

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.

Monthly Highlight: Invasive Streptococcus Pneumoniae

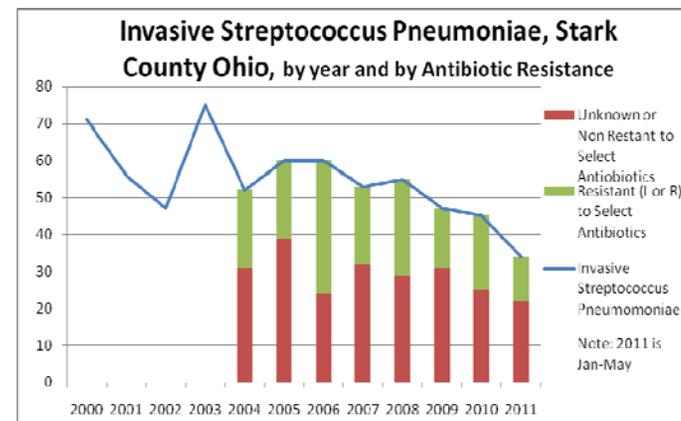
From January through May, Stark County has seen an increase in individuals reported with Invasive Streptococcus Pneumoniae (ISP) compared to the same period in 2010. ISP is a vaccine preventable disease that may lead to serious health outcomes including pneumonia, bacteremia, meningitis and death. Infections are complicated by increasing resistance to single and multiple classes of antibiotics.

ISP is a reportable disease in Ohio. Reporting includes the results of antibiotic resistance panels as well as basic demographics. It does not include serotype. There are more than 90 serotypes, many which are included in the 23-valent polysaccharide vaccine. Protection from approximately 88% of invasive serotypes can be obtained through vaccination.

For selected antibiotics, confirmation of intermediate or full resistance was found in 12 (35%) specimens this year. Resistance to the following antibiotic classes was reported: Penicillin's (50%), Quinolones (25%), and Macrolides (42%). Resistance to multiple classes of antibiotics was described in only 17% of cases this year compared with 65% in 2010.

ISP has contributed to the death of at least two Stark County residents this year. Age demographics of cases reported this year compared to 2010 appears to be slightly younger. In 2011, individuals ranged in age from 10 months to 96 years with a median age of 55 years, compared with a median age of 63 years in 2010. As can be inferred by the median age of 55 years, cases tend to be in adults aged 19-64 years (58%). This differs from the national tendency of cases being at higher risk of infection in children and the elderly. Similar to national statistics, African Americans are at a slightly higher risk for infection.

As shown in the graph, Stark County has witnessed a 6-year trend of overall negative growth in the rate of infections. The 100% increase in non-resistant strains, and 71% increase in resistant strains of ISP from Jan through May of 2011 compared to the same time period last year, threatens to undermine our local progress at disease reduction. The Centers for Disease Control and Prevention (CDC) offers the following opportunities to reduce the burden of disease in all of our residents. "Ability to prevent infections could improve through expanded use of 23-valent polysaccharide vaccine among adults and through use of the conjugate vaccine for infants and young children. **Campaigns for judicious use of antibiotics along with the new vaccine may slow or reverse emerging drug resistance.**"



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

	May 2011				June 2010			
	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	2695	20	300	N/A	90	5	25	N/A
Mold Count	11,090	1,050	3,030	5 Moderate	11,190	1,560	4,650	5 Moderate
Air Quality Index	87	17	42	6 Moderate	90	24	52.5	16 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 Summaries of Select Vital Statistics for Stark County

	May 2011	YTD 2011	2010 Total
Live Births	384	1,752	4521
Births to Teens	26	182	457
Deaths	312	1,914	4102

Table 3 Stark County Crude Birth and Death Rates

	2004	2005	2006	2007	2008
Birth	1172*	1163*	1191*	1190*	1166*
Death	971*	1022*	1000*	1035*	1067

*Source: Ohio Department of Health Data Warehouse. Rates are per 100,000 population.

If you have any questions, including how to receive copies of this report, please contact Christina Henning at 330.489.3327 or Chenning@cantonhealth.org.

