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TOLEDO-LUCAS COUNTY HEALTH DEPARTMENT
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ANNUAL COMMUNITY AND ENVIRONMENTAL HEALTH REPORT

2015

Annual Summary of the Division of Community Services and Environmental Health at the Toledo-Lucas County Health Department for 2015

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INFECTIOUS DISEASES

Infectious diseases, also commonly called communicable diseases, are illnesses caused by microorganisms, (bacteria, viruses, and parasites) and can be transmitted from an infected person or animal to another person or animal. The route of transmission varies by disease and may include direct contact with contaminated body fluids (e.g., blood) or respiratory secretions, contact with contaminated objects, inhalation of contaminated airborne particles, ingestion of contaminated food or water, or the bite of an animal or vector (e.g., insect) carrying the microorganism.

KEY FINDINGS

- 2015 saw an increase of diarrheal illnesses:
    - Campylobacterosis increased from 47 in 2014 to 72 in 2015
    - Giardiasis increased from 9 in 2014 to 17 in 2015
    - Cryptosporidiosis increased from 17 in 2014 to 19 in 2015
    - Salmonellosis increased from 37 in 2014 to 43 in 2015
- For 2015, there was a decrease in the number of reported cases of HIV/AIDS, with 54 being reported in 2014 and 33 being reported in 2015. Additionally, there was a decrease in the number of cases of Syphilis, with 59 being reported in 2014 and 40 cases reported in 2015.

LOOKING AHEAD

The Toledo-Lucas County Health Department is continually striving to decrease the number of infectious diseases acquired by residents of our county, as well as those visiting our jurisdiction. Increasing community awareness and education are continued goals for our upcoming calendar year.

Demographic Profile of Lucas County

Table 1: Lucas County Population by Gender and Age Group, 2010 Census Data

Age	Number of Female	Percent	Number of Male	Percent
Under 5 years	14,680	3.3	15,052	3.4
5 to 9 years	13,984	3.2	14,772	3.3
10 to 14 years	14,004	3.2	14,625	3.3
15 to 19 years	16,510	3.7	17,137	3.9
20 to 24 years	17,029	3.9	16,792	3.8
25 to 29 years	14,875	3.4	14,536	3.3
30 to 34 years	13,500	3.1	13,032	2.9
35 to 39 years	14,112	3.2	13,492	3.1
40 to 44 years	13,837	3.1	13,209	3.0
45 to 49 years	16,132	3.7	15,064	3.4
50 to 54 years	17,088	3.9	16,157	3.7
55 to 59 years	15,338	3.5	14,411	3.3
60 to 64 years	12,720	2.9	11,918	2.7
65 to 69 years	9,020	2.0	7,676	1.7
70 to 74 years	7,105	1.6	5,622	1.3
75 to 79 years	6,212	1.4	4,244	1.0
80 to 84 years	5,761	1.3	3,572	0.8
85+ years	5,942	1.3	2,655	0.6
Total	227,849	51.6	213,966	48.4

Table 2: Lucas County Population by Race (alone or in combination with one or more other races*), 2010 Census Data

Race	Number of Persons	Percent
White	339,206	76.8
Black or African American	92,260	20.9
American Indian and Alaska Native	4,246	1.0
Asian	8,801	2.0
Native Hawaiian and Other Pacific Islander	382	0.1
Some Other Race	11,904	2.7

In combination with one or more of the other races listed. The six numbers may add to more than the total population, and the six percentages may add to more than 100 percent because individuals may report more than one race.

Table 3: Lucas County Population by Ethnicity, 2010 Census Data

Ethnicity	Number of Persons	Percent
Hispanic or Latino (of any race)	26,974	6.1
Mexican	22,028	5.0
Puerto Rican	1,482	0.3
Cuban	388	0.1
Other Hispanic or Latino **	3,076	0.7
Not Hispanic or Latino	414,841	93.9
Total population	441,815	100.0

This category is composed of people whose origins are from the Dominican Republic, Spain, and Spanish-speaking Central or South American countries. It also includes general origin responses such as "Latino" or "Hispanic."

Counts and Rates of Reportable Diseases

OVERVIEW

According to the Ohio Administrative Code 3701-3-02, cases and suspected cases of selected infectious diseases are required to be reported to the Ohio Department of Health and local public health agencies. These reportable diseases were determined to be of public health significance in Ohio. Many of these diseases must also be reported by state health departments to the Centers for Disease Control and Prevention (CDC) as part of national public health surveillance of infectious diseases.

The 2015 Annual Summary includes cases of reportable disease that were diagnosed among residents of Lucas County, reported to public health, and found to meet the public health surveillance definition of a suspected or confirmed case. These data do not represent all cases of reportable infectious disease that occurred in the community, as individuals may not seek medical care for mild or asymptomatic infections. Additionally, a reported case of disease may not meet the surveillance definition of a confirmed or suspected case. Surveillance definitions are designed to standardize data collection and reporting across public health jurisdictions and may differ slightly from clinical definitions used in patient management. Outbreaks or media coverage of a particular disease can also influence testing and reporting rates. Data in this summary are considered provisional. Please note that data in the following pages are grouped by type of disease. Discrepencies in numbers of reported cases may exist from local to state level and national level based on any number of criteria to include or exclude cases. For any questions, please contact the epidemiology staff at TLCHD.

This summary is intended to be a resource for individuals and public health partners concerned about infectious diseases in Lucas County. Further information on communicable disease may be obtained by contacting the Toledo-Lucas County Health Department.

REPORTABLE DISEASES

A comprehensive listing and guidance for reportable diseases and non-reportable diseases in the State of Ohio can be found in the Infectious Disease Control Manual (IDCM) (http://www.odh.ohio.gov/pdf/idcm/intro1.pdf). This document also includes rules contained within the Ohio Administrative Code (OAC) that pertain to infectious disease reporting. Services provided at the Ohio Department of Health Laboratory and processes to submit specimens can be found within this document.

CHANGES FROM 2014

On May 1, 2015, Rule 3701-3-02 in the Ohio Administrative Code changed. The changes include:

- Addition of Middle East Respiratory Syndrome (MERS) as a Class A disease
- Addition of Chikungunya virus infection under arboviral diseases (Class B)
- Enumeration of the four Viral Hemorrhagic Fevers in Class A (Ebola virus disease, Lassa fever, Marburg hemorrhagic fever, and Crimean-Congo hemorrhagic fever)

COUNTS AND RATES OF REPORTABLE DISEASES

			2015				2014				2013				2012				2011			
	Reportable Condition	Class	Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate
ENTERIC	Amebiasis	B	1	0.23	1	0.23	1	0.23	1	0.23	1	0.23	1	0.23	0	0.0	0	0.0	0	0.0	0	0.0
	Campylobacteriosis	B	73	16.52	73	16.52	47	10.64	61	13.81	49	11.09	76	17.20	57	12.90	70	15.84	31	7.02	183	41.42
	Cholera	A	0	0.00	0	0.00	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Cryptosporidiosis	B	20	4.53	20	4.53	17	3.85	17	3.85	14	3.17	14	3.17	19	4.3	19	4.30	18	4.07	18	4.07
	Cyclosporiasis	B	0	0.00	0	0.00	1	0.23	1	0.23	3	0.68	3	0.68	0	0.0	0	0.0	0	0.0	0	0.0
	E. coli - Not O157:H7	B	0	0.00	0	0.00	1	0.23	1	0.23	3	0.68	3	0.68	7	1.58	7	1.58	1	0.23	1	0.23
	E. coli - O157:H7	B	0	0.00	0	0.00	4	0.91	4	0.91	1	0.23	1	0.23	3	0.68	3	0.68	1	0.23	1	0.23
	E. coli - Unknown serotype	B	0	0.00	0	0.00	0	0.0	1	0.23	0	0.0	1	0.23	0	0.0	0	0.0	0	0.0	0	0.0
	Giardiasis	B	18	4.07	19	4.30	9	2.04	9	2.04	13	2.94	13	2.94	7	1.58	7	1.58	15	3.4	15	3.40
	Hemolytic uremic syndrome (HUS)	B	0	0.00	0	0.00	1	0.23	1	0.23	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Listeriosis	B	0	0.00	0	0.00	1	0.23	1	0.23	3	0.68	3	0.68	2	0.45	2	0.45	0	0.0	0	0.0
	Salmonellosis	B	43	9.73	43	9.73	37	8.37	37	8.37	53	12.00	53	12.00	52	11.77	52	11.77	81	18.33	81	18.33
	Shigellosis	B	13	2.94	13	2.94	19	4.3	19	4.3	7	1.58	7	1.58	11	2.49	11	2.49	31	7.02	31	7.02
	Trichinosis	B	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Typhoid fever	B	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Vibrio parahaemolyticus infection	B	0	0.0	0	0.0	0	0.0	0	0.0	2	0.45	2	0.45	1	0.23	1	0.23	0	0.0	0	0.0
	Yersiniosis	B	2	0.45	2	0.45	1	0.23	1	0.23	1	0.23	1	0.23	2	0.45	2	0.45	1	0.23	1	0.23

Table 4: Rates and Counts of Enteric Diseases in Lucas County Ohio 2011-2015

COUNTS AND RATES OF REPORTABLE DISEASES

			2015				2014				2013				2012				2011			
	Reportable Condition	Class	Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate
HEPATITIS	Hepatitis A	B	0	0.00	0	0.00	0	0.0	0	0.0	1	0.23	9	2.04	2	0.45	7	1.58	2	0.45	5	1.13
	Hepatitis B - Perinatal Infection	B	0	0.0	1	0.23	0	0.0	7	1.58	0	0.0	2	0.45	0	0.0	1	0.23	0	0	18	4.07
	Hepatitis B - acute	B	4	0.91	6	1.36	1	0.23	6	1.36	0	0.0	10	2.26	4	0.91	17	3.85	2	0.45	7	1.58
	Hepatitis B - chronic	B	130	29.42	280	63.37	57	12.90	253	57.26	52	11.77	111	25.12	38	8.60	66	14.94	87	19.69	134	30.33
	Hepatitis C - acute	B	2	0.45	2	0.45	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.45	0	0.0	0	0.0
	Hepatitis C – chronic	B	466	100.95	466	100.95	237	53.64	756	171.11	292	66.09	631	142.82	242	54.77	478	108.19	443	108.19	794	179.71
	Hepatitis E	B	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Table 5: Rates and Counts of Hepatitis in Lucas County Ohio 2011-2015 (Note: due to changes in case classification over time, duplicates may exist within hepatitis reporting)

			2015				2014				2013				2012				2011			
	Reportable Condition	Class	Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate
STI	Chancroid	B	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Chlamydia infection	B	2641	597.76	2641	597.76	3231	731.30	3231	731.30	2267	513.11	2267	513.11	3210	726.55	3210	726.55	2359	533.93	2359	533.93
	Gonococcal infection	B	693	156.85	693	156.85	995	225.21	995	225.21	819	185.37	819	185.37	1349	305.33	1349	305.33	805	182.20	805	182.20
	Herpes - congenital	B	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	HIV/AIDS		-	-	33*	7.47	-	-	54*	12.22	-	-	39*	8.83	-	-	64*	14.49	-	-	56*	12.67
	Syphilis	B	-	-	40*	9.05	-	-	59*	13.35	-	-	26*	5.88	-	-	-	-	-	-	-	-

Table 6: Rates and Counts of Sexually Transmitted Infections in Lucas County Ohio 2011-2015

*Only Confirmed Counts

COUNTS AND RATES OF REPORTABLE DISEASES

	Reportable Condition	Class	2015				2014				2013				2012				2011			
			Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate
VACCINE PREVENTABLE	Diphtheria	A	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Haemophilus influenzae (invasive)	B	5	1.13	5	1.13	8	1.81	8	1.81	9	2.04	9	2.04	5	1.13	5	1.13	14	3.17	14	3.17
	Influenza A - novel virus infection	A	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Influenza-associated hospitalization	B	117	26.48	117	26.48	322	72.88	322	72.88	161	36.44	161	36.44	59	13.35	59	13.35	121	27.39	122	27.61
	Measles	A	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Meningococcal disease - *Neisseria meningitidis*	A	0	0.0	0	0.0	1	0.23	1	0.23	0	0.0	0	0.0	1	0.23	1	0.23	3	0.68	3	0.68
	Mumps	B	0	0.0	0	0.0	1	0.23	1	0.23	0	0.0	0	0.0	1	0.23	1	0.23	1	0.23	2	0.45
	Pertussis	B	9	2.04	13	2.94	26	5.88	34	7.70	36	8.15	40	9.05	6	1.36	10	2.26	14	3.17	18	4.07
	Poliomyelitis	B	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Rubella	B	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.23	0	0.0	0	0.0
	Tetanus	B	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.23	0	0.0	0	0.0	0	0.0	0	0.0
	Varicella	B	0	0.0	0	0.0	13	2.94	16	3.62	12	2.72	13	2.94	13	2.94	14	3.17	17	3.85	17	3.85

Table 7: Rates and Counts of Vaccine Preventable Illnesses in Lucas County Ohio 2011-2015

COUNTS AND RATES OF REPORTABLE DISEASES

			2015				2014				2013				2012				2011			
	Reportable Condition	Class	Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate
ZOONOTIC OR VECTOR-BORNE	Anaplasmosis/Erlichiosis		0	0.0	0	0.0	0	0.0	1	0.23	0	0.0	1	0.23	0	0.0	0	0.0	0	0.0	0	0.0
	Brucellosis	B	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Chikungunya virus	B	0	0.0	0	0.0	*Not reportable prior to 2015*															
	Dengue	B	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Encephalitis	B	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	LaCrosse virus disease	B	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Lyme Disease	B	2	0.45	8	1.81	2	0.45	13	2.94	3	0.68	12	2.72	1	0.23	17	3.85	6	1.36	10	2.26
	Malaria	B	2	0.45	2	0.45	1	0.23	2	0.45	2	0.45	2	0.45	0	0.0	0	0.0	1	0.23	2	0.45
	Other arthropod-borne disease	B	1	0.23	1	0.23	1	0.23	1	0.23	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Psittacosis	B	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Q Fever	B	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Rabies- Human	A	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Spotted Fever Rickettsiosis	B	1	0.23	1	0.23	0	0.0	1	0.23	1	0.23	2	0.45	0	0.0	1	0.23	2	0.45	2	0.45
	Tularemia	A	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Typhus fever	B	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Viral Hemorrhagic Fever (VHF)	A	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	West Nile Virus	B	5	1.13	6	1.36	0	0.0	1	0.23	8	1.81	9	2.04	4	0.91	4	0.91	6	1.36	6	1.36
	Yellow Fever	A	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Table 8: Rates and Counts of Zoonotic or Vector-Borne Illnesses in Lucas County Ohio 2011-2015

