

KENT COUNTY HEALTH DEPARTMENT

EPI FOCUS

2015 Communicable Disease Summary

EBOLA

Between October 2014 and November 2015, the Kent County Health Department monitored 48 individuals who returned to Kent County after travel to the West African countries of Guinea, Liberia and Sierra Leone. All but one of the travelers were low-risk and required daily contact for 21 days to monitor for fever and symptoms of Ebola. One traveler required direct active monitoring, which involved daily visual observations via Skype to monitor their health.

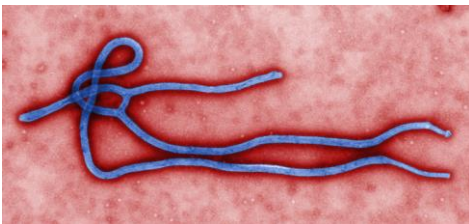


Photo courtesy of CDC

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, HIV/AIDS, chlamydia, gonorrhea, pertussis, Lyme disease, 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.

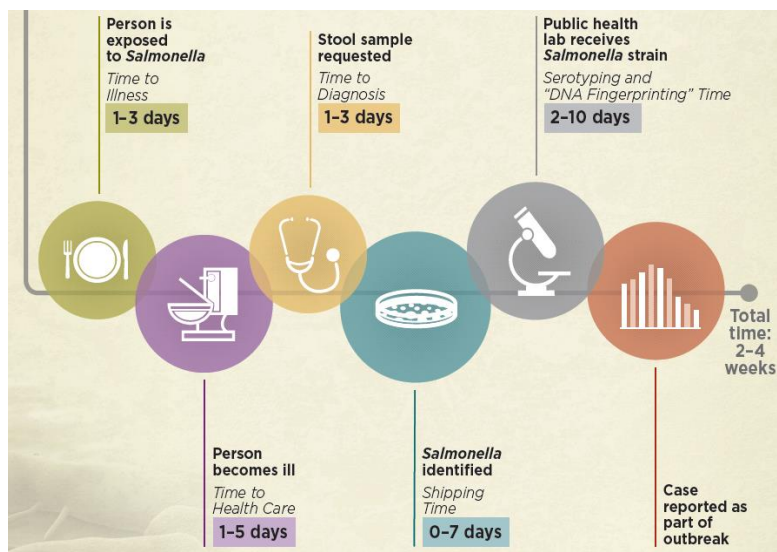
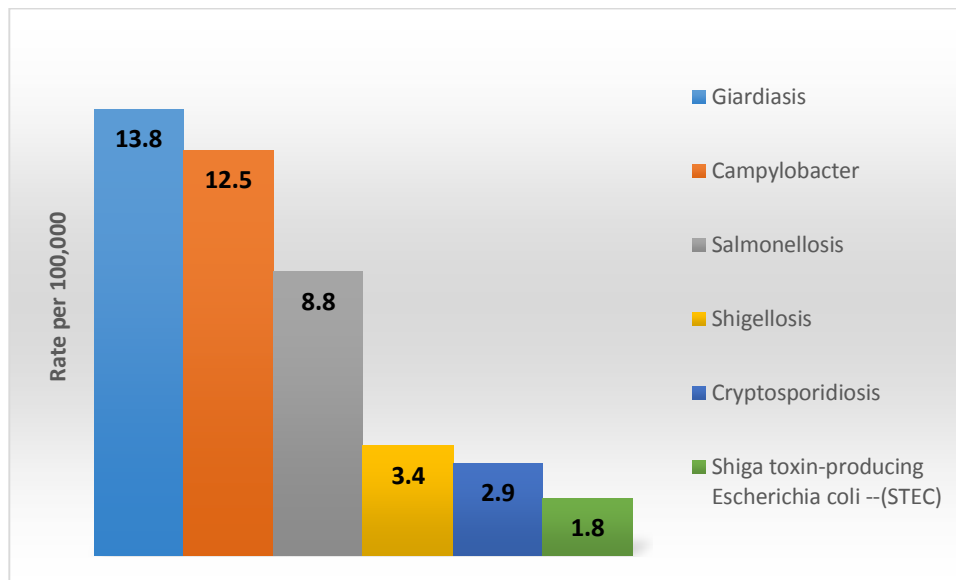
All data presented in this report were obtained from the MDSS and MSSS. If you would like to learn more about these systems or are interested in becoming a user, additional information can be found using the following links: [MDSS](#), [MSSS](#).

