Hawaii Epi Bulletin

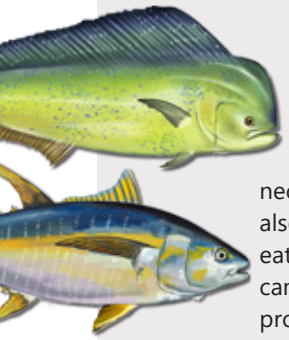
HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Spring 2018

There's something fishy about these illnesses…

Fish can be a very beneficial part of a diet, and can provide many positive health benefits to the consumer. However, there are some types of food poisoning that may sometimes occur with its consumption. Two types that are a risk here in Hawaii are scombroid and ciguatera fish poisoning. While the risk of these illnesses should not deter you from eating fish, having a better understanding of the risks associated with them will help you reduce your chances of getting sick.

Scombroid Fish Poisoning



Scombroid fish poisoning is an illness you get as a result of eating spoiled fish. When fish is not kept at the proper temperature at any point during its processing, an amino acid called histidine can be converted to histamine by bacteria; the high level of histamines is what causes this poisoning. Scombroid poisoning is most commonly associated with fish that are naturally high in histidine, including ahi, mahimahi, bonito, aku, albacore, mackerel, sardines, and anchovies. Symptoms of scombroid can occur within 30 minutes to several hours of eating spoiled fish and often can resemble an allergic reaction. This includes a reddening of the face (and sometimes the neck, arms, and upper trunk), a severe headache, rapid heartbeat, stomach cramps, nausea, and diarrhea. There is also sometimes an itching around the mouth and a taste that can be described as sharp, metallic, or peppery while eating the fish. Treatment for cases of scombroid poisoning is often unnecessary, but antihistamines or epinephrine can sometimes help with addressing some of the symptoms. The best way to prevent scombroid poisoning is to promptly clean and cook fish to avoid spoilage, and to make sure you always store fish at proper temperatures (40°F or below).

Ciguatera Fish Poisoning

Ciguatera fish poisoning is caused by the ingestion of ciguatoxin, a toxin produced by a microorganism called *Gambierdiscus toxicus* found on and near coral reefs. Small fish eat the microorganism and become contaminated with the toxin. Larger fish then eat those smaller fish, causing the toxin to become concentrated in their body, with the highest concentrations found in their livers, intestines, roe (eggs), and head. If people eat a fish or part of a fish with high levels of the toxin, they can become ill. Symptoms of ciguatoxin poisoning include numbness or tingling around the mouth, hands, or feet, joint or muscle pain, vomiting, diarrhea, chills, itching, headache, sweating, and dizziness. In some cases, temperature sensations can become reversed in the mouth. Symptoms often develop anywhere from within a few minutes to 3-6 hours after eating a contaminated fish. There is no treatment for ciguatera poisoning, but supportive care can be provided for the symptoms. There are no signs to indicate if a fish is contaminated with the toxin, and cooking does not remove the toxin, so the best way to minimize the risk and symptoms of ciguatera poisoning is to avoid eating head, intestines, liver, or roe (eggs) of any reef fish, as these are the parts with the highest concentration of toxin.

Both of these illnesses are reportable to the Hawaii Department of Health. For more information, go here:
Scombroid – Ciguatera

There's a fungus among us…*Candida auris*

The Coordinator's Corner
Healthcare-Associated Infections (HAI)

Fungi can cause a variety of serious infections from aspergillosis to histoplasmosis. In fact, *Candida* species, a type of yeast, are the most common organisms responsible for causing healthcare-associated bloodstream infections. *Candida albicans* was once the dominant *Candida* species of human infections. However, now over half are caused by a variety of non-*albicans* species, including *glabrata*, *parapsilosis*, and *tropicalis*. One species, *auris*, is causing concern as an emerging, multidrug-resistant pathogen leading to serious infections with few treatment options.

C. auris was first identified in the external ear canal of an inpatient in a Japanese hospital in 2009 (Auris is Latin for ear). Forty percent of *C. auris* isolates are multidrug-resistant, which is especially concerning because unlike antibacterials, there are only three antifungal drug classes: polyenes, azoles, and echinocandins.

Transmission of *C. auris* has occurred primarily in healthcare facilities and, unfortunately, *C. auris* affects the sickest of the sick. Risk factors for invasive candidiasis have included broad-spectrum antibiotic use, a prolonged ICU stay, abdominal surgery, or the presence of a central line. Twenty-five percent of patients with candidemia (*Candida* in the blood) die before hospital discharge. Additionally, patients' skin can be colonized with *C. auris* indefinitely. Colonization poses risks for invasive infection and transmission to others.

To add to the challenges with *C. auris*, yeasts aren't always identified to the species level. When they are, *C. auris* is commonly misidentified as similar species such as *C. haemulonii*.

