

KENT COUNTY HEALTH DEPARTMENT

EPI FOCUS

2016 Communicable Disease Summary

MUMPS

The first case of mumps since 2009 was reported in Kent County in early 2016. This case was part of a small cluster of mumps cases on a college campus, one of two such clusters investigated by KCHD during the year.

When evaluating a patient who has symptoms consistent with mumps, healthcare providers should collect a buccal swab for viral culture within 5 days of symptom onset. Instructions for collection are found [here](#).

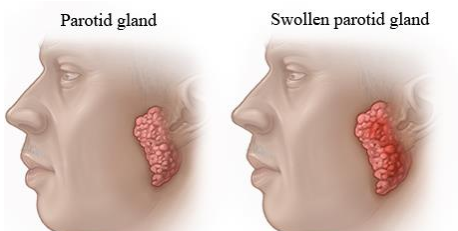


Photo Credit: Healthwise, Incorporated

INTRODUCTION

Prevention and control of communicable disease is a necessary and critical aspect of assuring community health, and is an affirmative duty of local public health departments. To this end, the Kent County Health Department (KCHD) monitors the occurrence of over 80 communicable diseases on a community-wide basis. Health care providers in Kent County are a critical component of our surveillance system. As such, it is important that KCHD provide feedback on disease trends in our community.

This edition of EpiFocus provides surveillance data on the following diseases: **shigellosis, campylobacter, giardiasis, salmonellosis, cryptosporidiosis, HIV/AIDS, chlamydia, gonorrhea, pertussis, mumps, tuberculosis and influenza.** Please take a moment to review these data and contact us at 616-632-7228 should you have any questions or comments.

What are reportable diseases?

A reportable disease is any disease, condition, infection or suspect occurrence of disease that is required under Michigan State Law (Section 5111 of Act. No. 368 of the Public Acts of 1978, as amended, being 333.511 of the Michigan Compiled laws) to be reported by physicians, laboratories, schools, daycare centers, and camps to the local health department.

The list of reportable diseases, along with details on how to report to the local health department, can be found in the [Health Care Professionals Guide to Disease Reporting in Michigan](#).

MICHIGAN DISEASE SURVEILLANCE SYSTEM (MDSS)

The Michigan Disease Surveillance System (MDSS) is a web-based communicable disease reporting system that facilitates coordination among local, state and federal public health agencies during follow-up investigations of communicable disease events. Along with the Michigan Syndromic Surveillance System (MSSS), these tools provide real-time access for data entry and analysis to improve the timeliness of public health interventions.

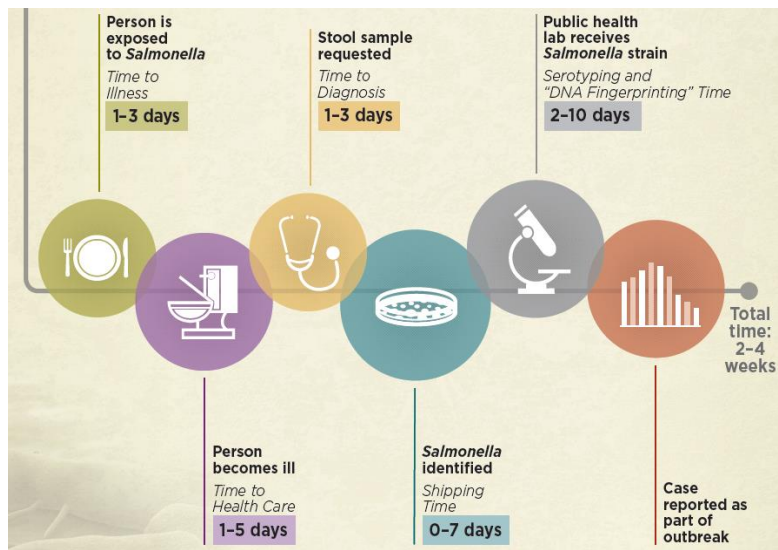
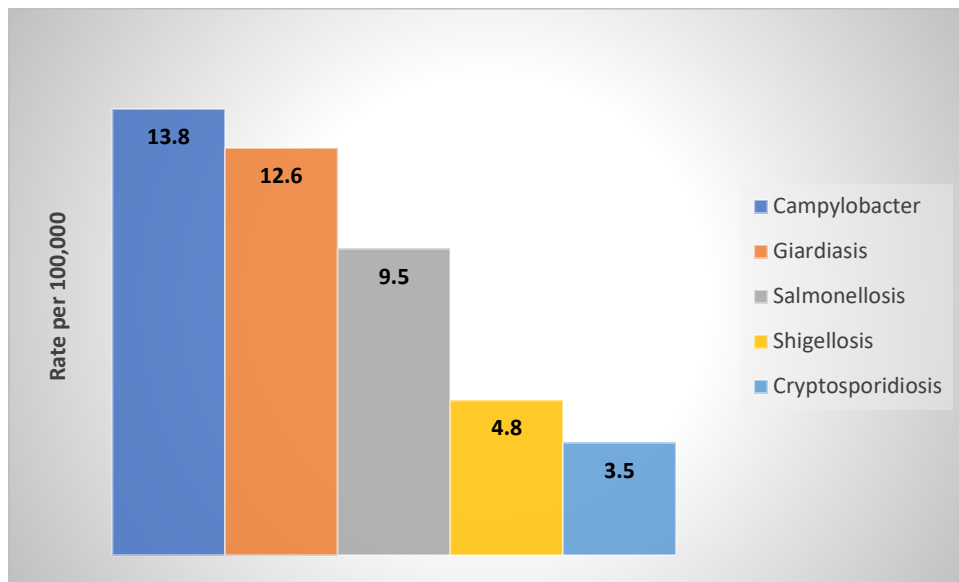
All data presented in this report were obtained from the MDSS and MSSS. If you would like to learn more about these systems or are interested in becoming a user, additional information can be found using the following links: [MDSS](#), [MSSS](#).

