

# EPI GRAM March, 2017

## A Monthly Publication of the Stark Public Health Infrastructure Coalition

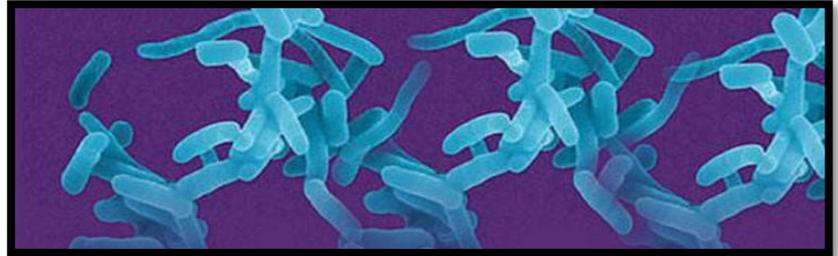
*EPI Gram* is a monthly publication of the Stark County Public Health Infrastructure Coalition. It contains a summary of provisional communicable disease reports and other key public health indicators, with summary tables for Stark County, Ohio. Some reportable conditions may be under investigation and,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



### Monthly Highlight: Shigellosis

Shigellosis is a diarrheal disease caused by a group of bacteria called *Shigella*. There are four species of *Shigella*; however, *Shigella sonnei* is the most common illness-causing species in the United States. Symptoms of shigellosis typically start 1–2 days after exposure and include:

- Diarrhea (sometimes bloody)
- Fever
- Abdominal pain
- Tenesmus (a painful sensation of needing to pass stools even when bowels are empty)



The rate of shigellosis in Ohio was 5.1 cases per 100,000 in 2014. The National rate was 4.8 cases per 100,000 in 2013. Stark County’s five year average rate is 9.97 cases per 100,000, mostly due to a higher than expected number of cases and institutional and community outbreaks in 2013 and 2014.

In 2017, the Ohio Department of Health updated the Infectious Disease Control Manual (IDCM) to reflect changes in the case definitions for cases/outbreaks of shigellosis. Under Laboratory Criteria for Diagnosis, there is the addition of *Supportive Laboratory Evidence* that includes detection of *Shigella species* or *Shigella/enteroinvasive E. coli (EIEC)* in a clinical specimen using culture independent diagnostic testing (CIDT). Confirmatory laboratory evidence remains the same and includes isolation of *Shigella species* from a clinical specimen. This change is important for the case classifications, as a Probable case now includes meeting the above supportive laboratory criteria for diagnosis OR a clinically compatible case that is epi-linked to a case that meets either the supportive or confirmatory laboratory criteria for diagnosis.

Because of increased multidrug resistance seen among *Shigella*, it is recommended that state and local public health agencies make efforts to encourage reflexive culturing by clinical laboratories that use CIDT methods. It is beneficial for cultured isolates to be submitted to state laboratories for further molecular typing (PFGE and whole genome sequencing), which can be instrumental in outbreak investigation and additional antimicrobial susceptibility testing.

Furthermore, it is recommended that susceptibility testing be completed before treatment due to the multidrug resistance of *Shigella*. Historically, shigellosis has been treated with ampicillin or Bactrim; however, resistance to both antibiotics is common globally. Recent reports of antibiotic-resistant shigellosis resistant to ciprofloxacin and azithromycin are occurring in the United States.

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

	March 2017				April 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 currently not available				430	3	30	N/A
Mold Count	Data collected seasonally and currently not available				1630	50	310	Low
Air Quality Index	63	37	43	(3) Moderate	114	37	46	(2) Unhealthy for Sensitive Groups

\*\*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](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**

	March 2017	YTD 2017	2016
Live Births	306	943	4190
Births to Teens	24	71	263
Deaths	331	1139	4356

\* 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, OH (Provisional Data)**

	Alliance City		Canton City		Massillon City		Stark County		All Departments	
	Mar	YTD	Mar	YTD	Mar	YTD	Mar	YTD	Mar	YTD
Amebiasis	0	0	0	0	0	1	0	0	0	1
Campylobacteriosis	0	0	1	6	0	0	5	8	6	14
Chlamydia infection	4	27	74	220	16	56	49	169	143	472
Cryptosporidiosis	0	0	0	1	0	0	4	4	4	5
E. coli, Shiga Toxin-Producing	0	0	0	1	0	0	1	1	1	2
Giardiasis	0	0	0	0	0	1	2	4	2	5
Gonococcal infection	0	3	23	85	4	11	13	42	40	141
Haemophilus influenzae	0	0	0	0	0	0	1	3	1	3
Hepatitis A	0	0	0	0	0	1	2	4	2	5
Hepatitis B - Perinatal Infection	0	0	0	0	0	0	0	2	0	2
Hepatitis B - acute	0	1	0	0	0	0	0	0	0	1
Hepatitis B - chronic	0	0	4	8	0	1	3	11	7	20
Hepatitis C - acute	1	1	1	1	0	0	0	0	2	2
Hepatitis C - chronic	6	14	10	39	4	14	9	39	29	106
Immigrant Investigation	0	0	0	0	0	0	1	1	1	1
Influenza-associated hospitalization	6	17	22	71	2	19	46	158	76	265
Legionellosis	0	1	0	1	0	0	0	0	0	2
Lyme Disease	0	0	0	0	0	0	2	5	2	5
Meningitis - aseptic/viral	0	0	1	3	0	0	1	5	2	8
Mumps	0	0	0	1	0	0	0	0	0	1
Pertussis	0	0	1	1	0	0	2	3	3	4
Salmonellosis	0	0	0	2	0	0	1	3	1	5
Shigellosis	0	0	0	1	0	0	1	1	1	2
Streptococcal - Group A -invasive	0	0	1	2	0	0	3	8	4	10
Streptococcal - Group B - in newborn	0	0	0	0	0	0	0	1	0	1
Streptococcus pneumoniae - invasive antibiotic resistance unknown or non-resistant	1	2	0	5	0	1	2	6	3	14
Streptococcus pneumoniae - invasive antibiotic resistant/intermediate	1	2	1	2	0	1	2	2	4	7
Syphilis, Total	1	1	0	0	0	0	0	3	1	4
> Syphilis, Primary, Secondary and Early Latent	1	1	0	0	0	0	0	1	1	2
Varicella	0	0	1	2	0	0	1	1	2	3
Vibriosis (not cholera)	0	0	0	0	0	0	1	2	1	2
Yersiniosis	0	0	0	1	0	0	0	5	0	6
<b>Total</b>	<b>21</b>	<b>70</b>	<b>140</b>	<b>453</b>	<b>26</b>	<b>106</b>	<b>152</b>	<b>492</b>	<b>339</b>	<b>1121</b>

