EPI WATCH

Monthly Epidemiology Newsletter

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(excluding HIV/AIDS)

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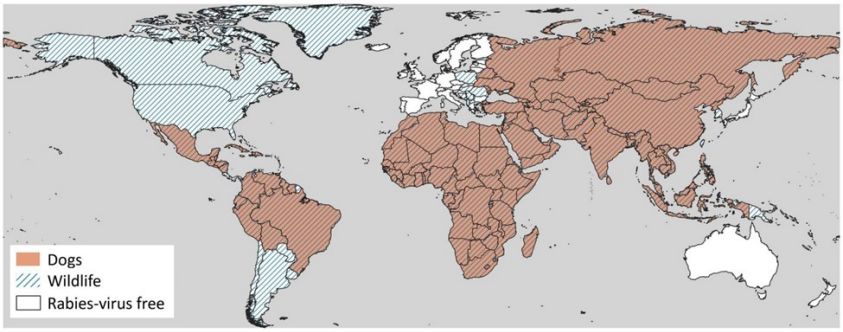
World Rabies Day

By: Rachel Ilic, MPH, CPH, CIC

Each year, World Rabies Day is celebrated on September 28 to raise awareness about rabies prevention and to honor Louis Pasteur, who developed the vaccine in 1885. Every year, rabies kills 70,000 people worldwide, despite the disease being preventable[1]. More than 99% of human rabies deaths outside of the United States are from dog bites or scratches.



Retrieved from: https://www.cdc.gov/rabies/around-world/index.html

The image below indicates the most likely source of rabies infection around the world. Although dogs are the main vector, other wildlife animals such as bats, foxes, jackals, mongooses, and skunks, among others, transmit rabies as well.

Retrieved from: https://www.cdc.gov/rabies/around-world/index.html

While the species vary around the world, it is important to remember that regardless of which type of animal a person encounters, any mammal can transmit rabies and therefore, a thorough history must be reviewed when identifying the need for post exposure prophylaxis.

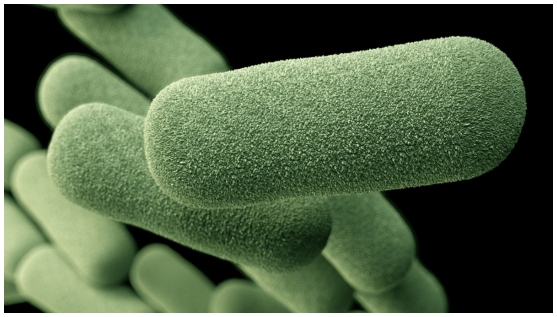
In the United Sates, the National Rabies Management Program was established in recognition of the changing scope of rabies. The goal of the program is to prevent the further spread of wildlife rabies and eventually eliminate terrestrial rabies in the US through an integrated program that involves the use of oral rabies vaccination targeting wild animals. This program targets the raccoon variant, canine variant in coyotes and a unique variant of gray fox rabies.

Over the past 30 years, rabies management has grown in complexity in the United States, as wild animals, including skunks, raccoons, foxes, coyotes, and bats, have replaced the domestic dog as the primary reservoir for the disease.

Resources:
[1]https://www.cdc.gov/rabies/around-world/index.html

Haemophilus influenzae

By: Stephen Marlin, MPH, CPH



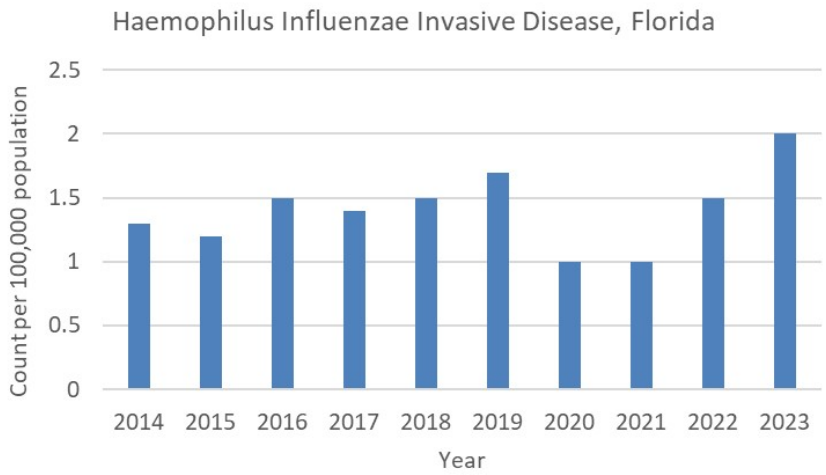
Haemophilus influenzae is a bacterium that can cause severe infections, with very young children having the highest risk of disease. *H. influenzae* spreads through direct person-to-person contact, entering the body through airborne droplets or direct contact with respiratory secretions. Once introduced, the bacteria can enter and colonize the nasopharynx of an individual and remain there for several months. Neonates can acquire the infection during delivery through amniotic fluid or through contact with genital tract secretions.