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.

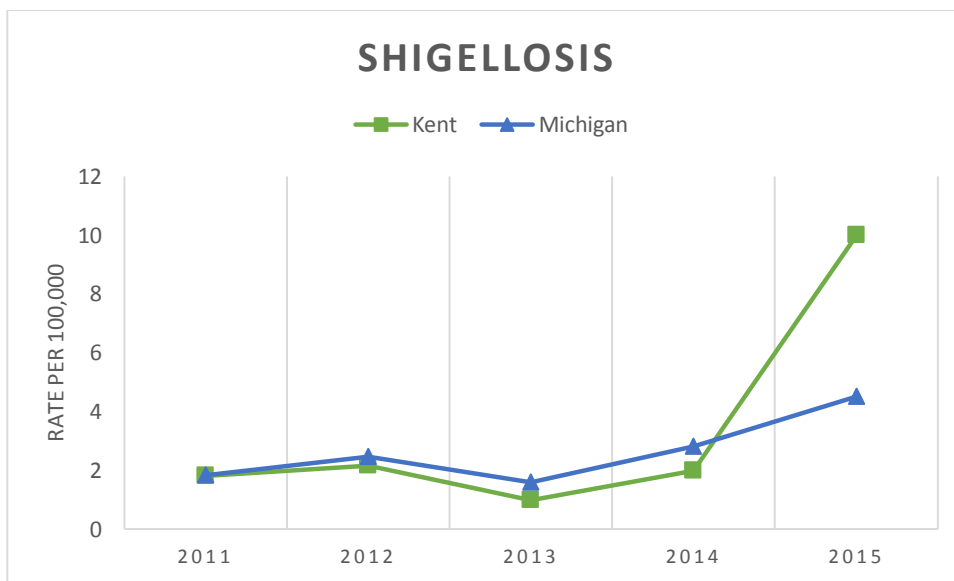
Due to the length of time between a patient's onset of symptoms and completion of an epidemiologic interview with KCHD CD/Epi staff, recall of exposures is often difficult. In the case of salmonellosis, patients are asked to provide a seven-day food history. Health care providers can assist in identifying 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 (2011-2015)



