

EPI GRAM December, 2017

A Monthly Publication of the Stark Public Health Infrastructure Coalition

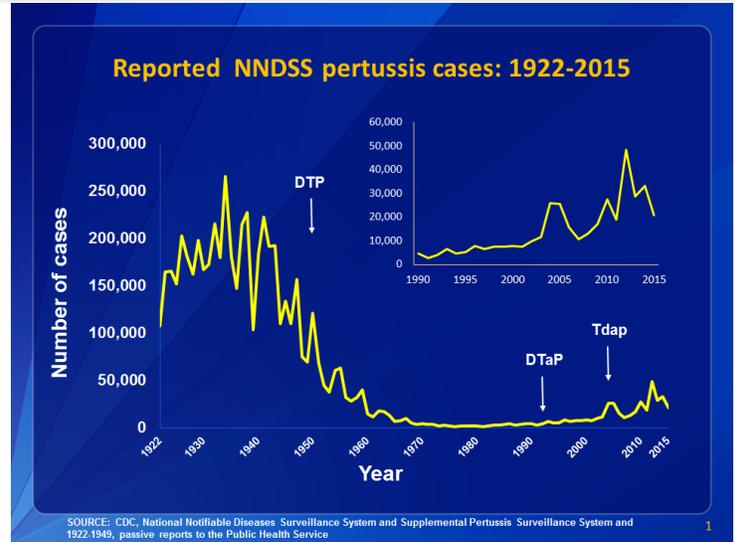
EPI Gram is a monthly publication of the Stark County Public Health Infrastructure Coalition. It contains a summary of provisional communicable disease reports and other key public health indicators, with summary tables for Stark County, Ohio. Some reportable conditions may be under investigation and, at any given time, data may fluctuate from month to month for a specific category. **If you have any questions please contact Avinash Joseph at 330.493.9914 or josepha@starkhealth.org, or Amanda Archer at 330.489.3327 or aarcher@cantonhealth.org.**



Public Health
Prevent. Promote. Protect.

Monthly Highlight: Pertussis

Pertussis (also known as whooping cough) is a vaccine preventable bacterial infection caused by the bacterium *Bordetella pertussis*. Pertussis almost exclusively affects younger children, and outbreaks most commonly blossom in daycares and schools. Pertussis normally occurs in 3 stages: catarrhal, paroxysmal, and convalescent. The catarrhal stage resembles the common cold and is when the disease is most infectious, normally lasting from 1 to 2 weeks. The paroxysmal stage is when symptoms worsen; the patient's cough becomes more violent with the signature whoop caused by gasps for air. Mucus production, apnea, or vomiting may also occur during this stage, which typically lasts 4 to 6 weeks but can last up to 10. In the convalescent stage symptoms gradually disappear, although symptoms may recur if the case develops a different respiratory infection.



Pertussis cases in the United States from 1922-2015, via CDC

Pertussis is transmitted when someone exhales, coughs, or sneezes the bacteria into the air. The aerosolized droplets are then breathed in by someone nearby, who can become infected. The best way to prevent the spread of pertussis is by vaccination. The main vaccine used in the United States for pertussis is the DTaP, which confers immunity against diphtheria, tetanus, and pertussis. The first three doses of DTaP are normally given to young children at 1 month, 2 months, and 6 months, with the fourth dose given between 12 and 18 months and a fifth between 4 and 6 years of age. A booster shot known as the Tdap (which vaccinates against the same diseases) is given at age 11 or 12. Newborns and infants who have not received the full DTaP series are particularly susceptible to illness; close contacts of cases who are pregnant or work closely with these vulnerable populations are generally recommended prophylactic antimicrobial treatment.

Stark County has seen a significant rise in pertussis cases. In December alone there were 24 cases throughout the county, bringing the total up to 41 cases for the year (above the 5 year average of 37.4 cases). Many of these cases were associated with incomplete vaccination. The best way to prevent pertussis is by having your child complete the DTaP series and Tdap as recommended. Other methods of reducing transmission include isolation of known cases, rapid antimicrobial treatment and vaccination (if applicable) for cases and vulnerable contacts, proper hand hygiene, and active surveillance.

Table 1 Summary of Air Quality Index, Pollen, and Mold Counts for Stark County, Ohio, including historical data.

	December 2017				December 2016			
	Monthly High	Monthly Low	Monthly Median	Counts in highest reported health risk category	Monthly High	Monthly Low	Monthly Median	Counts in highest reported health risk category
Pollen Count	Data collected seasonally and not currently available				Data collected seasonally and currently not available.			
Mold Count	Data collected seasonally and not currently available				Data collected seasonally and currently not available.			
Air Quality Index	72	18	40	7 (Moderate)	58	15	25	3 (Moderate)

**See the following websites for updated Air Quality Index and mold index terminology and color coding: <http://www.airnow.gov/index.cfm?action=aqibasics.aqi> https://pollen.aaaai.org/nab/index.cfm?p=reading_charts. Data source for this table is the Air Quality Division of the Canton City Health Department.

