

1882 Fourth smallpox epidemic introduced from China takes 282 lives. Inspection and licensing of dairies begin in Honolulu.

1893 Queen Liliʻuokalani yields under protest.

Hawaiian Population | 40,000
Foreign Population | 50,000

1894 **The Republic of Hawaii is proclaimed.**

1900 Tuberculosis is made a reportable disease. Kuakini is founded as Japanese Hospital on Kuakini St.

Hawaiian Population | 28,800

Mina.mina

2. To prize greatly, value greatly, especially of something in danger of being lost; to value, place great value on.

The Aliʻi founded: [Queen's Hospital](#), [Kapiʻolani Hospital](#), [Lunalilo Home](#), [Queen Liliʻuokalani Trust](#).

"Hawaiian Health Timeline and Events."
Dr. Kekuni Blaisdell, 1998. Updated by Papa Ola Lokahi, 2016

Visionary Leadership: Actions of Ali'i to care for keiki to kūpuna into the future



Queen's Hospital was founded in 1859 by [Queen Emma](#) and [King Kamehameha IV](#) to address the diseases that were decimating the Hawaiian population. There was no money in the treasury, so they personally solicited funds and donated their own money to raise \$13,530 to build the hospital.

Lunalilo Home was established by the will of William Charles Lunalilo, who died a bachelor in 1874. [King Lunalilo](#) was the first large landholding ali'i to create a charitable trust for the benefit of his people. The trust built a home for the poor, destitute, and infirm people of Hawaiian blood, with preference given to older people.



Concerned about the welfare of mothers and babies, [Queen Kapi'olani](#), Consort to King Kalākaua founded the Kapi'olani Maternity Home in 1890 with \$8,000 raised by holding bazaars, luau and other benefits. In 1909, [Albert and Emma Kauikeolani Wilcox](#) donated funds for Kauikeolani Children's Hospital as two out of seven babies died in their first year. In 1978, Kapi'olani and Kauikeolani Children's Hospitals became Kapi'olani Medical Center for Women & Children.



[Lydia Lili'u Loloku Wewehi Kamaka'eha](#), sister of King Kalākaua and hanai sister of Princess Pauahi, was a scholar, principled and knowledgeable leader, musician, and composer. When 10, young Lili'u witnessed grief and suffering during the 1848 measles epidemic that killed over 10,000. She established the Queen Lili'uokalani [Trust](#) in 1909 with ancestral lands from her mother, Keohokālōle. The Trust is dedicated to the wellbeing of the least fortunate Hawaiian *keiki*. Orphans and destitute Hawaiian children are the primary beneficiaries of her estate.



Public health during the Kingdom: Ho‘omaluku i ka wā mā mua, a ho‘omaluku nō i ka wā ma hope; Protect the past and protect the future

1836 First documented public health measure: Kuhina Nui Kīna‘u orders the Honolulu harbor pilot to screen all foreign-arriving vessels for small pox.

1839 The Quarantine Law is signed by Kamehameha III, Kauikeaouli, and the first Vital Statistics Act is passed.

1850 First Board of Health is appointed by Kamehameha III, two years after the first board of health is established in London and before anything comparable is established in the United States.

1851 The first legislative appropriation in public health is made by the Hawaiian government: \$10,000 to prevent cholera. The funds are later used for small pox victims.



To the Pilot at Honolulu.

YOU are hereby directed, previous to boarding any vessel from the North West Coast of America, and other vessels generally, to ascertain whether there has been any case of **SMALL POX**, or other pestilent disease, on board such vessel, for the previous forty-two days. If there should have been, you are hereby forbidden to go on board such vessel, or to suffer any of your boat's crew to go on board, but to conduct such vessel to a convenient anchorage, and direct the Master to hoist a yellow flag, (with which you will be furnished by us,) at the main, and immediately give information to the constituted authorities.

