



Kalamazoo County 2022 Communicable Disease Summary

This report shows five-year trends in Kalamazoo County for reportable conditions in Michigan. Additionally, for selected diseases, rates for both the county and state are shown over time. For detailed reports describing selected diseases visit the Health and Community Services Department webpage at www.kalcounty.com/hcs

Data are provisional, based on current reports in the Michigan Disease Surveillance System (MDSS). The MDSS is a dynamic, continually active system; counts of disease are constantly changing as cases are investigated, confirmed as cases, or ruled out as not meeting the case definition. The numbers reported are NOT final and should be used for general monitoring of trends over time.

Data was included using the following criteria: case referral date; case status=confirmed and probable; investigation status=active, completed, completed-follow up, new and review. Case rates were calculated using the U.S. census population denominator provided in MDSS.

Report Date: 2/2/23

Summary of Reportable Diseases by Year

Disease Group	Reportable Condition	County Cases Reported**					Michigan Cases Reported				
		2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Foodborne	Botulism - Foodborne	-	-	-	-	-	-	-	-	1	-
	Campylobacter	90	64	47	36	31	1,716	1,719	1,229	1,495	1,370
	Cryptosporidiosis	19	27	15	12	9	386	423	248	247	310
	Giardiasis	28	41	27	17	20	468	420	389	435	359
	Listeriosis *	-	-	-	-	-	24	29	29	36	36
	Norovirus	19	148	43	101	127	985	1,458	567	555	1,318
	Paratyphoid Fever	-	-	-	-	-	1	4	4	1	2
	Salmonellosis	51	44	18	23	29	1,137	1,078	908	869	848
	Shiga toxin-producing Escherichia coli --(STEC) *	17	16	11	12	12	302	298	206	259	404
	Shigellosis	5	2	3	8	7	205	219	153	167	173
	Typhoid Fever	-	-	-	-	1	8	10	1	3	14
Yersinia enterocolitica	14	11	5	3	5	80	80	78	87	178	
Foodborne Subtotal	243	353	171	212	243	5,314	5,747	3,819	4,161	5,021	
Influenza	Flu Like Disease*	12,415	5,268	3,633	1,888	6,628	360,585	321,339	191,014	82,577	216,591
	Influenza	2,427	1,063	1,613	9	967	45,273	30,069	30,309	2,892	45,219
	Influenza, Novel	-	-	-	-	-	3	1	-	-	4
	Influenza Subtotal	14,842	6,331	5,246	1,897	7,595	405,861	351,409	221,323	85,514	262,960
COVID19/MIS	Multisystem Inflammatory Syndrome	-	-	-	4	1	-	-	71	157	100
	Novel Coronavirus COVID-19	-	-	12,555	28,900	33,852	3	3	530,844	1,224,899	1,289,483
	COVID19/MIS Subtotal	-	-	12,555	28,904	33,853	3	3	530,915	1,225,056	1,289,583
Meningitis	Cronobacter (infant)	-	-	-	-	-	-	-	-	-	-
	Meningitis - Aseptic	30	8	11	12	9	824	460	255	248	271
	Meningitis - Bacterial Other	2	6	1	6	7	143	123	95	122	134
	Meningococcal Disease	-	-	-	1	-	4	7	3	6	5
	Streptococcus pneumoniae, Inv	29	23	18	16	25	796	929	531	462	708
	Meningitis Subtotal	61	37	30	35	41	1,767	1,519	884	838	1,118
Other	Acute Flaccid Myelitis (AFM)	-	-	-	-	-	6	2	5	-	3
	Anthrax	-	-	-	-	-	-	-	-	-	-
	Blastomycosis	-	-	-	-	1	16	26	26	26	36
	Botulism - Infant	-	-	-	-	-	1	-	2	-	1
	Brucellosis	-	-	-	-	-	4	1	3	-	8
	CP-CRE *	-	-	-	1	4	176	159	214	205	287
	Candida auris	-	-	-	-	-	-	-	-	2	132
	Cholera *	-	-	-	-	-	1	2	1	-	1
	Coccidioidomycosis	1	-	1	2	-	43	50	53	79	51
	Creutzfeldt-Jakob Disease	-	-	-	-	-	10	10	11	7	13
	Cyclosporiasis *	7	10	1	4	3	30	130	22	51	58
	Encephalitis, Post Chickenpox	-	-	-	-	-	1	1	-	-	2
	Encephalitis, Post Mumps	-	-	-	-	-	-	-	-	-	-
	Encephalitis, Post Other	-	-	-	1	1	10	14	10	16	15
	Encephalitis, Primary	-	2	3	-	2	17	15	15	12	7
	Guillain-Barre Syndrome	-	1	4	3	2	46	61	54	54	67
	Hantavirus	-	-	-	-	-	-	-	-	-	-
	Hantavirus, Other	-	-	-	-	-	-	-	-	-	-
	Hantavirus, Pulmonary	-	-	-	-	-	-	-	-	1	-
	Hemolytic Uremic Syndrome *	-	-	-	-	-	11	8	5	3	17
	Hemorrhagic Fever	-	-	-	-	-	-	-	-	-	-
	Histoplasmosis	3	6	6	9	4	154	233	205	262	327
	Kawasaki	-	-	-	1	-	36	56	60	43	55
	Legionellosis	11	9	6	6	8	631	559	386	583	340
	Leprosy	-	-	-	-	-	1	-	-	-	3
	Leptospirosis	-	-	-	-	-	1	3	3	1	2
	Melioidosis	-	-	-	-	-	-	-	-	-	-
	Monkeypox	-	-	-	-	2	-	-	-	-	395
	Novel Coronavirus SARS/MERS	-	-	-	-	-	-	-	-	-	-
	Plague	-	-	-	-	-	-	-	-	-	-
	Psittacosis	-	-	-	-	-	4	-	2	2	3
	Q Fever Acute	1	-	-	-	-	4	4	5	4	1
	Q Fever Chronic	-	-	-	-	-	2	-	-	1	1
	Rheumatic Fever	-	-	-	-	-	-	-	-	-	2
Rubella - Congenital	-	-	-	-	-	-	-	-	-	3	
Streptococcus pneumoniae, Drug Resistant	1	3	4	5	-	101	77	38	37	59	

