



2017 Communicable Disease Annual Report

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The Knox County Health Department is committed to promoting healthy lifestyles, preventing illness and protecting the environment for our community.



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SUMMARY OF 2017 EVENTS

The Knox County Health Department (KCHD) is dedicated to conducting disease surveillance and continues to evaluate investigation protocols to better serve county residents. In 2017, KCHD responded to 425 reportable diseases through the Ohio Disease Reporting System (ODRS).

Flu Surveillance Program

Towards the end of 2017, members of the KCHD Epidemiological Team started working on establishing a flu surveillance system with county providers. Data is intended to be collected on a weekly basis providing influenza numbers from providers to KCHD through a one page fax reporting form. The data will then be archived, used to give current situational awareness, and provide historical comparisons for future influenza seasons. Reporting started on January 1, 2018 and flu reports are being shared weekly. Currently, 16 providers are in the influenza reporting system.

Community Epi Response Team

In an effort to increase information sharing amongst county partners, KCHD developed and defined a community epi response team in 2017. A core epi team has already been established consisting of public health and hospital representatives. The community team identifies the following partners: public health, hospital, educators, physicians, nurses, first responders, nursing homes, veterinarians, and special needs groups. The first team meeting was held on August 14, 2017 and the group worked on defining roles and what information to share.

Radiological Surveillance Training

Two KCHD staff members attended a training on population monitoring at community reception centers for radiation on October 20, 2017. Due to Knox's location, it is unlikely that a radiological event will occur in county but Knox may need to accept people from northern counties having been exposed to radiation. During this training, staff were taught how to deal with large numbers of people exposed to radiation and how to continue to monitor their health status within shelter populations.

Full Scale Exercise

On November 9, 2017, KCHD conducted a full scale exercise opening a point of distribution (POD) at its primary location (Mount Vernon High School). The scenario was based on a student becoming infected with bacterial meningitis. Overall, the exercise was a success providing staff and volunteers with experience on how an actual POD operation will be executed.

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REPORTABLE DISEASES

There are three classes of reportable diseases in Ohio which require different timeframes for notifications based on their importance and impact on the health of the public.

CLASS A = 0 cases

Diseases of major public health concern because of the severity of disease or potential for epidemic spread – report immediately via telephone upon recognition that a case, a suspected case, or a positive laboratory result exists.

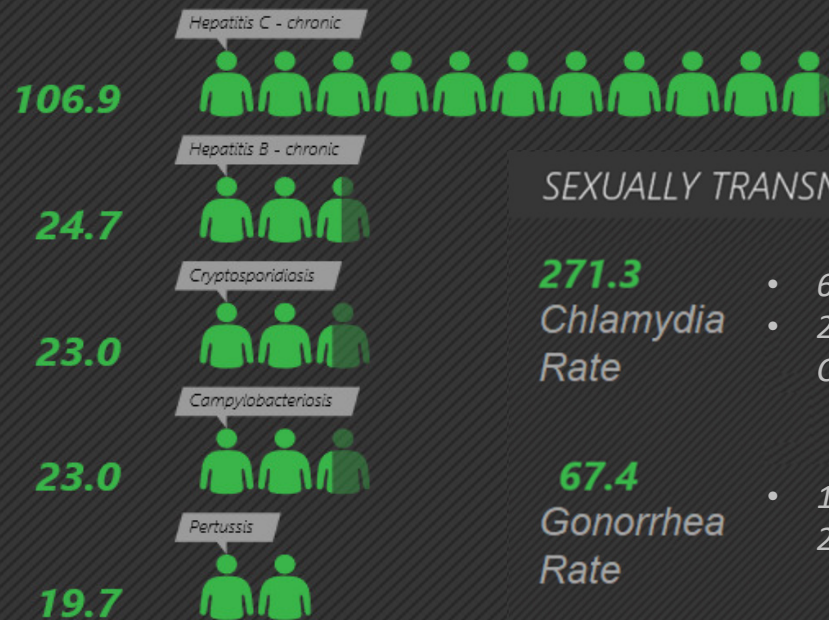
CLASS B = 425 cases

Disease of public health concern needing timely response because of potential for epidemic spread – report by the end of the next business day after the existence of a case, suspected case, or a positive laboratory result is known.