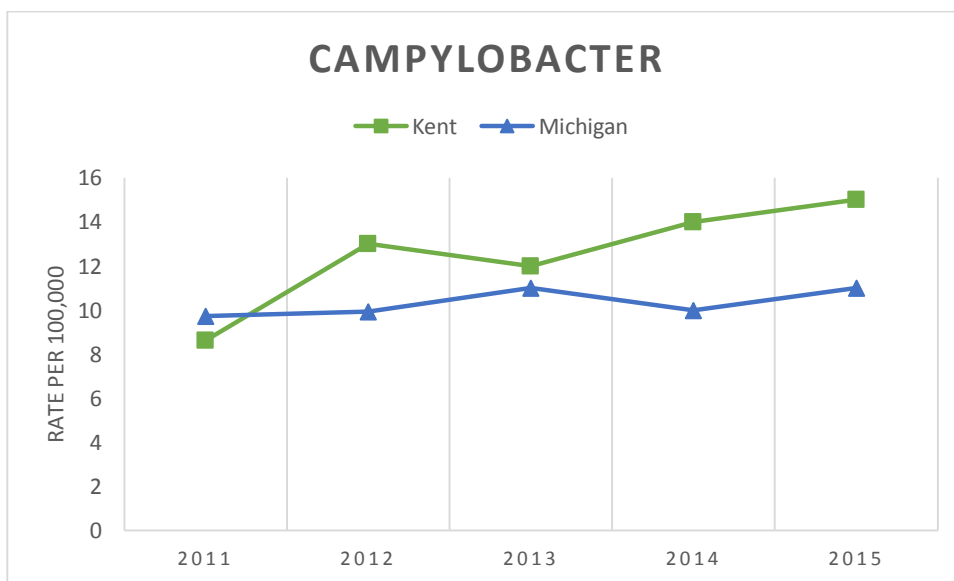
Shigellosis

2015 saw rates of salmonellosis and giardiasis decline in Kent County while rates of campylobacter continued to rise. In addition, after several years of being one of the least commonly reported gastrointestinal infections, there was a significant increase in the number of reports of shigellosis in 2015. Between 2010 and 2014, an average of 9 cases of shigellosis were reported each year in Kent County. In 2015, 61 cases of shigellosis were reported to KCHD. Shigellosis was most commonly reported in children under the age of 10 (47.5% of all cases). Among these children, 54% were identified as being Hispanic/Latino. Increases in shigellosis were also observed across the state (446 cases in 2015 compared to 279 in 2014) and in certain regions of the United States, including Texas where reported cases in 2015 were nearly double the number reported in 2014.



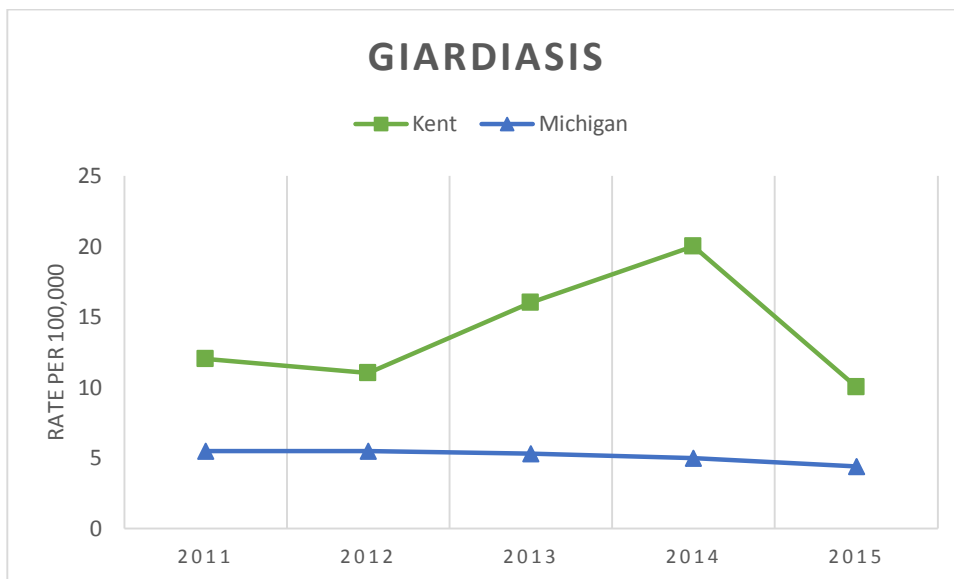
Campylobacter

Between 2010 and 2014, an average of 71 cases of *Campylobacter* were reported each year in Kent County. In 2015, 96 cases of *Campylobacter* were reported to KCHD, slightly more than the 89 cases reported in 2014. Half of the cases were reported in individuals 50 years of age and older, with those 70 and older accounting for 21% of all cases. Similar to 2014, only 7% of reported cases in 2014 were in children under the age of 5. Cases were slightly more common in the winter months between December and February (33 cases) than the summer months between June and August (26 cases). More than half of all cases (53) were reported between November and March.



