

KENT COUNTY HEALTH DEPARTMENT

EPI FOCUS

2014 Communicable Disease Summary

WEST NILE VIRUS

In 2014, the only human case of West Nile Virus (WNV) in Michigan was reported in Kent County.

The neuro-invasive case was the first case reported in Kent County since 21 confirmed cases were reported in 2012.

KCHD continued to test mosquito pools for WNV in 2014. Two pools tested positive for WNV during the week ending August 30, 2014.



<https://research.pasteur.fr/en/culex-pipiens-2-jpg/>

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: **campylobacter, giardiasis, gonorrhea, chlamydia, pertussis, Lyme disease, tuberculosis and influenza.** Take a moment to review these data and contact us at 616-632-7228 if 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)

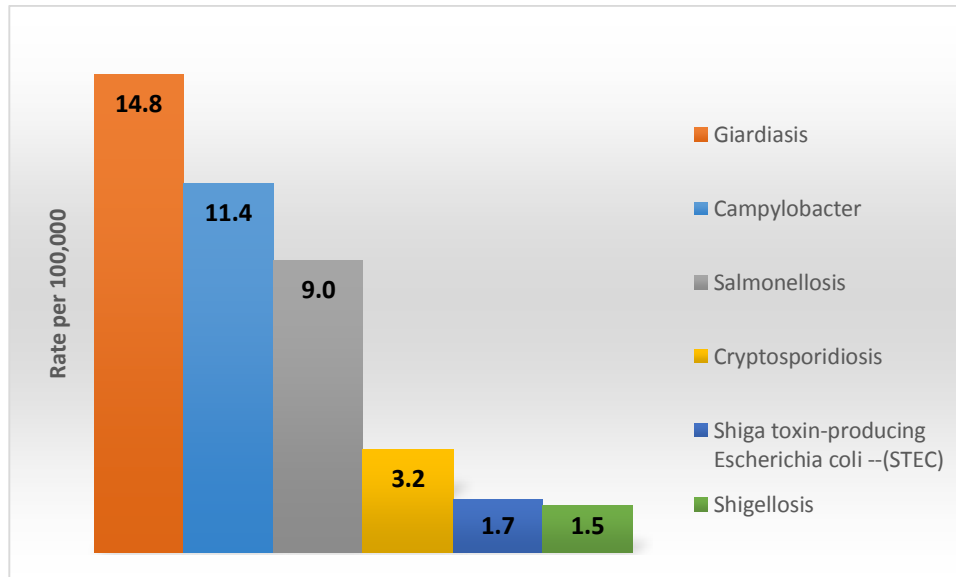
The Michigan Disease Surveillance System (MDSS) is a web-based communicable disease reporting system that facilitates coordination among local, state and federal public health agencies during follow-up investigations of communicable disease events. Along with the Michigan Syndromic Surveillance System (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 at the following links: [MDSS](#), [MSSS](#).

GASTROINTESTINAL ILLNESSES

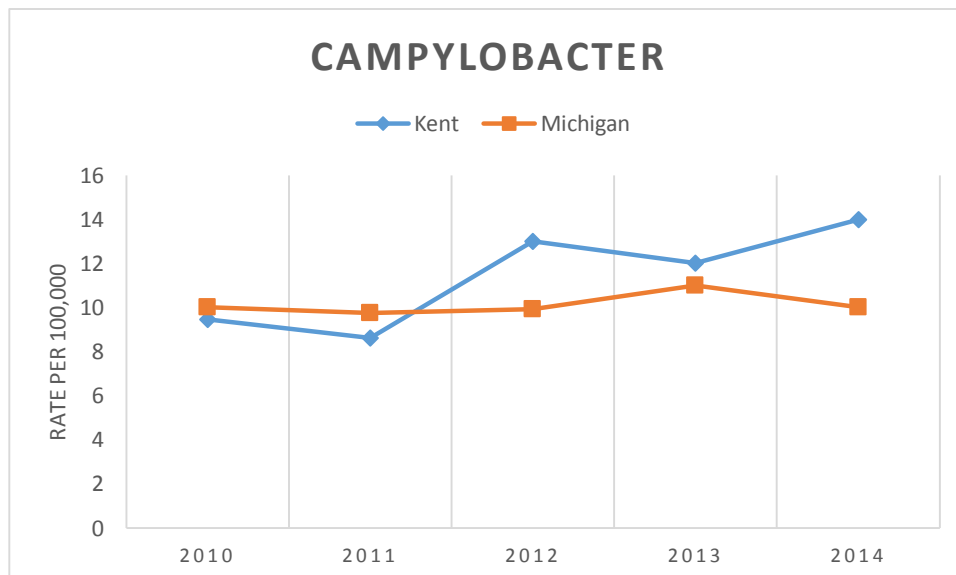
A variety of infectious agents can cause gastrointestinal illnesses, and testing does not always identify the cause. Health care providers can assist in identifying potential sources of illness by obtaining a meal and travel history from patients who present with gastrointestinal symptoms. Obtaining this information early in the disease process limits recall bias and provides valuable information to the investigation initiated by the Kent County Health Department once a report of gastrointestinal illness is received.