Any persons neglecting these regulations, will be severely punished: and vessels not conforming to them, shall be driven from our shores.

**KINAU,
AUHEA,
PAKI.**

WAIKIKI, AUGUST 1, 1836.

Credits: Hawaii Judiciary Archives / Punawaiola

[“Hawaiian Health Timeline and Events.”](#)Dr. Kekuni Blaisdell, 1998. Updated by Papa Ola Lokahi, 2016.

Leadership: Princess Lili'uokalani's 1881 quarantine limited the smallpox epidemic to O'ahu. Her own words on the next slide show her knowledge of public health measures and concern for her people.



Hawaiian Gazette.

WEDNESDAY, SEPTEMBER 7, 1881.

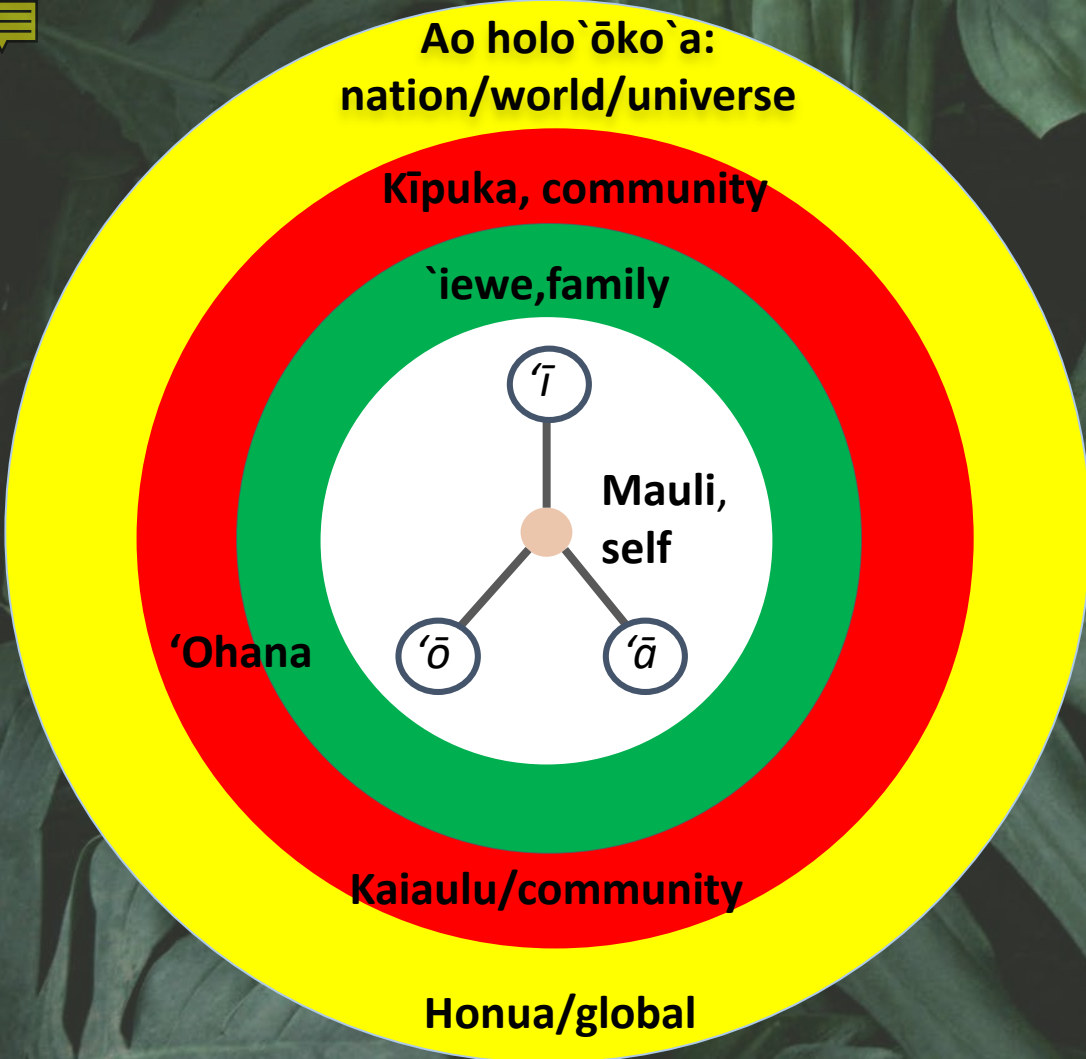
Her Royal Highness the Princess Regent will make a tour of the Islands. It was the Princess' intention to have made this tour early in the year, but the breaking out of the small-pox and the consequent quarantine regulations prevented the plan being carried out, the Regent setting aside her own wish to travel in order to show an example of keeping the quarantine strictly. The Regent and suite will leave on August 2nd, they will visit the lava flow first and will then spend a fortnight or so in the Kohala district, about August 19th the Regent will visit Kau. The Princess Likelike will probably join her sister in Kau. The other islands of the group will be visited in turn.