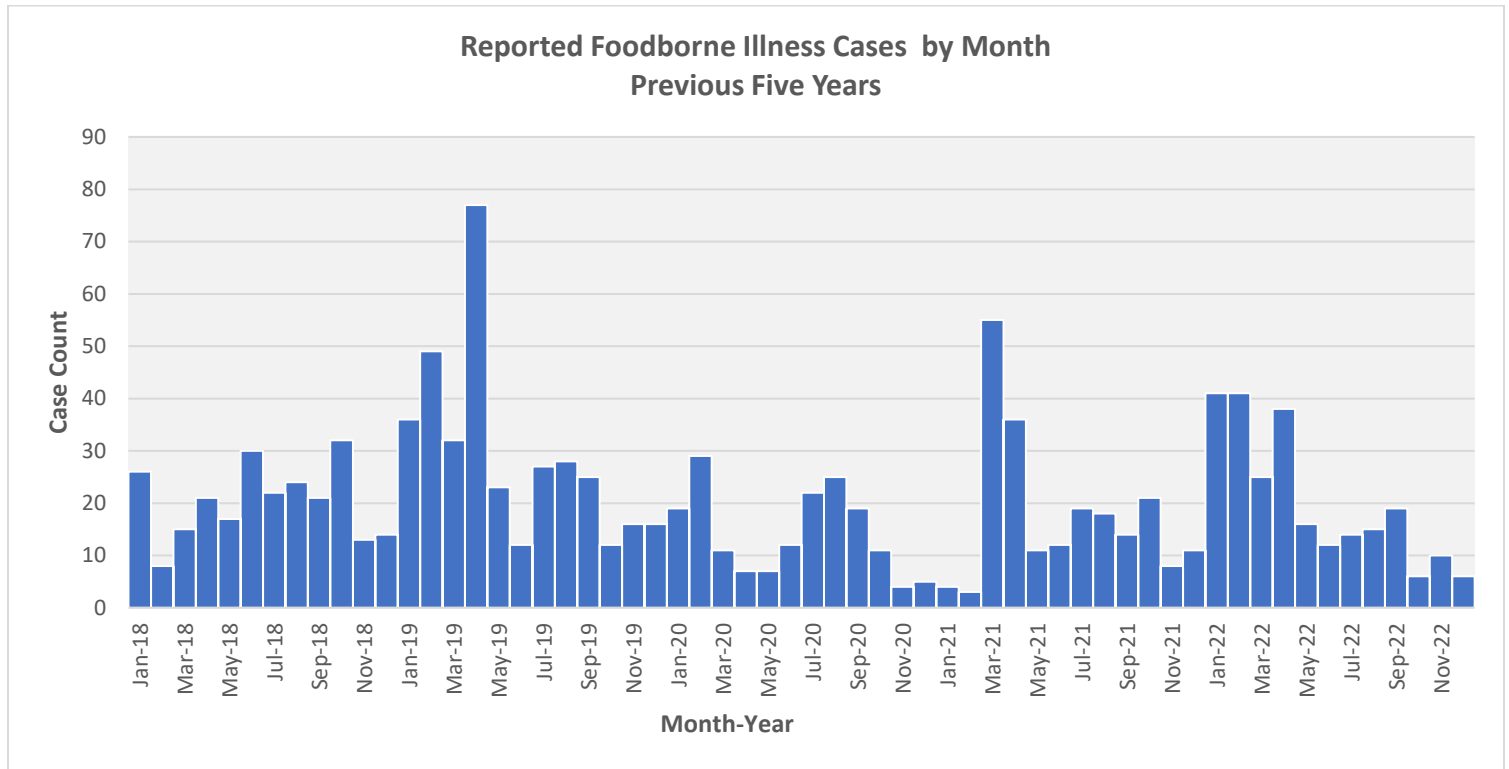
Disease Group	Reportable Condition	County Cases Reported**					Michigan Cases Reported				
		2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Other	Streptococcal Dis, Inv, Grp A	8	11	3	12	23	428	447	346	257	381
	Streptococcal Toxic Shock	2	-	-	-	-	5	5	4	2	2
	Toxic Shock	-	-	-	-	-	5	7	3	4	3
	Trachoma	-	-	-	-	-	-	-	2	1	-
	Trichinosis	-	-	-	-	-	-	-	-	-	-
	Tularemia	-	-	-	-	-	2	1	-	1	3
	Vibriosis-non Cholera *	2	2	3	-	2	44	41	26	36	40
	VISA	-	-	-	-	-	8	11	-	4	3
	VRSA	-	-	-	-	-	-	-	-	1	-
	Other Subtotal	36	44	31	44	52	1,798	1,923	1,501	1,695	2,321
Rabies	Rabies Animal	1	2	1	-	2	76	58	54	48	51
	Rabies: Potential Exposure & PEP *	2	43	111	20	35	6,471	5,960	3,454	3,646	3,626
	Rabies Subtotal	3	45	112	20	37	6,547	6,018	3,508	3,694	3,677
STD	Chancroid	-	-	-	-	-	-	-	-	2	-
	Chlamydia (Genital)	2,364	2,318	1,949	1,902	1,684	51,673	50,152	45,180	46,481	37,362
	Gonorrhea	1,030	1,090	1,221	1,095	860	17,046	18,137	23,518	22,265	15,789
	Granuloma Inguinale	-	-	-	-	-	-	-	-	-	-
	Lymphogranuloma venereum	-	-	-	-	-	19	6	8	3	3
	Syphilis - Congenital	-	-	2	3	2	15	14	30	42	38
	Syphilis - Early Latent	8	14	11	30	22	405	560	559	745	745
	Syphilis - Unknown Duration or Late	14	13	21	37	41	627	642	671	931	1,053
	Syphilis - To Be Determined	-	-	-	-	-	2	-	-	-	1
	Syphilis - Primary	2	9	16	31	15	225	271	319	356	406
Syphilis - Secondary	10	11	13	35	28	425	408	472	623	555	
STD Subtotal	3,428	3,455	3,233	3,133	2,652	70,441	70,190	70,757	71,448	55,952	
Tuberculosis	Latent Tuberculosis Infection	21	76	52	126	121	602	914	464	649	651
	Nontuberculous Mycobacterium	21	18	21	21	18	840	855	686	769	829
	Tuberculosis	-	1	4	2	1	113	129	105	137	121
	Tuberculosis Subtotal	42	95	77	149	140	1,555	1,898	1,255	1,555	1,601
VPD	Chickenpox (Varicella)	12	10	3	5	3	433	424	186	179	229
	Diphtheria	-	-	-	-	-	-	-	-	-	-
	H. influenzae Disease - Inv.	5	6	5	1	3	174	215	108	152	197
	Measles	-	-	-	-	-	19	46	-	2	5
	Mumps	-	-	-	-	-	42	25	5	4	13
	Pertussis	16	7	2	1	1	656	540	154	72	86
	Polio	-	-	-	-	-	-	-	-	-	-
	Rubella	-	-	-	-	-	-	-	1	5	7
	Shingles	9	10	22	37	28	1,248	1,225	819	630	736
	Tetanus	-	-	-	-	-	2	1	-	1	-
	VZ Infection, Unspecified	1	1	2	-	-	212	228	198	326	307
	VPD Subtotal	43	34	34	44	35	2,786	2,704	1,471	1,371	1,580
Vectorborne	Babesiosis	-	-	-	-	-	3	1	-	4	16
	Chikungunya *	-	1	-	-	-	2	1	-	1	1
	Dengue Fever *	-	1	-	-	-	10	21	3	5	10
	Ehrlichiosis, Anaplasma phagocytophilum *	-	-	-	-	-	14	13	18	57	70
	Ehrlichiosis, Anaplasmosis Undetermined	-	-	-	-	1	-	-	-	-	1
	Ehrlichiosis, Ehrlichia chaffeensis *	-	1	-	-	-	7	6	1	3	10
	Ehrlichiosis, Ehrlichia ewingii *	-	-	-	-	-	-	-	-	-	-
	Encephalitis, California Serogroup *	-	-	1	2	-	2	3	4	8	5
	Encephalitis, Eastern Equine *	-	3	-	-	-	1	10	4	1	-
	Encephalitis, Powassan *	-	-	-	-	-	-	-	-	-	-
	Encephalitis, St. Louis *	-	-	-	-	-	-	-	-	1	-
	Encephalitis, Western Equine *	-	-	-	-	-	-	-	-	-	-
	Lyme Disease	40	58	69	149	117	272	412	472	860	732
	Malaria	-	1	-	1	4	30	23	16	13	33
	Rickettsial Disease - Spotted Fever *	1	-	-	-	-	17	10	5	5	10
	Rickettsial Disease - Typhus	-	-	-	-	-	-	-	-	-	1
	West Nile Virus *	1	-	-	-	-	17	8	-	-	1
Yellow Fever *	-	-	-	-	-	-	-	-	-	-	
Zika *	-	-	-	-	-	1	-	-	-	-	
Vectorborne Subtotal	42	65	70	152	122	464	512	555	1,007	902	
Viral Hepatitis	Hepatitis A	4	1	1	-	-	358	78	21	26	23
	Hepatitis B, Acute	-	2	-	1	-	78	66	45	36	35
	Hepatitis B, Chronic	21	28	18	6	14	1,065	1,006	681	624	682
	Hepatitis B, Perinatal	-	-	-	-	-	1	-	-	-	-

Disease Group	Reportable Condition	County Cases Reported**					Michigan Cases Reported				
		2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Viral Hepatitis	Hepatitis C, Acute	7	2	1	4	4	178	129	142	129	128
	Hepatitis C, Chronic	234	115	90	59	94	9,843	5,696	4,109	3,863	3,685
	Hepatitis C, Perinatal	-	-	-	-	-	11	10	7	10	7
	Viral Hepatitis Subtotal	266	148	110	70	112	11,546	7,019	5,020	4,698	4,576
Total		19,006	10,607	21,669	34,660	44,882	508,082	448,942	841,008	1,401,037	1,629,291