Gastrointestinal Illnesses of Greatest Frequency, Kent County, Five-Year Averages (2010-2014)



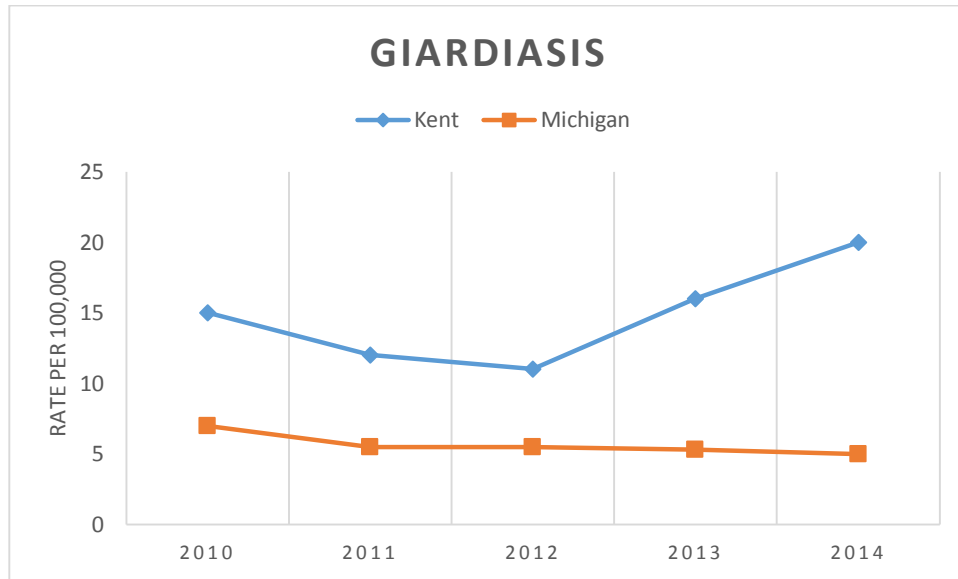
Campylobacter

While rates of salmonellosis and Shiga Toxin Producing *Escherichia coli* (STEC) remained relatively stable in 2014, Kent County experienced an increase in the rates of illness caused by *Campylobacter* and *Giardia*. Between 2009 and 2013, an average of 66 cases of *Campylobacter* were reported each year in Kent County. In 2014, 89 cases were reported to KCHD. While children under the age of 5 typically have the highest incidence of infection, less than 7% of reported cases in 2014 were in this age group. Rather, 35% of reported cases were individuals 25-44 years of age and 37% of cases were adults 50 and older. Cases were most commonly reported in March (15 cases), September (11 cases) and October (10 cases).



