

# EPI GRAM February, 2018

## 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](mailto:josepha@starkhealth.org), or Amanda Archer at 330.489.3327 or [aarcher@cantonhealth.org](mailto:aarcher@cantonhealth.org).**

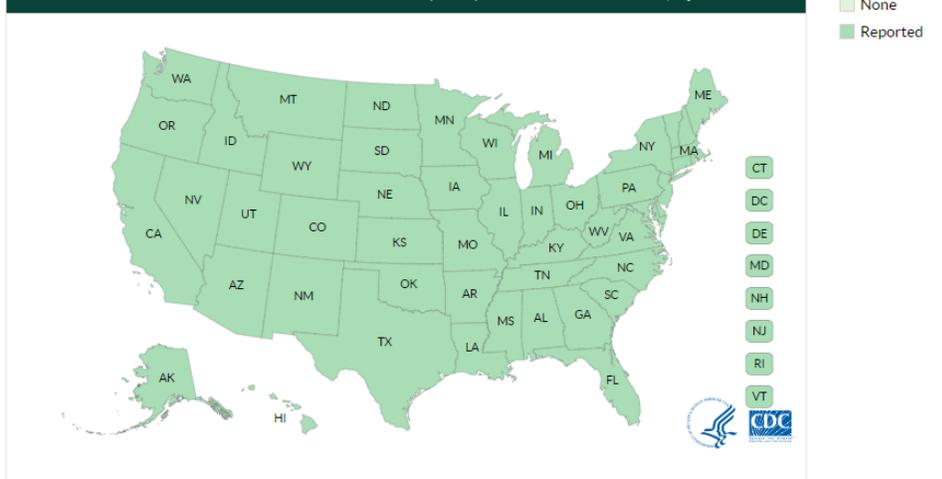


### Monthly Highlight: CRE

Carbapenem Resistant Enterobacteriaceae, or CRE, are a class of antibiotic resistant bacteria that has developed resistance to carbapenems, a group of antibiotics that are often used as a drug of last resort against multi-drug resistant bacteria. CRE encompass several different types of bacteria that are normally found in the human gut such as *E. coli* or *Klebsiella pneumoniae*. CRE can present in two different ways: colonization and infection.

Colonization occurs when CRE are found in a person who is not sick; infection occurs when CRE spread throughout the body causing disease. CRE infection can cause serious invasive diseases such as pneumonia, meningitis, or a bloodstream infection. The vast majority of people infected with some sort of CRE are already hospitalized and/or very ill. Risk factors for developing CRE include usage of an invasive device (i.e. catheter), time spent in a hospital, and having a compromised immune system.

Patients with KPC-producing Carbapenem-resistant Enterobacteriaceae (CRE) reported to the Centers for Disease Control and Prevention (CDC) as of December 2017, by state



All 50 states have reported at least 1 case of KPC-producing CRE, via CDC

CRE are the latest frontier within the purview of antimicrobial stewardship, a set of public health principles that seeks to improve patient outcomes, reduce antibiotic resistance, and decrease healthcare costs by promoting responsible antibiotic use. CRE are particularly daunting because in this case the development of antibiotics has not caught up to the evolution of resistance within these microorganisms. The best way for the general public to prevent the spread of CRE and other multi-drug resistant bacteria is through proper hand hygiene, especially when visiting healthcare facilities. Other ways we as a community can practice antimicrobial stewardship are by reducing unnecessary antibiotic prescriptions and purchasing meat from farms that do not raise animals with antibiotics. Through enhanced surveillance and community buy-in, we can prevent the spread of these dangerous organisms in Stark County.

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

	February 2018				February 2017			
	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				Data collected seasonally and currently not available			
Mold Count	Data collected seasonally and currently not available				Data collected seasonally and currently not available			
Air Quality Index	69	13	36.5	6 (Moderate)	73	17	33	6 (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](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**

	Feb 2018	YTD 2018	2017
Live Births	351	721	4014*
Births to Teens	20	52	271*
Deaths	336	834	4475*

\* Birth and death data is preliminary

**Table 3 Stark County Crude Birth Rate and Death Rates**

	2013	2014	2015	2016	2017*
Birth	11.3	11.3	11.2	11.3	10.7
Death	11.3	11.4	11.6	11.7	11.9

\*Source: Ohio Department of Health Data Warehouse. Rates are per 1,000 population. 2017 data is preliminary.