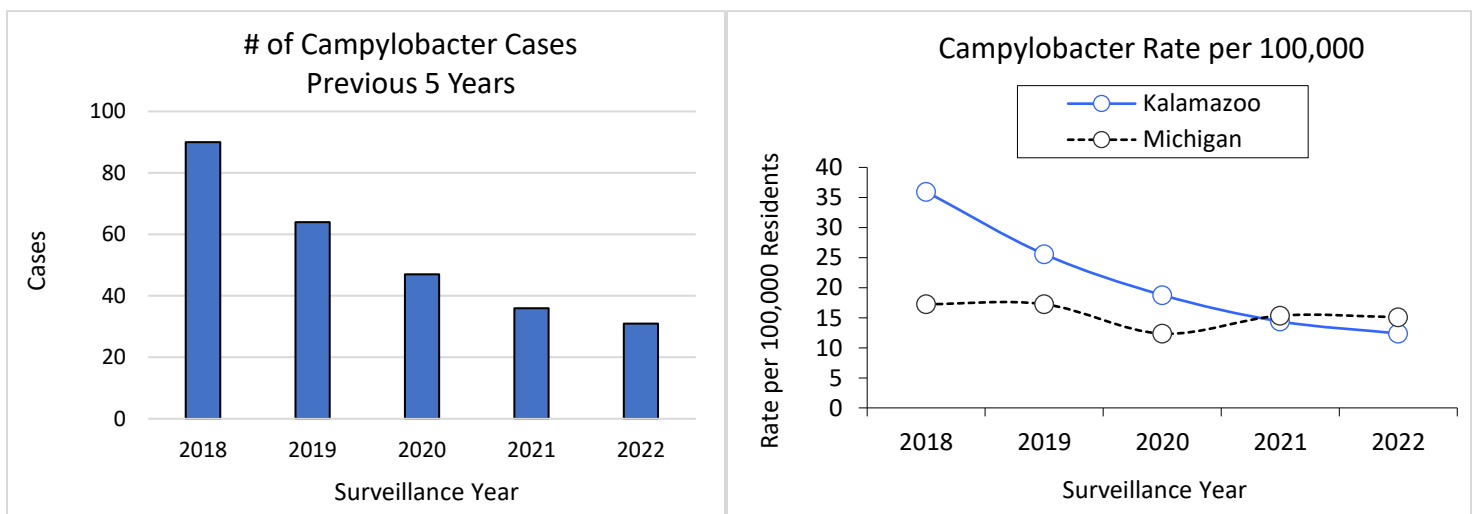
* Indicates includes historic and current forms in MDSS

** Data for cases reported is based on week case was referred to the health department

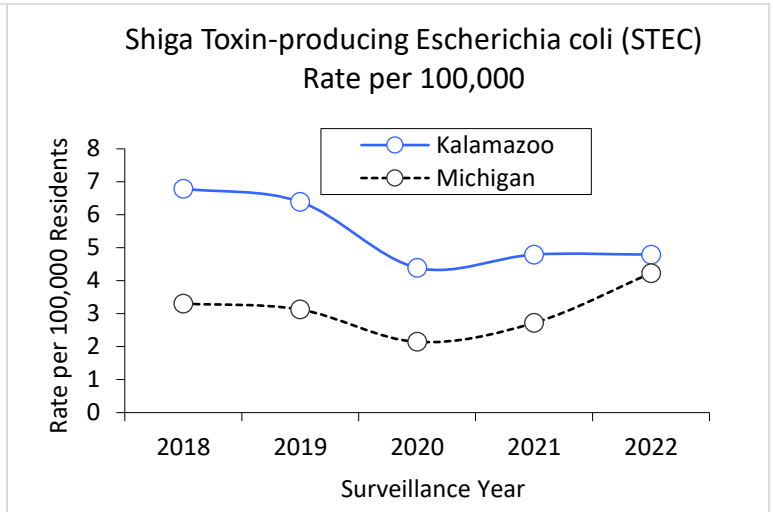
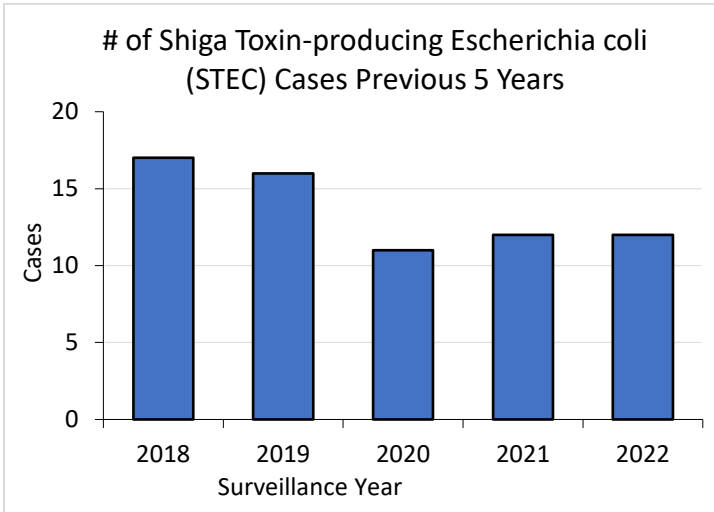
Selected Foodborne Illnesses



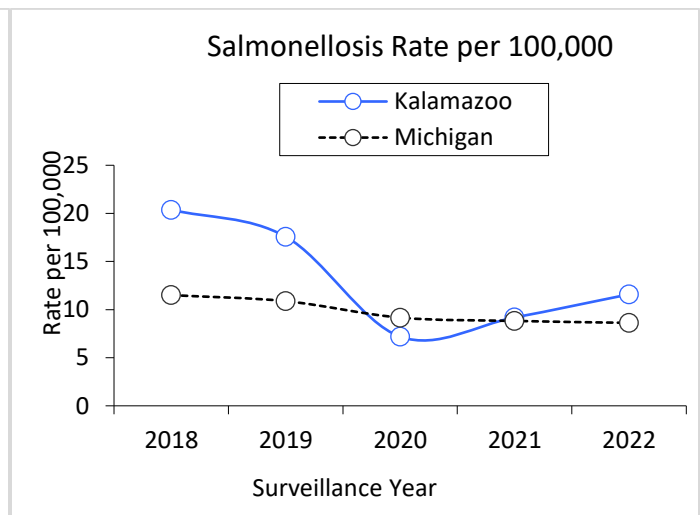
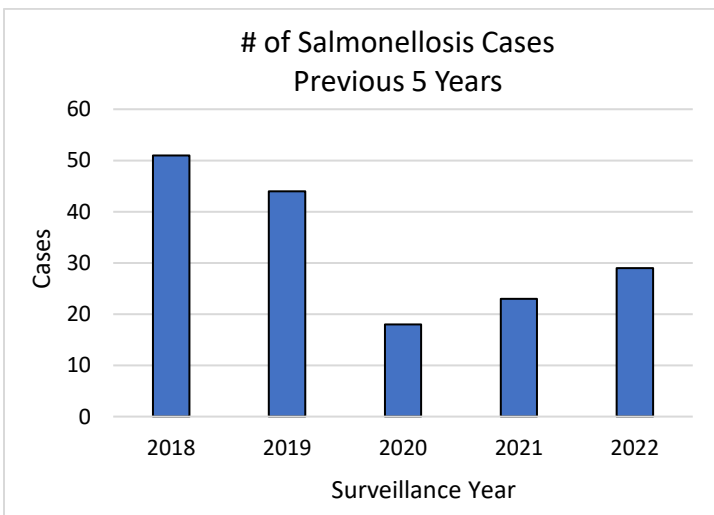
Campylobacter was the most commonly reported foodborne illness in the county (excluding norovirus) in 2022. However, the number of cases reported has steadily decreased in the county since 2018. The county 2022 case rate per 100,000 was slightly lower than the rate for MI.



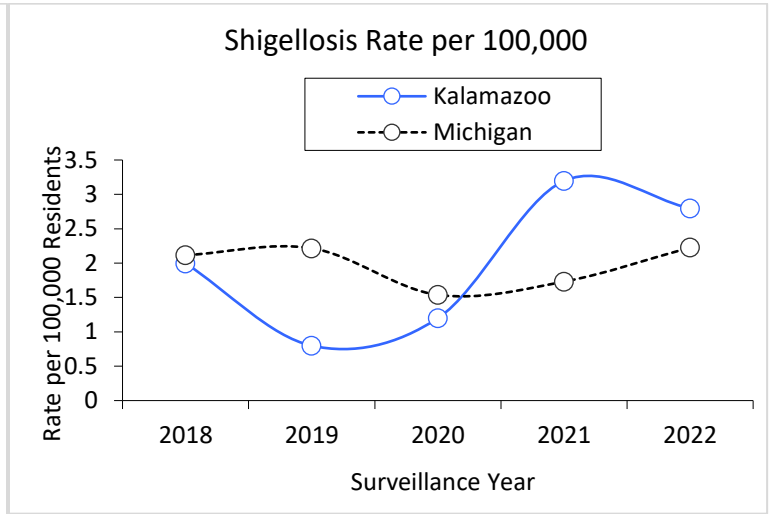
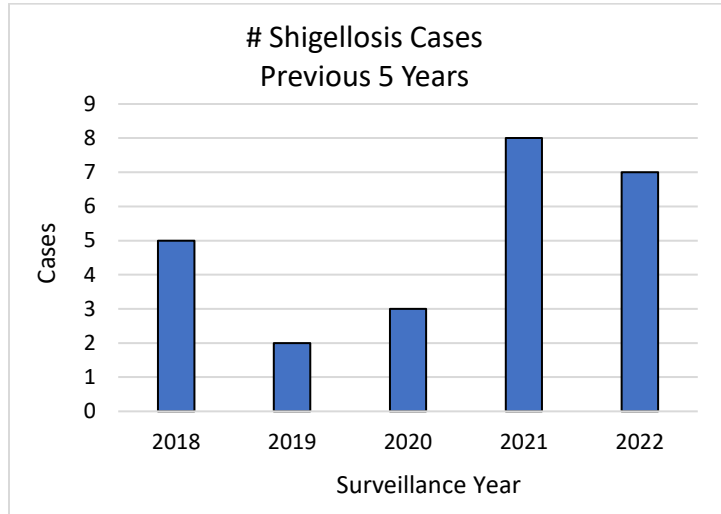
For the past three years the number of STEC cases reported in the county has been stable. Counts for 2022 were lower compared to 2018-19. Typically, the county had a higher case rate compared to MI, in 2022 rates were similar. In 2022, MI was part of two multi-state outbreaks of STEC.