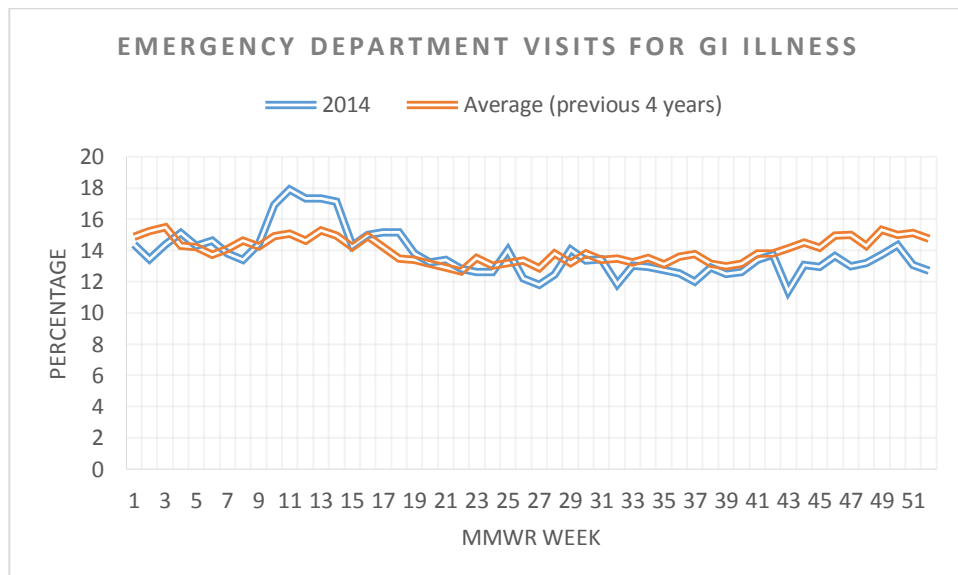
Giardiasis

Giardiasis is the most commonly reported gastrointestinal infection in Kent County. In 2013, 99 cases were reported and between 2009 and 2013, an average of 84 cases were reported each year. In 2014, the number of reported cases increased to 123. The rate of reported *Giardia* infection in Kent County has historically been higher than the state of Michigan. This is likely due to the high number of asymptomatic infections that are identified as a result of routine screening in the refugee/international adoptee population. Of the 123 cases reported in 2014, 87 (70.7%) were a refugee or international adoptee. Among these cases, only 2 (2.3%) indicated that they experienced symptoms of gastrointestinal illness.



Syndromic Surveillance

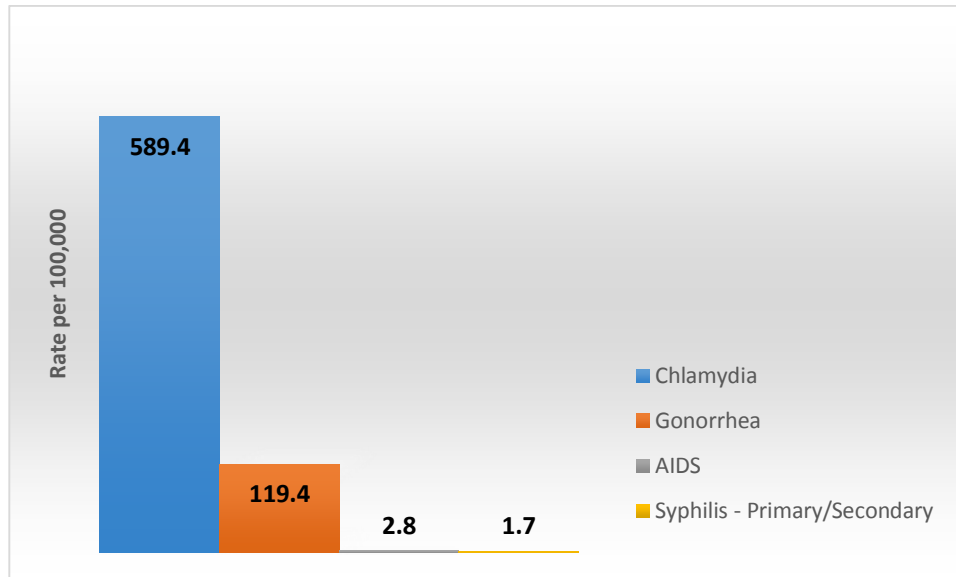
Data from the MSSS are useful in providing an indication of local gastrointestinal (GI) illness activity. The percentage of people visiting local emergency departments each week for GI illness are compared to data from the previous four years to indicate how the current year's activity compares to what is "expected" during each week. In 2014, these data indicated an increase in GI illness activity that began during the week ending March 8 (MMWR Week 10) and continued through the week ending April 5 (MMR Week 14). This increase was most likely due to the circulation of the Sydney strain of norovirus. During this time period, the KCHD investigated two large outbreaks; one associated with a local restaurant and another with a local school. Both outbreaks were determined to be the result of public vomiting incidents.