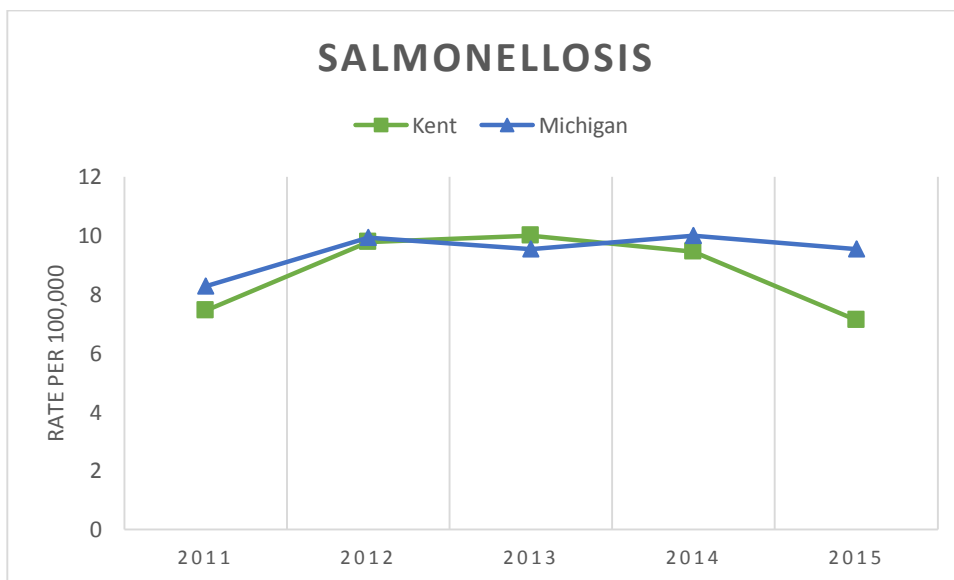
Giardiasis

While *Giardia* is typically the most commonly reported gastrointestinal infection in Kent County, the number of cases reported in 2015 was half of what was reported in 2014. Sixty-one (61) cases of *Giardia* were reported in 2015, compared to 123 in 2014 and an average of 93 reported each year between 2010 and 2014. Despite the decrease, the rate of reported *Giardia* infection in Kent County continued to be higher than the state of Michigan. While the number of cases in the refugee/international adoptee population wasn't as great as in previous years, 34 (56%) of cases were reported in this population. Among these cases, only one (3%) indicated that they experienced symptoms of gastrointestinal illness.



Salmonellosis

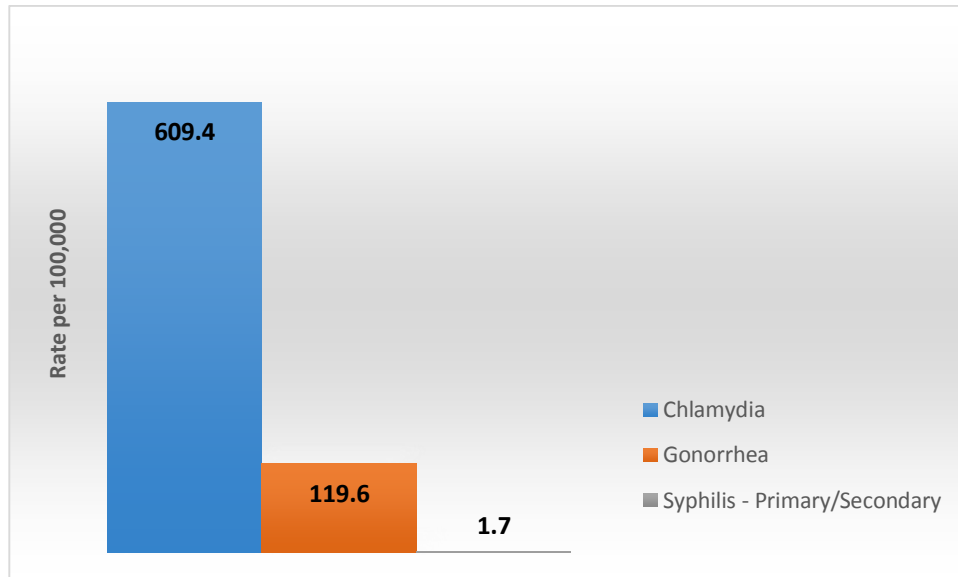
Salmonella is a common cause of gastrointestinal illness in Kent County. Between 2010 and 2014, an average of 55 cases were reported each year. This year, there was a decrease in the number of reported cases from 57 in 2014 to 43 in 2015. *Salmonella enteritidis* was the most common serotype identified in 2015 (40%) followed by *S. typhimurium* (9%). Every other serotype identified accounted for two or fewer cases in 2015.