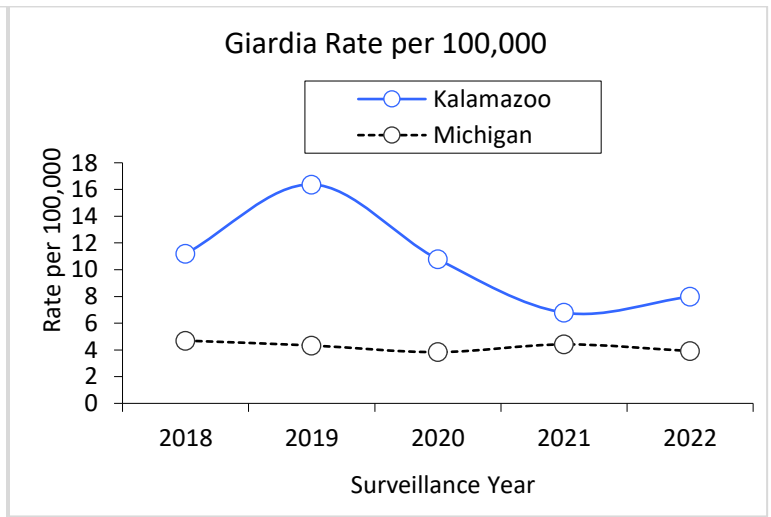
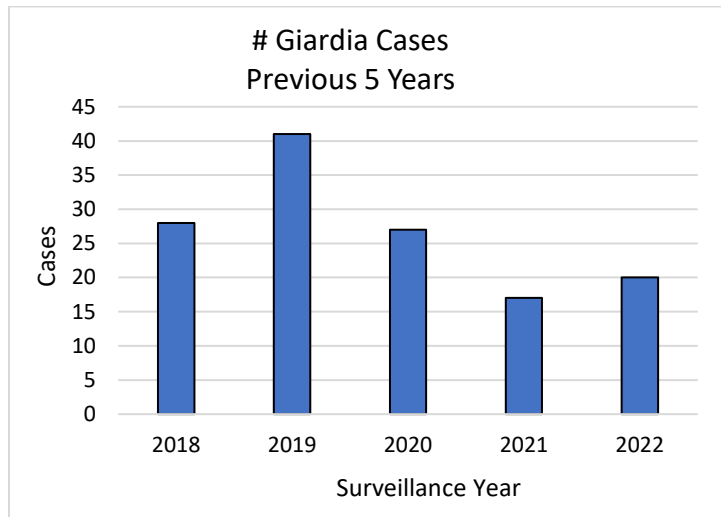
Salmonellosis was the second most commonly reported foodborne illness in the county in 2022 (excluding norovirus). There has been a steady increase in the number of cases reported after low case counts in 2020. However, case counts have not reached similar numbers to 2018/2019. The county 2022 rate was slightly higher than the case rate for MI.



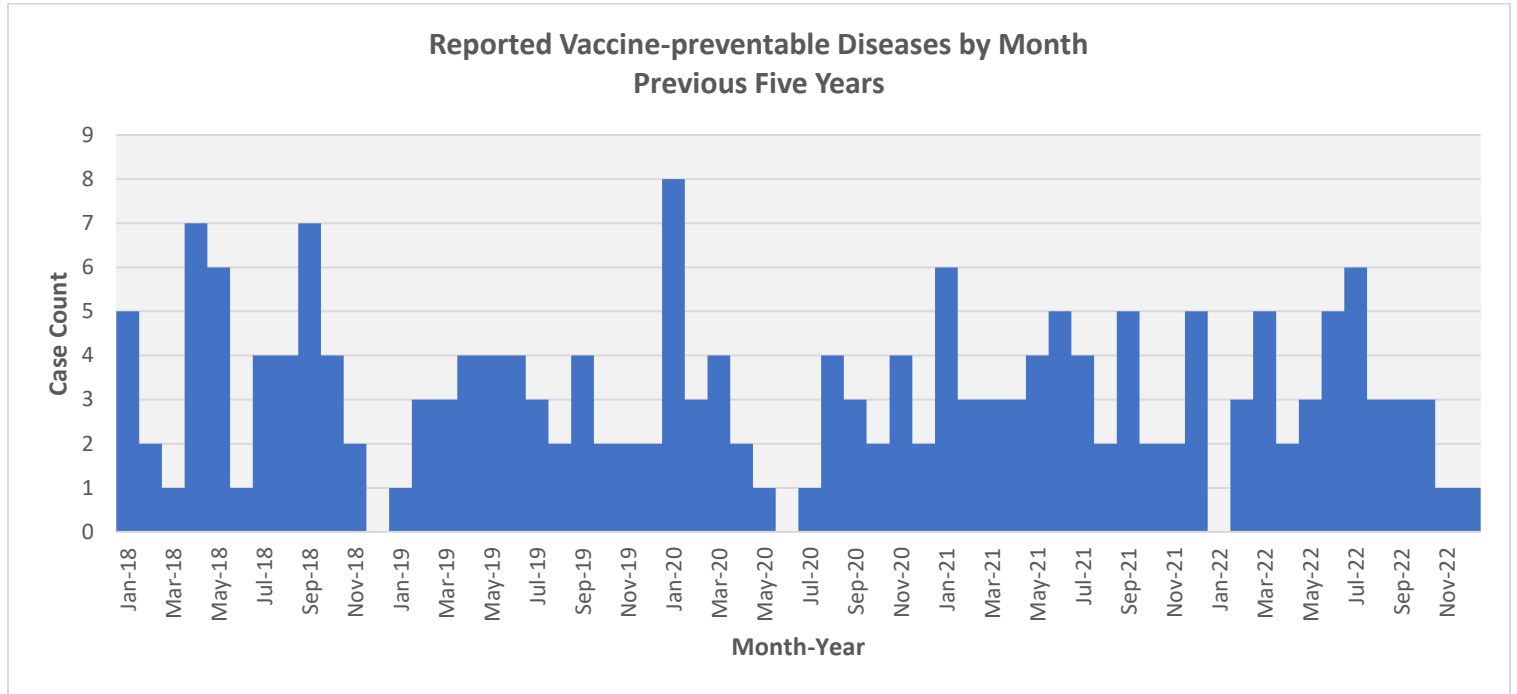
During 2021 and 2022, there were more cases of shigellosis reported compared to the previous three years. The county case rate was also higher compared to MI for both years.