CLASS C = 0 outbreaks

Report an outbreak, unusual incident or epidemic of other diseases by the end of the next business day.

TOP 5 CLASS B INCIDENCE RATES (RATE PER 100,000)



SEXUALLY TRANSMITTED DISEASES

- 271.3 Chlamydia Rate**
 - 6.9% increase from 2016
 - 23.6% of cases had prior Chlamydia infection
- 67.4 Gonorrhea Rate**
 - 174.0% increase from 2016



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Top Reportable Diseases in Knox County in Comparison to Central Region Counties (Rate per 100,000)

CENTRAL REGION COUNTIES	HEPATITIS C - CHRONIC		HEPATITIS B - CHRONIC		CRYPTOSPORIDIOSIS		CAMPYLOBACTERIOSIS		PERTUSSIS		CHLAMYDIA		GONORRHEA	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Crawford	67	159.2	20	47.5	6	14.3	4	9.5	2	4.8	172	408.7	19	45.1
Delaware	105	53.4	17	8.7	6	3.1	20	10.2	36	18.3	381	193.9	77	39.2
Fairfield	193	126.5	43	28.2	6	3.9	18	11.8	31	20.3	341	223.5	62	40.6
Fayette	61	212.7	27	94.2	1	3.5	12	41.8	3	10.5	80	279.0	17	59.3
Franklin	2,175	172.0	671	53.1	57	4.5	223	17.6	370	29.3	9,271	733.2	4,246	335.8
Hardin	58	184.3	17	54.0	1	3.2	12	38.1	0	0.0	84	266.9	37	117.6
Knox	65	106.9	15	24.7	14	23.0	14	23.0	12	19.7	165	271.3	41	67.4
Licking	188	109.2	42	24.4	6	3.5	24	13.9	31	18.0	742	430.9	334	194.0
Logan	41	90.8	4	8.9	4	8.9	13	28.8	2	4.4	117	259.1	23	50.9
Madison	98	225.7	23	53.0	1	2.3	9	20.7	13	29.9	131	301.7	40	92.1
Marion	173	265.8	37	56.8	11	16.9	12	18.4	13	20.0	343	526.9	87	133.6
Morrow	48	137.0	19	54.2	6	17.1	7	20.0	1	2.9	77	219.8	15	42.8
Pickaway	793	1,377.6	57	99.0	2	3.5	6	10.4	176	305.7	188	326.6	52	90.3
Union	395	712.3	54	97.4	7	12.6	14	25.2	9	16.2	213	384.1	57	102.8
Wyandot	14	63.3	3	13.6	1	4.5	33	149.2	1	4.5	57	257.7	5	22.6
OHIO	21,951	188.3	4,156	35.6	650	5.6	2,088	17.9	865	7.4	58,272	499.8	22,632	194.1

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Review of Top Reportable Diseases in Knox County

HEPATITIS C – CHRONIC: Increases in Hepatitis C cases continue in Knox County but have declined overall in Ohio. The major contributing factor for Hepatitis C infections are the use of injection drugs.

HEPATITIS B - CHRONIC: Hepatitis B – chronic decreased by 16.3 percent compared to the previous year. Hepatitis B can be spread when blood, semen, or other body fluid infected with the Hepatitis B virus enters the body of a person who is not infected.

CRYPTOSPORIDIOSIS: In 2017, Cryptosporidiosis decreased by 41.5 percent compared to 2016 but still ranked first in the central region (**15 Counties**). There were two separate incidents where more than one household member was ill with Crypto but did not get classified as an outbreak. Over 70 percent of the reported cases in 2017 had some sort of exposure to cattle/calves. Cattle, especially calves, are known to be one of the top sources of exposure for Crypto.