Source: Ohio Disease Reporting System, downloaded 04/07/2017.



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

	March 2017	March 2016	YTD 2017	YTD 2016	All of 2016	5 Yr Annual Average	Rate
Amebiasis	0	0	1	0	0	0.2	0.053
Anaplasmosis	0	0	0	0	1	0.4	0.107
Babesiosis	0	0	0	0	0	0.2	0.053
Brucellosis	0	0	0	0	0	0.2	0.053
Campylobacteriosis	6	3	14	13	83	69.4	18.499
Chlamydia	143	161	472	493	1899	1611.4	429.518
Coccidioidomycosis	0	0	0	0	1	0.6	0.160
Creutzfeldt-Jakob Disease	0	0	0	0	2	0.6	0.160
Cryptosporidiosis	4	1	5	5	47	35.4	9.425
Cyclosporiasis	0	0	0	0	4	1.2	0.320
Dengue	0	0	0	0	0	0.2	0.053
Escherichia coli , Shiga Toxin Producing	1	0	2	1	16	4.0	1.065
Giardiasis	2	1	5	3	25	28.6	7.623
Gonorrhea	40	75	141	187	678	594.8	158.544
Haemophilus influenzae , Invasive	1	1	3	2	5	6.8	1.813
Hemolytic Uremic Syndrome (HUS)	0	0	0	0	0	0.2	0.053
Hepatitis A	2	0	5	0	3	6.2	1.653
Hepatitis B, Perinatal	0	0	2	0	4	1.6	0.426
Hepatitis B, Acute	0	0	1	1	4	4.8	1.279
Hepatitis B, Chronic	7	3	20	13	55	39.2	10.449
Hepatitis C, Acute	2	0	2	2	7	7.0	1.866
Hepatitis C, Chronic	29	22	106	73	326	279.0	74.367
Hepatitis E	0	0	0	0	1	0.2	0.053
Influenza-associated hospitalization	76	71	265	100	196	273.8	72.981
Influenza-associated pediatric mortality	0	0	0	0	0	0.2	0.053
LaCrosse virus disease	0	0	0	0	1	0.4	0.107
Legionellosis	0	0	2	2	16	15.6	4.158
Listeriosis	0	0	0	0	1	1.2	0.320
Lyme Disease	2	1	5	3	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	2	8	6	30	28.4	7.570
Meningitis, Other Bacterial	0	0	0	1	5	3.8	1.013
Meningococcal Disease	0	0	0	0	0	1.0	0.267
Mumps	0	0	1	1	2	2.4	0.640
Pertussis	3	2	4	4	31	37.4	9.969
Q fever, acute	0	0	0	0	0	0.4	0.107
Salmonellosis	1	1	5	8	51	44.8	11.941
Shigellosis	1	0	2	0	8	35.6	9.489
Spotted Fever Rickettsiosis	0	0	0	0	0	0.0	0.000
Staphylococcal aureus - intermediate resistance to vancomycin (VISA)	0	0	0	0	1	0.2	0.053
Streptococcal Dis, Group A, Invasive	4	2	10	3	10	12.8	3.412
Streptococcal Dis, Group B, in Newborn	0	0	1	0	4	1.8	0.480
Streptococcal Toxic Shock Syndrome	0	0	0	0	1	1.0	0.267
Streptococcus pneumoniae - invasive antibiotic resistance unknown or non-resistant	3	7	14	19	37	36.0	9.596
Streptococcus pneumo - inv antibiotic resistant/intermediate	4	2	7	8	16	117.8	4.745
Syphilis, Total	1	5	4	5	21	12.0	3.195
➤ Syphilis, Primary, Secondary and Early Latent	1	2	2	2	15	7.6	2.024
Toxic Shock Syndrome (TSS)	0	0	0	0	0	0.8	0.213
Tuberculosis	0	0	0	0	2	1.2	0.320
Thyphoid Fever	0	0	0	0	0	0.4	0.107
Varicella	2	3	3	16	35	29.4	7.837
Vibriosis - other (not cholera)	1	0	2	0	4	1.8	0.480
Vibrio parahaemolyticus infection	0	0	0	0	0	0.2	0.053
West Nile Virus	0	0	0	0	0	0.6	0.160
Yersiniosis	0	0	6	1	9	4.6	1.226
Zika virus infection	0	0	0	2	5	1.0	0.267

Source: Ohio Disease Reporting System, downloaded 04/07/2017. Rates are per 100K population and based on 5 yr average incidence '12-'16.