The most common clinical manifestations resulting from severe *H. influenzae* infections are meningitis, bronchitis, epiglottitis, pneumonia, arthritis, and cellulitis. Reports of *H. influenzae* tend to follow a seasonal pattern, with increased cases typically occurring during autumn (September through December) and spring (March through May). Although person-to-person transmission beyond the initial case is uncommon, several factors may elevate infection risk, including overcrowded living conditions, large family units, daycare exposure, underlying health conditions, or immunosuppressive therapy.

In the late 19th century, researchers initially believed that *H. influenzae* was responsible for influenza outbreaks. Richard Pfeiffer first documented the organism in 1892, when he identified it in respiratory samples from influenza patients, leading him to suggest a connection between the bacterium and the flu-like illness. Charles-Edward Winslow and colleagues assigned the name *Haemophilus* to the organism in 1920. The true viral cause of influenza wasn't established until 1933, revealing that *H. influenzae* was causing secondary bacterial infections[1].

Prior to widespread immunization, *H. influenzae* was commonly found in the nasopharynx of healthy children and would resolve without causing disease. *H. influenzae* was common enough, however, that the bacterium was still historically the most common cause of bacterial meningitis, and was a primary cause of many other bacterial diseases as well[1].

H. influenza invasive disease has presented most commonly among the youngest children. Severe manifestations were typically seen in children under the age of 5 years; within that group, the majority of cases were children younger than 18 months, and even further, the greatest burden of disease was typically seen among those children 6 to 11 months old[1].



Data retrieved from FLCHARTS. https://www.flhealthcharts.gov/

H. influenzae strains are classified as encapsulated (typable) or unencapsulated (non-typable). Of the typable strains, they are further classified by one of six distinct polysaccharides that present on the bacterial capsule (known as types a, b, c, d, e, and f). Through cerebrospinal fluid analysis conducted by Margaret Pittman in the 1930's, it was determined that almost all cases of invasive disease were capsular and type b, also known as *Haemophilus influenzae* type b or Hib. After the introduction of Hib conjugate immunization in 1987, the case incidence of invasive disease decreased by 99%, resulting in a national annual rate of fewer than 2 cases per 100,000 population for the last several decades[4]. The majority of reported invasive *Haemophilus* infections that occur today are from non-typable strains, which Hib immunization does not confer protection against. Although case rates are low, this disease has not been eradicated. Florida sees roughly 300 cases of *H. influenzae* invasive disease on average each year, and the population adjusted rate may be increasing[5].

The Centers for Disease Control and Health Protection's *Haemophilus influenzae* Pediatric Supplemental Surveillance Report provides an overview of case reports from 14 participating states[3]. In 2023 (the most recent available national summary), 661 cases of invasive *Haemophilus influenzae* disease were reported among children aged <5 years throughout the United States[3]. Of 171 analyzed cases, the highest incidence occurred in those 1-11 months of age (n=56). Clinical syndromes were reported for 148 cases, and of those, 67 experienced bacteremia, 30 exhibited meningitis, 25 experienced pneumonia, and 26 had other syndromes. Overall, the case fatality rate (per 100 cases with known outcome) was 12.4.

Invasive *Haemophilus influenzae* infections became nationally notifiable in 1991. The Florida Department of Health continues to monitor this disease of significant public health concern.