GASTROINTESTINAL ILLNESSES

A variety of infectious agents can cause gastrointestinal illnesses, and testing does not always identify the cause. Once a report of gastrointestinal illness is received by KCHD, Communicable Disease and Epidemiology (CD/Epi) Unit staff initiate an investigation into potential exposures that may have caused the patient's illness. Patients are asked for travel history, water exposures (swimming and drinking water), animal contacts, exposure to other ill individuals and food history. The goal of these investigations is to identify community risks that threaten the public's health. These threats can be localized, such as *Cryptosporidium* contaminated water at a park or widespread, such as food products contaminated with *Salmonella* at a processing facility. Whatever the source of infection once identified, KCHD works with other public health partners at the local, state and federal level to prevent further spread.

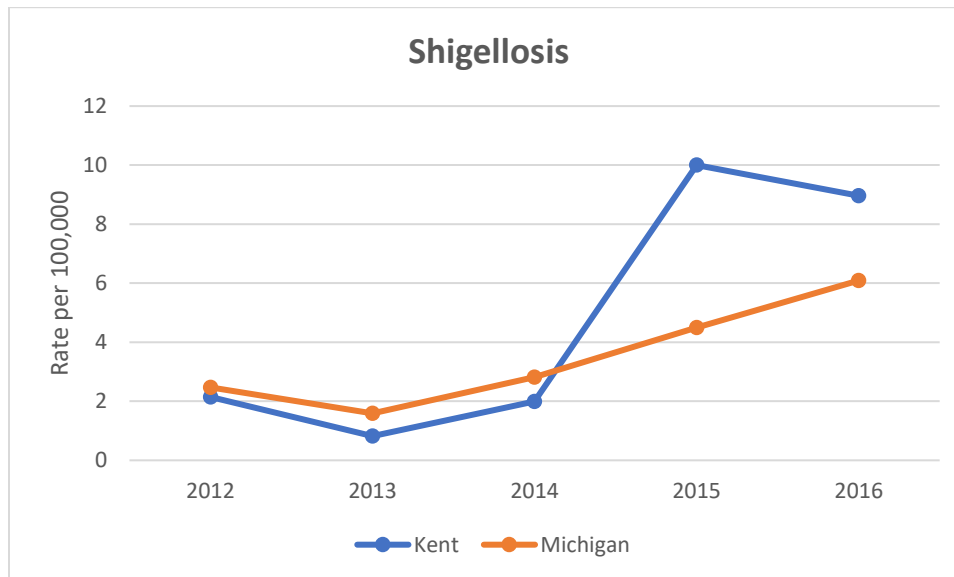
Due to the length of time between a patient's onset of symptoms and completion of an epidemiologic interview with KCHD CD/Epi staff, recall of exposures is often difficult. In the case of salmonellosis, patients are asked to provide a seven-day food history. Health care providers can assist in identifying potential sources of illness by obtaining a meal and travel history from patients who present with gastrointestinal symptoms. Obtaining this information early in the disease process limits recall bias and provides valuable information to the investigation initiated by KCHD.