SEXUALLY TRANSMITTED INFECTIONS

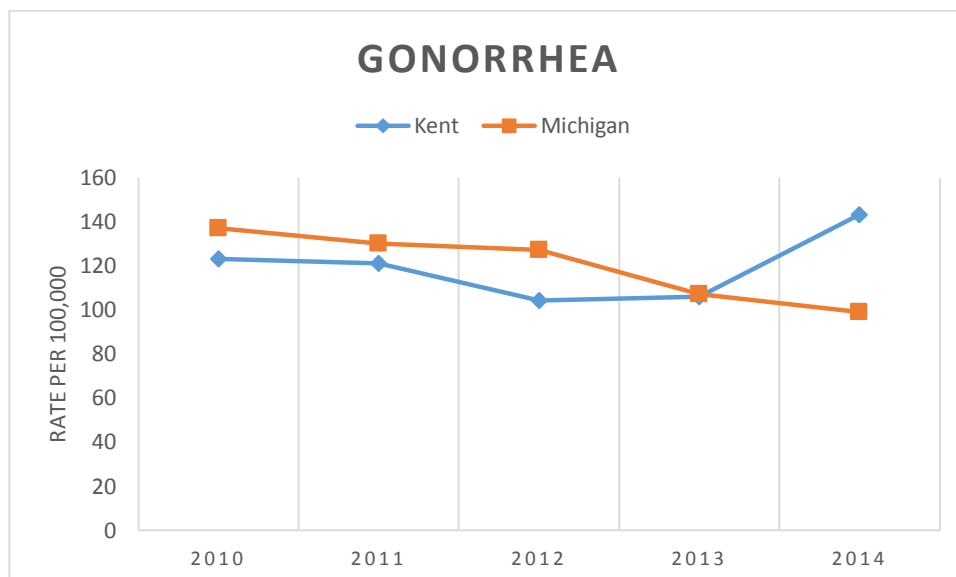
KCHD offers counseling, testing and treatment for chlamydia, gonorrhea, and syphilis. Counseling and testing for HIV are also available. In addition to testing, the department provides assistance in contacting partners of individuals that have been diagnosed with these infections. Health care providers 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 (2010-2014)



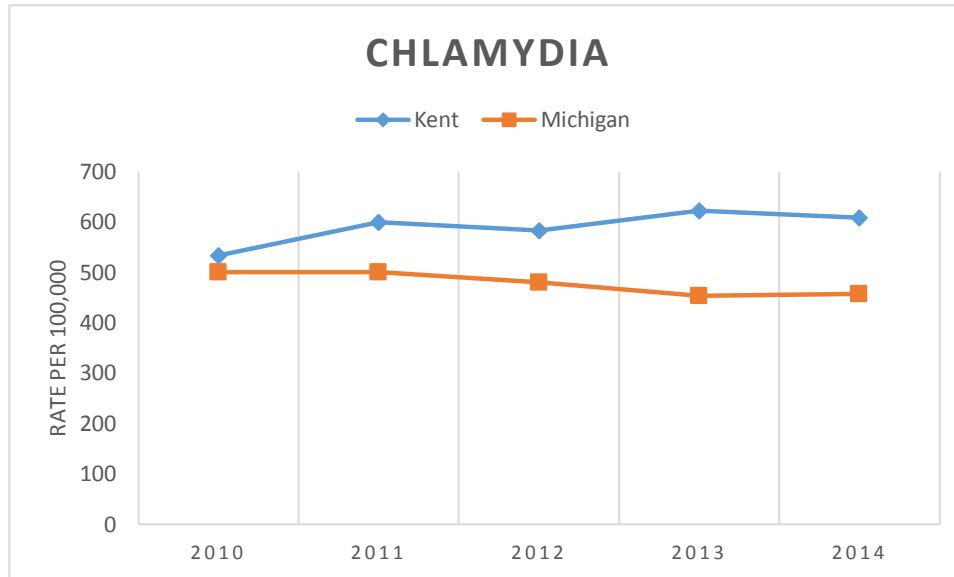
Gonorrhea

There were 867 cases of gonorrhea reported to the health department in 2014 after an average of 723 cases were reported per year from 2009 to 2013. This is the highest number of reported cases since 2009. Prior to 2014, the rate of gonorrhea in Kent County had been steadily declining since 2006. The rate had decreased from 227 per 100,000 in 2006 to 106 per 100,000 in 2013. The rate increased to 143 per 100,000 in 2014. Among cases reported in 2014, 61% were between the ages of 15 and 24 and 81% of cases were under the age of 30. Fifty-one percent (51%) of reported cases were female.