COUNTS AND RATES OF REPORTABLE DISEASES

	Reportable Condition	Class	2015				2014				2013				2012				2011			
			Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate
OTHER REPORTABLE	Anthrax	A	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Botulism- foodborne	A	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Coccidioidomycosis	B	3	0.68	3	0.68	1	0.23	1	0.23	1	0.23	1	0.23	0	0.0	1	0.23	1	0.23	1	0.23
	Creutzfeldt-Jakob Disease	B	0	0.0	1	0.23	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Cytomegalovirus - congenital (CMV)	B	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.23	1	0.23	1	0.23	1	0.23
	Ehrlichiosis-Ehrlichia chaffeensis	B	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.23	0	0.0	0	0.0	0	0.0	0	0.0
	Legionellosis	B	10	2.26	13	2.94	6	1.36	6	1.36	18	4.07	18	4.07	4	0.91	5	1.13	7	1.58	7	1.58
	Meningitis - aseptic/viral	B	55	12.45	56	12.67	38	8.60	41	9.28	55	12.45	55	12.45	46	10.41	46	10.41	73	16.52	73	16.52
	Meningitis - bacterial (Not *N. meningitidis*)	B	6	1.36	6	1.36	7	1.58	7	1.58	6	1.36	6	1.36	7	1.58	7	1.58	2	0.45	2	0.45
	Middle East Respiratory Virus (MERS)	A	0	0.0	0	0.0	*Not reportable prior to 2015*															
	Mycobacterial disease - other than tuberculosis	B	35	7.92	35	7.92	39	8.89	39	8.83	32	7.24	32	7.24	27	6.11	27	6.11	28	6.34	28	6.34
	Plague	A	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Severe Acute Respiratory Syndrome (SARS)	A	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Smallpox	A	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Staphylococcal aureus - intermediate resistance to vancomycin (VISA)	B	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Streptococcal - Group A –invasive	B	10	2.26	13	2.94	15	3.40	15	3.40	13	2.94	13	2.94	12	2.72	12	2.72	19	4.30	19	4.30
	Streptococcal - Group B - in newborn	B	3	0.68	3	0.68	0	0.0	0	0.0	4	0.91	4	0.91	3	0.68	3	0.68	3	0.91	3	0.91
	Streptococcal toxic shock syndrome (STSS)	B	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	5	1.13	5	1.13	4	0.91	4	0.91

COUNTS AND RATES OF REPORTABLE DISEASES

			2015				2014				2013				2012				2011			
	Reportable Condition	Class	Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate	Confirmed + Probable	Rate	All Statuses	Rate
OTHER REPORTABLE	Streptococcus pneumoniae - invasive antibiotic resistance unknown or non-resistant	B	26	5.88	26	5.88	19	4.3	19	4.30	32	7.24	32	7.24	33	7.47	33	7.47	36	8.15	36	8.15
	Streptococcus pneumoniae - invasive antibiotic resistant/ intermediate	B	11	2.49	11	2.49	9	2.04	9	2.04	14	3.17	14	3.17	10	2.26	10	2.26	12	2.72	12	2.72
	Toxic shock syndrome (TSS)	B	0	0.0	0	0.0	0	0.0	1	0.23	0	0.0	0	0.0	0	0.0	1	0.23	0	0.0	0	0.0
	Tuberculosis	B	8	1.81	8	1.81	2	0.45	3	0.68	7	1.58	7	1.58	4	0.91	4	0.91	4	0.91	4	0.91

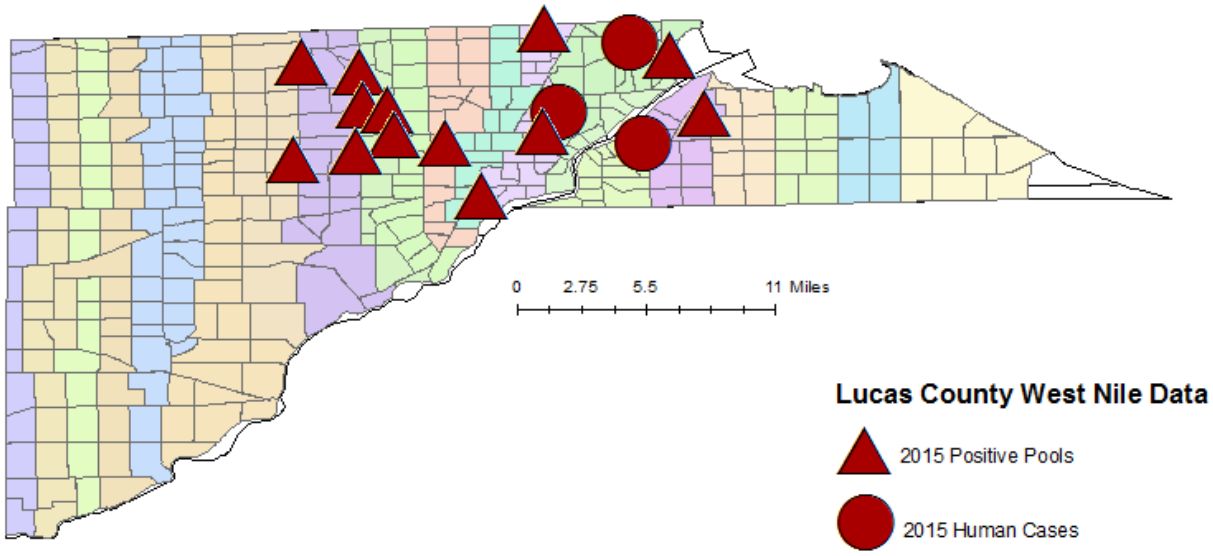
Table 9: Rates and Counts of Other Reportable Diseases in Lucas County Ohio 2011-2015

GEOGRAPHIC DISTRIBUTION OF SELECTED DISEASES

Geographic Distribution of Selected Diseases

OVERVIEW

Highlighted below is a geographic distribution of selected diseases within Lucas County.



A special thank you to the Toledo Area Sanitary District in partnering and sharing data regarding mosquito trapping and testing.

Outbreaks

OVERVIEW

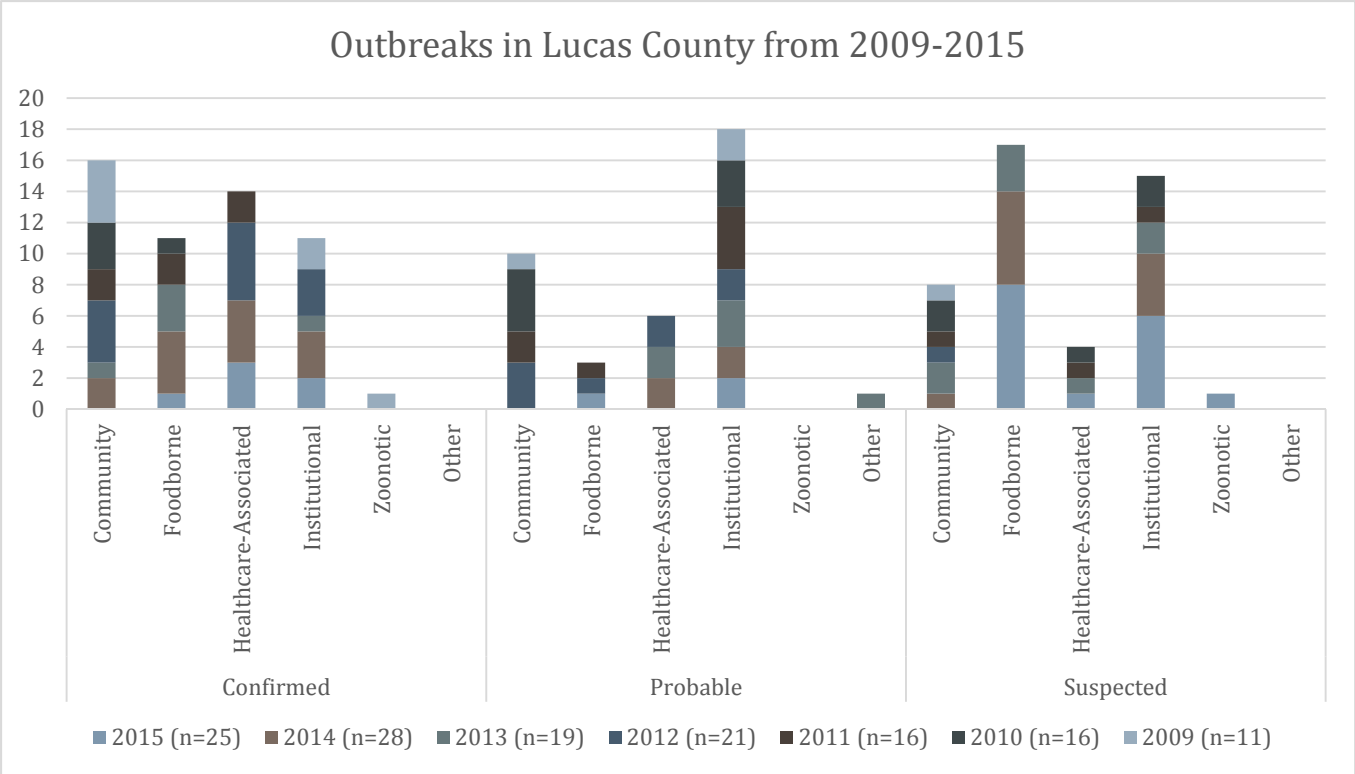
For the 2015 calendar year, there were 25 suspect, probable or confirmed outbreaks that were investigated in Lucas County by the epidemiology staff.

Outbreaks are Class C reportable conditions, unless otherwise specified. Ohio Department of Health classifies outbreaks into a number of categories including Community, Foodborne, Healthcare-Associated, Institutional, Waterborne, and Zoonotic. Definitions for each type of outbreak can be found in the Infectious Disease Control Manual (IDCM) (http://www.odh.ohio.gov/pdf/idcm/intro1.pdf).

Status	Outbreak Type	Agent	Count	Number of Ill
Confirmed	Foodborne	Norovirus	1	4
	Healthcare-associated	MOTT	1	4
		Norovirus	2	83
	Institutional	Norovirus	1	73
		Shigella	1	7
		Total	**6**	**171**
Probable	Foodborne	Norovirus	1	2
	Institutional	Parainfluenza	1	7
		Sarcoptes scabiei	1	11
		Total	**3**	**20**
Suspected	Foodborne	Unknown Agent	8	18
	Healthcare-associated	Sarcoptes scabiei	1	15
	Institutional	Hand, Foot, and Mouth Disease	3	7
		Influenza	1	14
		Norovirus	1	71
		Sarcoptes scabiei	1	5
	Waterborne	*Legionella spp*	1	20
		Total	**16**	**150**
		Grand Total	**25**	**341**

Table 11: Outbreaks Investigated by Epidemiologists at Toledo-Lucas County Health Department, 2015

OUTBREAKS


Outbreaks in Lucas County from 2009-2015
20
18
16
14
12
10
8
6
4
2
0
Community
Foodborne
Healthcare-Associated
Institutional
Zoonotic
Other
Confirmed
Probable
Suspected
2015 (n=25)
2014 (n=28)
2013 (n=19)
2012 (n=21)
2011 (n=16)
2010 (n=16)
2009 (n=11)

Mycobacterium chelonae

OVERVIEW

In February of 2015, an Infection Control Preventionist (ICP) at the University of Michigan Medical System notified the Toledo-Lucas County Health Department that two individuals had contracted *Mycobacterium chelonae* after undergoing LASIK eye surgery at a Lucas County facility in January of 2015. It was noted that the Toledo-Lucas County Health Department launched an immediate investigation into the matter. TLCHD notified multiple departments including: Wood County Health District (due to the fact that the two individuals infected resided in Wood County), the Ohio Department of Health (ODH), the Outbreak Response and Bioterrism Investigation Team (ORBIT), and the Bureau of Infectious Diseases (BID). Based on epidemiological and traceback investigations, 4 case-patients were identified in Lucas County and the TLCHD recommended the facility cease all procedures until the infection site was determined.

During the course of this investigation, it was determined that a small humidifier, in the room during surgery, was the reservoir of infection. Due to the fact that *Mycobacterium chelonae* can be present in water, it is likely that the mist created by the humidifier caused the infection in the eye of the four patients. The TLCHD, along with the ODH and CDC, recommended that the Lucas County facility discontinue the use of the small humidifier in the surgical setting. The misting of water from the humidifier increases the opportunity for microorganisms to be introduced into the environment. The TLCHD also recommended that the facility implement a regular cleaning schedule of humidifiers and the water used in that humidifier. It was also recommended that an environmental sample be taken after implementing these procedures to ensure that the issue has been resolved.

Epidemiology overview of *Mycobacterium chelonae*

Infectious agents: A group of bacterium named *Mycobacterium chelonae*

Mode of transmission: *Mycobacterium chelonae* is commonly found in water, soil, and dust and is known to contaminate medical products. There is very little risk of transmission from person to person.

Symptoms: Light sensitivity, pain, blurry vision, ability to see infection with naked eye

Prevention: Implementation of infection control policies at surgical and medical facilities, including: protocols for cleaning, disinfecting, and sterilizing medical equipment should mitigate future infections. The use of healthcare-approved humidifiers in a surgical setting should also help to prevent further infection.