Queen Lili'uokalani's
Autobiography, Chap. 12



(Lili'uokalani Trust)

King Kalakaua had been gone but a few weeks when the startling news was in circulation that the small-pox had broken out in the city...[O]ur past experience with the disease had shown us how fatal it might become to the Hawaiian people, and whatever the inconveniences it became necessary at all hazards to prevent its spread. Summoning the cabinet, I had all arrangements perfected to stay the progress of the epidemic. Communication between the different islands of the group was stopped. Vessels were absolutely prohibited from taking passengers. A strict quarantine of all persons infected or under suspicion was maintained; and so scrupulously and energetically were these regulations enforced, that when they were relaxed and quarantine raised, it was found that no case had been reported outside the place of its first appearance. But it was a serious thing to confine its ravages to the city of Honolulu, in which there were some eight hundred cases and about three hundred deaths.



Connecting Past, Present, Future

Nā honua maui ola is a Hawaiian philosophy that health (*maui ola*) is connected to three *piko* each person has: *ī* (spiritual, head), *ō* (family, belly button), and *ā* (next generation).

No one is an isolated individual. Maui (self) develops within family (*ī*ewe, *‘ohana*), community (*kīpuka*, *kaiaulu*), nation, and world (*ao holo`ōko`a*, *honua*) from childhood (*keiki*), to adulthood (*mākua*), to elder (*kūpuna*) status.

If I care for others during the COVID pandemic I care for myself, too. It is my *kuleana*, my responsibility.

What happened when six Tongan boys were shipwrecked for 15 months on a kapu island?

Watch the 21-minute [video](#).

Think about the values, practices, decisions, and knowledge that enabled the teenagers to survive and create a healthy community.

1. What were the sources of the strengths that enabled their survival?
2. How did the boys share leadership and defuse conflict and anger?
3. How does their survival show that when we care for others, we also care for ourselves?
4. What can your leaders and you do to help your family, community, our state, and nation return to health during COVID-19?