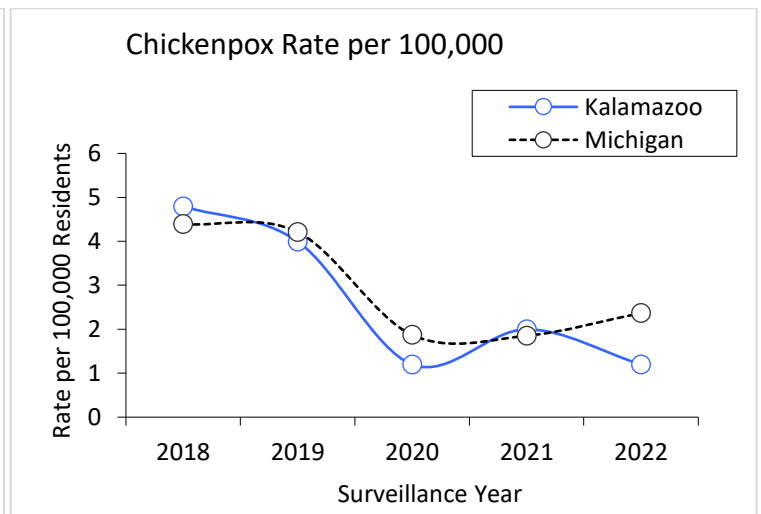
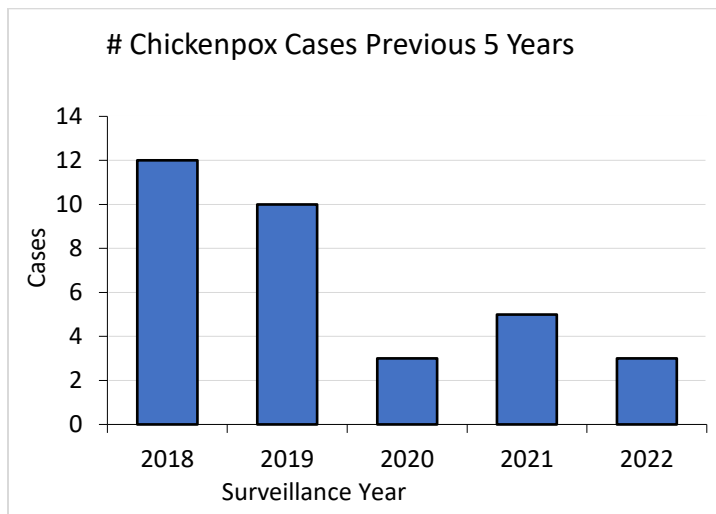
A slightly larger number of cases of giardia were reported in 2022 compared to 2021; however, case counts were still below those in 2018-2020. The county giardia case rate has been higher than the MI rate since 2018.



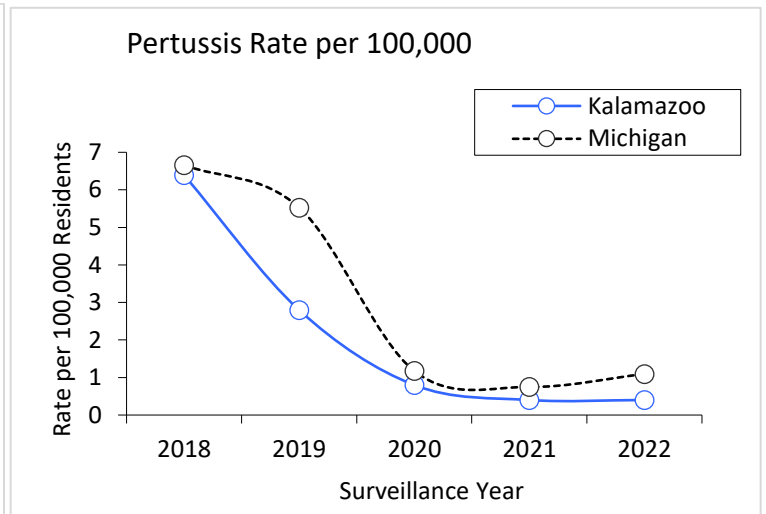
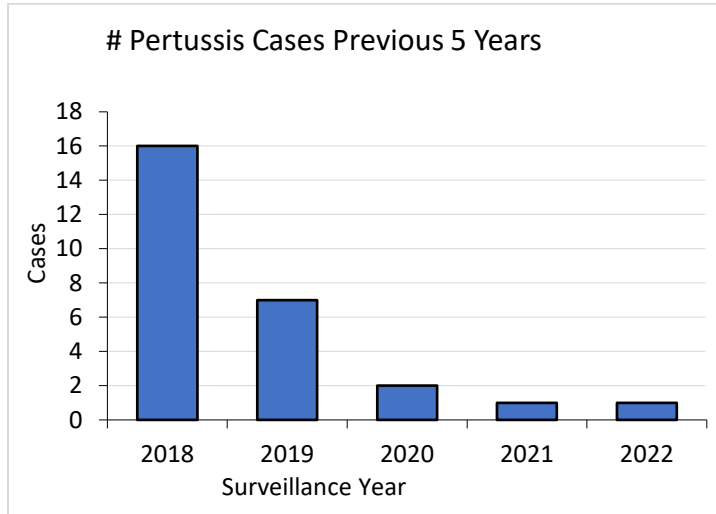
Selected Vaccine Preventable Diseases



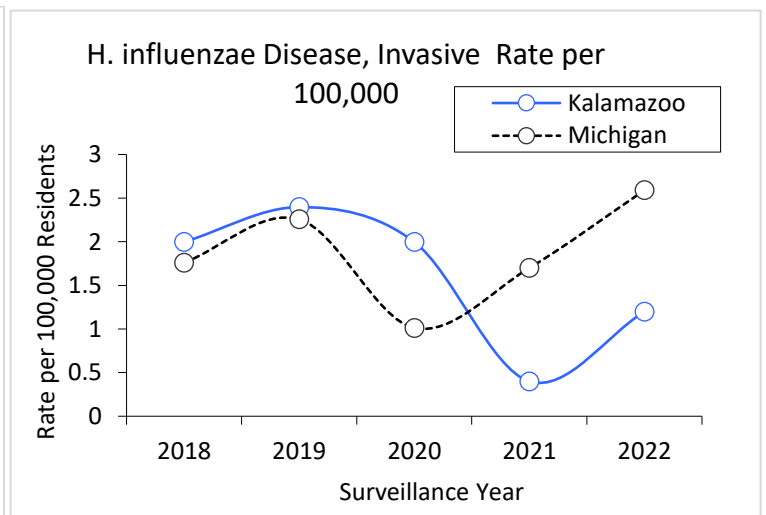
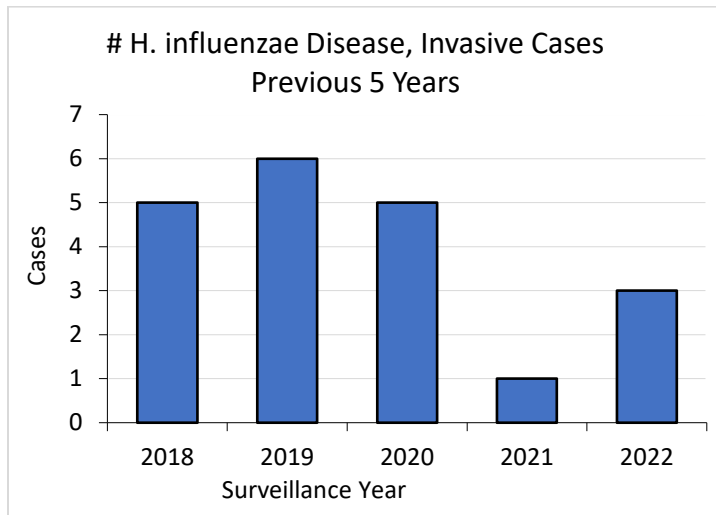
In 2022, the number of cases of chickenpox reported in the county was lower compared to 2021. Kalamazoo county has similar rates to MI since 2018; however, in 2022 the rate was slightly lower. The U.S. vaccination program for chickenpox/varicella began in 1995, during the first 25 years of the program it is estimated that the vaccine has prevented an estimated 91 million cases, 238,000 hospitalizations and 2,000 deaths nationwide (www.cdc.gov/chickenpox).