For more information: http://www.odh.ohio.gov/

Legionnaires' Disease

OVERVIEW

In 2015, the Toledo-Lucas County Health Department (TLCHD) was notified of a potentional respiratory outbreak associated with an institution in Toledo, Ohio. The Environmental Health Director was informed of a number of individuals that were diagnosed with pneumonia and others who had pneumonia-like symptoms, all of whom worked in the same building (Facility A).

An investigation was launched immediately and a questionnaire was developed to begin calling the individuals for an interview. The Ohio Department of Health (ODH) was called to discuss the outbreak and they also coordinated a specimen shipment for testing at the Center for Disease Control and Prevention (CDC). The local hospitals were put on heightened alert for possible pneumonia and Legionnaires' disease cases.

Following the launch of the investigation, Hazcorp Env Services completed air testing of Facility A and portable HEPA filters were installed over the weekend. Tim Keane, an engineering consultant specializing in waterborne pathogen outbreak investigation and remediaion, was brought for guidance on a potential waterborne disease at Facility A. With the help of the ODH and the CDC, three indiviuals that were confirmed in the outbreak were asked to visit TLCHD for additional testing. A hotline was established with the TLCHD on September 3, 2015 for community members who were clients of Facility A, who had been in the building between June 13-August 4, 2015 and were experiencing pneumonia-like symptoms. After extensive testing and validations, the summary showed Legionella levels have been well below Occupational Safety and Health Administration (OSHA) upper limits.

Ultimately, there were 31 cases of ill employees reported to TLCHD from Facility A. After applying the case definition, 20 individuals were indentified as matching the case definition as 'confirmed' or 'suspect'. Facility A worked with the TLCHD to find the source of illness and elmininate it immediately. A new company was hired to implement necessary improvements and perform routine preventative maintencance.

EPIDEMIOLOGY OVERVIEW OF LEGIONELLA

Infectious agents: *Legionella spp*., a very serious type of pneumonia (lung infection)
Mode of transmission: Spread through water droplets that if breathed in, can cause Legionnaires' disease. Legionnaires' disease is not spread from person-to-person.
Incubation Period: 2-10 days
Symptoms: Cough, muscle aches, high fever, shortness of breath, headache
Treatment: Legionnaires' disease is treated with antibiotics
Prevention: Certain factors can put a person at higher risk for contracting Legionnaires' disease. These include: being a current or former smoker, having chronic lung disease such as emphysema, or chronic obstructive pulmonary disease (COPD), or having a weakened immune system.
For more information: http://www.odh.ohio.gov/

Timeliness of Disease Reports

OVERVIEW

Examining the timeliness of disease reporting is a key part of good public health practice. Timeliness requirements for each reportable disease vary based on the communicability and severity of the disease.

In the Ohio Disease Reporting Systems (ODRS) application, it is possible to query the date when a healthcare provider diagnosed an illness and the date when the local health department received notification of the illness (i.e., the date the case was entered into ODRS). When the date of diagnosis was unavailable (for some cases), the date laboratory results were available was used. If both of the aforementioned dates were absent from case files, the date specimen(s) were collected serve as the date the healthcare provider was suspecting illness. This absence of data is an area that the department of epidemiology will be focusing on to improve in 2015.

The table below lists selected diseases and the corresponding median and mean number of days between healthcare provider diagnosis and reporting to the local health department in 2015. This includes any case reported to the health department, regardless of final disease classification. In 2009, E. coli, hepatitis A, listeriosis, mumps, pertussis, and salmonellosis became Class B (1) reportable conditions, which are required to be reported by the end of the next business day after the existence of a case is known. Measles, meningococcal disease, and rubella are Class A reportable conditions (designated in red in the following table) due to their severity and potential for epidemic spread; Class A reportable conditions are required to be reported immediately via telephone upon recognition of a case, suspected case, or positive laboratory result.

Reporting lag is defined as the difference between the diagnosis date and when the case was reported to the local health department. *It is to be noted that an increase in the lag time of some diseases that require minimal health department follow-up (e.g. chlamydia, hepatitis B, hepatitis C, gonococcal infection) is inflated, due to management of high volume of cases received by TLCHD.*

TLCHD will periodically monitor the reporting lag times for selected diseases. Regular monitoring will help address two key issues: late reporters and missing data. If specific reporters are found to be contributing to longer lag times, this information will be shared with them, challenges to timely reporting will be identified and addressed, and closer monitoring of reports will follow. Additionally, filling in missing or incorrect dates will aid in better, timelier interventions and prevention efforts.

TIMELINESS OF DISEASE REPORTS

Reportable Condition	Lag Time (in days) 2014	Lag Time (in days) 2015
Amebiasis	1.00	2.00
Anaplasmosis-Anaplasma phagocytophilum	8.00	0.00
Botulism, foodborne	4.00	0.00
Campylobacteriosis	3.84	2.54
Chlamydia infection	32.71*	2.27
Coccidioidomycosis	1.00	2.67
Cyclosporiasis	1.00	0.00
Diphtheria	1.00	0.00
E. coli	1.57	0.80
Giardiasis	6.82	1.65
Gonococcal infection	79.15*	2.12
Haemophilus influenzae (invasive disease)	6.63	2.00
Hepatitis A	7.00	0.50
Hepatitis B (including delta) - acute	1.83	1.00
Hepatitis B (including delta) - chronic	178.11*	2.94
Hepatitis C – chronic	105.14*	51.65
Influenza-associated hospitalization	2.46	2.02
Legionellosis - Legionnaires' Disease	67.00	3.73
Listeriosis	0.00	0.00
Lyme Disease	10.41	0.78
Malaria	35.67	3.00
Measles	5.00	0.00
Meningitis - aseptic/viral	3.68	2.21
Meningitis - bacterial (Not N. meningitidis)	5.14	2.43
Meningococcal disease - *Neisseria meningitidis*	0.00	0.00
Mumps	3.75	0.00
Mycobacterial disease - other than tuberculosis	6.00	0.03
Other arthropod-borne disease	8.00	1.00
Pertussis	4.55	0.95
Salmonellosis	20.26	2.35
Shigellosis	7.65	0.64
Spotted Fever Rickettsiosis, including Rocky Mountain spotted fever (RMSF)	4.00	3.00
Streptococcal - Group A -invasive	4.38	2.92
Streptococcus pneumoniae - invasive	3.79	3.41
Toxic shock syndrome (TSS)	4.00	0.00
Tuberculosis	0.00	0.00
West Nile virus disease (also current infection)	2.83	1.00
Yersiniosis	1.00	0.00

Diseases designated in Red are Class A Reportable Diseases

**It is to be noted that an increase in the lag time of some diseases that require minimal health department follow-up (e.g. chlamydia, hepatitis B, hepatitis C, gonococcal infection) is inflated, due to management of high volume of cases received by TLCHD. In 2015, TLCHD was able to have full-time clerical support entering many disease reports, thus reducing time from receipt to input into database.*

Environmental Health Introduction

OVERVIEW

The Toledo-Lucas County Health Department's Division of Environmental Health is responsible for inspections, permits, and licenses. The Division covers over 50 different programs, including, but not limited to: food, wells, septic systems, and public swimming pools. In addition to regulatory responsibilities, the Division conducts educational sessions in the aforementioned programs.

Food Protection

OVERVIEW

The Food Safety Program is responsible for the inspections of food service operations, temporary food service operations, food vending machines, micro-markets, mobile food operations, and retail food establishments. These inspections are conducted with consumer safety in mind. Local health departments have the authority to enforce state standards for safety and sanitation in Food Service Operations and Retail Food Establishments.

WHY IT IS A PUBLIC HEALTH CONCERN

Foodborne illness is a serious public health threat. According to the Centers for Disease Control and Prevention, each year in the United States, 76 million persons suffer symptoms (e.g. vomiting, diarrhea) caused by mishandled, tainted, or spoiled food. It is the goal of the Food Protection Division of Environmental Health to reduce the risk of foodborne illnesses through inspection, education, and enforcement.

PROGRAMMATIC UPDATE

Food facility inspections that have been conducted as of July 9, 2015 are available on-line through the Toledo-Lucas County Health Department. This advancement illustrates our continued commitment to increased communication and improving the health of Lucas County residents.

2015 SNAPSHOT

Food Service Operations	
Licensed	1,769
Inspections Completed	5,298
Food Service Mobile	
Licensed	101
Inspections Completed	120
Food Service-Temporary License	
Licensed	321
Inspections Completed	321
Food Service-Vending Machines	
Licensed	282
Inspections Completed	234
Retail Food Establishment	
Licensed	733
Inspections Completed	1,262

THE TOP SPOT AWARD

In an effort to incentivize food establishments for overall cleanliness and to minimize violations, the Toledo-Lucas County Health Department created the Top Spot Award. This is a completely voluntary program where food establishments who meet guidelines set forth by the TLCHD can be awarded The Top Sport Award. Criteria for this program include: having no confirmed food borne illnesses within 2 years, having the same licensee for at least 1 full licensing year, having no violations from the liquor control or smoking program, among other criteria. The award recognizes food establishments for applying and meeting these requirements. For 2015, 74 food establishments were recognized for the Top Spot Award.

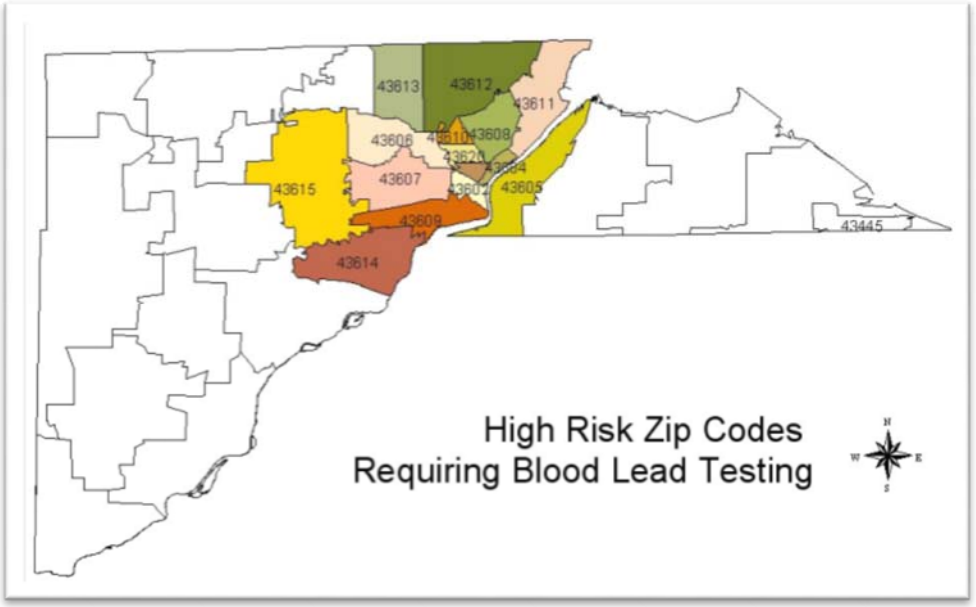
Lead Prevention

OVERVIEW

"Lead Poisoning" is defined as a confirmed level of lead in human blood of ten micrograms per deciliter (10 µ/dL) or greater. The State of Ohio mandates blood lead screening for all high risk children 72 months (6 years) of age and below. High risk children are defined as a child that meets one or more of the following criteria:

- Lives in or regularly visits a house built before 1950. (This includes a day care center, preschool, or home of a baby sitter or relative.)
- Lives in or visits a house that has peeling, chipping, dusting or chalking paint.
- Lives in or visits a house built before 1978 with recent, ongoing, or planned renovation/remodeling.
- Has a sibling or playmate who has or did have lead poisoning.
- Frequently comes in contact with an adult who has a hobby or works with lead. Examples are construction, welding, pottery, painting, and casting ammunition.
- Or any child residing in one of the following zip codes:
  - 43402
  - 43460
  - 43551
  - 43602
  - 43604
  - 43605
  - 43606
  - 43607
  - 43608
  - 43609
  - 43610
  - 43611
  - 43612
  - 43613
  - 43614
  - 43615
  - 43620
  - 43624

For the 2015 calendar year, 973 children were screened by the Toledo-Lucas County Health Department and 70 of those resulted in lead cases that the health department managed. Overall, 39 Risk Assessments (Inspections) were conducted from January to December of 2015.



LEAD PREVENTION

WHY IT IS A PUBLIC HEALTH CONCERN

Lead can damage nearly every system in the human body, and has harmful effects on both adults and children. Lead poisoning is the greatest environmental threat to children in Ohio.

Signs of lead poisoning are not always easy to see. Children can be poisoned by lead and may not look or act sick. Sometimes the non-specific symptoms may be mistaken for similar illnesses (e.g. upset stomach, influenza). Some possible signs and symptoms of lead poisoning are listed below.

CHILDREN	ADULTS
Tiredness or loss of energy	Tiredness or weakness
Hyperactivity	Irritability
Irritability or crankiness	Trouble sleeping
Reduced attention span	Headache
Poor appetite	Difficulty concentrating
Weight loss	Aches or pains in stomach
Trouble sleeping	Loss of appetite
Aches or pains in stomach	Constipation
	Nausea
	Weight loss

Lead poisoning can affect every organ and system in the body. Very high levels of lead exposure can cause coma, seizures, and even death. Even a little lead can make children slow learners. Other health effects include:

CHILDREN	ADULTS
Behavior and learning problems	Impotency
Hyperactivity	Brain and nervous system damage
Impaired speech and language	High blood pressure
Slowed growth	Digestive problems
Kidney and liver damage	Kidney problems
Hearing damage	Anemia
	Reproductive system problems
	Hearing, vision, and muscle coordination problems

Children and adults can get lead in their bodies by swallowing or breathing in dust that contains lead. Some individuals also have occupational exposures to lead that put them at higher risks of elevated blood lead levels. Your healthcare provider can ask you some questions to see if you or your child is at risk for lead poisoning and then can request blood to be tested. The blood testing is used to find out how much lead is in a person's blood.