Table 2 Select Vital Statistics for Stark County

	December 2017	YTD 2017	2016
Live Births	337	4,198	4,190
Births to Teens	31	306	263
Deaths	316	4,350	4,388

* Birth and death data may include non-county residents.

Table 3 Stark County Crude Birth Rate and Death Rates

	2011	2012	2013	2014	2015
Birth	10.8	10.9	11.2	12.0	12.3
Death	11.3	11.4	11.3	11.4	11.6

*Source: Ohio Department of Health Data Warehouse. Rates are per 1,000 population.

Table 4: Jurisdictional Summary of Reportable Diseases in Stark County

	Alliance City		Canton City		Massillon City		Stark County		Total	
	Dec	YTD	Dec	YTD	Dec	YTD	Dec	YTD	Dec	YTD
Amebiasis	0	0	0	0	0	1	0	0	0	1
Babesiosis	0	0	0	0	0	0	0	1	0	1
Brucellosis	0	0	0	1	0	0	0	0	0	1
Campylobacteriosis	1	6	0	26	0	2	2	54	3	88
Chlamydia infection	10	123	54	797	12	192	46	695	122	1,807
Coccidioidomycosis	0	0	0	0	0	0	0	0	0	0
Creutzfeldt-Jakob Disease	0	1	1	1	0	0	0	1	1	3
Cryptosporidiosis	2	5	0	2	0	3	1	20	3	30
Cyclosporiasis	0	0	0	0	0	0	0	2	0	2
E. coli, Shiga Toxin-Producing	0	0	0	1	0	2	1	9	1	12
Giardiasis	0	2	0	3	0	1	0	12	0	18
Gonococcal infection	1	21	22	326	2	40	13	154	38	541
Haemophilus influenzae	0	0	0	2	0	0	1	7	1	9
Hepatitis A	0	1	0	0	0	1	1	8	1	10
Hepatitis B – acute	0	2	1	3	0	2	0	1	1	8
Hepatitis B - chronic	0	2	0	19	1	5	7	40	8	66
Hepatitis B - perinatal	0	0	0	0	0	0	0	3	0	3
Hepatitis C - acute	0	0	0	2	0	0	0	0	0	2
Hepatitis C - chronic	2	29	8	110	3	38	11	129	24	306
Hepatitis E	0	0	0	0	0	0	0	0	0	0
Influenza-associated hospitalization	3	24	30	113	13	39	57	237	103	413
Influenza-associated pediatric mortality	0	0	0	0	0	0	0	0	0	0
LaCrosse Virus Disease	0	0	0	0	0	0	0	0	0	0
Legionellosis	0	1	0	6	0	0	0	8	0	15
Listeriosis	0	0	0	0	0	0	0	1	0	1
Lyme Disease	0	2	0	5	0	1	3	21	3	29
Malaria	0	0	0	0	0	0	0	0	0	0
Measles - indigenous to Ohio	0	0	0	0	0	0	0	0	0	0
Meningitis - aseptic/viral	0	2	0	14	0	2	2	25	2	43
Meningitis-bacterial (not N. meningitides)	0	0	0	1	0	1	1	1	1	3
Mumps	0	0	0	1	0	1	0	1	0	3
Pertussis	4	6	11	17	5	5	4	13	24	41
Q fever, acute	0	0	0	0	0	0	0	1	0	1
Salmonellosis	0	4	0	4	0	0	0	31	0	39
Shigellosis	0	0	7	17	0	0	3	6	10	23
Spotted Fever Rickettsiosis	0	0	0	1	0	1	0	4	0	6
Staphylococcal aureus	0	0	0	0	0	0	0	0	0	0
Streptococcal-Group A, invasive	0	0	0	5	0	2	2	15	2	22
Streptococcal-Group B- in newborn	0	0	0	0	0	0	0	1	0	1
Streptococcus pneumoniae - invasive antibiotic resistance unknown or non-resistant	0	3	0	7	0	4	1	19	1	33
Streptococcus pneumoniae - invasive antibiotic resistant/intermediate	0	2	1	6	0	4	1	4	2	16
Streptococcal toxic shock syndrome	0	0	0	0	0	0	0	0	0	0
Syphilis, Total	1	4	2	14	0	2	1	9	4	29
➤ Primary, Secondary and Early Latent	0	1	0	7	0	2	0	2	0	12
Tuberculosis	0	0	0	1	0	0	0	2	0	3
Typhus fever	0	0	0	0	0	0	0	1	0	1
Varicella	0	1	0	3	0	3	6	13	6	20
Vibriosis (not cholera)	0	0	0	0	0	0	0	2	0	2
Yersiniosis	0	0	0	2	0	0	0	7	0	9
Zika Virus Disease	0	0	0	0	0	0	0	0	0	0
Total	24	241	137	1,518	37	352	163	1,566	361	3,677

Source: Ohio Disease Reporting System, downloaded 1/18/2018.