Gastrointestinal Illnesses of Greatest Frequency, Kent County, Five-Year Averages (2012-2016)



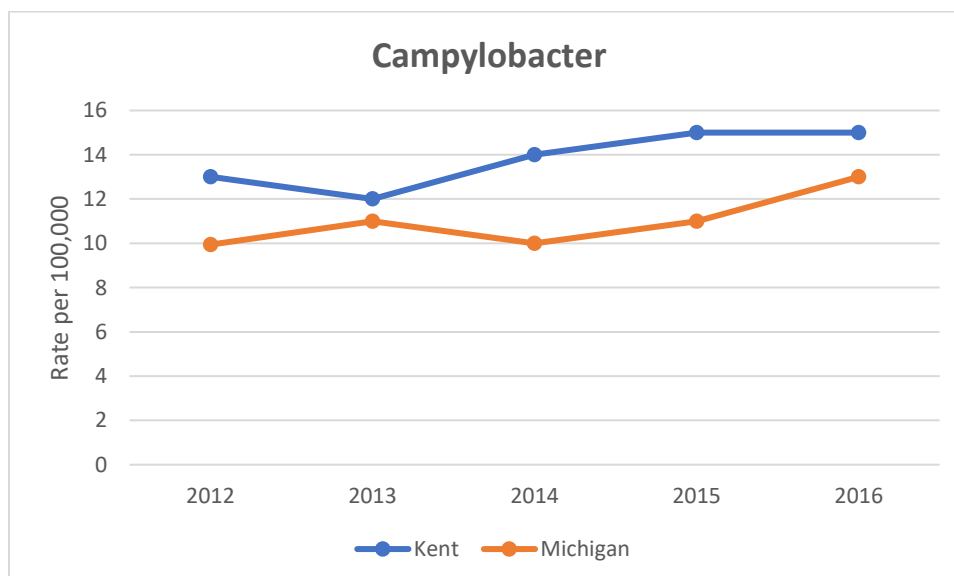
Shigellosis

After the significant increase in the number of reports of shigellosis in 2015, the number of shigellosis cases reported to the Kent County Health Department remained high in 2016. In 2016, 54 cases of shigellosis were reported, which was slightly below the 61 reported in 2015. Between 2011 and 2015, an average of 20 cases of shigellosis were reported each year in Kent County. Cases reported in 2016 were slightly older than those reported in 2015. In 2016, 35.2% of cases were under the age of 10, compared to 47.5% of 2015 cases. Half of all cases reported in 2016 were 19 years of age and older. An increase in shigellosis continues to be observed across the state of Michigan where 602 cases were reported in 2016 compared to 445 in 2015.



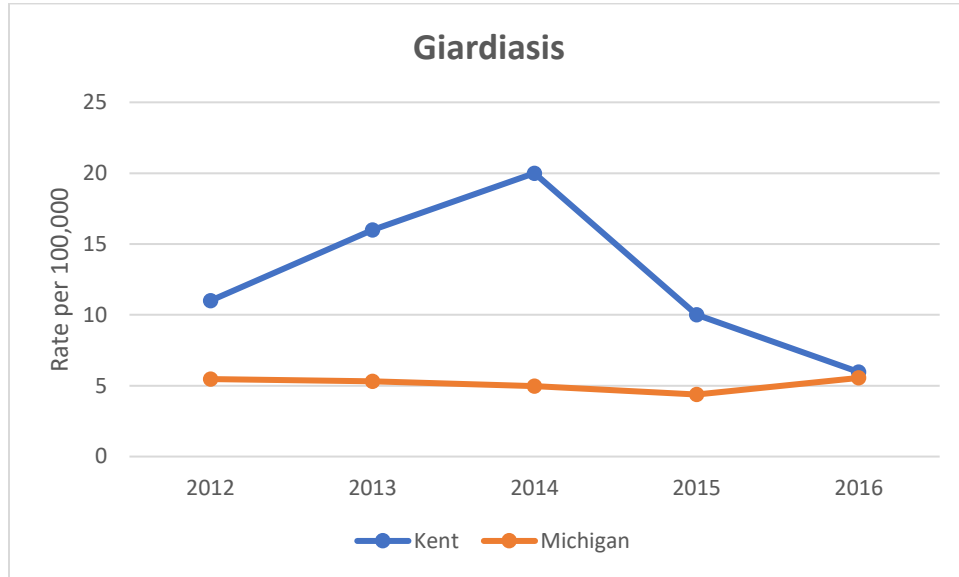
Campylobacter

Between 2011 and 2015, an average of 78 cases of *Campylobacter* were reported each year in Kent County. In 2016, 95 cases of *Campylobacter* were reported to KCHD, similar to the 96 cases reported in 2015. The average age of cases was 44.7 years with slightly more than half (57%) under the age of 50. Nearly 1 in 5 cases occurred in individuals 65 years of age and older. Like 2015, only a small percentage of reported cases (6%) were in children under the age of 5. Cases were more commonly reported in the warmer months from May to August (45 cases) than the colder months from December to March (21 cases).