Chlamydia

In 2014, 3,665 cases of chlamydia were reported to KCHD. There was an average of 3,424 cases reported per year from 2009 to 2013. While the Kent County chlamydia rate decreased slightly from 2013, it remains well above the rate in the state as a whole. Data from 2014 reveal that 69% of cases in Kent County were between the ages of 15 and 24 and 87% of cases were under the age of 30. Sixty-seven percent (67%) of all cases were female. Because up to 70% of sexually active women with chlamydial infections are asymptomatic, many infections go unreported. It is recommended that sexually active women age 25 years and younger, or older women with risk factors (new sex partner or multiple sex partners), have an annual screening for detection of an asymptomatic infection.



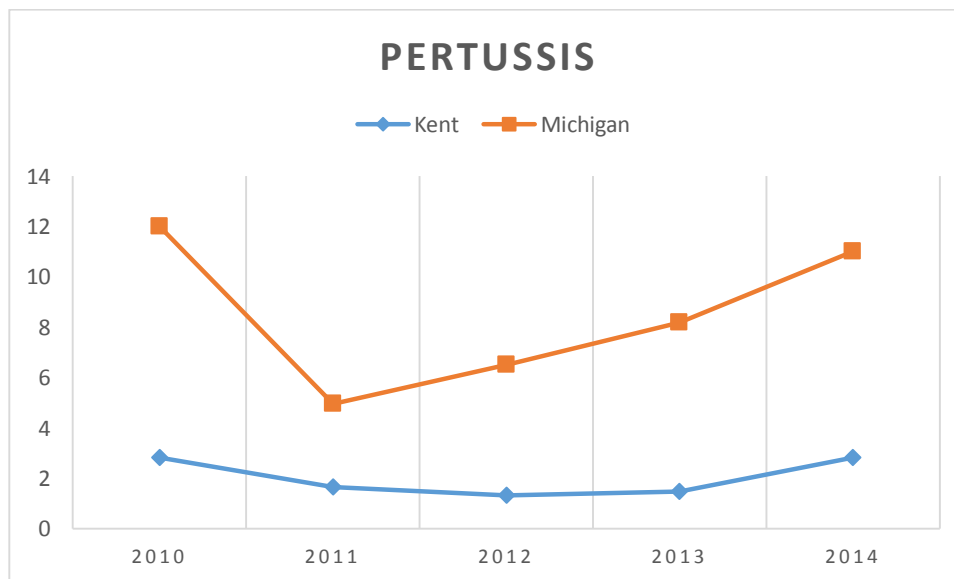
VACCINE PREVENTABLE DISEASES

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, or hepatitis A, an investigation will be initiated to determine contacts at risk of becoming infected. Once identified, KCHD arranges for the appropriate post-exposure prophylaxis (PEP) in the form of antibiotics, immunoglobulin (IG) or vaccination. KCHD is capable of covering payment for PEP in instances where at-risk contacts are unable to pay for it themselves.