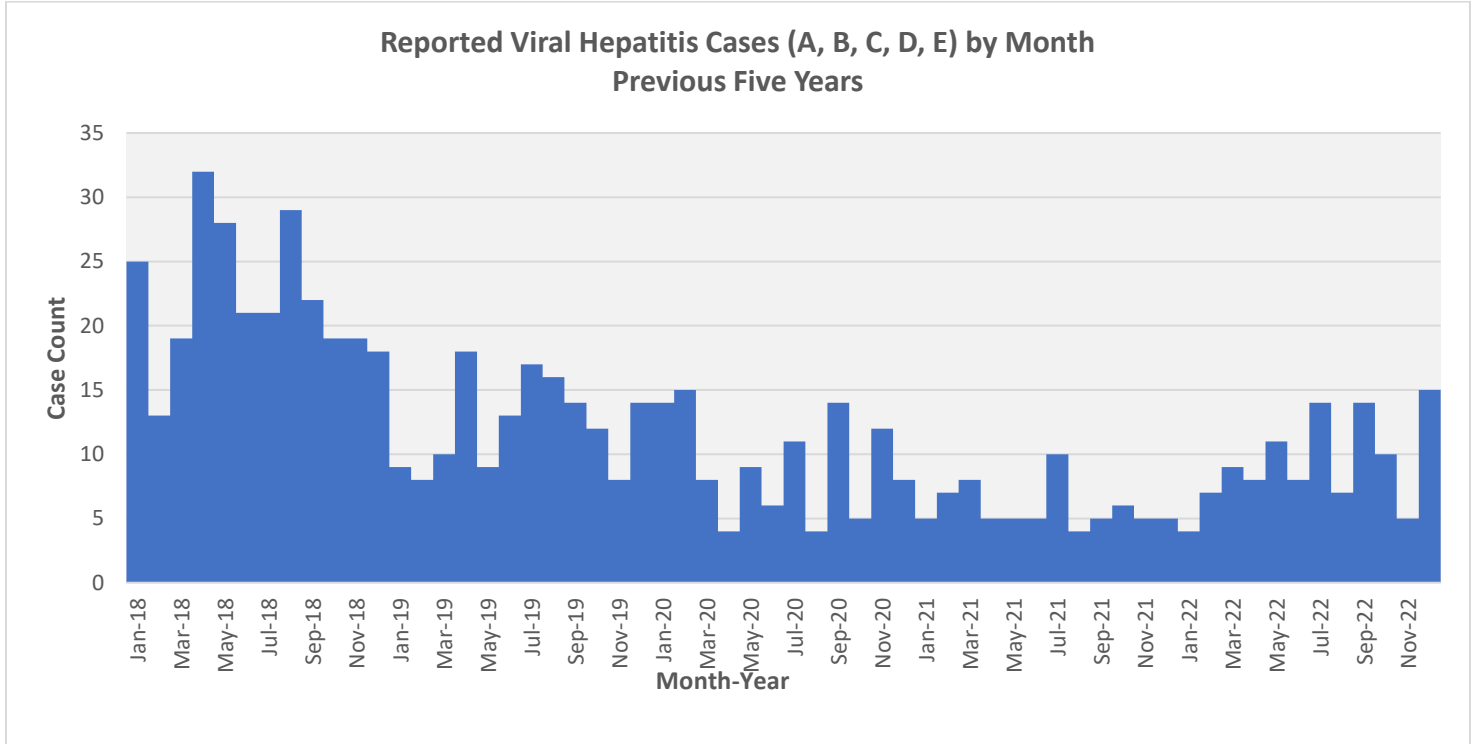
In the county there has been a steady decrease in the number of cases of pertussis ('Whooping Cough') reported since 2018. During this time the annual county case rate has been lower compared to the rate for the state of MI.



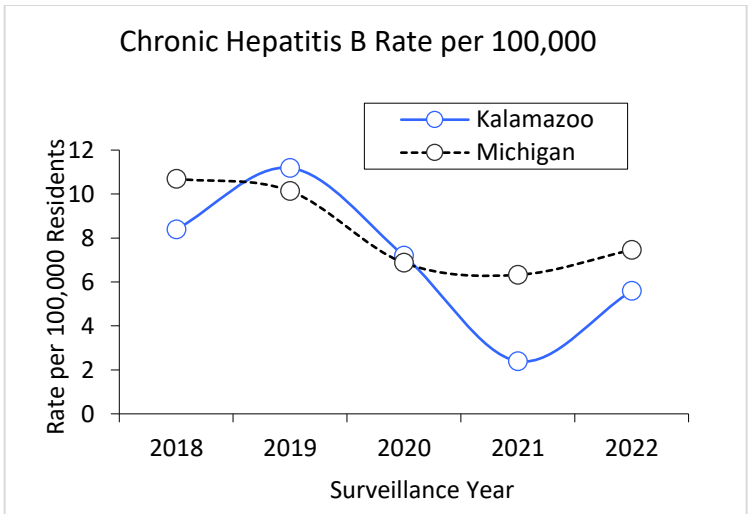
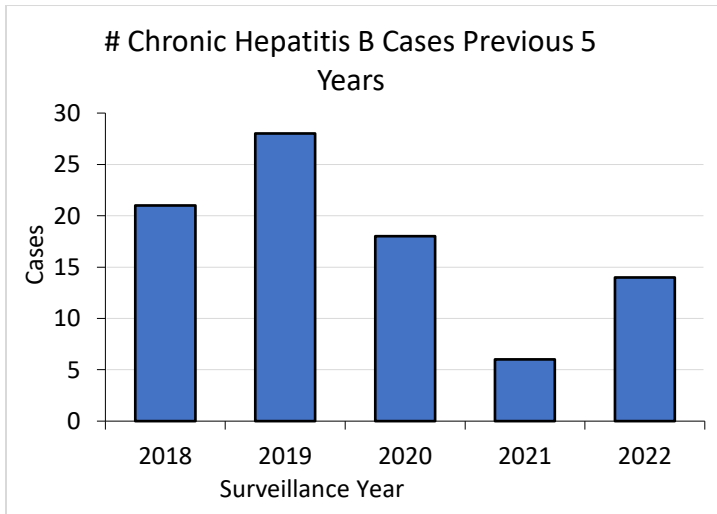
In 2022, the number of cases of H. influenzae disease increased compared to the previous year; however, the case rate was lower compared to MI. Case counts remain below 2018-2020 counts.



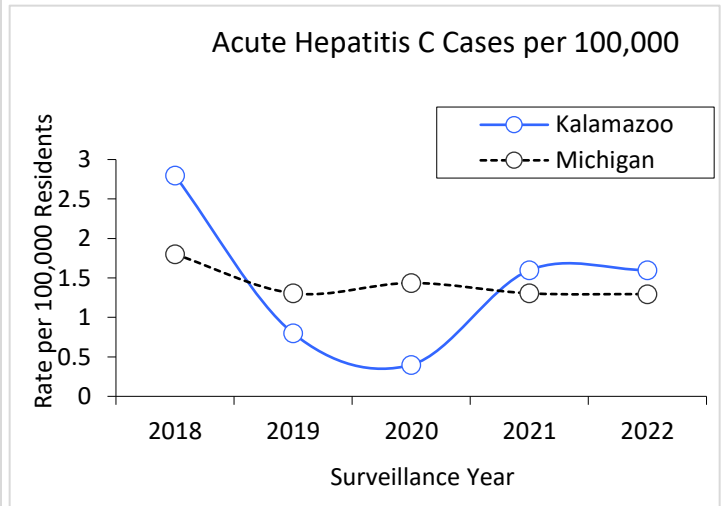
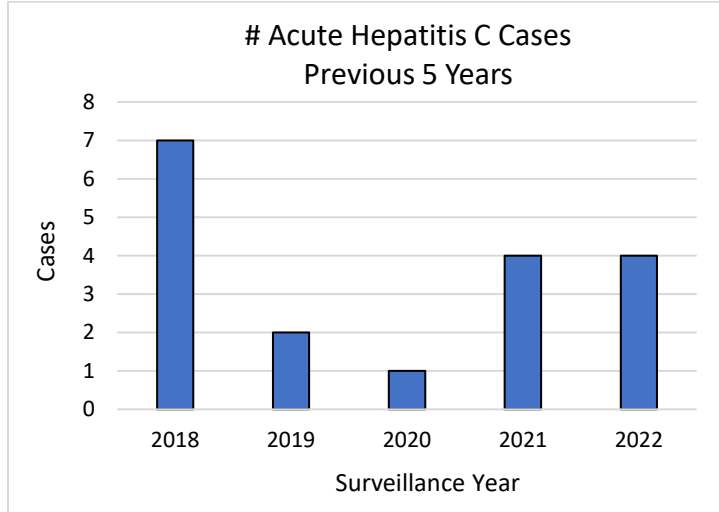
Hepatitis