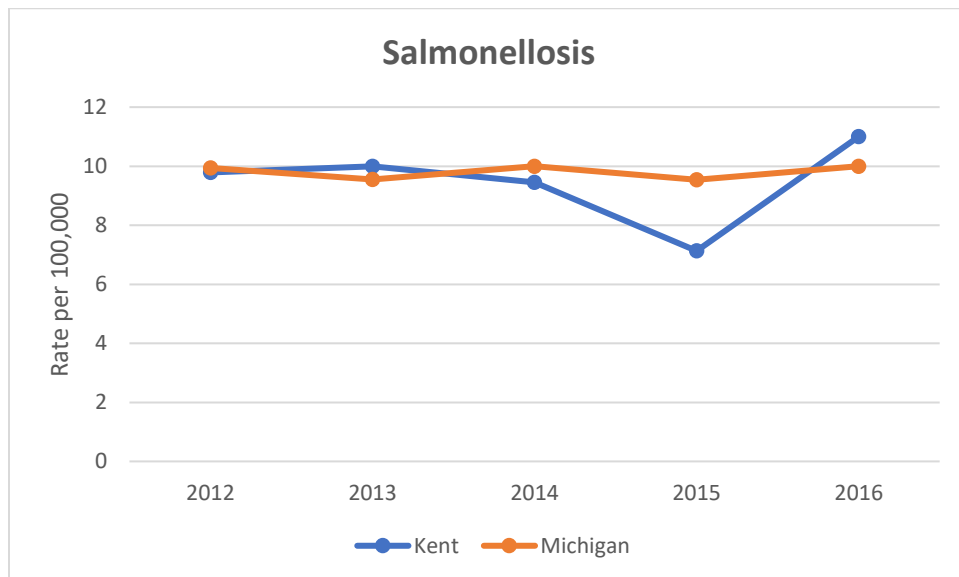
Giardiasis

After years of consistently being higher than the overall rate in the state of Michigan, the rate of giardiasis in Kent County was similar to the state rate in 2016. Thirty-six (36) cases of *Giardia* were reported in 2016, compared to an average of 86 reported each year between 2011 and 2015. The number of cases among the refugee/international adoptee population continued to decrease as only 6 (16.7%) of cases were reported in this population. Among these cases, only one was identified as experiencing symptoms of gastrointestinal illness.



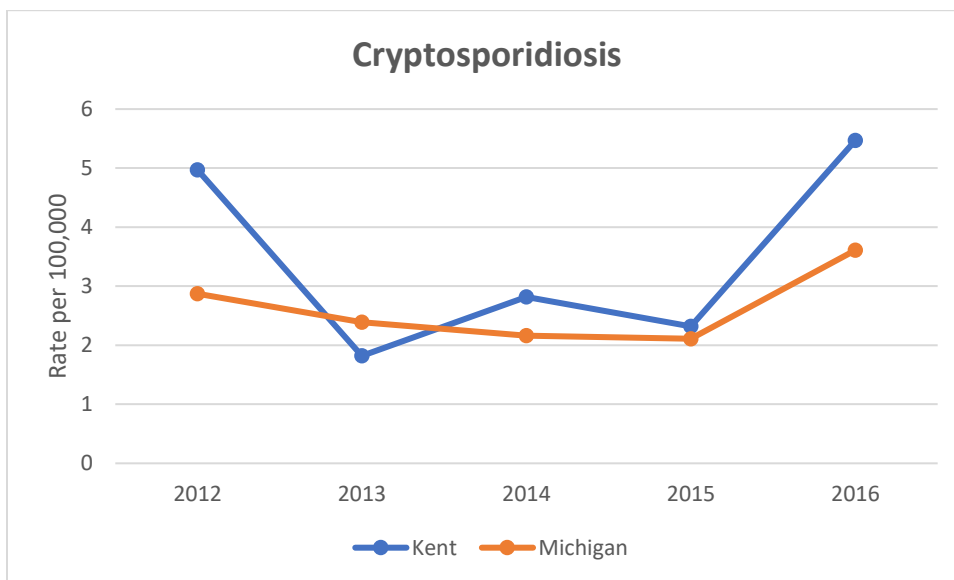
Salmonellosis

After a slight dip in the number of salmonellosis cases in 2015, the number of reported cases in 2016 was enough to push the local rate of salmonellosis above the statewide rate. Between 2011 and 2015, an average of 54 cases were reported each year. This year, there was a significant increase in the number of reported cases from 43 in 2015 to 68 in 2016. The average age of salmonellosis cases was 39.5, with 13% of cases under the age of 10 and 10% of cases 65 years of age and older. Eighteen (18) different serotypes were identified through laboratory testing in 2016. *Salmonella enteritidis* was the most common serotype identified in 2015 (30%) followed by *S. typhimurium* (19%). *Salmonella newport* and *Salmonella 4,12:i:-* accounted for 6 and 4 cases, respectively.