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, syphilis and HIV 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 (2011-2015)

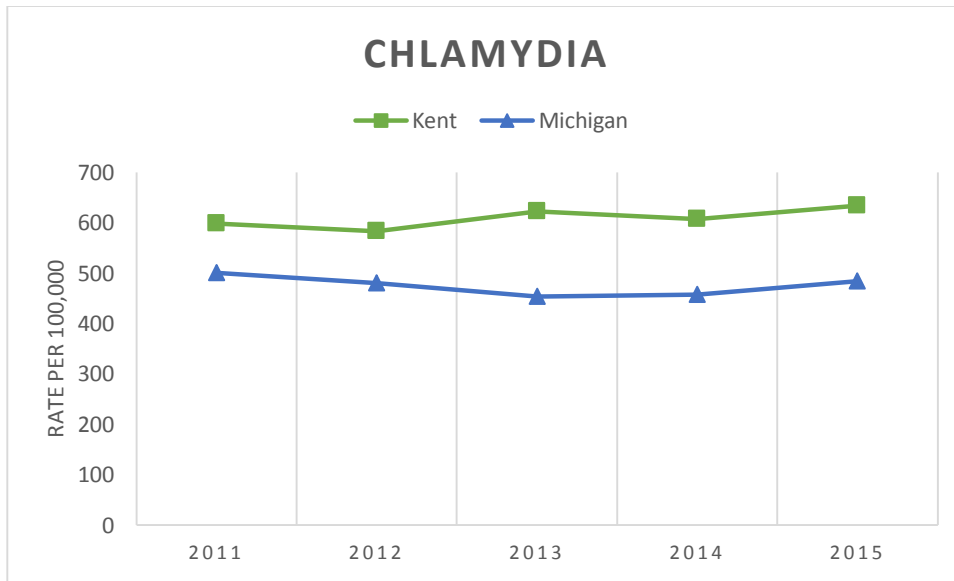


HIV/AIDS

In 2015, there were 24 new cases of HIV reported in Kent County residents and 19 new diagnoses of AIDS. This compares to 38 cases of HIV and 16 AIDS diagnoses reported during 2014. 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.

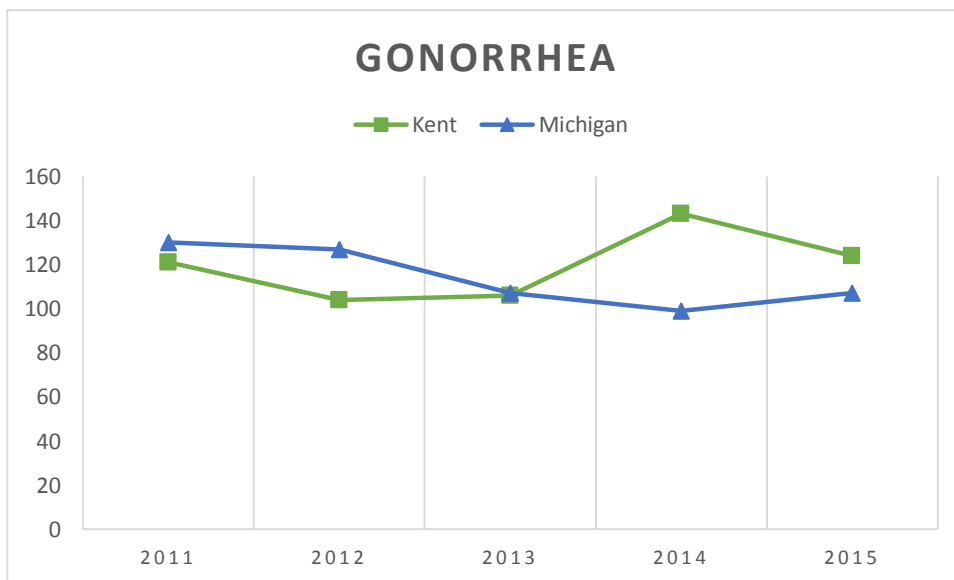
Chlamydia

After a slight decline in the number of reported chlamydia cases in 2014, the number of cases rose once again in 2015, with 3,822 cases reported to KCHD. There was an average of 3,555 cases reported per year from 2010 to 2014. While the state of Michigan also experienced an increase in cases from the previous year, the chlamydia rate in Kent County remains well above the rate in the state as a whole. Reported cases of chlamydia continue to be most common among college-aged females. Data from 2015 reveal that 39% of cases in Kent County were between the ages of 20 and 24 years and 85% of cases were between the ages of 15 and 29. Two-thirds of all cases were female. 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