As of March 31, 2018, the Centers for Disease Control and Prevention (CDC) has reported 257 confirmed clinical cases of *Candida auris* and far more colonized patients. The majority of clinical cases have been from New York (155), New Jersey (59), and Illinois (25) (Figure 1). *C. auris* has been detected around the globe, and US cases have been linked to healthcare facilities in India, Pakistan, South Africa, the United Arab Emirates, and Venezuela. For updated case counts, visit the CDC's *C. auris* tracking webpage. Fortunately, Hawaii hasn't yet detected *C. auris*. To ensure this pathogen doesn't become endemic on our islands, we will all have to work together to improve detection and containment.

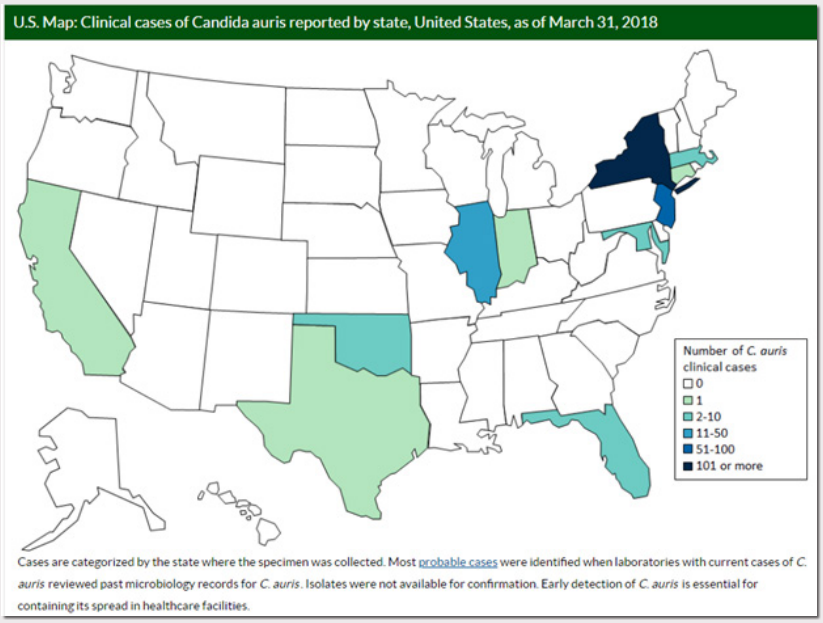
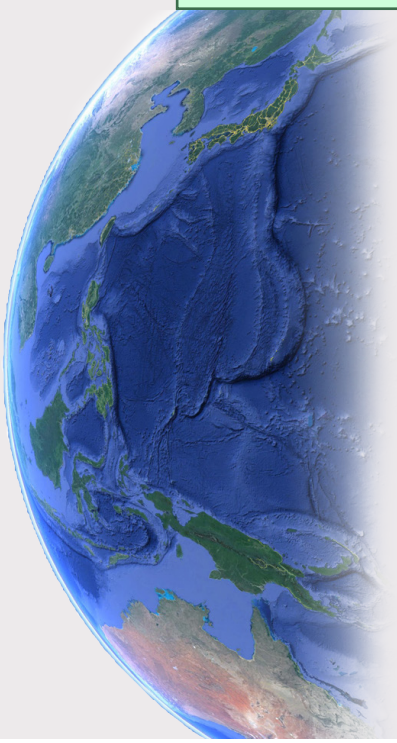


Figure 1: Source CDC

Providers should remain aware of emerging multidrug-resistant threats, where they are circulating, and what the risk factors are. They should collect a travel history on any patients they suspect may have *Candida auris* infection. With that information, laboratories can perform appropriate tests, and infection preventionists can ensure appropriate precautions are put into place until *C. auris* diagnosis is excluded. Here in Hawaii, suspect *C. auris* isolates are sent to our regional public health reference laboratory in Washington state. Any positive results will initiate an aggressive containment response from the Disease Investigation Branch at the Department of Health.

For more information, visit the CDC *C. auris* webpage here.

Updates from the Pacific



Mumps

- There are ongoing outbreaks occurring in **Chuuk and Yap States (FSM)** and **Vanuatu**

Measles

- There is an ongoing outbreak reported from the **Philippines**. As of March 26, 2018, there have been 4,168 cases reported since January 1, 2018. Thirteen deaths have been associated with the outbreak.

Meningococcal disease

- An outbreak of meningococcal disease group C is reported in **Fiji**. As of April 19, 2018, there have been 55 cases (23 laboratory confirmed) since January 1, 2018.

Dengue

- Ongoing DENV-2 outbreaks occurring in **American Samoa**, **Fiji**, and **Vanuatu**
- DENV-1 outbreak ongoing in **Wallis and Futuna**
- An outbreak involving DENV-1 and DENV-2 is ongoing in **New Caledonia**.
- The number of new dengue cases reported from an outbreak in **Samoa** has decreased greatly. However, as of March 18, 2018 there have been 3,255 cases reported since August 2017.

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