Cryptosporidiosis

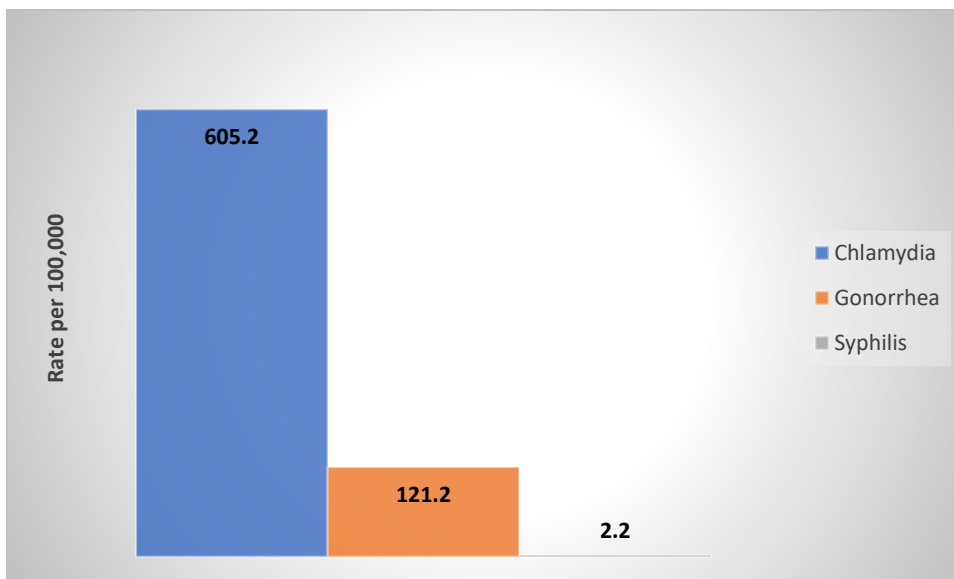
The number of cryptosporidiosis cases reported to KCHD in 2016 was nearly double the five-year average. Thirty-three (33) cases were reported in 2016 after an average of 17 cases were reported annually between 2011 and 2015. The parasite *Cryptosporidium* can be spread in several different ways, but water (drinking water and recreational water) is the most common way to spread the parasite. While 7 of the cases were associated with an outbreak involving exposure to river water, greater than one in four cases reported no swimming in the month prior to the onset of symptoms. August was the most common month for diagnosis with 11 cases, including those involved in the outbreak, but cases were reported throughout the entire year.



SEXUALLY TRANSMITTED INFECTIONS

KCHD offers counseling, testing and treatment for chlamydia, gonorrhea, and syphilis. Counseling and testing for HIV are also available. In addition to testing, the department provides assistance in contacting partners of individuals that have been diagnosed with these infections. Health care providers should report all confirmed cases of chlamydia, gonorrhea, and syphilis to the health department by fax at 616-632-7185. Faxed reports should include patient demographics, laboratory results and treatment information. Forms and instructions for reporting cases of HIV can be found [here](#).

Sexually Transmitted Infections of Greatest Frequency, Kent County, Five-Year Averages (2012-2016)