Septic and Water

OVERVIEW

The primary purpose of the Septic and Well Program is to prevent disease resulting from human consumption of contaminated water. This is accomplished, in part, by assuring that waste-water handling systems do not contaminate the aquifers and surface water sources of drinking water.

An important component of the household sewage treatment system program is to ensure that all sewage systems are installed properly for effective treatment of sewage effluent to prevent contamination of drinking water. The Toledo-Lucas health department oversees sewage system designs and installation including conducting site reviews prior to sewage system approval to final inspections to ensure proper installation. The health department also assists homeowners with education on proper maintenance of sewage system to prolong the life of the sewage system and to prevent system failures.

In addition to the household sewage treatment system program, the TLCHD oversees proper installations and maintenance of private water systems including wells and hauled water storage tanks. Proper installation of private water systems is very crucial in providing safe drinking water for the homeowners. As part of monitoring the safety of the private water system, the TLCHD conducts water samples and transport the water to a lab to be tested.

Household Sewage Treatment	
Permits	67
Inspections	94
Potable Water Systems	
Permits	47
Inspections	34
Water Samples	229

SEWAGE TREATMENT SYSTEM PROGRAM

There are over 12,000 household sewage treatment system in Lucas County that if properly maintained, can be a safe and effective mean of wastewater disposal. However, failed or improperly discharging sewage system can cause sewage to contaminate our surface and ground water, the same water that we all swim and drink. The mission of the TLCHD is to minimize the threat of surface water and ground water contamination from malfunctioned or improperly designed, installed or maintained household sewage treatment systems in order to prevent disease transmission and to protect the quality of surface and ground water. TLCHD performs inspections, regulate contractors, educate homeowners, and enforce sewage regulations.

SEPTIC AND WATER

SEWAGE TREATMENT SYSTEM ASSESSMENT PROGRAM

Effective January 1, 2016, the sewage regulation requires all health departments to develop a program for the administration of operation and maintenance (O&M) management for sewage treatment systems and system owner education. To develop the O&M program, TLCHD is conducting an assessment of all HSTS in Lucas County to determine the type, age, condition, and complexity of the HSTS. The complexity of the system refers to whether the system uses mechanical components to treat the sewage effluent or to dose the sewage effluent into the pipes for dispersal. Surface water sampling is also being conducted as part of the assessment to test for fecal coliform and E. coli. The assessment is only being conducted for data collection and monitoring purposes but no fee is being assessed to the homeowners. Currently the assessment is conducted by two staff sanitarians and the implementation of the program started in August, 2015.

Assessments completed in 2015	324
Surface Water samples collected in 2015	93

PRIVATE WATER PROGRAM

A private water system is any water system other than a public water supply system that provides water for human consumption. The most common examples of private waters systems include wells, hauled water systems, cisterns and drinking water ponds. The construction, alteration or sealing of a private water system will require a permit from the health department. Only registered water system contractors may construct, alter or seal private water systems, drill water wells, and install pit-less adapters.

HOUSEHOLD SEWAGE TREATMENT SYSTEM REPLACEMENT AND REPAIR SYSTEM

The Ohio Environmental Protection Agency and the Ohio Department of Health awarded the Toledo-Lucas County Health Department $300,000 to assist Ohio households with no or little financial means to repair or replace failing household sewage treatment systems (HSTS) with an emphasis in the Swan Creek Watershed. The program requires that households that are located in the Swan Creek Watershed and whose income is at or below 100%, 200%, or 300% of the U.S. Department of Health and Human Services poverty guidelines be prioritized for the replacement or repair program. The funding covers such expenses such soil evaluation, designs, applicable permits, and installation including materials. The replacement or repairs of HSTS is be fully reimbursable for homeowners whose incomes are at or below 100% of the poverty level. The program will also assist Lucas County households whose poverty level is at or below 200% and is at or below 300% with lesser amount of reimbursements of cost. If money is still available, the program will open up to the rest of Lucas County outside of the Swan Creek Watershed.

WOLF CREEK WATERSHED SEPTIC SYSTEM EDUCATION PROGRAM

In conjunction with the Toledo metropolitan area of council of government (TMACOG), the City of Oregon, and the Lucas County Soil & Water Conservation District, the TLCHD began the Wolf Creek Watershed Septic System Education Program. The program is aimed at educating homeowners in the Wolf Creek

watershed on how to properly maintain their household sewage treatment system. The homeowners are assessed regarding their knowledge of HSTS and then provided with educational material on proper maintenance of HSTS. A video which can be seen on the TLCHD website has also been created to provide information on HSTS and how to maintain them.

CHAMBERS INSTALLATION FIELD DAY—TRAINING OPPORTUNITY FOR SEWAGE CONTRACTORS

May 5, 2015, a training was provided for sewage contractors using a live demonstration of a sewage treatment system being installed using "chambers". Prior to the adoption of the new sewage regulations in January 1, 2015, many of the local sewage contractors installed traditional stone and pipes for leach fields. The Chambers installation field day which was sponsored by Infiltrator Systems Inc. and John Helminiak & Sons Excavating, a local sewage contractor, was used to demonstrate another method for the installation of leach fields. Chambers are gravel-less systems and can be installed using a smaller infiltrative area than traditional leach fields. Over twenty five people were in attendance and contractors were able to obtain CEU's which are required to become registered to conduct sewage work in Lucas County.

WHY IT IS A PUBLIC HEALTH CONCERN

Safe septic and sewage treatment is an important component to public health. Sewage has the potential to pollute water systems with pathogens, excess nutrients, heavy metals, and other toxins. Improperly managed sewage systems can negatively impact aquatic life and contribute to bacterial growth in bodies of water. Pathogens carried in sewage can also end up in drinking water supplies and swimming areas, if systems are not properly maintained. The Environmental Protection Agency estimates that up to 3.5 million individuals fall ill from swimming in waters contaminated by sanitary sewer overflows alone every

year. Listed below are a number of pathogens, parasites and viruses that can be implicated in contaminated water systems:

	AGENT	ACUTE EFFECTS
BACTERIA	*E. coli* O157:H7	Diarrhea
	Legionella pneumonia	Fever, pneumonia
	Helicobacter pylori	Gastritis
	Vibrio cholera	Diarrhea
	Vibrio vulnificus	Skin and tissue damage
	Campylobacter	Diarrhea
	Salmonella	Diarrhea
	Yersinia	Diarrhea
	Shigella	Diarrhea
	Cyanobacteria	Diarrhea
	Leptospirosis	Fever, headache, chills, muscle aches, vomiting
	Aeromonas hydrophila	Diarrhea
	Pseudomonas aeruginosa	Fever, lethargy
PARASITE	*Giardia lamblia*	Diarrhea
	Cryptosporidium	Diarrhea
	Toxoplasma gondii	Newborn syndrome, hearing and visual loss, mental issues
	Microsporidia	Diarrhea
	Entamoeba cayetanensis	Amebiasis, amoebic dysentery, abscesses in liver or other organs
VIRUS	Hepatitis virus	Liver infection
	Adenoviruses	Eye infections, diarrhea, respiratory disease
	Caliciviruses	Diarrhea
	Coxsackieviruses	Encephalitis, aseptic meningitis
	Echoviruses	Aseptic meningitis
	Polyomaviruses	Gastroenteritis
	Norovirus	Nausea, vomiting, abdominal pain or cramps, watery or loose diarrhea, malaise, low-grade fever, muscle pain

Listing is not comprehensive to cover all waterborne illness pathogens/bacteria/viruses. Also not included are chemicals that have been implicated in previous waterborne illnesses.

Recreational Vehicle Parks

OVERVIEW

The Toledo-Lucas County Health Department is mandated by the Ohio Department of Health to enforce rules relating to recreational vehicle parks; these rules can be found in the Ohio Administrative Code (OAC) in Chapter 3701-25. Minimum standards have been established and are to be enforced for the design, installation, operation, and maintenance of these parks to protect the public from injury, minimize the potential for disease transmission, and provide a safe and healthy recreational environment.

2015 SNAPSHOT

For 2015, 14 facilities have been licensed and 17 inspections have been conducted during the calendar year.

Rodent Program

OVERVIEW

The rodent control program is designed to manage one of the oldest public health problems known to humans. Rodents destroy property, have the potential to contaminate food supplies, and also carry diseases. Our goal is to control the spread of disease by limiting the growth of rodent populations and to correct conditions that contribute to rodent breeding. To accomplish this goal, the rodent control program conducts field inspections, issues orders to abate conditions that are conducive to proliferation of rodents, bait public areas, and meet with neighborhood groups to provide education on methods of rodent control and application of pesticides.

2015 SNAPSHOT

For the 2015 calendar year, the rodent program conducted 1,404 inspections and applied 233 pounds of bait within Lucas County.

COMMUNITY DEVOLOPMENT BLOCK GRANT (CDBG) 41st YEAR UPDATE

The rodent program also works under the Community Development Block Grant (CDBG) when conducting rodent complaint and demo inspections within the City of Toledo. The area for this grant includes all areas in the City of Toledo with an emphasis in areas with low to moderate levels of income. When compiling data for this grant, only the initial complaint and demo inspection are reported. In the past 18 months, the Toledo-Lucas County Health Department completed a total of 1,080 rodent abatement inspections at demolition sites in the City of Toledo. Of the 1,080 inspections, 81% or 875 inspections were conducted in the low and moderate household income areas according to the 2013 Median Household Income Map. Demolition inspections in the low income levels completed totaled 48.33% or 522 inspections and areas of moderate income had a total of 32.6% or 353 demolition inspections. The data shows that we were able to meet the needs of our targeted area.

Total Number of Demolition Inspections Conducted		
Low Household Income per 2013 Census Tract	522 Demolition Inspections Completed	48.33%
Moderate Household Income per 2013 Census Tract	353 Demolition Inspections Completed	32.69%
Other Census Tract Areas	205 Demolition Inspections Completed	18.98%
Total Number:	1,080 Demolition Inspections Completed in the City of Toledo	100%

RODENT PROGRAM

In the past 18 months the Toledo-Lucas County Health Department received a total of 1,190 rodent complaints in the City of Toledo. Of the 1,190 complaints received, 70.25% or 836 complaints were received in the low and moderate household income areas according to the 2013 Median Household Income Map. Complaints received in the low income level areas totaled 38.66% or 460 total complaints and areas of moderate income had a total of 31.60% or 376 total complaints received. The number of complaints received are counted by address and not the number of times an inspector will visit the home to conduct an inspection.

Total Number Complaints Received July 1, 2014-December 31, 2015		
Low Household Income per 2013 Census Tract Area	460 Rodent Complaints Received for these areas	38.66%
Moderate Household Income per 2013 Census Tract	376 Rodent Complaints Received for these areas	31.60%
Other Census Tract Areas	354 Rodent Complaints Received for these areas	29.75%
Total Number:	1,190 Rodent Complaints Received	100%

WHY IT IS A PUBLIC HEALTH CONCERN

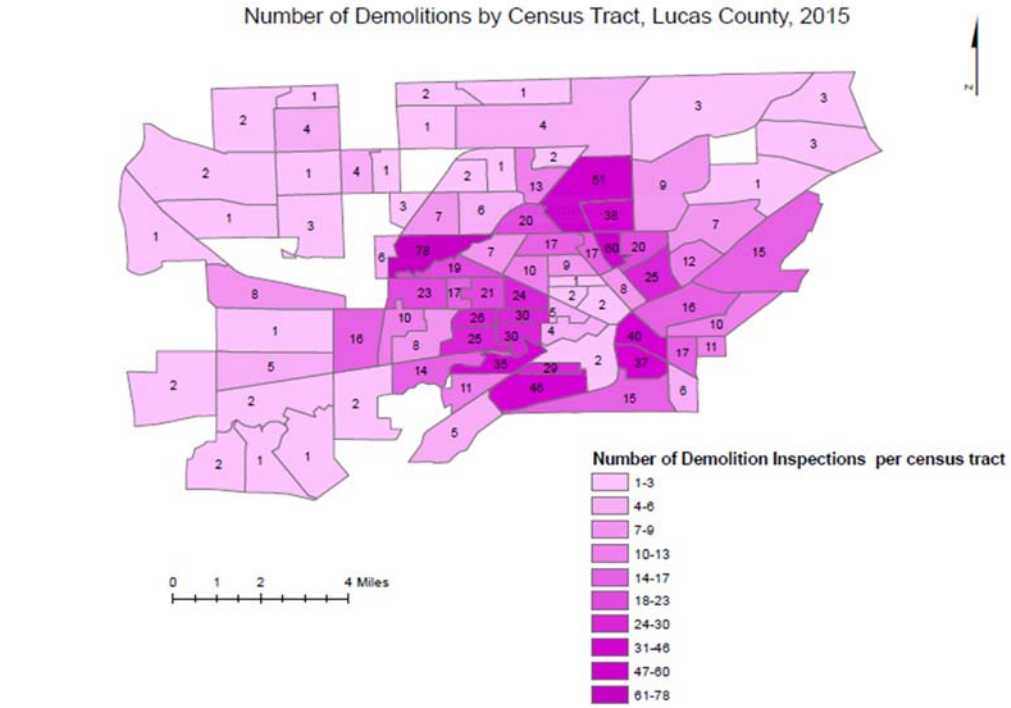
Aside from the obvious concerns relating to the presence of rodents, many diseases can be directly transmitted by rodents. Listed below are just a few of these diseases:

- Hantavirus pulmonary syndrome
- Hemorrhagic fever with renal syndrome
- Lassa fever
- Leptospirosis
- Lymphatic Chorio-meningitis (lcm)
- Omsk hemorrhagic fever
- Plague
- Rat-bite fever
- Salmonellosis
- South American arenaviruses
- Tularemia