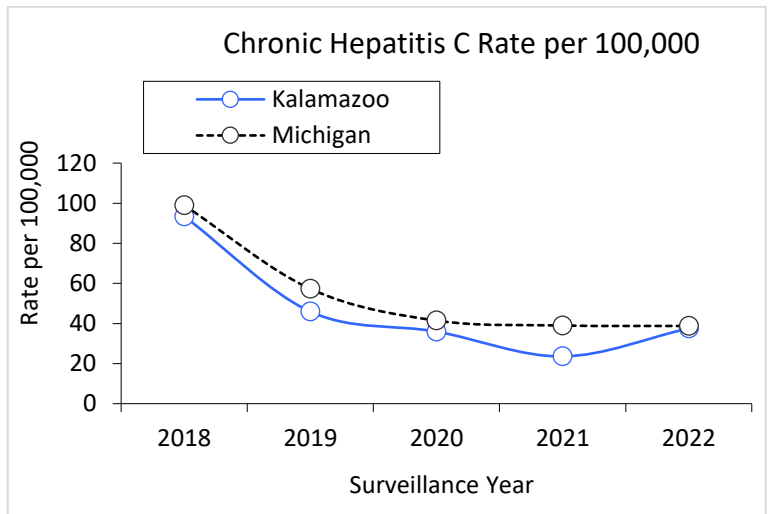
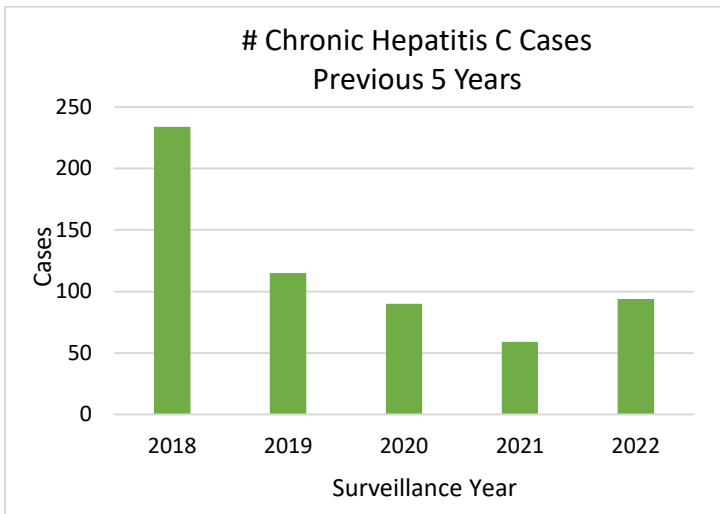
There was an increase in the number of chronic hepatitis B cases reported in 2022 compared to the previous year, counts remain below 2018-2020. The county had a lower rate compared to MI for the past two years, rates during 2019-2020 were similar.

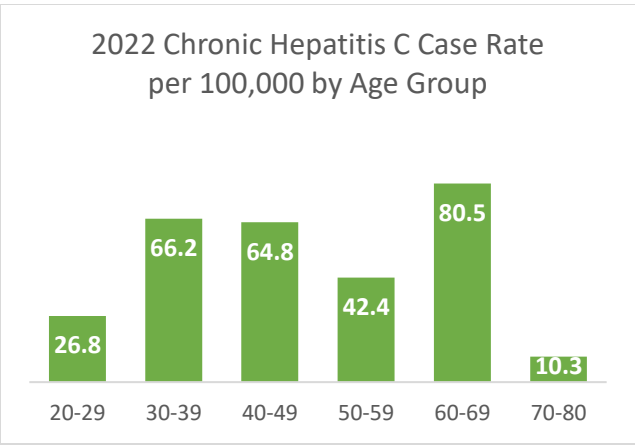
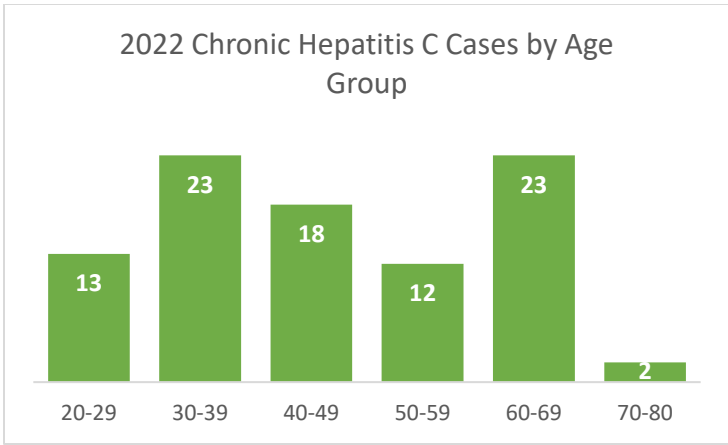


Case counts for acute hepatitis C were similar for 2021 and 2022. The case rate for MI was higher compared to the county for 2022.

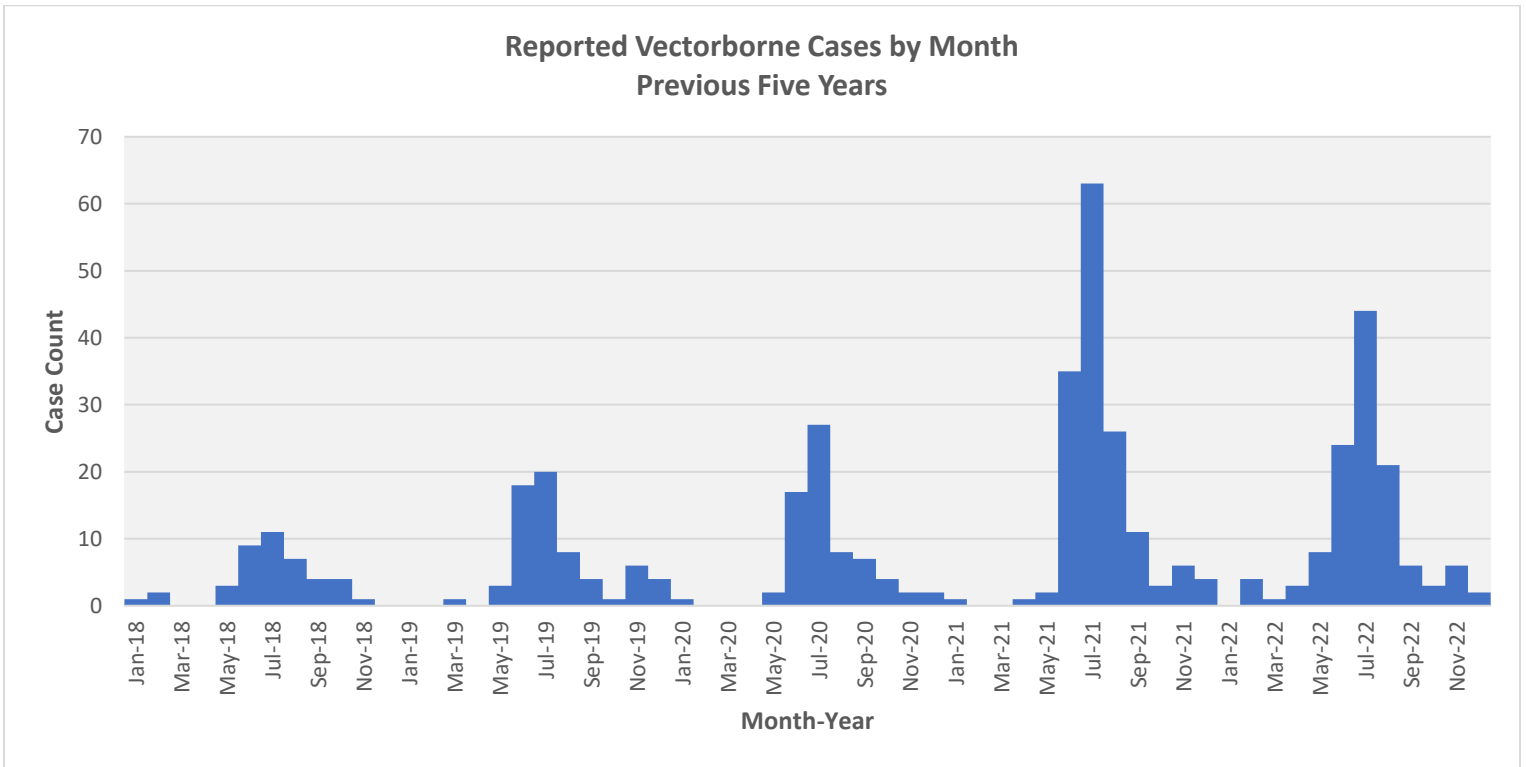


In 2022, Kalamazoo County had a larger number of cases reported compared to 2021, counts were similar to 2020. County rates were similar to the state since 2018. The charts below show the number of chronic hepatitis C cases reported by age group for 2022 and age-specific case rates. The highest case rate was in those age 60-69 years followed by the 30-49 year old age group.