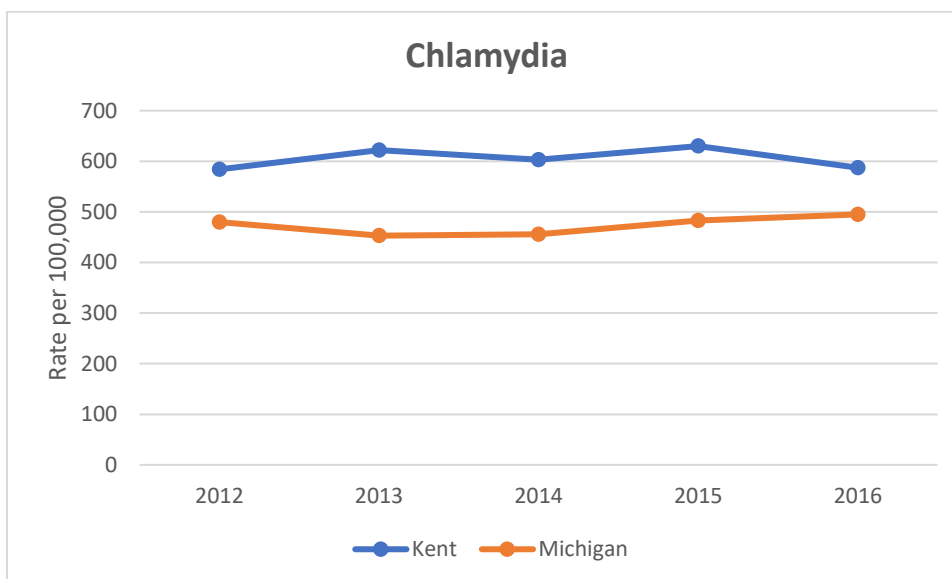


HIV/AIDS

In 2016, there were 33 new cases of HIV reported in Kent County residents and 13 new diagnoses of AIDS. This compares to 24 cases of HIV and 19 AIDS diagnoses reported during 2015. KCHD offers both conventional blood testing and rapid testing for HIV. Results from conventional tests are available within 10 days and patients must return to the health department to receive their test result. Rapid test results are available within 30 minutes at the same visit. Partner Services are offered to all individuals who test positive for HIV. Offering testing and counseling to contacts of positive cases is very important, so they may get appropriate medical care and help stop the spread of infection to others.

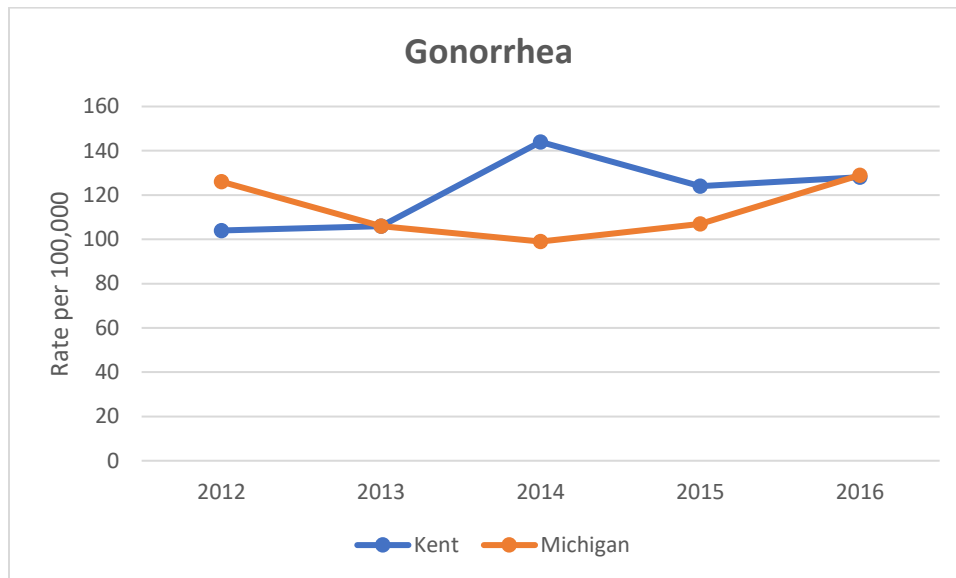
Chlamydia

The number of chlamydia cases in Kent County decreased from 3,797 in 2015 to 3,541 in 2016. This is slightly lower than the average of 3,663 cases reported per year from 2011 to 2015. Despite increases in the statewide rate of chlamydia, the rate in Kent County remains higher than the state. Females bear the greatest burden of chlamydia infection in Kent County. The rate among females was 766 per 100,000 compared to 401 per 100,000 among males. Among patients 20 to 24 years of age, the rate was 3,933 per 100,000 in females and 1,942 per 100,000 in males. Because many infections are asymptomatic in sexually active females, sexually active women age 25 years and younger, or older women with risk factors (new sex partner or multiple sex partners), should have an annual screening for detection of an asymptomatic infection.



Gonorrhea

Cases of gonorrhea in Kent County increased slightly from 750 in 2015 to 773 in 2016, which is above the annual average of 725 from 2011 and 2015. While the gonorrhea rate increased slightly in Kent County, the statewide rate increased significantly to the point where the two rates were relatively equal in 2016. Contrary to what was seen with chlamydia, the gonorrhea case rate was greater among males in 2016 (144 per 100,000) than among females (113 per 100,000). Among the population 20-24 years of age, the rate was 551 per 100,000 among males and 468 per 100,000 among females.