Pertussis

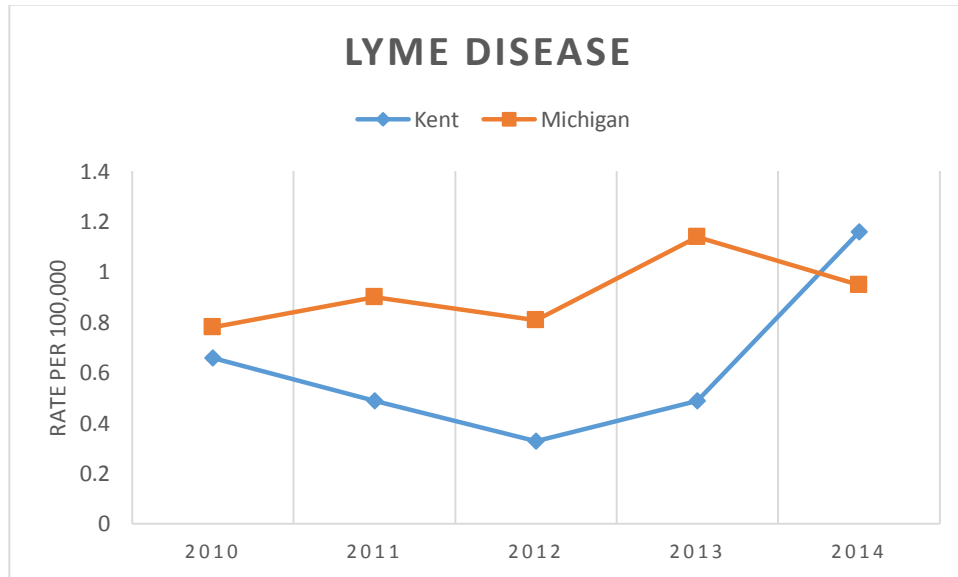
There were 17 cases of pertussis reported in 2014, compared to an average of 10 cases reported per year from 2009 to 2013. This represents an increase in cases from 2013, when there were 9 reported cases. Among the cases reported in 2014, 18% were under the age of 1 and 88% were under the age of 10. Nine (9) of the cases were unvaccinated. The pertussis rate in Kent County continues to be much lower than that of the state of Michigan. The 2014 rate in the state of Michigan includes the 100 cases that were diagnosed as part of a large outbreak in northwest Michigan that began in a school-aged population with low vaccination rates.

It is likely that pertussis is under-reported in Kent County and its incidence is much greater than what is detected through passive surveillance. In order to appropriately detect cases and allow for the prevention of further cases through appropriate post-exposure prophylaxis, 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).



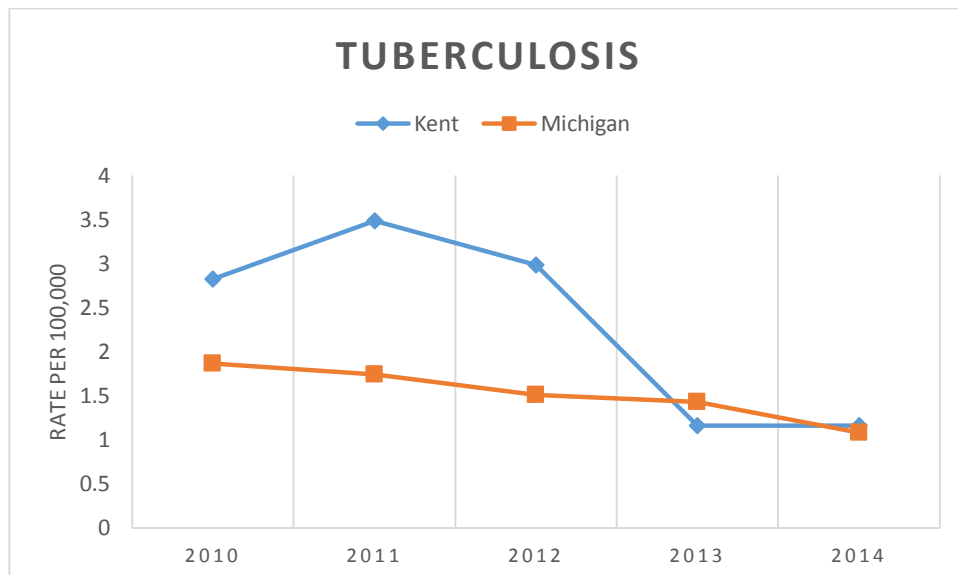
Lyme disease

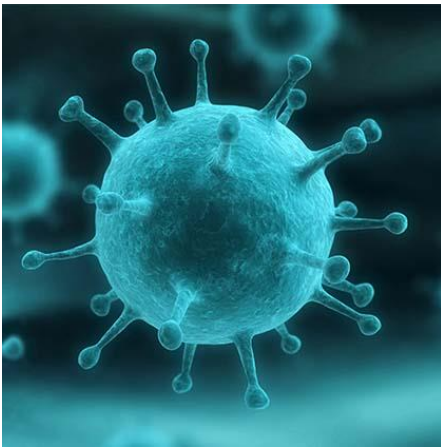
The number of cases of Lyme disease in Kent County residents increased from 3 in 2013 to 7 in 2014. Between 2009 and 2013, there was an average of 3 cases reported per year. These 7 cases resulted in a case rate that exceeded the overall rate in Michigan in 2014. Kent County is considered endemic for Lyme disease, meaning that infected ticks have been identified or two or more laboratory confirmed cases have been identified with local exposure. Despite this, all but one of the cases of Lyme disease reported in 2014 indicated a history of travel outside of Kent County prior to diagnosis.