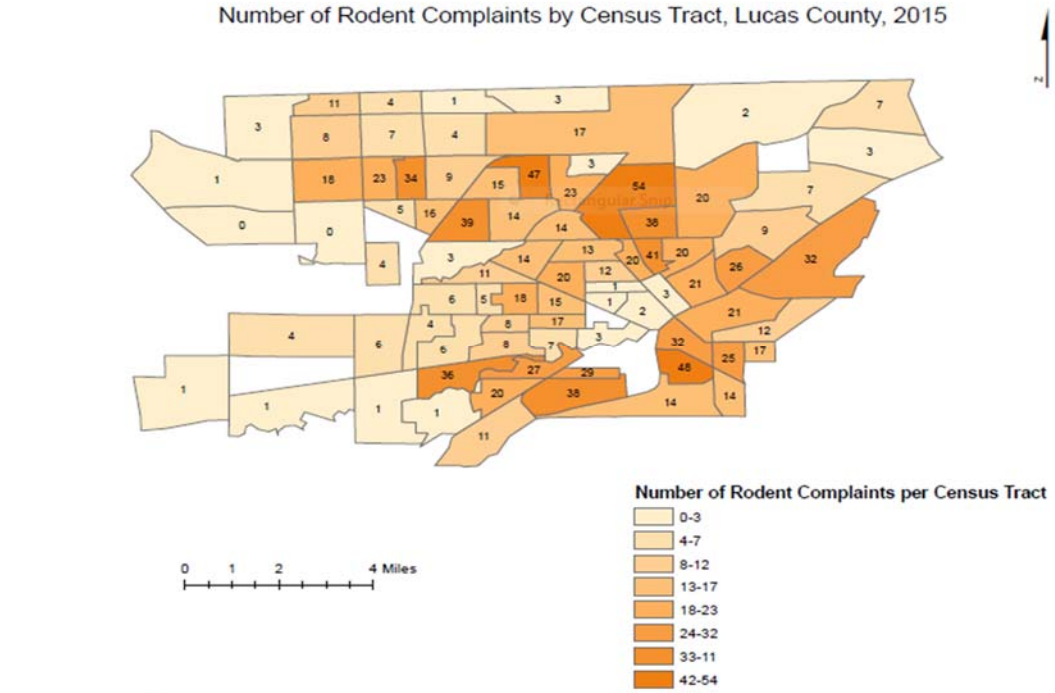
Rodents also can indirectly transmit many diseases to humans. These diseases include, but are not limited to:

- Babesiosis
- Colorado tick fever
- Cutaneous leishmaniasis
- Human granulocytic anaplasmosis
- Lacrosse encephalitis
- Lyme disease
- Murine typhus
- Omsk hemorrhagic fever
- Powassan virus
- Scrub typhus
- Rickettsialpox
- Relapsing fever
- Rocky mountain spotted fever
- Sylvatic typhus
- West Nile virus

RODENT PROGRAM



Created by Samantha Eitniear, Toledo-Lucas County Health Department



Created by Samantha Eitniear, Toledo-Lucas County Health Department

Schools

Overview:
For the 2015 calendar year, the Toledo-Lucas County Health Department inspected all public and private schools for environmental health and safety risks factors. In accordance to the U.S. Department of Education, office of the under Secretary, "Inadequate indoor environment in schools may decrease performance by causing health effects that either directly impair concentrations or memory or indirectly affect learning." Our goal is to inspect schools twice a school year and inform the school officials of the environmental health and safety risks found during our inspections and provide guidance on correcting any deficiencies. While this program is unfunded and there are no regulatory requirements for schools to correct any deficiencies, we believe that this program has helped provided a safe school environment for the children of Lucas County.

2015 SNAPSHOT

In 2015, 180 facilities were licensed and a total of 299 inspections were completed.

WHY IT IS A PUBLIC HEALTH CONCERN

In 2010, President Obama's Education Blueprint states safety and health conditions of school environment as an essential element to improve student learning. There is a growing number of literature which documents the support of a safe and healthy school environment for learning. Decaying environmental conditions present in a school building can affect learning as well as the health and morale of staff and students. According to a 2004 report to the Under Secretary of the U.S. Department of Education, "The overall evidence strongly suggests that poor environments in schools, due primarily to effects of indoor pollutants, adversely influence the health, performance and attendance of students." One of the easiest ways to create a healthy school environment is to improve everyday maintenance to keep the school buildings clean, running smoothly and safely. Unsanitary conditions and poor cleaning practices can attract unwanted pests, allow dusts and other irritants to accumulate which contribute to increased respiratory and asthma symptoms among the children and adults. *

* U.S. EPA: An Overview of Routine Cleaning and Maintenance for a Healthy School Environment
* U.S. Department of Education, Office of Planning, Evaluation and Policy Development, ESEA Blueprint for Reform, Washington, D.C. 2010
*The American Clearinghouse on Educational Facilities, Maintaining a Safe and Healthy School Environment for Learning. Vol. 1, No. 1, 2011.
*Information taken from ODH School Inspection Guidance, 10-29-10

Public Swimming Pools

OVERVIEW

Public swimming pools, spas, and special use pools are regulated under the authority of Chapter 2749 of the Ohio Revised Code (ORC) and Chapter 3701-31 of the Ohio Administrative Code (OAC) and the enforcement of these regulations within Lucas County, Ohio falls to the responsibility of the Toledo-Lucas County Health Department.

These rules were created to establish minimum standards for the design, installation, operation, and maintenance of these facilities in order to protect the public from injury, minimize the potential for disease transmission, and provide a safe and healthy aquatic recreational environmental. Public swimming pool collectively references public swimming pools, public spas, special use pools, wading pools, and spray grounds.

Most swimming pools are inspected by our staff prior to the pools opening during the early summer months and are inspected on a periodic basis throughout the summer. There are also several indoor swimming pools and spas that are located in hotels and health clubs that inspected year round. In addition to conducting regular inspections of swimming pools, the Toledo-Lucas County Health Department conducts inspections if there are complaints from a citizen or if investigating concerns associated with possible water borne illnesses.

2015 SNAPSHOT

The staff at the Toledo-Lucas County Health Department have licensed 254 public swimming pools and conducted 620 inspections for 2015.

WHY IT IS A PUBLIC HEALTH CONCERN

Chlorine, a common pool cleaning chemical, does not kill all germs instantly. Some bacteria and parasites have become very tolerant to chlorine and, until recently, have not been known to cause human illness. These resistant bacteria and parasites can take minutes to days to be killed by chlorine, so swallowing just a little water that contains these germs can make you sick.

Recreational water illnesses (RWIs) are caused by germs spread by swallowing, breathing in mists or aerosols of, or having contact with contaminated water in swimming pools, hot tubs, water parks, water play areas, interactive fountains, lakes, rivers, or oceans. RWIs can also be caused by chemicals in the water or chemicals that evaporate from the water and cause indoor air quality problems.

RWIs include a wide variety of infections, such as gastrointestinal, skin, ear, respiratory, eye, neurologic, and wound infections. The most commonly reported RWI is diarrhea. Diarrheal illnesses are caused by germs such as Crypto (short for *Cryptosporidium*), *Giardia*, *Shigella*, Norovirus and *E. coli* O157:H7. With RWI outbreaks on the rise, swimmers need to take an active role in helping to protect themselves and

prevent the spread of germs. It is important for swimmers to learn the basic facts about RWIs so they can keep themselves and their family healthy every time they swim.

In the past two decades, there has been a substantial increase in the number of RWI outbreaks associated with swimming. Crypto, which can stay alive for days even in well-maintained pools, has become the leading cause of swimming pool-related outbreaks of diarrheal illness. As indicated in the Centers for Disease Control and Prevention's Morbidity and Mortality Weekly Report from 2012, 2004 to 2008, reported Crypto cases increased over 200% (from 3,411 cases in 2004 to 10,500 cases in 2008).

Although Crypto is tolerant to chlorine, most germs are not. Keeping chlorine at recommended levels is essential to maintain a healthy pool. However, a 2010 study posted in the Centers for Disease Control and Prevention's Morbidity and Mortality Weekly Report in 2010 found that 1 in 8 public pool inspections resulted in pools being closed immediately due to serious code violations such as improper chlorine levels.

For more information about recreational water illnesses, see www.cdc.gov/healthywater/swimming/rwi.

Body Art

OVERVIEW

Body art in the state of Ohio is regulated under the authority of Chapter 3730.01 of the Ohio Revised Code (ORC) and Chapter 3701-9 of the Ohio Administrative Code (OAC) and, for the jurisdiction of Lucas County Ohio, is to be enforced by the Toledo-Lucas County Health Department. These rules were created to establish minimum standards, applicable across the entire state of Ohio, for the operation and maintenance of body art facilities in order to protect the public from injury, minimize the potential for disease transmission, and provide a safe and healthy environment.

2015 SNAPSHOT

For the 2015 calendar year, the program in Lucas County has licensed 25 facilities and conducted 60 facility inspections.

WHY IT IS A PUBLIC HEALTH CONCERN

Popularity and decreased taboo associated with tattooing and body piercing has left many individuals believing that these procedures are extremely safe, especially when conducted in what may appear to be a well-respected tattoo artist in a seemingly sterile setting. Public health works to ensure that facilities are operating within licensing guidelines and that the risk of infectious diseases and hazardous situations are mitigated. Unsterile tattooing equipment and needles can transmit diseases such as HIV, hepatitis, and skin infections caused by many bacteria, including some species of *Staphylococcus* .

Bathing Beaches

OVERVIEW

The Bathing Beach Regulation adopted by the Toledo-Lucas County Health Department is the source of regulations for bathing beaches permitted by this department. The Toledo-Lucas County Health Department will conduct annual inspections at permitted bathing beaches in Lucas County. Safety and sanitation of the bathing beach and diving areas are evaluated along with the water quality. Water quality standards are based on the current U.S. Environmental Protection Agency (EPA) standards. Currently, the standards state that *E.Coli* shall not exceed 235 *E.Coli* colonies per 100ml in more than 10% of the samples taken during any 30-day period.

2015 SNAPSHOT

In 2015, the Toledo-Lucas County Health Department issued 3 bathing beach permits and conducted 5 inspections with water sampling. All water samples taken and tested did not exceed the U.S. EPA standard of 235 E.Coli colonies per 100ml.

WHY IS IT A PUBLIC HEALTH CONCERN

Conducting inspections at the permitted bathing beaches allows this department to assure a safe and healthy aquatic recreational environment by protecting the bathing public from risks of contracting waterborne diseases from exposure to contaminated waters. Gastroenteritis with the symptoms of nausea, vomiting, headache, stomachache, fever and diarrhea are the most common associated illness when swimming in contaminated water. Other illnesses associated with swimming in contaminated water include, eye, ear, nose and throat infections.

Smoke-Free Workplace

OVERVIEW

Public health in Lucas County has been a long-standing advocate for smoke-free environments. In 2003, many universities across Ohio, including some within Lucas County, banned smoking on campus. The Toledo-Lucas County Health Department has been responsible for enforcing Ohio's Smoke-Free Workplace Act and has been instrumental in tightening smoking legislation within the state. Ohio's Smoke-Free Workplace Act was voted upon in November of 2006 as Issue 5 in the state of Ohio; Issue 5 was a statute which set into law a requirement that all public places and places of employment in the state of Ohio prohibit smoking.

The new law went into effect December 7, 2006, thirty days after voters passed the law. Administrative rule for the Ohio Revised Code 3794 further defined the law and enforcement by outlining responsibilities of proprietors and individuals. They clarify the posting requirements for signs, outline due process for proprietors and individuals and state fines and penalties for violations.

2015 SNAPSHOT

For the calendar year of 2015, the Toledo-Lucas County Health Department conducted 130 smoke-free workplace inspections.

WHY IT IS A PUBLIC HEALTH CONCERN

Smoking is the leading preventable cause of death in the United States. The Centers for Disease Control and Prevention estimates that cigarette smoking causes more than 480,000 deaths in the United States annually. Smokers are also more likely than nonsmokers to develop heart disease, stroke, and lung cancer. Quitting smoking lowers your risk for smoking-related diseases and can add years to your life.

Secondhand smoke is the combination of smoke from the burning end of a cigarette and the smoke breathed out by smokers. Exposure to secondhand smoke has immediate adverse effects on the cardiovascular system and can cause coronary heart disease and stroke. Breathing secondhand smoke can have immediate adverse effects on your blood and blood vessels, increasing the risk of having a heart attack. Secondhand smoke harms not only adults, but children by increasing their likeliness to develop other illnesses (e.g. bronchitis, pneumonia, ear infections, asthma).

For additional information, see http://www.cdc.gov/tobacco/index.htm

Animal Bites

OVERVIEW

Ohio State law requires that owners of any animal that may have been involved in a bite follow specific rules. People can be exposed to diseases, such as rabies, when they are bitten by an infected animal, or less commonly, when saliva from infected animals get into an open wound or onto a mucous membrane. The Toledo-Lucas County Health Department works with the Ohio Department of Health Zoonotic Disease Program to conduct activities to protect Ohio residents from the spread of diseases carried by animals by providing education, providing testing of specimens, and collecting and maintaining data on rabies and animal bites within Lucas County, Ohio.

2015 SNAPSHOT

For the 2015 calendar year, 701 bite reports were completed. 81 samples were sent to the Ohio Department of Health Laboratories and 0 tested positive for rabies virus.