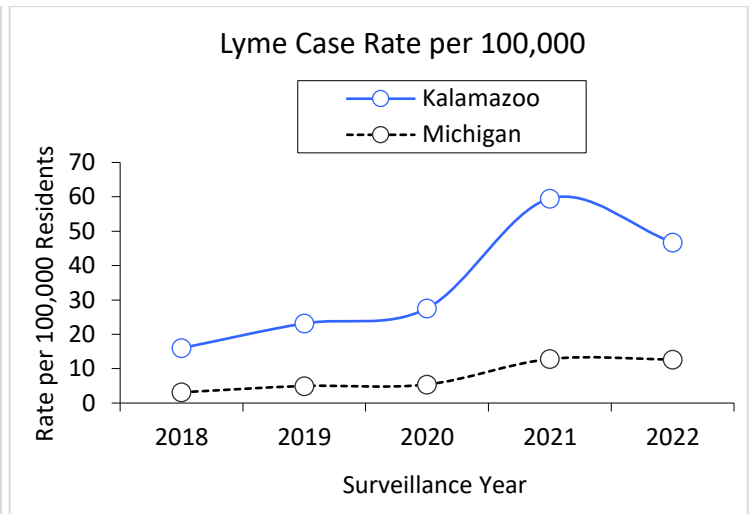
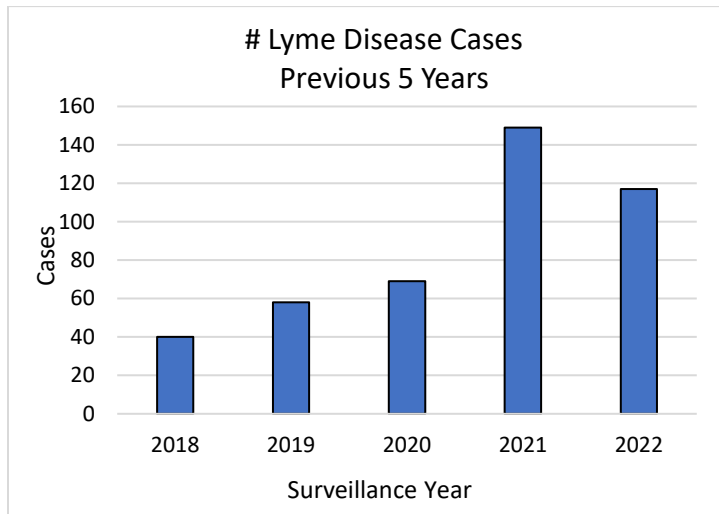




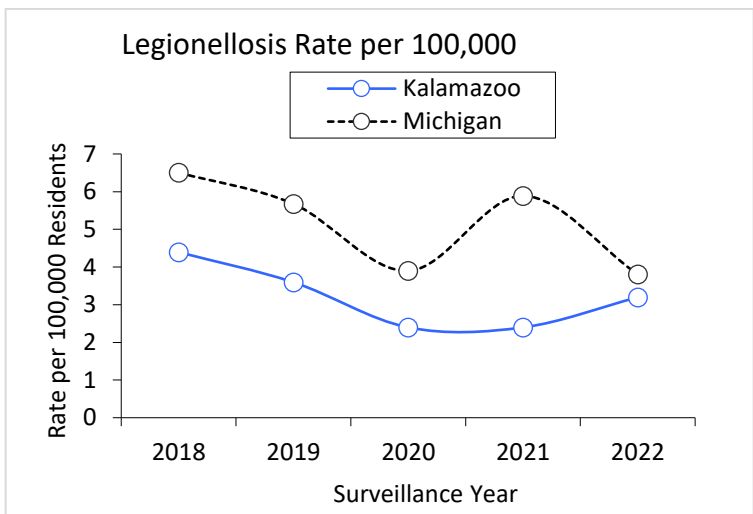
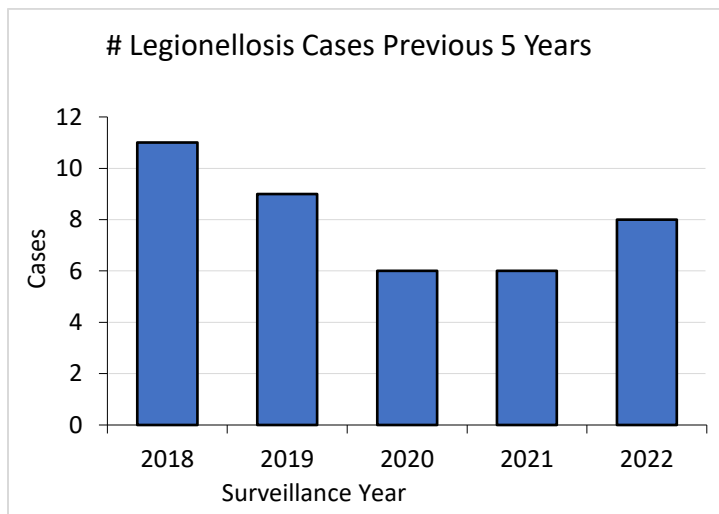
Other Diseases



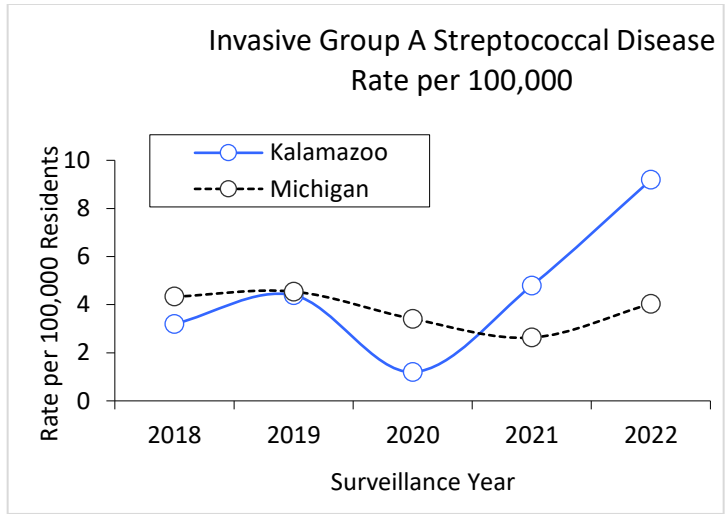
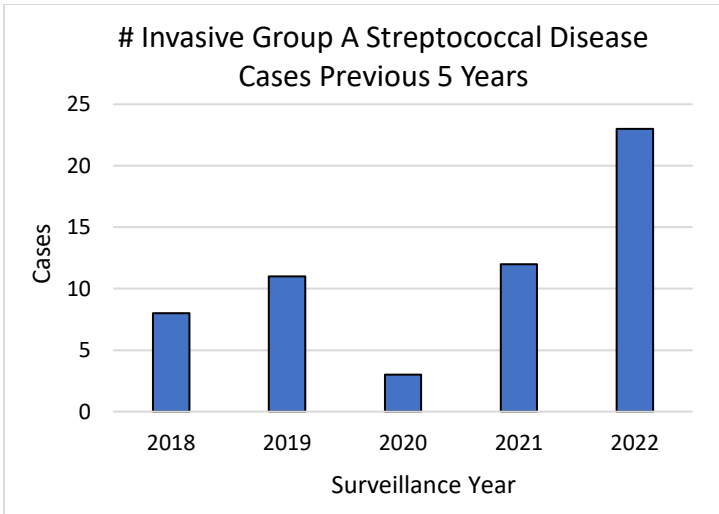
After a statewide increase in cases reported during 2021, the number of cases reported in county residents decreased in 2022. The county case rate has been higher compared to MI since 2018. Cases are reported by county of residence, not location of exposure to the tick vector (blacklegged tick). This tick vector is endemic in Michigan in portions of the Upper Peninsula and in the Western Lower Peninsula. However, the tick is now expanding into other areas in the state (www.michigan.gov/emergingdiseases)



In 2022, the number of cases of legionellosis reported increased slightly compared to the previous year; however, the county case rate remained below the state rate.



The number of Invasive Group A Streptococcal (iGAS) cases was at the largest number reported since 2018. The county case rate was higher compared to MI for both 2021 and 2022. In 2022, the CDC began an investigation of an increase of iGAS among children in the U.S. In Kalamazoo, the cases reported were in adults age 18 and older. No specific clusters of illness were identified.



An outbreak of mpox occurred in the U.S. and other countries during 2022. In Kalamazoo county fewer than five cases were identified in county residents. The county case rate remained below the MI case rate for the year. A total of 271 residents received their first dose of the mpox vaccine, 202 received their second dose (data as of 1/30/23). The majority of those receiving the vaccine were male (90%, sex assigned at birth) and between the ages of 20-39 years (62%).