Whereas cases of chlamydia increased in 2015, gonorrhea cases decreased compared to 2014. There were 751 cases reported in 2015 compared to the 867 cases reported the previous year. This number, however, was higher than the annual average between 2010 and 2014 (724). Similar to chlamydia, cases were most common among those 20 to 24 years of age (33%). While 77% of cases were between 15 and 29 years of age, gonorrhea cases were slightly more common in those aged 30-39 (16% of cases compared to 10% for chlamydia). Contrary to chlamydia where two-thirds of cases were female, 53% of gonorrhea cases were reported in males.



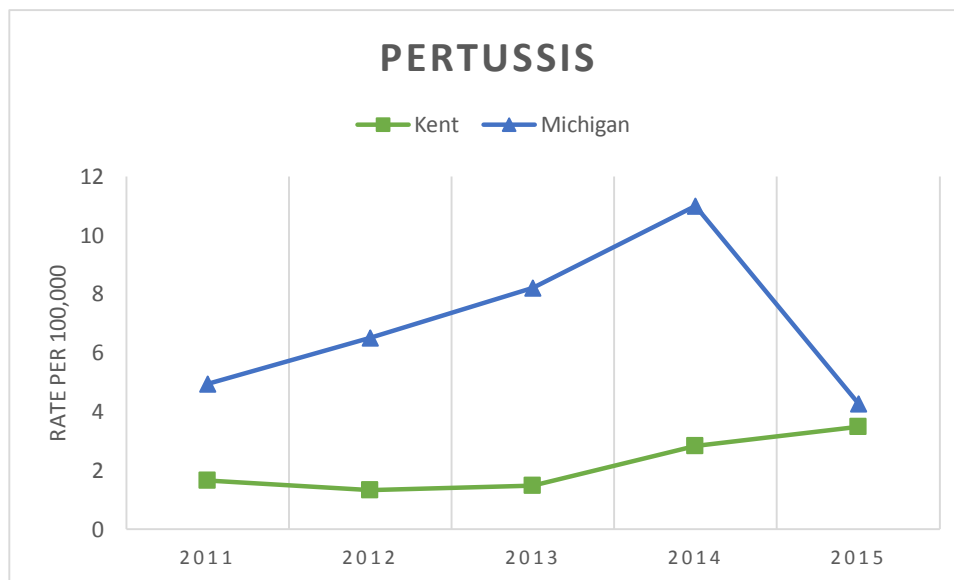
VACCINE PREVENTABLE DISEASES

Prevention 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

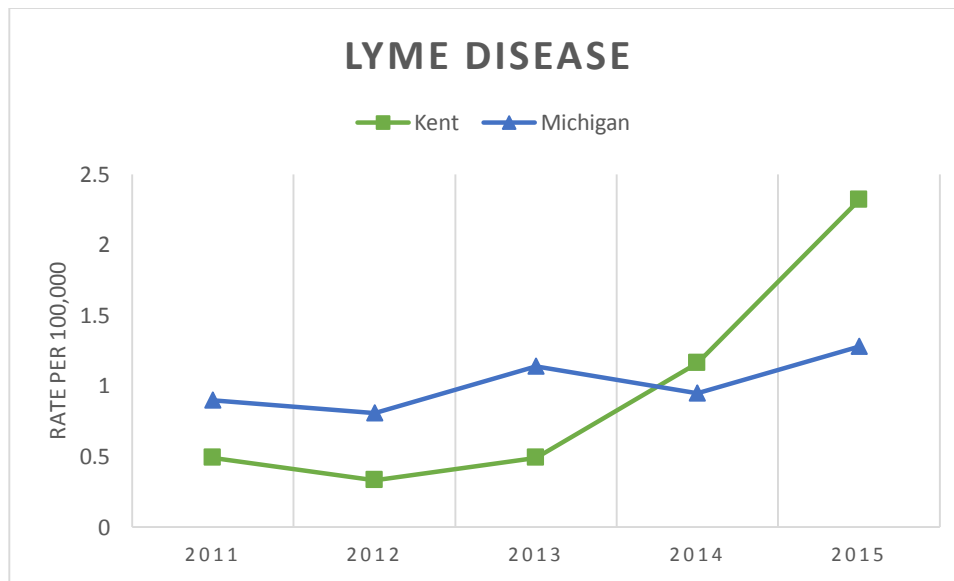
The number of cases of pertussis reported to KCHD continued to increase in 2015. A total of 21 cases were reported, compared to 17 in 2014 and an annual average of 12 reported between 2010 and 2014. Among the cases reported in 2014, 19% were under the age of 1. Unlike 2014, when 88% of cases were under the age of 10, only 48% of cases in 2015 were reported in this age group. Younger age groups continued to dominate the case reports of pertussis, however, as 81% of cases were younger than 20 years of age. Six (6) of the cases were unvaccinated.