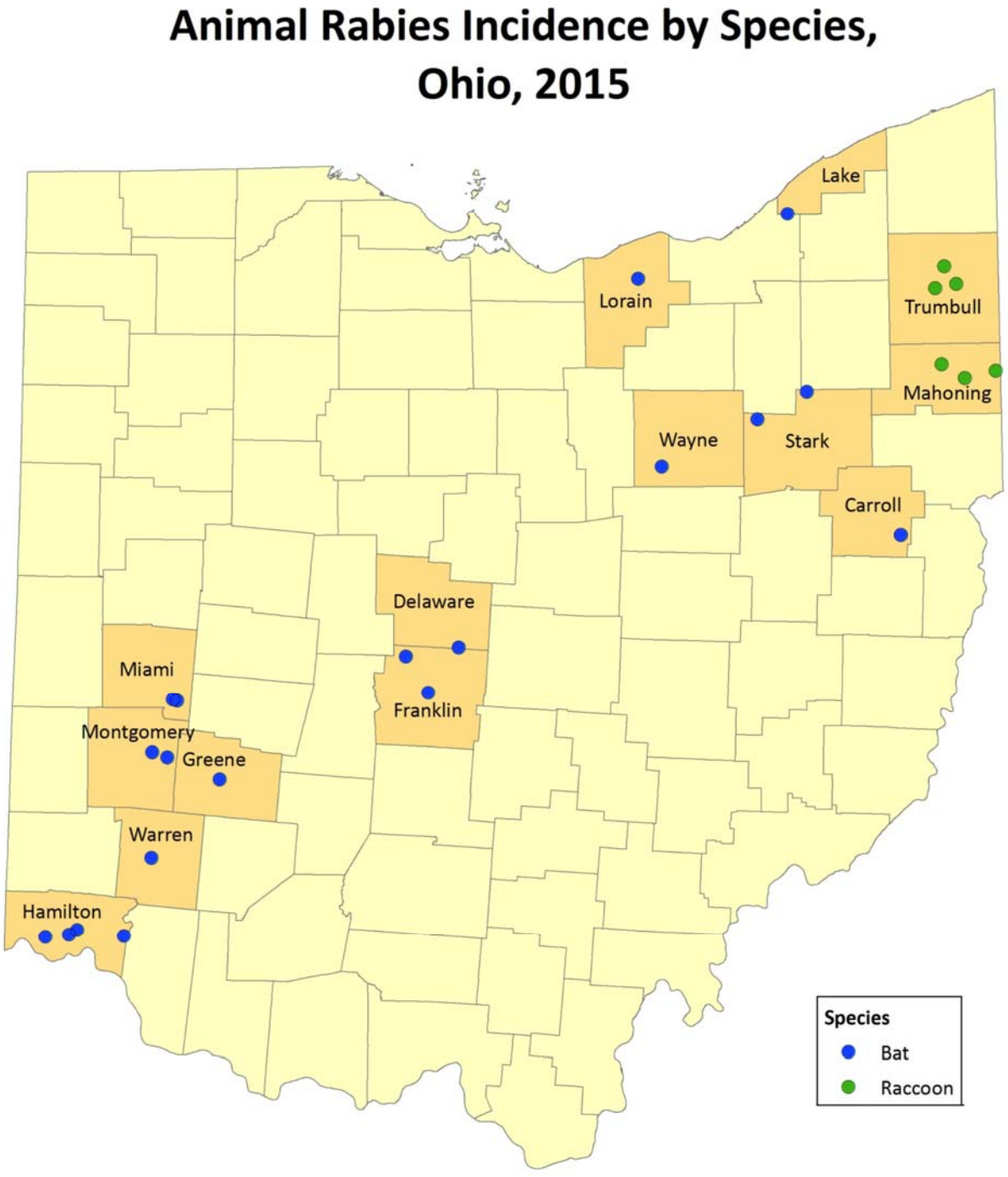
2015 Animal Bite Report by Species in Lucas County

Species	Number of Bite Reports
Dog	586
Cat	89
Bat	16
Raccoon	3
Squirrel	3
Domestic Rodent	2
Monkey	1
Opossum	1

WHY IT IS A PUBLIC HEALTH CONCERN

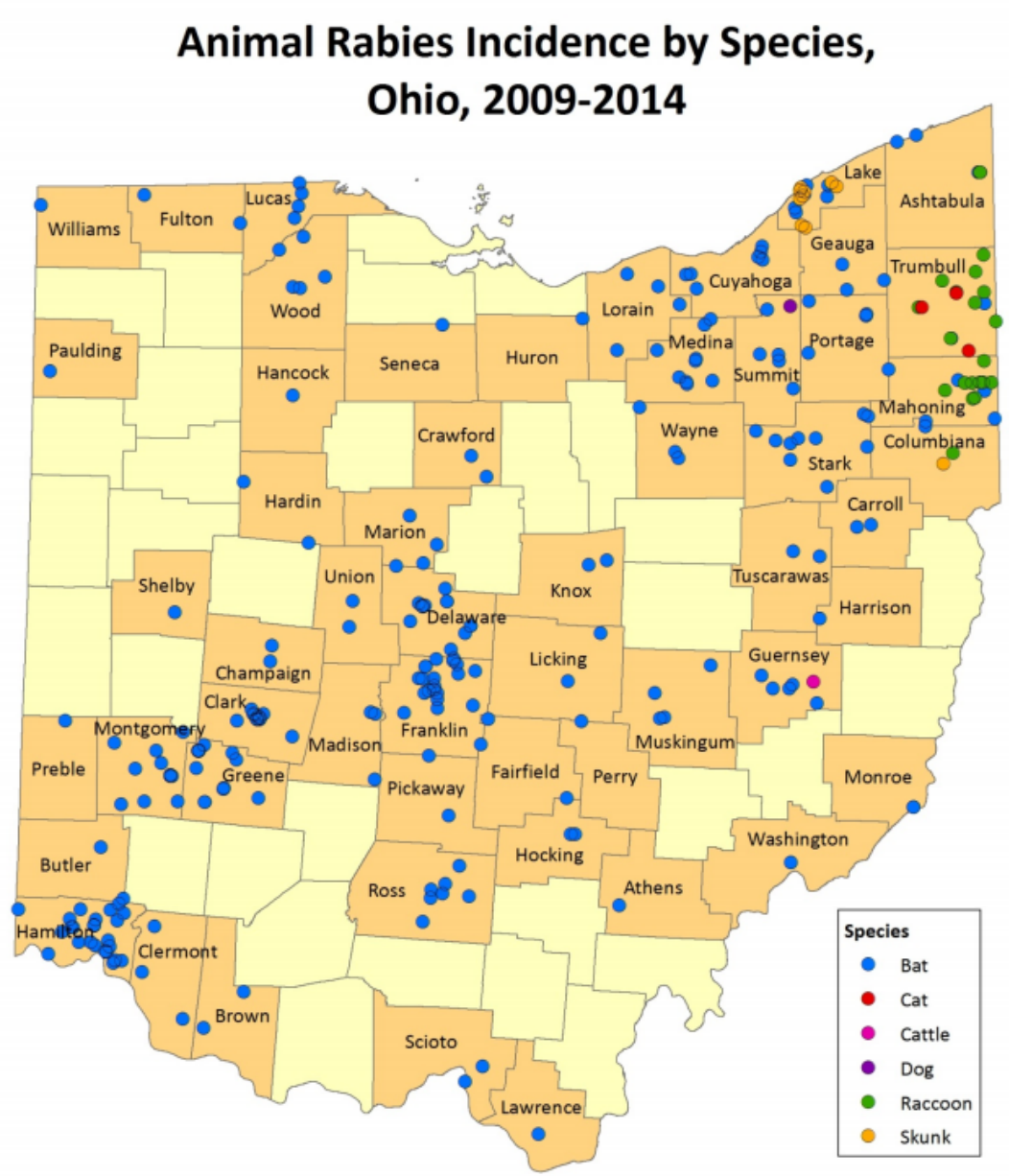
Animal bites can result in serious injuries and potential exposures to diseases such as rabies. It is estimated that nearly 5 million people in the United States are bitten by dogs each year, and about 1 in 4 of those people require medical attention. Mammals are carriers for rabies and, though the presumed fear is primarily around contracting rabies from dogs, the more likely exposure to rabies is through the bite or contact with bats.

ANIMAL BITES



For more information, visit http://www.odh.ohio.gov/animalrabies

ANIMAL BITES



Nuisance

OVERVIEW

A public health nuisance is when a building or property is in a condition that threatens or potentially threatens the health of any person or community. The Toledo-Lucas County Health Department will often work with cities, townships and villages to abate public health nuisance conditions by inspections and enforcement actions. Examples of public health nuisances are unsanitary housing or living conditions, accumulation of trash, garbage, and other debris on properties and other conditions that attract roaches and rodents which may harbor diseases.

2015 SNAPSHOT

For the 2015 calendar year, the TLCHD inspected 408 nuisance complaints.

Type of Nuisance Complaint Investigated	Number of Complaints Received
Pest/Vermin	99
Housing/Unsanitary Conditions	95
Other	49
Raw sewage at a dwelling	46
No water at a dwelling	30
Mosquito-Stagnant Water/Pool	26
Animal Issues	24
City of Toledo Complaints regarding Keeping of Chickens	9
Feral Cats	7
Ticks	7
Solid Waste	6
Scrap Tires	4
Open Dumping	4
Composting	2
Total Complaints Investigated	**408**

Response and Preparedness

GROUP OVERVIEW

- Community Services, Response and Preparedness (CSRP) was established in 2008 to look to the future and assure cutting edge epidemiological capabilities, infectious disease surveillance, emergency response services, emergency preparedness education and awareness to the community.
- The group directs the Health Department's support and response for any public health emergency or local disaster related event for Lucas County
- In addition, the group houses the Regional Public Health Coordinator for Northwest Ohio. Through the office of Community Services, Response and Preparedness, Toledo-Lucas County Health+ Department provides emergency preparedness coordination and support to the eighteen county Northwest Ohio Public Health Region.

EMERGENCY PREPAREDNESS

The Community Services, Response and Preparedness group is primarily funded through the Public Health Emergency Preparedness (PHEP) Grant. This grant is annually used to support, sustain and build emergency preparedness capabilities within Lucas County, Ohio and the Northwest Ohio Region.

Resources obtained and projects accomplished with these resources benefit the general population within Toledo-Lucas County Health Department's jurisdictions. The 11 specified community sectors within Lucas County (business, community leadership, cultural and faith-based groups and organizations, emergency management, healthcare, social services, housing and sheltering, media, mental/behavioral health, state office of aging or its equivalent, education and childcare settings) also greatly benefit from these planning efforts.

RESPONSE AND PREPAREDNESS

TLCHD strives to annually meet the outlined PHEP grant deliverables that correspond to the 15 Centers for Disease Control and Prevention (CDC) emergency preparedness capabilities. Some of these activities include updating the Strategic National Stockpile (SNS) self-assessment and improvement plan, conducting training and conducting exercises to address gaps/inefficiencies.

DISASTER RESPONSE TEAM

The TLCHD disaster response team was created in 2015. The purpose of this group is to have trained staff available to provide assistance when a disaster occurs within Lucas County and the city of Toledo. The group features staff members from all divisions and professions across the TLCHD.

The team meets monthly to hear from different speakers, visit local community partners, or perform in-house planning initiatives. Team activities include the following:

Site Visits

- Toledo Fire Department
- ProMedica Toledo Hospital Emergency Department
- Lucas County Emergency Management Agency, EMA, Emergency Operations Center

Training

- Incident Command Structure Training
- Personal Protective Equipment Overview

Disaster Response Team
Toledo-Lucas County Health Department

Response team visit to Toledo Fire Station No. 5

EXERCISE PLANNING AND TRAINING

- Regional Fit Testing Train the Trainer
    - TLCHD, in conjunction with Toledo Fire Special Operations provided fit testing to all local first responders and public health offices in the Northwest Ohio region.
- Continuity of Operations Planning (COOP)
    - The Northwest Ohio regional functional exercise in April 2015 focused on COOP.
    - In such exercises an organization must show its ability to relocate and sustain essential services when a disaster strikes its permanent establishment.
- Davis-Besse Graded Exercise
    - The Lucas County EMA conducted a functional exercise and a full-scale exercise for the Davis-Besse Nuclear Power Plan in the spring of 2015.
    - The Lucas County EMA is required to perform an activation of their Emergency Operations Center in downtown Toledo, as well as an activation of their community reception center in Oregon, Ohio in the event a disaster occurs at Davis-Besse Nuclear Power Plant in Ottawa County.

  - The exercise was graded by the Federal Emergency Management Agency (FEMA) for compliance of current nuclear regulations, stakeholder response, and community resiliency.
  - Lucas County leads the nation in emergency preparedness by providing a pet reunification center for residents utilizing the community reception center. This measure is not required by FEMA and is only done by a select few agencies across the nation.
- Multi-Agency Coordination Plan Tabletop Exercise
  - The Lucas County Integrated Healthcare Coordination Team(local healthcare coalition) conducted a table top exercise with all members to review the activation and responsibilities of the Lucas County Multi-Agency Coordination Plan.
- St. Luke's Hospital Flu Clinic
  - The emergency preparedness team partnered with health services to provide a community flu clinic in November 2015.
  - The flu clinic provided both pediatric and adult flu immunizations.
  - This flu clinic fulfilled a PHEP grant requirement for a point of dispensing activation site.

EMERGENCY RESPONSE PLAN REVISIONS

The TLCHD emergency response plans are in the process of being completely rewritten and reformatted. All plans will now be in line and reflect the Centers for Disease Control and Prevention's Public Health Preparedness Capabilities. The following plans have been updated during the 2015 calendar year:

- All-Hazards Emergency Response Plan
- Continuity of Operations
- Demobilization and Recovery
- Quarantine and Non-Pharmaceutical Interventions
- Volunteer Management
- Epidemiology and Surveillance
- Hazard Vulnerability Analysis
- Training and Exercise (Local and Regional)
- Emergency Public Information and Warning
- Blood Borne Pathogens

EBOLA VIRUS DISEASE SUPPLEMENTAL GRANT

In April 2015, the division of Community Services, Response and Preparedness was awarded a supplement to its PHEP grant. This supplement aims to increase local and state preparedness planning and coordination with regard to the concerns around the Ebola Virus Disease (EVD) and other special pathogens. These efforts will result in the creation of the *Northwest Ohio Ebola and Other Special Pathogens Concept of Operations Plan*.

The division is currently collaborating with the seventeen counties in the region to create regional and local Ebola Virus Disease plans. This grant enabled the division to hire a Regional Ebola Coordinator to help coordinate the preparedness planning in the region and partially fund another team member to write the local plan for Lucas County.

Northwest Ohio Ebola and Other Special Pathogens Concept of Operations Plan considerations:

- Local Health Department Roles
- First Responder PPE Training
- Patient Transportation Guidelines
- Hospital Guidelines
- Isolation & Quarantine
- Management of Human Remains
- Waste Mangement
- Information Sharing Guidelines

Creating the *Northwest Ohio Ebola and Other Special Pathogens Concept of Operations Plan* has been very timely, since many Northwest Ohio epidemiologists have monitored "travelers" (persons who have traveled through regions under CDC restrictions) in their respective counties for Ebola disease.