Resources:

[1]https://www.cdc.gov/pinkbook/hcp/table-of-contents/chapter-8-haemophilus-influenzae.html#:~:text=Haemophilus%20influenzae%20type%20b%20(Hib),-Causes%20severe%20bacterial&text=It%20was%20first%20described%20by,clinical%20syndrome%20known%20as%20influenza.

[2]https://ndc.services.cdc.gov/case-definitions/haemophilus-influenzae-invasive-disease-2015/

[3]https://www.cdc.gov/hi-disease/media/images/Hifigure3.png

[4]https://www.cdc.gov/Mmwr/preview/mmwrhtml/rr6301a1.htm

[5]https://www.flhealthcharts.gov/charts/LoadPage.aspx?l=rdPage.aspx?rdReport=NonVitalIndNoGrp.Dataviewer&cid=0167

Select Reportable Diseases in Pinellas County

Disease	Pinellas		YTD Total		Pinellas County Annual Totals		
	Aug 2025	Aug 2024	Pinellas 2025	Florida 2025	2024	2023	2022
A. Vaccine Preventable							
Coronavirus 2019	2030	2902	7271	165432	19906	45495	110629
Measles	0	0	0	6	0	0	0
Mpox	1	2	2	31	12	6	155
Mumps	0	0	0	8	2	0	0
Pertussis	10	4	71	1222	38	1	2
Varicella	0	1	11	338	157	25	24
B. CNS Diseases & Bacteremias							
Creutzfeldt-Jakob Disease (CJD)	0	0	2	25	3	1	3
Meningitis (bacterial, cryptococcal, mycotic)	0	1	2	99	16	6	11
Meningococcal Disease	0	0	0	20	1	3	2
C. Enteric Infections							
Campylobacteriosis	24	17	186	4239	221	222	203
Cryptosporidiosis	4	2	18	341	29	28	38
Cyclosporiasis	1	3	4	176	7	11	19
E. coli Shiga Toxin (+)	6	3	24	861	34	36	26
Giardiasis	1	4	26	695	59	40	34
Hemolytic Uremic Syndrome (HUS)	0	1	2	24	2	2	0
Listeriosis	0	0	4	44	1	2	3
Salmonellosis	15	29	104	4628	220	187	170
Shigellosis	4	5	37	799	46	55	35
D. Viral Hepatitis							
Hepatitis A	0	0	0	97	1	1	20
Hepatitis B: Pregnant Woman +HBsAg	1	0	5	300	4	17	20
Hepatitis B, Acute	4	1	10	355	32	37	32
Hepatitis C, Acute	4	9	49	1167	92	104	117
E. Vectorborne/Zoonoses							
Animal Rabies	1	0	1	73	1	1	0
Rabies, possible exposure	34	27	198	5384	195	180	134
Chikungunya Fever	0	0	0	10	1	0	0
Dengue fever	2	1	5	267	10	5	7
Eastern Equine Encephalitis	0	0	0	0	0	0	0
Lyme Disease	4	4	12	260	13	21	11
Malaria	0	0	0	32	2	4	4
West Nile Virus	0	0	0	7	1	0	0
Zika Virus Disease	0	0	0	0	0	0	0
F. Others							
Hansens Disease (Leprosy)	0	0	0	25	1	1	0
Legionellosis	4	3	31	460	36	16	37
Mercury Poisoning	0	0	0	27	0	0	0
Vibrio Infections	1	2	19	279	29	19	19
Tuberculosis	4	2	19	457	25	20	22
G. Sexually Transmitted Infections							
Chlamydia	306	334	2479	64016	3914	4256	4054
Gonorrhea	163	129	1063	23755	1803	1802	1752
Syphilis, Total	41	59	334	10628	582	687	766
Syphilis, Infectious (Primary and Secondary)	15	28	135	2006	287	361	347
Syphilis, Early Latent	12	18	111	3444	146	206	279
Syphilis, Late Syphilis (Late Latent; Neurosyphilis)	14	12	86	5025	142	112	135
Syphilis, Congenital	0	1	2	153	7	8	5

*YTD up to August 31, 2025

**includes travel and non-travel associated cases

All data are provisional and subject to updates as new reports are received and reviewed.