The rate of pertussis in the state of Michigan declined considerably in 2015 and was only slightly greater than Kent County (4.3 per 100,000 vs. 3.5 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).



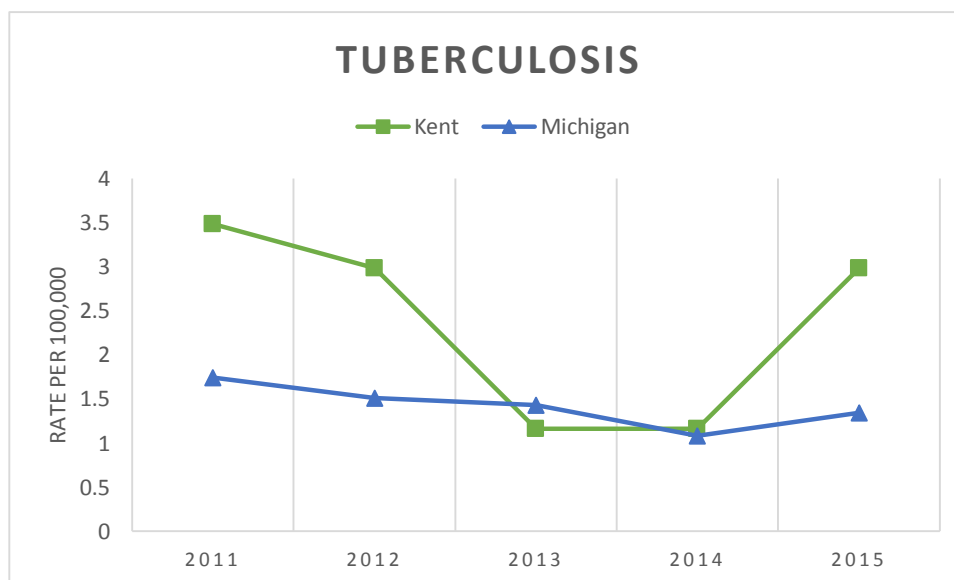
Lyme disease

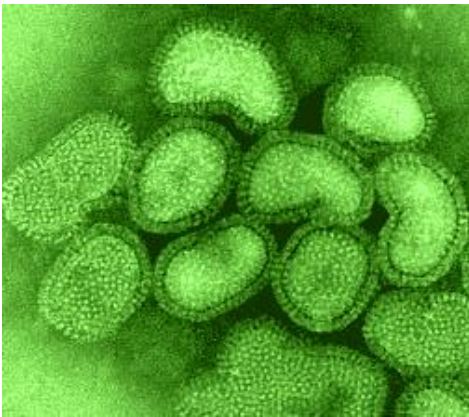
The number of cases of Lyme disease in Kent County residents doubled in 2015 to 14. Between 2010 and 2014, there was an average of 4 cases reported per year. As a result of the increased number of cases, the Kent County case rate nearly doubled the overall rate in Michigan in 2015 (2.3 per 100,000 vs. 1.3 per 100,000). Travel history prior to the onset of symptoms was known for 12 of the 14 cases. Of these, 10 patients reported a travel history outside of Kent County. Because Kent County is considered endemic for Lyme disease, individuals venturing outdoors should take appropriate precautions to prevent tick bites (www.cdc.gov/ticks/avoid/). Because transmission of the bacteria that causes Lyme disease requires the tick to be attached for more than 36 hours, it is critical that individuals inspect their skin after exposure to tick habitats and properly remove ticks if found (www.cdc.gov/ticks/removing_a_tick.html).