CAMPYLOBACTERIOSIS: Knox County had a 56.5 percent increase in Campylobacteriosis cases in 2017 compared to the previous year. Investigations suggest these were isolated and random cases since no outbreaks were identified. The top exposure from interviews amongst cases were raw beef/ground beef.

PERTUSSIS: Pertussis ranked 5th in 2017 for Knox County's top reportable diseases. Several reports were investigated with most being sporadic throughout different parts of Knox County. Five cases were reported within the same geographical area over two months but a connection with all five cases was unable to be made. Three of the cases were household contacts and the other two did not have a confirmed exposure connection. Therefore, an outbreak was not established amongst these cases. Cases, outside of one household contact, ranged in age from 7 to 12 years of age.

CHLAMYDIA: Knox County had an increase in Chlamydia cases (**6.9 percent increase from 2016**) and ranked 9th out of 15 central region counties. 23.6 percent of cases reported in 2017 had prior Chlamydia infections.

GONORRHEA: Knox County ranked 8th in 2017 for Gonorrhea rate in the central region. In 2017, the Gonorrhea rate increased by **174 percent!**

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REPORTABLE DISEASE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YTD	+/-
Amebiasis	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Anaplasmosis - Anaplasma phagocytophilum	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Anthrax	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Botulism - foodborne	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Botulism - infant	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Botulism - wound	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Brucellosis	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Campylobacteriosis	0	1	0	1	0	3	1	2	0	1	4	1	14	+
Chancroid	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Chlamydia	18	14	14	13	9	17	17	18	15	16	5	9	165	+
Cholera	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Coccidioidomycosis	1	0	0	0	0	0	0	0	1	1	0	0	3	+
Creutzfeldt - Jakob Disease	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Creutzfeldt - Jakob Disease - variant (vCJD)	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Cryptosporidiosis	0	1	3	0	3	0	1	0	1	3	2	0	14	-
Cyclosporiasis	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Cytomegalovirus - congenital (CMV)	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Dengue	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Dengue Hemorrhagic Fever	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0	0	=
E.coli – (shiga toxin producing) - Not O157:H7	0	0	0	0	0	0	0	0	0	0	0	0	0	=
E.coli – (shiga toxin producing) - O157:H7	0	0	0	0	0	0	0	0	0	0	0	0	0	=
E.coli – (shiga toxin producing) Unknown serotype	0	0	0	0	0	0	0	0	0	0	0	0	0	-

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E.coli – (O157:H7, Not O157, Unknown)	0	0	3	0	2	0	1	0	0	1	1	0	8	+
Eastern equine encephalitis virus disease	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Ehrlichiosis/Anaplasmosis - Undetermined	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Ehrlichiosis-Ehrlichia chaffeensis	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Ehrlichiosis-Ehrlichia ewingii	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Encephalitis - post chickenpox	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Encephalitis - post mumps	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Encephalitis - post other infection	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Encephalitis - primary viral	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Giardiasis	0	1	0	0	1	2	0	0	0	0	1	0	5	=
Gonorrhea	7	3	3	3	3	3	1	4	2	5	3	4	41	+
Granuloma inguinale	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Haemophilus influenzae (invasive disease)	0	0	0	0	0	0	0	0	0	0	0	1	1	+
Hantavirus - infection	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Hantavirus - pulmonary syndrome	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Hemolytic uremic syndrome (HUS)	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Hepatitis - acute viral undetermined etiology	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Hepatitis A	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Hepatitis B - investigation	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Hepatitis B - Perinatal Infection	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Hepatitis B (including delta) - acute	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Hepatitis B (including delta) - acute/chronic	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Hepatitis B (including delta) - chronic	1	1	2	0	0	2	0	4	0	1	2	2	15	-