Table 5 – Summary Table of Diseases Reported in the Previous 5 years within Stark County (Provisional Data)

	December 2017	December 2016	YTD 2017	YTD 2016	All of 2016	5 Yr Annual Average	5 Yr. Annual Rate
Amebiasis	0	0	1	0	0	0.2	0.053
Babesiosis	0	0	1	0	0	0.2	0.053
Brucellosis	0	0	1	0	0	0.2	0.053
Campylobacteriosis	3	4	88	83	83	69.4	18.499
Chlamydia	122	185	1,807	1,899	1,899	1,611.4	429.518
Coccidioidomycosis	0	0	0	1	1	0.6	0.160
Creutzfeldt-Jakob Disease	1	1	3	2	2	0.6	0.160
Cryptosporidiosis	3	2	30	47	47	35.4	9.436
Cyclosporiasis	0	0	2	4	4	1.2	0.320
Dengue	0	0	0	0	0	0.2	0.053
Ehrlichiosis/ Anaplasmosis	0	0	0	1	1	0.4	0.107
Escherichia coli, Shiga Toxin-Producing	1	1	12	16	16	9.6	2.559
Giardiasis	0	1	18	25	25	28.6	7.623
Gonorrhea	38	48	541	678	678	594.8	158.544
Haemophilus influenzae , Invasive	1	1	9	5	5	6.8	1.813
Hemolytic Uremic Syndrome (HUS)	0	0	0	0	0	0.2	0.053
Hepatitis A	1	0	10	3	3	6.2	1.653
Hepatitis B, Perinatal	0	0	3	2	2	1.6	0.426
Hepatitis B, Acute	1	0	8	4	4	4.8	1.279
Hepatitis B, Chronic	8	7	66	67	67	39.2	10.449
Hepatitis C, Acute	0	0	2	7	7	7.0	1.866
Hepatitis C, Chronic	24	31	306	328	328	279.0	74.367
Hepatitis E	0	0	0	1	1	0.2	0.053
Influenza-associated hospitalization	103	37	413	196	196	273.8	72.981
Influenza-associated pediatric mortality	0	0	0	0	0	0.2	0.053
LaCrosse virus disease	0	0	0	1	1	0.4	0.107
Legionellosis	0	0	15	16	16	15.6	4.158
Listeriosis	0	0	1	1	1	1.2	0.320
Lyme Disease	3	0	29	26	26	16.4	4.371
Malaria	0	0	0	1	1	0.6	0.160
Measles (indigenous to Ohio)	0	0	0	1	1	2.0	0.533
Meningitis, Aseptic	2	1	43	30	30	28.4	7.570
Meningitis, Other Bacterial	1	0	3	5	5	3.8	1.013
Meningococcal Disease	0	0	0	0	0	1.0	0.267
Mumps	0	0	3	2	2	2.4	0.640
Pertussis	24	0	41	31	31	37.4	9.969
Q fever, acute	0	0	1	0	0	0.4	0.107
Salmonellosis	0	1	39	51	51	44.8	11.941
Shigellosis	10	4	23	8	8	35.6	9.489
Spotted Fever Rickettsiosis	0	0	6	0	0	0.00	0.00
Staphylococcal aureaus	0	0	0	1	1	0.2	0.053
Streptococcal Dis, Group A, Invasive	2	2	22	10	10	12.8	3.412
Streptococcal Dis, Group B, in Newborn	0	0	1	4	4	1.8	0.480
Streptococcal Toxic Shock Syndrome	0	0	0	1	1	1.0	0.267
Streptococcus pneumo. – inv. antibiotic resistance unknown or non-resistant	1	6	33	37	37	36.0	9.596
Streptococcus pneumo. – inv. antibiotic resistant/intermediate	2	0	16	16	16	17.8	4.745
Syphilis, Total	4	2	29	21	21	12.0	3.195
> Syphilis, Primary, Secondary and Early Latent	0	0	12	15	15	7.6	2.024
Toxic Shock Syndrome (TSS)	0	0	0	0	0	0.8	0.213
Tuberculosis	0	0	3	2	2	1.2	0.320
Typhus fever	0	0	1	0	0	0.4	0.107
Varicella	6	2	20	35	35	29.4	7.837
Vibriosis - other (not cholera)	0	0	2	4	4	1.8	0.480
Vibriosis parahaemolyticus	0	0	0	0	0	0.2	0.053
West Nile Virus	0	0	0	0	0	0.6	0.160
Yersiniosis	0	0	9	9	9	4.6	1.226
Zika Virus Disease	0	0	0	5	5	1.0	0.267

Source: Ohio Disease Reporting System, downloaded 1/18/18. Rates are per 100K population and based on 5 yr average incidence '12-'16.



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