Tuberculosis

After two years in which the number of tuberculosis cases reported in Kent County decreased to 7 per year, the number of cases reported in 2015 increased to 18. Prior to 2013, there was an average of 17 cases reported per year. Among the cases reported in 2015, all but 3 were born outside of the United States. Individuals of Asian descent accounted for 56% of cases and those identifying as Hispanic/Latino accounted for 17% of cases in 2015. The percentage of cases in patients of Asian descent was greater than that reported between 2010 and 2014 (39%), and the percentage in those identifying as Hispanic/Latino was slightly less than the five-year average (26%).





<http://virologyhistory.wustl.edu/images/flu3c.gif>

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 previous three influenza seasons in Kent County, the peak level of ILI activity occurred during the last week of December or first week of January. During the 2015-2016 season, activity peaked during the week ending March 12 when 12.2% of emergency departments in the county were for ILI. Data from the Centers for Disease Control and Prevention (CDC) for the past 34 influenza seasons (1982-1983 to 2015-2016) indicate that flu activity most often peaked in February (14 seasons), followed by December (7 seasons), March (6 seasons) and January (5 seasons). During the most recent 18 influenza seasons, only two other seasons have peaked in March (2005-06 and 2011-12).

Contact Us

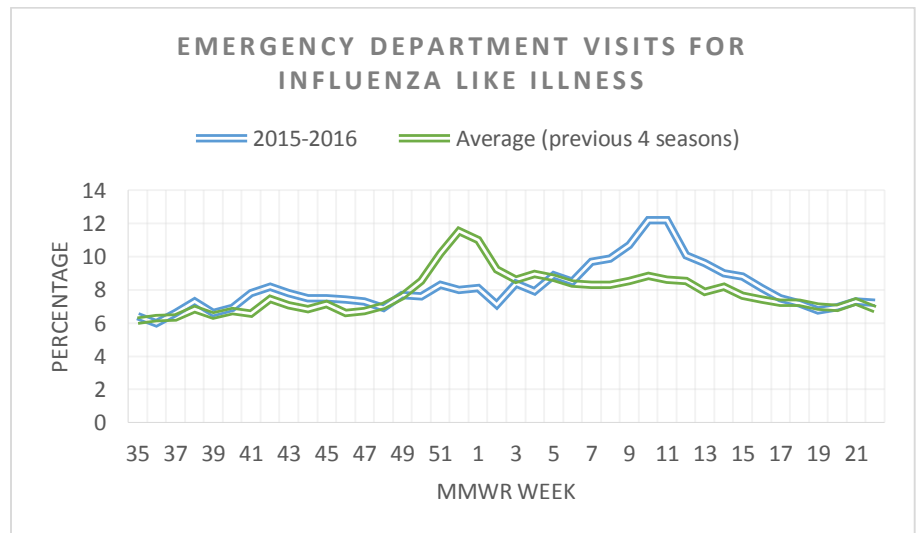
Kent County Health Department

700 Fuller Ave NE
Grand Rapids, MI 49503
Phone: 616-632-7228
Fax: 616-632-7085
www.accesskent.com/Health



HEALTH DEPARTMENT
Caring today for a healthy tomorrow

According to the CDC, influenza activity was less severe overall compared to the previous three seasons. CDC deemed influenza activity as moderate, due to a lower percentage of outpatient visits, lower hospitalization rates and a lower percentage of deaths attributed to pneumonia and influenza. Overall, influenza A (H1N1)pdm09 was the predominant circulating strain, although H3N2 viruses circulated during October and November and influenza B viruses were more commonly identified from mid-April to mid-May. Antigenic and genetic characterization showed that most circulating viruses were well-matched to the 2015-16 vaccine.



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>