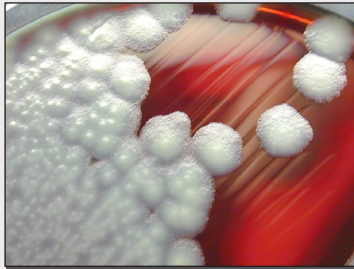


Hawaii Epi Bulletin

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Fall 2017

Bacillus cereus biovar anthracis



Between 2001 and 2006, unknown strains of *Bacillus cereus* causing anthrax-like disease were isolated from several chimpanzees and a western lowland gorilla in Cote d'Ivoire and Cameroon. Testing revealed the isolated strains of *B. cereus* were carrying the same virulence plasmids as those found in *Bacillus anthracis*, the bacteria responsible for anthrax. The newly isolated strain was named *B. cereus* biovar *anthracis*.

B. cereus bv *anthracis* has since been isolated from other animals including elephants and goats, but its distribution is limited to several countries in Africa, with no indication it has spread beyond this region. However, because it shares virulence factors with *B. anthracis* and has similar potential to be a severe threat to public health, the US Department of Health and Human Services (HHS) added it to the HHS select agent list in October 2016, and it is currently regulated as a Tier 1 select agent.

Because of the very limited distribution of *B. cereus* bv *anthracis*, it does not pose a risk in Hawaii. Given this as well as that *B. cereus* is commonly isolated in specimens and is generally considered to be non-pathogenic, to reduce the burden of unnecessary testing and make sure actual cases of *B. cereus* bv *anthracis* infection are identified, when clinicians suspect anthrax-like illness in a patient, they should:

- Notify the laboratory when ordering testing on a patient who presents with anthrax-like symptoms.
- Include a patient travel history with the laboratory test requisition form.
- Report suspect cases to Hawaii State Department of Health (DOH)

Go here for more information on: ([B. cereus](#)) ([Anthrax](#))

SELECT AGENTS:

Select agents and toxins are a subset of biological agents and toxins that the Departments of Health and Human Services (HHS) and Agriculture (USDA) have determined to have the potential to pose a severe threat to public health and safety, to animal or plant health, or to animal or plant products.

The current list of select agents can be found [here](#).

TIER 1 SELECT AGENTS:

A subset of select agents and toxins have been designated as Tier 1 because these biological agents and toxins present the greatest risk of deliberate misuse with significant potential for mass casualties or devastating effect to the economy, critical infrastructure, or public confidence, and pose a severe threat to public health and safety.

Entities that possess, use, or transfer Tier 1 select agents and toxins must adhere to the additional requirements detailed within the [Select Agent Regulations](#).

(From: Federal Select Agent Program)

Mumps Vaccine Outbreak Dose

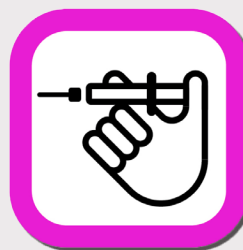
Because of the current mumps outbreak in Hawaii, in addition to the routine vaccination recommendations, persons born in 1957 or later, especially those who live or work in crowded conditions, should receive an additional MMR vaccine dose now:

For persons born in 1957 or later:

Number of previous MMR doses	Years since last MMR dose	Vaccinate Now
2	10 years or more	Yes
1	5 years or more	Yes
None or unknown	-	Yes

Before vaccines were available, nearly everyone was infected with mumps by the time they were age 15 years. The majority of people born before 1957 are likely to have been infected with mumps and therefore are presumed to be protected. Persons born before 1957 who are unsure if they had mumps disease previously should talk to their healthcare provider about vaccination. In general, although it is not ideal, receiving extra doses of vaccine poses no medical problem.

Healthcare providers should report any suspected cases of mumps to HDOH immediately by calling the disease reporting line at (808) 586-4586.



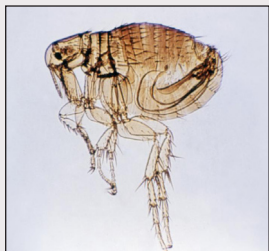
For updates on the mumps outbreak, go here: ([Mumps Updates](#))

<i>B. cereus</i> bv <i>anthracis</i>	1
Mumps Outbreak Dose	1
Murine Typhus	2
Updates from the Pacific	2
Flu Vaccine	3
Disease Reporting Categories	3

This timely report of surveillance and laboratory activities from the Disease Outbreak Control Division of the Hawaii State Department of Health contains information on investigations in progress and/or diagnoses that may not yet be confirmed. The **Hawaii Epi Bulletin** is intended primarily for the use of the public health professionals, should be considered privileged, and should **NOT** be distributed further.