Table 4: Jurisdictional Summary of Reportable Diseases in Stark County, OH (Provisional Data)	Alliance City		Canton City		Massillon City		Stark County		All Departments	
	Feb	YTD	Feb	YTD	Feb	YTD	Feb	YTD	Feb	YTD
Campylobacteriosis	0	0	0	0	1	1	0	3	1	4
Chlamydia infection	9	26	58	127	13	24	63	121	143	298
Cryptosporidiosis	0	0	0	2	0	1	0	1	0	4
E. coli, Shiga Toxin-Producing	0	0	0	1	1	1	0	0	1	2
Giardiasis	0	0	2	3	0	0	1	1	3	4
Gonococcal infection	5	7	30	59	4	10	7	17	46	93
Haemophilus influenzae (invasive disease)	0	0	0	0	0	0	0	1	0	1
Hepatitis A	0	0	0	0	0	0	1	1	1	1
Hepatitis B (including delta) – acute	0	0	0	0	0	0	0	1	1	1
Hepatitis B (including delta) - chronic	0	1	0	2	1	1	3	8	4	12
Hepatitis C - acute	0	0	1	2	0	0	0	0	1	2
Hepatitis C - chronic	3	5	8	22	1	3	12	23	24	53
Influenza-associated hospitalization	5	18	38	109	6	34	86	286	135	447
Legionellosis - Legionnaires' Disease	0	0	0	1	0	0	0	0	0	1
Lyme Disease	0	0	0	0	0	0	1	2	1	2
Meningitis - aseptic/viral	1	2	0	1	0	0	1	2	2	7
Meningitis - bacterial (Not N. meningitidis)	0	0	0	0	0	1	0	0	0	0
Pertussis	2	3	0	0	0	1	3	9	5	13
Salmonellosis	0	0	0	0	2	2	5	9	7	11
Shigellosis	0	0	3	5	0	0	0	7	3	12
Streptococcal - Group A -invasive	0	0	1	2	0	0	0	2	1	4
Streptococcus pneumoniae - invasive antibiotic resistance unknown or non-resistant	0	1	1	2	0	0	1	4	2	7
Streptococcus pneumoniae - invasive antibiotic resistant/intermediate	0	0	0	0	1	1	2	2	3	3
Syphilis, Total	0	0	0	0	0	0	2	2	2	2
Syphilis, Primary, Secondary and Early Latent	0	0	0	0	0	0	2	2	2	2
Varicella	0	0	1	1	0	0	2	2	3	3
Yersiniosis	1	1	0	0	0	0	0	0	1	1
<b>Total</b>	<b>26</b>	<b>64</b>	<b>144</b>	<b>340</b>	<b>30</b>	<b>80</b>	<b>194</b>	<b>509</b>	<b>394</b>	<b>993</b>