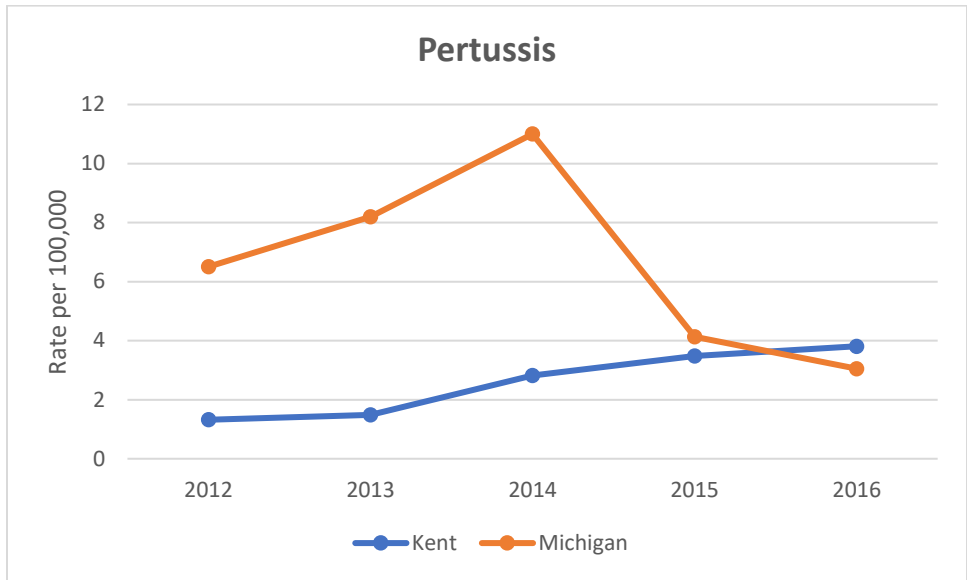
VACCINE PREVENTABLE DISEASES

Control of many vaccine preventable diseases occurs not only through immunization, but also through post-exposure prophylaxis of individuals identified as contacts of confirmed cases. When KCHD receives a confirmed report of pertussis, meningococcal disease, *Haemophilus influenzae* type B infection, mumps, measles or hepatitis A, an investigation will be initiated to determine contacts at risk of becoming infected. Once identified, KCHD arranges for the appropriate prophylaxis (antibiotics, IG, and/or vaccination).

Pertussis

The number of cases of pertussis reported to KCHD continued to increase in 2016. A total of 23 cases were reported, compared to 21 in 2015 and an annual average of 13 reported between 2011 and 2015. In 2016, 48% of cases were under the age of 10, the same percentage as 2015. Overall, younger patients dominated the case reports of pertussis, as 78% of cases were younger than 17 years of age. Surveillance indicated that breakthrough infection is common, as 15 of the cases were vaccinated against pertussis.

The rate of pertussis in the state of Michigan continued to decline in 2016 and the rate in Kent County exceeded the statewide rate for the first time in several years (3.8 per 100,000 vs. 3.0 per 100,000). To adequately assess the impact of pertussis in Kent County, physicians are encouraged to consider pertussis in the differential diagnosis of patients with cough illness lasting 2 weeks or longer. Clinicians should collect nasopharyngeal swab or aspirate specimens from suspected cases of pertussis for culture or polymerase chain reaction (PCR) testing. Serologic methods are not appropriate for diagnosis of pertussis (except in rare instances).