Glossary: Definitions of words used in this lesson

1. [Community spread](#): people infected with virus causing COVID-19 locally, including some who are not sure how or where they became infected.
2. [Contact tracing](#): to control transmission by identifying and quarantining persons who may have been in contact with someone infected with an infectious disease such as COVID-19.
3. [Epidemic](#): any rise in cases beyond the baseline for that geographic area.
4. [Immunity](#): the condition that permits either natural or acquired resistance to disease.
5. [Isolation](#): to separate people infected with a contagious disease such as COVID-19 from those who are not.
6. [La'au lapa'au](#): traditional herbal medicine, largely effective in Hawai'i prior to introduced infectious diseases.
7. [Leprosy](#): Hansen's disease, an infectious but curable bacterial disease. First documented in 1835, 8,000 sufferers were isolated at Kalaupapa, Moloka'i from 1866-1969 when isolation laws ended.
8. [Measles](#): highly contagious, sometimes deadly viral disease able to be controlled by measles vaccine.
9. [Minamina](#): 1. To regret, be sorry, deplore 2. To prize greatly especially of something in danger of being lost.
10. [Lili'uokalani](#): Only reigning Hawaiian queen and last Hawaiian sovereign until 1898 U.S. Overthrow.
11. [Pandemic](#): the worldwide spread of a new disease such as COVID-19.
12. [Quarantine](#): to separate and restrict movement of people exposed to a contagious disease to see if they become sick. Quarantines (from the Italian *quaranta giorni*, 40 days) began in the [14th century](#) to protect coastal cities.
13. [Smallpox](#): viral disease only in people spread by coughing, sneezing, contact with sores, clothes, bedding.
14. Vaccination: treatment with a [vaccine](#), typically containing an agent that resembles all or part of a disease-causing microorganism to produce immunity against a disease.

History of Infectious Diseases in Hawai'i: Caring for People Past, Present, and Future

1. First review slides, click on links to read articles, see videos.
2. Second, review Glossary for definitions of important terms.
3. Third, click on the “10 Question” link below to start the quiz for this module.
4. [10 Question Quiz](#)
 - Your goal is to score at least 90%, 9 correct out of 10.
 - If under 90%, review slides and readings and take the quiz up to two more times.
 - Some questions may be different in each quiz.
 - Submit your highest score.
5. Mahalo nui loa for your time and attention!

To Teachers: This module addresses Social Studies, NGSS, Common Core, Health, Nā Hopena A‘o

1. [Inquiry Standard SS.9-12.1.2](#) Critique compelling questions that reflect an enduring issue in the field
2. [Next Generation Science Standards:](#) Cross-cutting concepts
 2. Cause and Effect: Mechanism and Prediction: Events have causes, sometimes simple, sometimes multifaceted.
 4. Systems and system models. Defining the system under study provides tools for understanding and testing ideas.
3. **Common Core** [CCSS.ELA-LITERACY.RH.11-12.7](#)
Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem
4. [Health Education Standards](#)
 1. Comprehending Concepts related to health promotion and disease prevention to enhance health.
 2. Analyzing Influences of family, peers, culture, media, technology, and other factors on health behavior.
5. [Nā Hopena A‘o](#)
To develop a sense of Wellbeing | To develop a sense of Belonging | To develop a sense of Aloha | To develop a sense of Hawai‘i.
6. [Nā Honua Maui Ola:](#)
Promote personal growth and development to strengthen cultural identity, academic knowledge and skills, pono decision making, and the ability to contribute to one’s self, family, local and global communities.
7. [UN Sustainable Development Goal #3 Good Health and Well-being](#)
Ensure healthy lives and promote well-being for all at all ages

COVID-19 Information and Resources

1. Centers for Disease Control and Prevention

- What to Do If You Are Sick If you have a fever, cough or [other symptoms](#).
- If you have [an emergency warning sign](#), get emergency medical care immediately.

2. State of Hawai'i - Department of health: Disease outbreak control division: COVID-19

- [Get the Facts about COVID-19](#)
- [Hawai'i COVID-19 Data](#)
- [Office of Language Access: COVID-19 Multilingual Resources](#)

3. Hawai'i Reproductive Rate [Rt](#)

4. Hawai'i State Department of Education (Check for updates.)

- [RETURN TO LEARN: SCHOOL REOPENING PLAN](#) (Jan. 15, 2020)

5. One Oahu organization

- [Protect Yourself. Each Other. Hawai'i](#)

6. The Washington Post

- Community spread: At dinner parties and game nights, casual American life is fueling the [coronavirus surge](#).
- Daily updates for how many people have died from [coronavirus in the U.S.](#)

7. Johns Hopkins University

- [Coronavirus Resource Center](#)