



EPI WATCH

Monthly Epidemiology Newsletter

World Tuberculosis Day

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Disease Reporting

To report diseases and clusters of illness:

Phone: (727) 824-6932

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(excluding HIV/AIDS)

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World Tuberculosis Day is observed on March 24 in recognition of German physician Robert Koch who identified *Mycobacterium tuberculosis* as the bacteria that causes Tuberculosis (TB) in 1882¹.

TB primarily affects the lungs (pulmonary) but can infect any part of the body (extra-pulmonary). Pulmonary TB is transmitted by droplets when an infected person coughs, sings or sneezes². Common symptoms of pulmonary TB disease are a cough lasting more than three weeks, coughing up blood, unintended weight loss, fatigue, fever, night sweats, chills, and loss of appetite.



TB is categorized into two conditions; latent TB infection (LTBI) and active TB. LTBI occurs when *M. tuberculosis* is present in the body, but the immune system keeps the bacteria from replicating and making the infected person sick. Those with LTBI generally do not have symptoms and are unable to transmit the infection to others. Latent TB infections can become active TB disease when the immune system is unable to prevent the bacteria from replicating and can occur weeks to years after the initial infection². Treatment for LTBI and active TB includes multiple antibiotics taken daily from three months to a year². In Florida, this regimen must be directly observed to confirm adherence. Multi-drug resistant TB (MDR-TB) is found throughout the world and following treatment is crucial for limiting the development of MDR-TB. In many developed countries active TB is rare but increases in cases and deaths have been occurring since 2020. In 2021, the Centers for Disease Control and Prevention (CDC) reported almost 7,900 cases of active TB in the United States. Additionally, 600 deaths associated with TB disease were reported in 2020. Per the CDC, Florida reported 6.3% of the active TB cases in 2021 with New York, Texas and California reporting the most cases¹.

Multiple screening tests are available; however, these tests alone do not determine active or latent TB. Positive screening tests must be followed by chest radiographs, sputum testing, and physical assessment to determine the current condition².

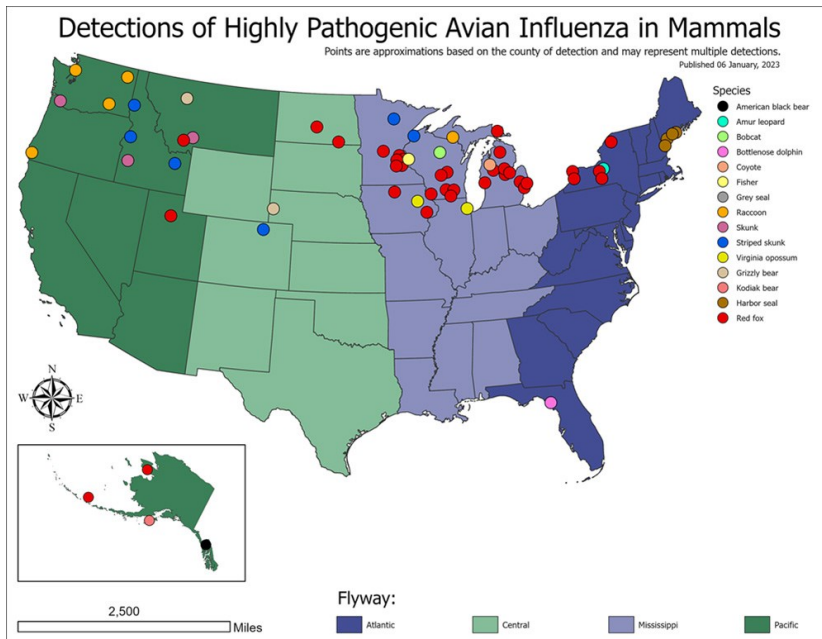
Active TB can be prevented by screening those at high risk for TB, completing LTBI treatment when identified and seeking medical evaluation if symptomatic¹.

For more information, please visit: [Tuberculosis \(TB\) | CDC](https://www.cdc.gov/tb/)

¹ <https://www.cdc.gov/tb/default.htm> ² Tuberculosis - Symptoms and causes - <https://www.mayoclinic.org/diseases-conditions/tuberculosis/symptoms-causes/syc-20351250> Mayo Clinic ³ Tuberculosis | Florida Dept of Health <https://www.floridahealth.gov/diseases-and-conditions/tuberculosis/index.html> Florida Department of Health (floridahealth.gov)

Avian Influenza (H5N1) Spillover in North American Seals

By: Stephen Marlin, MPH, CPH



Source: [USDA APHIS | 2022-2023 Detections of Highly Pathogenic Avian Influenza in Mammals](https://www.usda.gov/aphis/npis/topics/diseases/2022-2023-detections-of-highly-pathogenic-avian-influenza-in-mammals)

transmission may have occurred.¹ This study suggests that the virus could be the cause of the elevated number of seal deaths over the course of the year.

This study, and others, reinforces the idea that continued monitoring of HPAI transmission among wild birds, agricultural flocks, and nearby animal populations remains critically important. With the right data, public health agencies may be able to help reduce the impact that HPAs have on the U.S. economy and its people.