Tuberculosis

There were 7 new active cases of Tuberculosis (TB) reported in 2014 after an average of 16 cases were reported per year from 2009 to 2013. All cases reported in 2014 were either born outside of the United States or had lived overseas for a period of time. Over the five year period from 2010-2014, 81% of active tuberculosis cases in Kent County were identified in foreign-born individuals. Individuals of Asian descent accounted for 39% of cases and those identifying as Hispanic/Latino accounted for 26% of cases during this period. Between 2010 and 2014, there were two tuberculosis isolates in Kent County identified as being resistant to multiple drugs. One isolate obtained from a sputum specimen was resistant to isoniazid and ethionamide. The other isolate was obtained from pleural fluid and was resistant to isoniazid, ethionamide and streptomycin.





<http://www.bioquell.com/en-us/resources-and-support/microbiology/influenza-virus>

Contact Us

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www.accesskent.com/Health



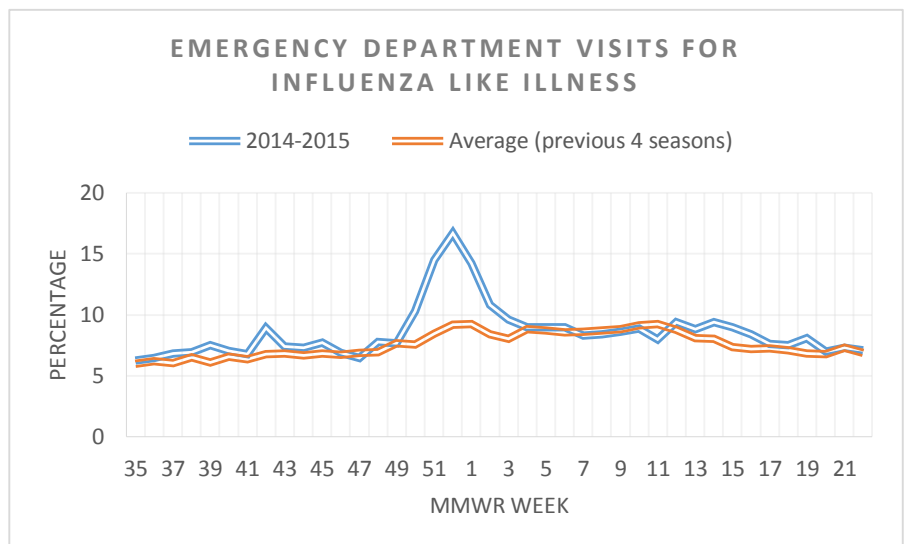
HEALTH
DEPARTMENT
Caring today for a healthy tomorrow

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 (EDs) 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 2014-2015 influenza season, activity sharply increased during the week ending December 13 (MMWR Week 50) and peaked during the week ending December 27 (MMWR Week 52). During the peak level of activity, 16.7% of all visits to local emergency departments were for ILI. This was the highest weekly percentage of ED visits due to ILI since the influenza pandemic of 2009-2010. Activity returned to baseline levels by early February.

The Centers for Disease Control and Prevention (CDC) characterized the 2014-2015 influenza season as moderately severe due to high levels of outpatient illness, high levels of hospitalization and a relatively high percentage of deaths attributed to pneumonia and influenza. Influenza A (H3N2) viruses were the most prominently circulating viruses through the end of February. Influenza B viruses predominated for the remainder of the season.

According to the CDC, the effectiveness of the 2014-2015 seasonal influenza vaccine was 23% against influenza A and B viruses, but only 13% against influenza A (H3N2). Reduced protection from the vaccine was due to the fact that more than 80% of influenza A (H3N2) viruses analyzed at CDC were different than the H3N2 virus component of the 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>