Murine Typhus in Hawaii

The Coordinator's Corner
Arboviral Diseases



Fleas have long been the cause of some of the largest outbreaks of infectious diseases ever seen in human populations. Here in Hawaii, the main concern related to fleas comes from murine typhus (also known as endemic typhus), a bacterial infection caused by the organism *Rickettsia typhi*. Since 2013, there have been 28 confirmed and probable cases of murine typhus reported in Hawaii residents with 2 cases so far in 2017. However, higher incidence of murine typhus infections is possible and has occurred in Hawaii's recent past. In 2002, 47 cases of murine typhus were reported to the Hawaii Department of Health across 5 separate islands: Maui (35 cases), Molokai (six), Oahu (three), Kauai (two), and Hawaii (one).

Most cases of murine typhus have been associated with a specific flea species (*Xenopsylla cheopis*) coming from rats, but the bacteria can also be transmitted by other fleas more commonly associated with cats and other pets. These fleas may also be found on rats, mice, mongooses, and other small mammals if they come in contact with other infested animals. The murine typhus bacteria are transmitted to humans through bites from these infected fleas or through the inhalation of infected, dried flea feces. The fleas themselves become infected after feeding from the rodents, which serve as the reservoir for the bacteria. Once a flea is infected, it can spread the disease for the rest of its life. Murine typhus is not spread from one

infected person to another or from an infected person to fleas.

Symptoms of murine typhus typically begin 7 to 14 days after initial exposure to the bacteria. The symptoms can have sudden onset and may include fever, headaches, body and joint pain, nausea, vomiting, and stomach aches. The illness seldom lasts longer than 2 weeks, and the duration of the illness can be shortened through antibiotic treatment prescribed by a healthcare provider. However, if the infection is left untreated, symptoms may persist and complications, such as encephalitis (brain inflammation) or organ failure, may occur.

To prevent murine typhus infections, it is important to reduce and avoid any potential contact with infected fleas. Keep rodents and other infected animals away from your home by removing excess timber and other materials that could harbor rats infested with fleas. If necessary, trapping rodents live may be preferable to poisoning them as the fleas may then leave the deceased rodent in search of a new host, including pets. If contact with fleas is unavoidable, be sure to use insect repellents containing DEET to repel the pests. Additionally, always wear gloves if you are handling sick or dead animals that may have been infested with fleas.

For more information on murine typhus, check out our website here: ([Murine Typhus](#))

Updates from the Pacific

Mumps

- There have been ongoing outbreaks and circulation reported from Vanuatu, Pohnpei and Kosrae in the Federated States of Micronesia, Marshall Islands, New Zealand, and Tonga.

Influenza

- An increasing number of influenza A and B cases have been reported in New Caledonia. As of Oct. 10, 2017, 106 cases of influenza A and 39 cases of influenza B have been confirmed since July 24, 2017.

Typhoid Fever

- As of Oct. 10, 2017, a total of 13 cases have been reported from Moturiki, Fiji.

Conjunctivitis

- There have been an increasing number of cases reported in the Republic of Marshall Islands.

Don't Forget to Get your Flu Vaccination!

Flu season is underway, and a yearly flu vaccine is one of the most important ways to protect yourself against the virus. It's recommended that everyone 6 months or older should get an annual flu vaccine. It's never too late to get one if you haven't already!

Vaccines are available from many locations statewide, including doctor's offices and many pharmacies. You can use our vaccine locator to find one near you!

[Vaccine Locator](#)



HDOH Hawaii Health Care Provider Disease Reporting Categories

Confidential

Infections/diseases which may carry a social stigma are to be reported with extra precautions to assure patient confidentiality. Reports are to be submitted within three working days of diagnosis.

Urgent

Diseases or conditions that are suspicious or presenting with novel symptoms that may or may not be part of a known disease or disease complex, labeled "urgent" shall be **reported by telephone as soon as a provisional diagnosis is established.**

The telephone report shall be followed by a written report submitted by mail or fax within three days to the Disease Outbreak Control Division, Disease Investigation Branch on Oahu or to the District Health Office on the neighbor islands.

Routine

Diseases labeled "routine" shall be reported by mail, by telephone, or fax to the Disease Outbreak Control division, Disease Investigation Branch on Oahu or to the District Health Office on the neighbor islands.

Routine/Enteric (enteric prevention priority)

Diseases labeled "routine—enteric prevention priority" shall be reported by telephone as soon as a working diagnosis is established if the individual case is a food handler, direct care provider, or pre-school-aged child. Otherwise, routine reports may be submitted.

Outbreak Reports

Any disease shall be reported by telephone when observed to occur clearly in excess of normal expectancy as determined by the healthcare provider or the Director of Health. The telephone report shall be followed by a written report submitted by mail or fax within three days to the Disease Outbreak Control Division, on Oahu or to the District Health Office on the neighbor islands.

HDOH Telephone Numbers

Oahu (Disease Investigation Branch)
(808) 586-4586

Maui District Health Office
(808) 984-8213

Kauai District Health Office
(808) 241-3563

Big Island DHO (Hilo)
(808) 933-0912

Big Island DHO (Kona)
(808) 322-4877

After hours (Oahu)
(808) 566-5049

After hours (Neighbor islands)
(808) 360-2575