Regional plan challenges:

- Identifying EMS providers throughout Northwest Ohio who are properly trained and equipped to transport suspected or known Ebola patients to the appropriate hospital.
- Waiting for hospital classifications. Currently, Ohio has One Ebola Treatment Hospital (Metro Health Medical Center) in Cleveland, Ohio and eight Ebola Assessment Hospitals. The only assessment hospital in Northwest Ohio is, St. Rita's Medical Center (Lima, Ohio). All other hospitals are considered front-line hospitals.
- Hospital Definitions: Frontline hospitals will identify, evaluate, and isolate suspected Ebola Virus patients and arrange for transport to a higher level of care. Assessment hospitals accept suspected Ebola Virus patients up to 96 hours to perform testing to confirm or exclude infection. Treatment Centers serve as a state resource to accept and treat patients with the Ebola Virus.
- Planning for the care of pediatric EVD patients. Northwest Ohio's only Ebola assessment hospital, St. Rita's Medical Center, does not have the capacity to care for pediatric Ebola patients so these patients may require transport to a children's assessment hospital in Cleveland, Ohio or Columbus, Ohio. Securing transportation in this case has been difficult.

Additional Activities Associated with the Grant:

- In October, 2015 Toledo-Lucas County Health Department, Toledo Fire & Rescue, Lucas County EMS, The Hospital Council of Northwest Ohio, and the Lucas County Prosecutors Office sponsored the Northwest Ohio Ebola Update Program. The program was held at the University of Findlay and was directed to all first responders (Fire, EMS, Law Enforcement, EMA, Hospitals, and Public Health) throughout Northwest Ohio to provide them with updates and the latest information on response to Ebola related incidents.
- In December, 2015 the Lucas County Ebola Plan Coordinator and the Regional Ebola Coordinator were invited to attend an Ebola exercise at ProMedica Toledo hospital, to see how that facility would to respond if someone with Ebola were to walk in unannounced in their emergency department for treatment. Their response followed their facility's Ebola Plan. The exercise concluded when ProMedica Transportation Network transferred the patient to an Ebola assessment hospital.
- CSRP has purchased additional personal protective equipment (PPE) to better prepare for an emergency event.

POINT OF DISPENSING (POD) SITES

In the event that the entire population of Lucas county needs to obtain medical countermeasures (MCM), the health department lacks the resources to single-handedly respond to such an incident. Such an event may be caused by an act of bioterrorism, epidemic or pandemic disease, or novel and highly infectious agent poses a serious risk to the public.

To prepare for this kind of public health emergency, TLCHD has a Point of Dispensing (POD) plan. In this plan, we have establishing Memorandums of Understandings with partners to use their facilities and/or staff to distribute medical countermeasures in a public health emergency. These POD partners currently include, faith based organizations, schools, businesses, and other local organizations.

Types of PODS

Open	• TLCHD has 19 open POD partners offering the use of their facility use and/or volunteers
Closed	• Closed PODs are established at a private businesses or organizations. They types of PODs are specifically meant to serve a specific population, usually the business or organization's employees and their families. • The health department has memorandum of understandings with 34 closed POD partners consisting of businesses and organizations

Both closed and open POD partners would serve as the site where pharmaceuticals from the Strategic National Stockpile could be delivered, and medical personnel at these sites would dispense these medications during a public health emergency. Agreements with trucking companies to assist in the transfer of supplies to our POD partners are also in place.

The POD agreements ensure that we can offer antibiotics, vaccines, or other medical counter measures to as many people as expeditiously and efficiently as possible to minimize morbidity and mortality amongst the population.

RESPONSE AND PREPAREDNESS

MEDICAL RESERVE CORPS

- The Medical Reserve Corps (MRC) is a voluntary organization comprised of physicians, nurses, dentists, and other medical/non-medical professionals to assist public health during an emergency.
- As of the beginning of 2016, the Lucas County MRC has 128 registered volunteers.
- New learning plans for emergency training have been created to have all MRC volunteers trained for a variety of disasters.
- In 2015, a climate survey was given to all volunteers to gauge what interests volunteers would like incorporate in the coming year. In response, different training and outreach opportunities will be conducted for 2016.
- Improvements have been made regarding badging, credentialing, and deployment logistics with the United Way of Greater Toledo.

REGIONAL COORDINATION BY TLCHD

The Division of Community Services, Response and Preparedness houses the Regional Public Health Coordination Team for Northwest Ohio. This team provides the following services for the NW Ohio Region:

- Facilitator for meetings/trainings for the NW Ohio Public Information Officers, Disaster Planners, Epidemiologists and Health Commissioners
- Liaison for Hospital Planners in NW Ohio
- 24/7 liaison with Ohio Department of Health, Local Health Departments and the Regional Healthcare Coalition to assist with information sharing during a response

INTRA-AGENCY COORDINATION

The PHEP grant has afforded TLCHD the opportunity to work with the Hospital Council of Northwest Ohio (HCNO) to locally develop the Lucas County Integrated Healthcare Planning Coalition, and to regionally develop the NW Ohio Healthcare Emergency Management Coalition (NWO-HEMC). Both of these groups are a great success in how partnerships with EMA, hospitals, and other stakeholders can work together in healthcare planning. Both groups meet regularly; TLCHD and the Hospital Council of NW Ohio sit on the steering committees for both coaltions. For the upcoming year, public health's membership on the steering committee will be re-evaluated due to the language in the current RFP that regionally, PHEP and HPP are to co-lead healthcare coalition activities.

NWO HEMC mission:

> *To promote regional cooperation and the sharing of healthcare system and regional healthcare resources, the NWO-HEMC will continue to prepare through cooperative planning, training, and exercising to jointly respond to man-made or natural emergencies.*

Public Health Accreditation

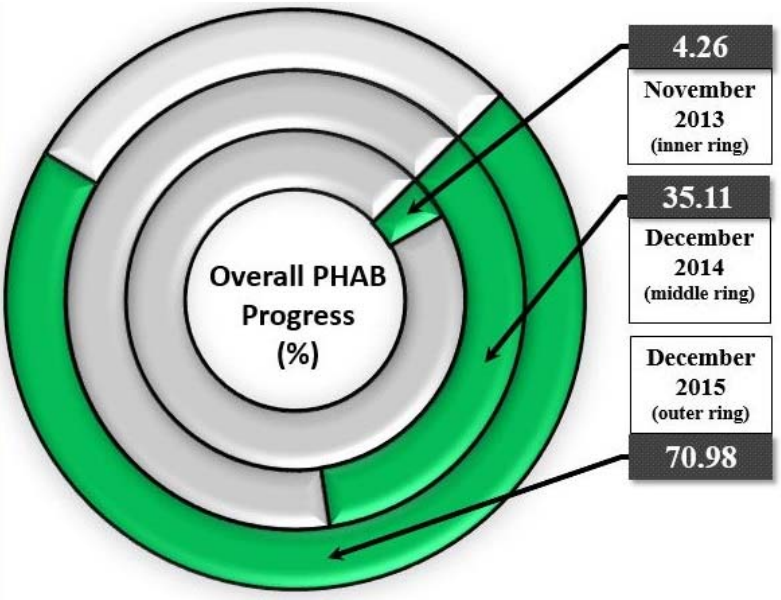
OVERVIEW

Public Health Accreditation is a voluntary program developed to measure health department performance against an established set of nationally recognized, practice-focused, and evidenced-based standards. It provides a systematic approach for performance assessment and improvement across twelve domains of public health practice. The Public Health Accreditation Board (PHAB) modeled these accreditation requirements on the Ten Essential Public Health Services to ensure all applicants meet or exceed an established baseline of care and service to their constituents. The underlying goal for this program is to advance the quality and performance of public health departments in an effort to improve and protect the health of the entire U.S. population.

The state of Ohio has mandated that all public health departments reach an accredited status by the year 2020. The following is a performance snapshot of the Toledo-Lucas County Health Department's progress towards accreditation readiness in the 2015 calendar year.

2015 SNAPSHOT

The Toledo-Lucas County Health Department (TLCHD) continued to make significant progress towards their application for Public Health Accreditation. As of January 1st, 2015, TLCHD had collected and verified 35.11% of the required documentation in PHAB's standards and measures. Throughout the year, the TLCHD Accreditation Team collected and prepared an additional 35% of the required documentation necessary to demonstrate our commitment towards improving our public health standards and services.

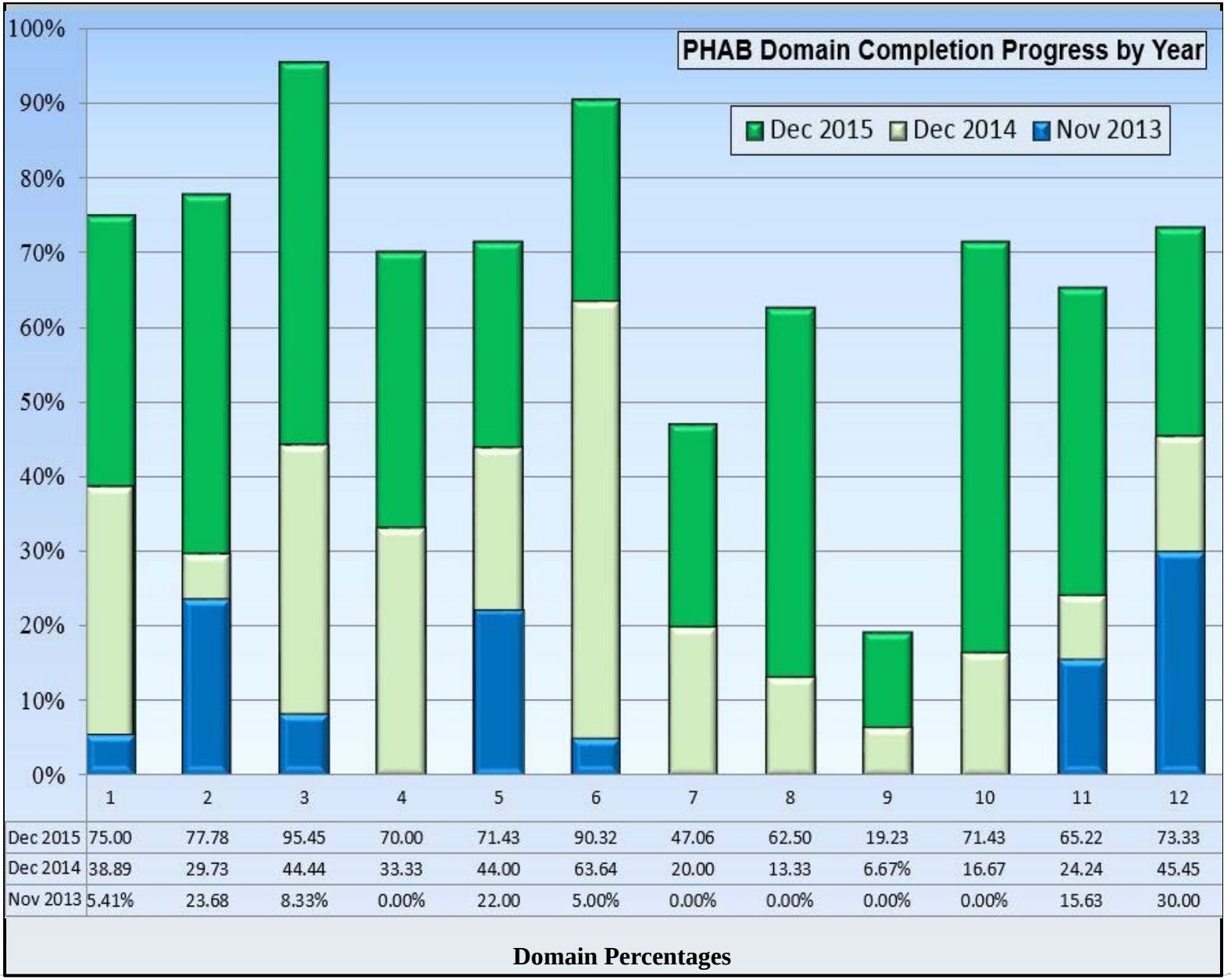


In addition to documentation preparation, agency administrators and supervisors completed both Performance Management and Workforce Development self-assessments in preparation for wider staff engagement in 2016.

The Quality Assurance Coordinators also facilitated an all-staff Morale Survey on behalf of the Human Resources department. The results of this survey highlighted areas for improved communication and provided a baseline for subsequent staff morale surveys. A summary of these results were presented at the 2015 all-staff Winter Retreat. A presentation on the fundamentals of PHAB Accreditation was also delivered to all staff at the Winter Retreat by the QA Coordinators.

The agency's accreditation readiness has moved closer to the realization of becoming a nationally accredited body. Applying for accreditation is our promise to the community that our healthcare standards are high, our vision for a healthier Lucas County is clear, and our commitment to the public's wellbeing remains our highest priority.

PUBLIC HEALTH ACCREDITATION



	1	2	3	4	5	6	7	8	9	10	11	12
Dec 2015	75.00	77.78	95.45	70.00	71.43	90.32	47.06	62.50	19.23	71.43	65.22	73.33
Dec 2014	38.89	29.73	44.44	33.33	44.00	63.64	20.00	13.33	6.67%	16.67	24.24	45.45
Nov 2013	5.41%	23.68	8.33%	0.00%	22.00	5.00%	0.00%	0.00%	0.00%	0.00%	15.63	30.00

Domain Percentages

Quality Improvement

OVERVIEW

Quality Improvement (QI) in Public Health is a formalized process designed to examine and improve the delivery and efficacy of public health services. QI involves the use of a deliberate and defined improvement process, such as Plan-Do-Study-Act (PDSA), to dissect a problem, discover its root cause, implement a solution, and measure the success or failure of the change initiative. QI is a continuous process that empowers employees at all levels of an organization to support and participate in the improvement of processes, programs, and services they deliver to the public.