For more information about avian influenza, please visit: <https://www.cdc.gov/flu/avianflu/index.htm>

¹ https://wwwnc.cdc.gov/eid/article/29/4/22-1538_article ² <https://www.cdc.gov/flu/avianflu/spotlights/2022-2023/h5n1-technical-report.htm>

³ <https://www.cdc.gov/flu/avianflu/timeline/avian-timeline-2020s.htm>

Highly pathogenic avian influenza (HPAI) viruses are of substantial concern to public health agencies, including the Centers for Disease Control and Prevention (CDC), due to their potential to spread rapidly through bird populations. HPAI viruses are known to cause severe disease and many mortalities among birds and can have devastating effects on wildlife and agricultural flocks, raising concern for conservationists and farmers. HPAI viruses also have the capacity to transmit to mammals in rare cases, causing mild to severe illness.²

In February of 2022 there were reports of an H5N1 outbreak (an HPAI virus) in a commercial turkey facility.³ Over the course of the year, researchers associated with Tufts University noticed a corresponding elevation in the number of strandings and mortalities among North American seals. Knowing that HPAs have been known to transmit to marine mammals, the Tufts researchers conducted two testing trials on seals located in a region spanning from Virginia to

Maine and found evidence that bird to mammal

Karenia brevis and Shellfish Harvesting

By: Jessica McFarland

Algae is an important part of the ocean ecosystem but when supplied with excess nutrients, can multiply exponentially, becoming harmful to nearby ocean life when oxygen in the water is depleted and is referred to as harmful algal blooms (HAB)¹. Some algae species, like *Karenia brevis*, color the water surface red leading to the name “red tide”; however, not all HABs are red. *K. brevis* is distributed throughout the Gulf of Mexico and can be harmful to marine animals, birds and turtles. Humans can be impacted by skin and throat irritation¹.

Karenia brevis produces a neurotoxin called brevetoxin, which disrupts nerve cells. The toxin can accumulate in filter feeders such as snails, clams and oysters². The Department of Health does not recommend local harvesting during times of red tide.

These type of shellfish can be contaminated with brevetoxins and when consumed can cause Neurotoxic Shellfish Poisoning (NSP). Symptoms include gastrointestinal upset, tingling and numbness of the lips, mouth, fingers and toes, myalgia, ataxia and dizziness. The toxin cannot be removed by preparation methods and individuals are highly discouraged from local harvesting during times when *K. brevis* is in the Gulf waters. The Florida Department of Agriculture and Consumer Services closes shellfish harvesting areas when *K. brevis* cell counts exceed 5,000 cells per liter; however, illegal harvesting has been linked to NSP cases².

Visit the Florida Fish and Wildlife Conservation Commission’s website for more information on red tide: <https://myfwc.com/research/redtide/statewide/>

¹ <https://ocean.si.edu/ocean-life/plants-algae/what-exactly-red-tide>

² https://www.floridahealth.gov/environmental-health/aquatic-toxins/_documents/nsp-medical-facts-2014-56kb.pdf



Select Reportable Diseases in Pinellas County

Disease	Pinellas		YTD Total		Pinellas County Annual Totals		
	Feb 2023	Feb 2022	Pinellas 2023	Florida 2023	2022	2021	2020
A. Vaccine Preventable							
Coronavirus 2019	3496	22780	6358	202574	119224	103356	44852
Measles	0	0	0	0	0	0	1
Mpox	0	0	1	17	2861	0	0
Mumps	0	0	0	2	14	9	20
Pertussis	0	0	0	15	60	55	216
Varicella	1	3	6	79	440	365	348
B. CNS Diseases & Bacteremias							
Creutzfeldt-Jakob Disease (CJD)	0	1	0	12	51	22	10
Meningitis (Bacterial, Cryptococcal, Mycotic)	0	2	2	17	131	83	81
Meningococcal Disease	0	0	0	10	68	27	17
C. Enteric Infections							
Campylobacteriosis	20	14	31	605	4022	3873	3403
Cryptosporidiosis	3	2	6	113	619	343	291
Cyclosporiasis	0	0	0	6	509	252	153
<i>E. coli</i> Shiga Toxin (+)	1	3	2	144	1033	573	454
Giardiasis	4	1	4	194	1179	710	656
Hemolytic Uremic Syndrome (HUS)	0	0	0	0	17	3	4
Listeriosis	0	0	0	4	55	57	38
Salmonellosis	6	11	18	669	7059	6240	6738
Shigellosis	4	2	11	170	948	535	549
D. Viral Hepatitis							
Hepatitis A	0	1	0	24	320	203	1021
Hepatitis B: Pregnant Woman +HBsAg	0	3	1	87	426	292	325
Hepatitis B, Acute	1	2	3	125	794	654	549
Hepatitis C, Acute	12	8	20	261	1668	1809	1688
E. Vectorborne/Zoonoses							
Animal Rabies	0	0	0	8	65	85	82
Rabies, possible exposure	11	10	27	830	4839	3738	3458
Chikungunya Fever	0	0	0	0	1	1	0
Dengue fever	0	0	0	58	960	32	116
Eastern Equine Encephalitis	0	0	0	0	0	0	0
Lyme Disease	0	0	0	12	257	193	121
Malaria	1	0	2	8	60	44	18
West Nile Virus	0	0	0	0	9	10	51
Zika Virus Disease	0	0	0	0	0	0	0
F. Others							
Chlamydia	295	318	592	N/A	4027	4090	3956
Gonorrhea	118	140	265	N/A	1734	1883	1634
Hansen's Disease	0	0	0	3	8	13	27
Legionellosis	0	0	2	54	523	503	428
Mercury Poisoning	0	0	0	6	37	15	9
Syphilis, Total	41	57	99	N/A	879	634	479
Syphilis, Infectious (Primary and Secondary)	18	15	55	N/A	336	274	212
Syphilis, Early Latent	15	29	33	N/A	269	239	166
Syphilis, Congenital	0	0	0	N/A	5	7	5
Syphilis, Late Syphilis (Late Latent; Neurosyphilis)	8	13	11	N/A	269	114	96
Tuberculosis	1	1	1	N/A	22	21	24
<i>Vibrio</i> Infections	0	1	1	2	230	178	226

*YTD up to February 28, 2023. n/a = not available at this time