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Hepatitis C - acute	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Hepatitis C - acute/chronic	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Hepatitis C - chronic	9	2	6	7	4	7	6	1	1	5	9	8	65	+
Hepatitis E	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Herpes - congenital	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Immigrant Investigation	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Influenza – ODH Lab Results	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Influenza – associated hospitalization	9	17	9	5	0	0	0	0	1	0	1	3	45	+
Influenza – associated pediatric mortality	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Influenza Seasonal (IRIS)	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Kawasaki disease	0	0	0	0	0	0	0	0	0	0	0	0	0	=
LaCrosse virus disease	0	0	0	0	0	0	1	0	0	0	0	0	1	+
Legionellosis – Legionnaires’ Disease	0	0	0	0	1	0	1	0	1	0	1	0	4	-
Leprosy (Hansen Disease)	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Leptospirosis	0	0	0	0	0	0	2	0	0	0	0	0	0	+
Listeriosis	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Lyme Disease	0	1	0	0	0	0	2	0	0	0	0	1	4	-
Lymphogranuloma venereum (LGV)	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Malaria	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Measles – imported from outside Ohio	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Measles – indigenous to Ohio	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Measles – status not determined	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Meningitis – aseptic/viral	0	0	0	0	0	0	0	0	0	1	1	0	2	=

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Meningitis – bacterial (Not N. meningitidis)	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Meningococcal disease - Neisseria meningitidis	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Mumps	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Mycobacterial disease – other than tuberculosis	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Pertussis	1	0	1	0	1	4	2	0	0	2	1	0	12	+
Plague	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Poliomyelitis – non-paralytic	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Poliomyelitis – paralytic	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Poliomyelitis – paralytic/non-paralytic	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Powassan virus disease	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Psittacosis	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Q fever, acute	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Q fever, chronic	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Rabies – animal	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Reye syndrome	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Rheumatic fever	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Rocky Mountain spotted fever (RMSF)	1	0	0	0	0	0	0	1	0	0	0	0	2	+
Rubella – congenital	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Rubella – not congenital	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Salmonellosis	0	0	2	1	2	1	0	0	1	1	1	2	11	-
Severe Acute Respiratory Syndrome (SARS)	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Shigellosis	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Smallpox	0	0	0	0	0	0	0	0	0	0	0	0	0	=

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St. Louis encephalitis virus disease	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Staphylococcal aureus - intermediate (VISA)	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Staphylococcal aureus - vancomycin resistant (VRSA)	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Streptococcal – Group A – invasive	0	1	2	0	0	0	0	0	0	0	0	0	3	+
Streptococcal – Group B – in newborn	0	0	0	0	1	0	0	0	0	0	0	0	1	+
Streptococcal toxic shock syndrome (STSS)	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Streptococcus pneumoniae - unknown resistance	0	0	0	0	0	0	0	0	0	0	1	0	1	-
Streptococcus pneumoniae – intermediate resistance	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Syphilis – congenital	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Syphilis – early latent (<1 year)	0	0	0	2	0	0	0	0	0	0	0	0	2	+
Syphilis – late latent (>1 year) asymptomatic	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Syphilis – late with no neurosyphilis	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Syphilis – neurosyphilis	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Syphilis – primary	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Syphilis – secondary	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Syphilis – stage Unknown	0	0	0	0	0	0	0	0	0	0	0	1	1	+
Syphilis – unknown latent	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Tetanus	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Toxic shock syndrome (TSS)	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Toxoplasmosis – congenital	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Trichinosis	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Tuberculosis	0	0	0	0	0	0	1	0	0	0	0	0	1	=

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Tuberculosis – multi-drug resistant (MDR-TB)	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Tularemia	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Typhoid fever	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Typhus fever	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Varicella	0	0	1	0	0	0	0	1	0	0	0	0	2	-
Vibrio parahaemolyticus infection	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Vibrio vulnificus infection	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Vibriosis – other (not cholera)	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Viral Hemorrhagic Fever (VHF)	0	0	0	0	0	0	0	0	0	0	0	0	0	=
West Nile virus disease	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Western equine encephalitis virus disease	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Yellow fever	0	0	0	0	0	0	0	0	0	0	0	0	0	=
Yersiniosis	0	1	0	0	0	0	1	0	0	0	0	0	2	+
Zika virus disease	0	0	0	0	0	0	0	0	0	0	0	0	0	-

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