Quality Improvement is most successful when embedded within the culture of the organization. Organizational culture is the very essence of how work is accomplished; it matures over several years, during which norms are passed on from one generation of staff to the next. Because it is ingrained within an organization, transforming culture to embrace QI requires strong commitment and support from agency leadership to drive the change over time.

2015 SNAPSHOT

In 2015, the Toledo-Lucas County Health Department's Quality Improvement Council met eight times to examine QI project suggestions and associated data. Three QI projects were selected to move forward based on the evidence presented to the Council.

New Employee Orientation Project (NEO)

The aim of this project was to improve the New Employee Orientation process through better staff communication and preparation prior to new employee's arrival and conducting a more personal orientation day for each new employee. The process starts the day of hire and ends when the employee orientation evaluation is complete. Success will be measured by improving the overall satisfaction score on the new employee orientation survey by 20%.

To achieve these measures, the NEO Project team surveyed new employees hired within 14 months prior to the start of the project. Additionally, directors and supervisors were surveyed to assess their readiness for orienting new employees, if they are properly notified in advance, and their overall satisfaction with the existing process.

The team identified potential improvements, including the provision of guidance to directors and supervisors on the new employee orientation process; sending welcome letters to new employees prior to their start date; arranging a welcome packet with important information and health department branded "swag;" assigning a buddy to guide the new employee through their orientation process; redesigning the orientation process to take place the course of a month rather than a single day; and standardizing a single orientation day once a month for all new employees hired since the last orientation day.

The NEO Project team developed material for a welcome packet, an employee handbook, and worked with the Human Resources department to determine the best methods to change the current process. *This project is currently on-hold pending administrative approvals.*
(See Fishbone Diagram on 48)

The Daily QI Project

The aim of this project was to develop a standardized procedure for coding the daily logs to allow proper reporting of information to both our internal and external stakeholders.

The Daily QI Project team held its first meeting in late November, and set a schedule to meet once per week thereafter. The team identified potential improvements including the development of a standard policy and procedures for completing the daily logs; development of a training program and example materials/reference book; a revised version of the daily code list; and a possible revision of the daily form itself.

By the end of 2015, the team had already begun an open dialogue to examine and reclassify the codes used for daily log reporting. The team expects to have all materials ready for review by the environmental supervisors and staff by late February or early March.
(See Fishbone Diagram on 49)

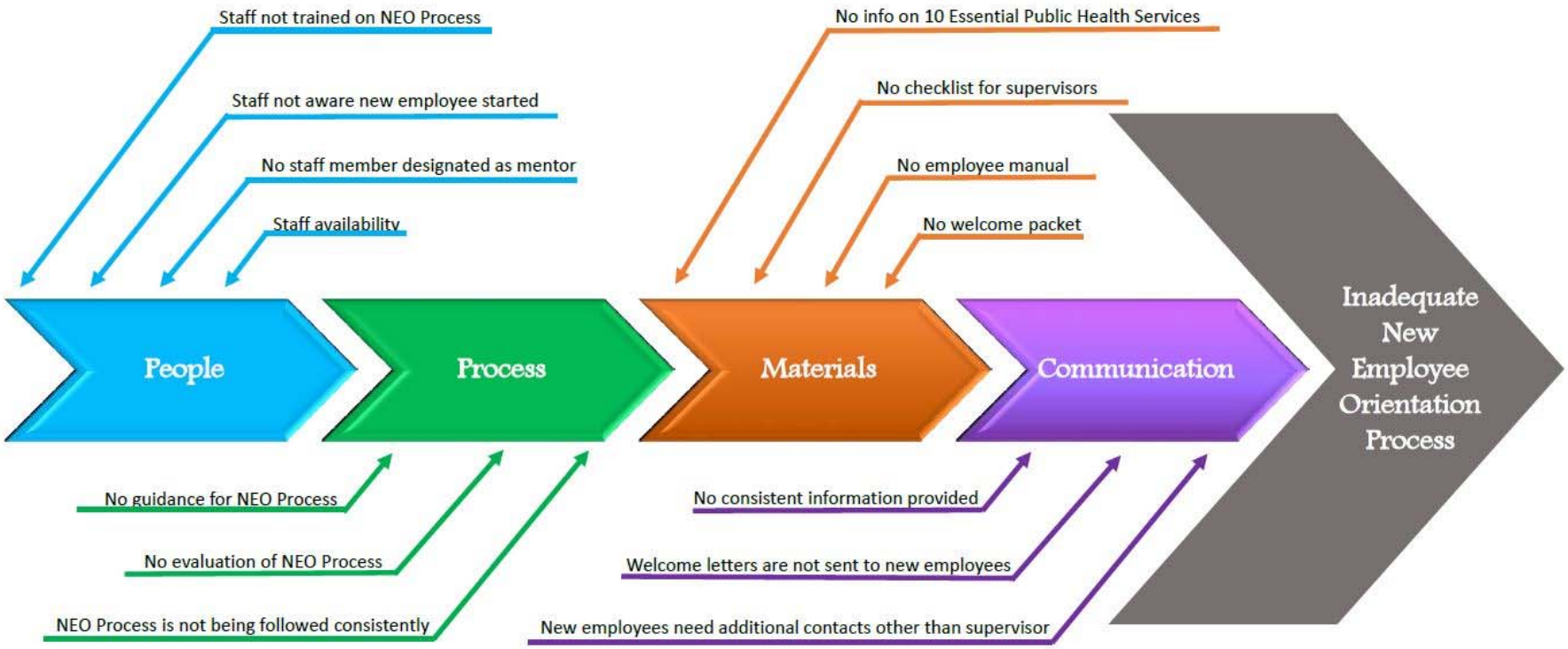
The After-Hours QI Project

The aim of this project is to standardize the response to disasters after business hours county-wide.

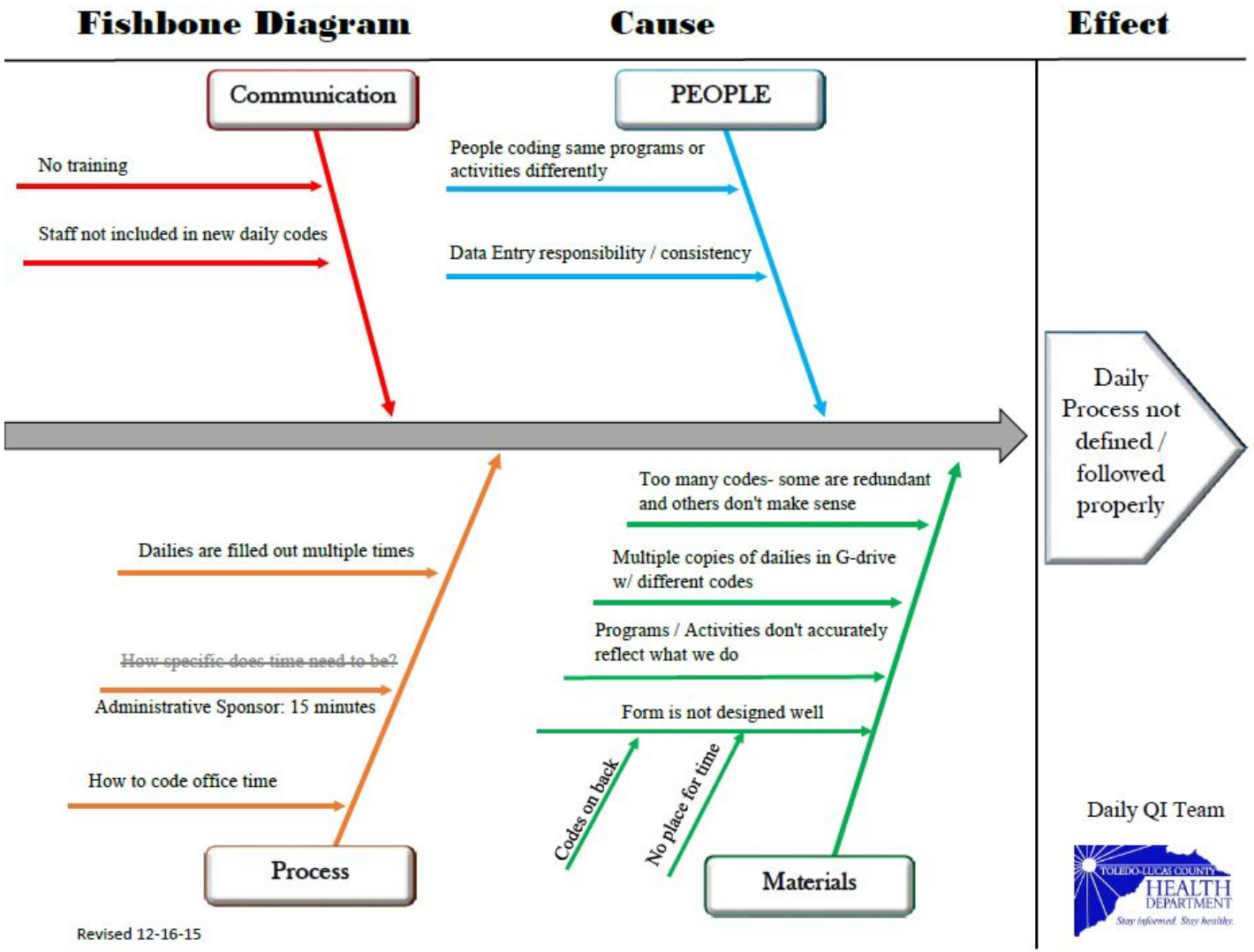
The After-Hours QI Project team first met in December to examine the current process of the 24/7 C.L.I.C. line. This line served as the means for the general public and community partners to contact the health department in the event of an emergency. The current process often resulted in the wrong administrator or supervisor being contacted as the Public Utilities staff manning the line after normal business hours followed a static call-down list that did not properly account for area of expertise or job function.

The team is ultimately looking to decrease response time, develop a process to ensure all stakeholder needs are met, and to reduce cost to the health department by avoiding unnecessary call-outs and overtime charged.
(See Fishbone Diagram on 50)

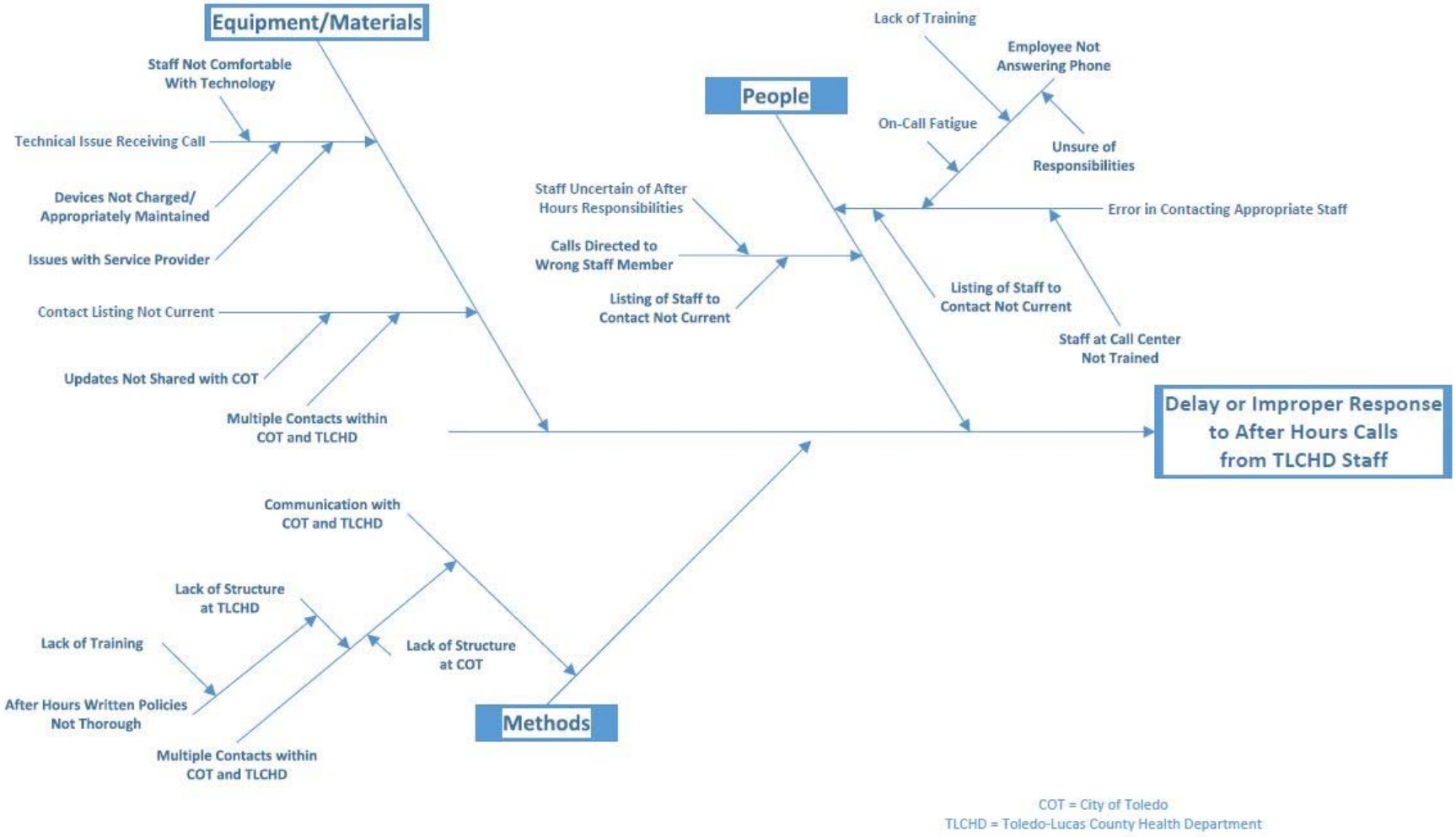
New Employee Orientation Project Fishbone Diagram



Daily QI Project Fishbone Diagram



After-Hours QI Project Fishbone Diagram



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