Table 4: 2011 Jurisdictional Summary of Reportable Diseases in Stark County, OH

	Alliance City		Canton City		Massillon City		Stark County		All Departments	
	May	YTD	May	YTD	May	YTD	May	YTD	May	YTD
Campylobacteriosis			1	3		2	3	6	4	11
Chlamydia infection	8	45	78	292	12	53	38	179	136	569
Creutzfeldt-Jakob Disease							1	1	1	1
Cryptosporidiosis				2			1	5	1	7
E Coli (STP) O157:H7					1	1		1	1	2
E Coli (STP) NOT O157:H7							1	1	1	1
Giardiasis			1	4		2	4	24	5	30
Gonococcal infection	7	37	43	147	6	19	10	46	66	249
Haemophilus influenzae		1	1	1				2	1	4
Hepatitis A								1	0	1
Hepatitis B-Perinatal Infection								1	0	1
Hepatitis B- acute								1	0	1
Hepatitis B- Chronic		1	2	5			2	8	4	14
Hepatitis C - acute				1		1		1	0	3
Hepatitis C - chronic		8	4	37	1	11	8	44	13	100
Herpes-Congenital	1	1							1	1
Influenza-associated hospitalizations		8		41		12		79	0	140
Listeriosis								1	0	1
Lyme Disease							1	2	1	2
Meningitis - aseptic/viral			1	2	1	1			2	3
Meningococcal disease -								1	0	1
Mycobacterial disease-Not TB	1	2		2			3	8	4	12
Pertussis								8	0	8
Rocky Mountain Spotted Fever	1	1						1	1	2
Salmonellosis		1					2	9	2	10
Streptococcal - Group A - invasive				4			1	10	1	14
Streptococcus Toxic Shock Syndrome (STSS)				1				1	0	2
Strep pneumoinvasive antibiotic resistance unk or non-resistant	1	2		3	1	4	2	13	4	22
Strep pneumoniae - invasive antibiotic resistant/intermediate		2		2	1	2	2	6	3	12
Syphilis, Total				5			1	1	1	6
Syphilis, Pr & Secondary				4						4
Varicella	1	3		1			1	8	2	12

Source: Ohio Disease Reporting System

**Table 5 – 2011 Summary Table of Diseases Reported in the previous 5 years within Stark County, OH.
(Provisional Data)**

	May-11	YTD 2011	YTD 2010	All of 2010	5 Yr annual average	Rate
Anaplasmosis (Ehrlichiosis)	0	0	0	0	1	0.26
Campylobacteriosis	4	11	12	50	52	13.7
Chlamydia	136	569	564	1320	1188	313.12
Coccidioidomycosis	0	0	0	0	1	0.26
Creutzfeldt-Jakob Disease	1	1	0	0	3	0.7
Cryptosporidiosis	1	7	5	23	22	5.8
Cytomegalovirus, Congenital	0	0	0	0	1	0.26
Dengue	0	0	0	1	1	0.26
E. coli - enterohemorrhagic (STP) NOT O157:H7	1	1	0	1	2	0.53
E. coli - enterohemorrhagic (STP) O157:H7	1	2	2	3	3	0.9
E coli , STP, Unknown	0	0	0	1	1	0.37
Encephalitis - post other infection	0	0	0	0	1	0.26
Encephalitis - primary viral	0	0	0	0	2	0.53
Giardiasis	5	30	12	69	49	12.86
Gonorrhea	66	249	160	406	527	138.83
Haemo. Influz., Bacteria	1	4	3	8	6	1.63
Hemolitic Uremic Syndrome	0	0	0	0	2	0.53
Hepatitis A	0	1	0	0	5	1.19
Hepatitis B - Perinatal Infection	0	1	0	3	4	1.05
Hep B, Acute	0	1	3	5	5	1.21
Hep B, Chronic	4	14	19	38	39	10.38
Hep C, Acute	0	3	1	4	4	1.05
Hep C, Past or Present	13	100	100	233	232	61.09
Herpes, Congenital	1	1	0	0	1	0.26
Influenza A - novel virus infection	0	0	0	0	2	0.53
Influenza-Hospitalized	0	140	1	7	N/A	N/A
LaCrosse virus disease	0	0	0	2	2	0.53
Legionellosis	0	0	2	16	15	3.9
Listeriosis	0	1	0	1	3	0.79
Lyme Disease	1	2	1	4	3	0.79
Malaria	0	0	1	2	3	0.66
Meningitis, Asep	2	3	12	33	38	9.91
Meningitis Bac.	0	0	0	2	3	0.74
Meningococcal Dis.	0	1	1	2	1	0.32
Mumps	0	0	1	1	2	0.4
Mycobacterial disease - other than tuberculosis	4	12	13	32	22	5.69
Pertussis	0	8	7	106	35	9.22
Rheumatic fever	0	0	0	0	1	0.26
Rocky Mountain Spotted	1	2		1	1	0.26
Salmonellosis	2	10	14	34	41	10.8
Shigellosis	0	0	4	4	51	13.33
Strep Inv A GAS	1	14	2	12	10	2.53
Strep B Newborn	0	0	2	4	4	0.95
Strep toxic shock (STSS)	0	2	0	0	2	0.4
Strep pneumo - invasive antibiotic resistance unk or non-resistant	4	22	11	25	28	7.48
Streptococcus pneumo - invasive antibiotic resistant/intermediate	3	12	7	20	24	6.27
Syphilis, Total	1	6	6	10	14	3.74
Syphilis, Pri & Secondary	0	4	3	4	4	1.16
Toxic shock syndrome (TSS)	0	0	0	1	2	0.4
Typhoid Fever	0	0	0	0	1	0.26
Varicella#	2	12	20	56	119	31.41
West Nile Virus	0	0	0	0	2	0.53
Yersiniosis	0	0	0	0	3	0.88

This report includes confirmed, probable and suspect cases, as reported in the Ohio Disease Reporting System (ODRS).

*Annual Rate per 100,000 population is derived from a five year average of disease incidence and on a total population of 379,466