Alliance City Health  
Department  
cityofalliance.com/health



Canton City Health  
Department  
cantonhealth.org



Massillon City Health  
Department  
massillonohio.com/health



Stark County Health  
Department  
starkhealth.org

<b>Table 5 – Summary Table of Diseases Reported in the Previous 5 years within Stark County (Provisional Data)</b>	<b>Feb-18</b>	<b>Feb-17</b>	<b>YTD 2018</b>	<b>YTD 2017</b>	<b>All of 2017</b>	<b>5 Yr Annual Average</b>	<b>Rate</b>
Amebiasis	0	0	0	1	1	0.4	0.107
Anaplasmosis	0	0	0	0	0	0.4	0.107
Babesiosis	0	0	0	0	1	0.4	0.107
Bruceellosis	0	0	0	0	1	0.2	0.054
Campylobacteriosis	1	0	4	7	88	74.0	19.807
Chlamydia	143	154	298	329	1804	1666.6	446.078
Coccidioidomycosis	0	0	0	0	0	0.4	0.107
Creutzfeldt-Jakob Disease	0	0	0	0	3	1.2	0.321
Cryptosporidiosis	0	1	4	1	30	32.4	8.672
Cyclosporiasis	0	0	0	0	2	1.6	0.428
E. coli, Shiga Toxin-Producing (O157:H7, Not O157, Unknown Serotype)	1	1	2	1	12	11.0	2.944
Giardiasis	3	1	4	3	18	24.6	6.584
Gonorrhea	46	56	93	102	542	574.0	153.635
Haemophilus influenzae , Invasive	0	0	1	2	9	7.0	1.874
Hemolytic Uremic Syndrome (HUS)	0	0	0	0	0	0.2	0.054
Hepatitis A	1	1	1	3	10	7.0	1.874
Hepatitis B, Perinatal	0	0	0	0	1	1.8	0.482
Hepatitis B, Acute	1	1	1	1	8	5.6	1.499
Hepatitis B, Chronic	4	9	12	12	66	45.0	12.045
Hepatitis C, Acute	1	0	2	0	2	6.6	1.767
Hepatitis C, Chronic	24	29	53	70	300	295.4	87.363
Hepatitis E	0	0	0	0	0	0.2	0.054
Influenza-associated hospitalization	135	106	447	189	413	326.4	87.363
Influenza-associated pediatric mortality	0	0	0	0	0	0.2	0.054
LaCrosse virus disease	0	0	0	0	0	0.2	0.054
Legionellosis	0	0	1	2	15	15.4	4.122
Listeriosis	0	0	0	0	1	1.2	0.321
Lyme Disease	1	1	2	3	29	19.4	5.193
Malaria	0	0	0	0	0	0.6	0.161
Measles (indigenous to Ohio)	0	0	0	0	0	2.0	0.535
Meningitis, Aseptic	2	0	7	6	43	30.2	8.083
Meningitis, Other Bacterial	0	0	1	0	3	3.6	0.964
Meningococcal Disease	0	0	0	0	0	1.0	0.268
Mumps	1	1	1	1	3	2.8	0.749
Pertussis	5	0	13	1	41	42.8	11.456
Q fever, acute	0	0	0	0	0	0.4	0.107
Q fever, chronic	0	0	0	0	1	0.2	0.054
Salmonellosis	7	1	11	4	39	44.8	11.991
Shigellosis	3	0	12	1	23	38.6	10.332
Spotted Fever Rickettsiosis	0	0	0	0	6	1.2	0.321
Staphylococcal aureus - intermediate resistance to vancomycin (VISA)	0	0	0	0	0	0.2	0.054
Streptococcal Dis, Group A, Invasive	1	3	4	6	22	13.0	3.480
Streptococcal Dis, Group B, in Newborn	0	1	0	1	1	1.6	0.428
Streptococcal Toxic Shock Syndrome	0	0	0	0	0	0.8	0.214
Streptococcus pneumoniae – inv. antibiotic resistance unknown or non-resistant	2	3	7	11	33	31.2	8.351
Streptococcus pneumo – inv. antibiotic resistant/intermediate	3	0	3	3	16	16.8	4.497
Syphilis, Total	2	2	2	3	29	15.4	4.122
Syphilis, Primary, Secondary and Early Latent	2	1	2	1	13	9.6	2.570
Toxic Shock Syndrome (TSS)	0	0	0	0	0	0.8	0.214
Tuberculosis	0	0	0	0	3	1.4	0.375
Typhus Fever	0	0	0	0	0	0.2	0.054
Varicella	3	0	33	1	20	25.6	6.852
Vibriosis - other (not cholera)	0	1	0	1	2	2.2	0.589
Vibrio parahaemolyticus infection	0	0	0	0	0	0.2	0.054
West Nile Virus	0	0	0	0	1	0.6	0.161
Yersiniosis	1	2	1	6	9	6.0	1.606
Zika virus infection	0	0	0	0	0	1.0	0.268

Source: Ohio Disease Reporting System, downloaded 02/08/2018. Rates are per 100K population and based on 5 yr average incidence '13 – '17.