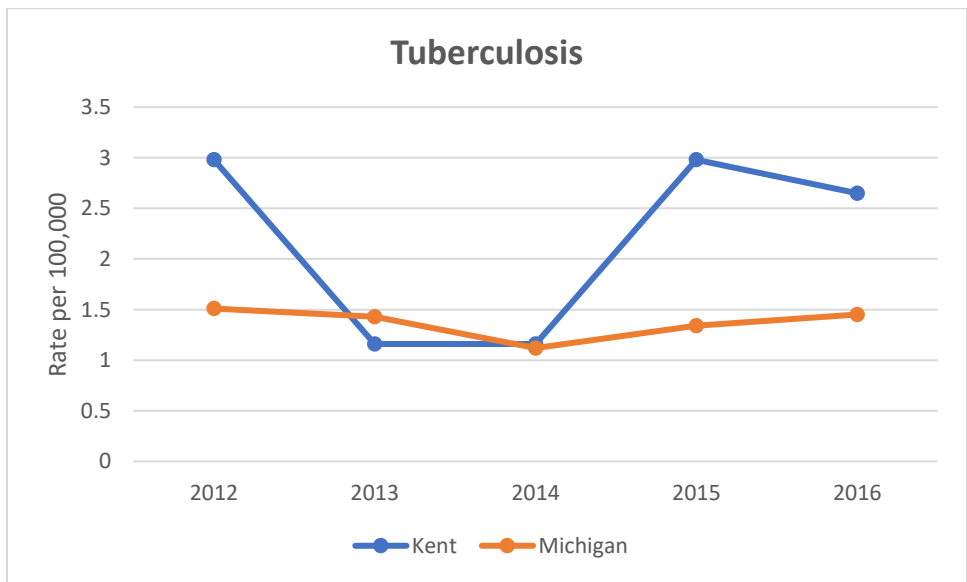


Mumps

In 2016, KCHD received its first confirmed case of mumps since 2009. Overall, KCHD received reports of 3 confirmed cases and 5 probable cases. A confirmed case of mumps is defined as a person with clinical symptoms of mumps with laboratory confirmation of mumps virus by PCR or culture. A probable case is defined as an individual with a clinically compatible illness with a positive test for serum anti-mumps immunoglobulin M (IgM) antibody or epidemiologic linkage to another probable or confirmed case or linkage to a group/community defined by public health during an outbreak of mumps. During 2016, KCHD was involved in two cluster investigations of mumps on college campuses, which accounted for 4 of the reported cases. Among the 6 cases for whom vaccination status was known, 4 had documentation of at least one dose of mumps-containing vaccine.

Tuberculosis

The 16 cases of tuberculosis reported to KCHD in 2016 was slightly above the annual average of 14 between 2011 and 2015. In 2016, the rate of tuberculosis in Kent County continued to be above the statewide rate. Among the cases reported in 2016, all but 4 were born outside of the United States. Individuals of Asian descent accounted for 82% of the cases among individuals born outside of the United States.



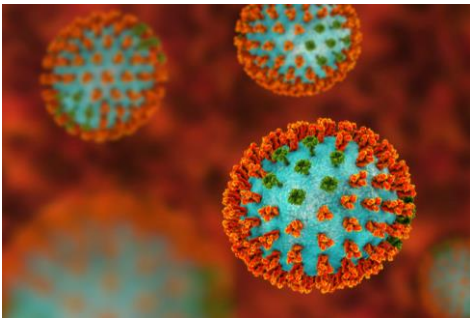


Photo Credit: Washington University, St. Louis

INFLUENZA

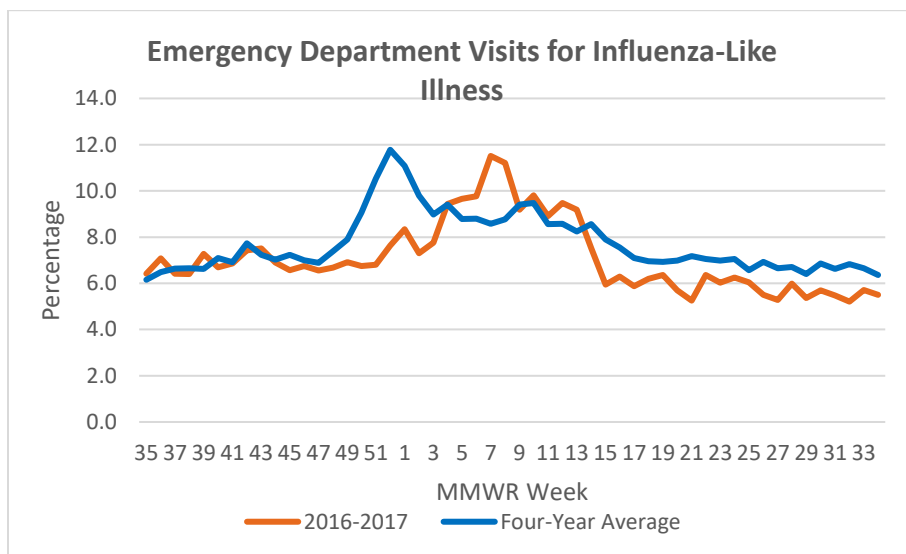
Data from the MSSS are useful in providing an indication of local influenza-like illness (ILI) activity. The percentage of people visiting local emergency departments each week for ILI are compared to data from the previous four seasons to indicate how the current season’s activity compares to what is “expected” during each week. During the 2015-2016 influenza season in Kent County, the peak level of ILI activity occurred during the week ending March 2, 2016 when 12.2% of emergency department visits in the county were for ILI. During the 2016-2017 season, activity peaked slightly earlier during the week ending February 18, 2017 when 11.5% of visits to emergency departments were for ILI. Data from the Centers for Disease Control and Prevention (CDC) for the past 35 influenza seasons indicate that February is the most common month for peak influenza activity.

According to the CDC, influenza activity for the 2016-2017 season was classified as moderate. Overall, influenza A (H3N2) was the predominant circulating strain. Vaccine effectiveness against the predominant influenza A(H3N2) viruses was 34% and vaccine effectiveness against influenza B viruses was 56%. The majority of influenza viruses characterized at CDC were similar to the reference viruses representing the recommended components for the 2016–17 vaccine.

Contact Us

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STAY UP TO DATE ON LOCAL DATA

Additional reports on communicable diseases in Kent County can be found at the following web site:

<https://accesskent.com/Health/CommDisease/reports.htm>