

Epi Focus 2010

A Publication of the Kent County Health Department

December 2011

2010 Communicable Disease Report Executive Summary

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 executive summary provides surveillance data on the following diseases: Giardiasis, cryptosporidiosis, chlamydia, gonorrhea, pertussis, chicken pox, and tuberculosis. Please take a moment to review these data and contact us at 616-632-7228 should you have any questions or comments.

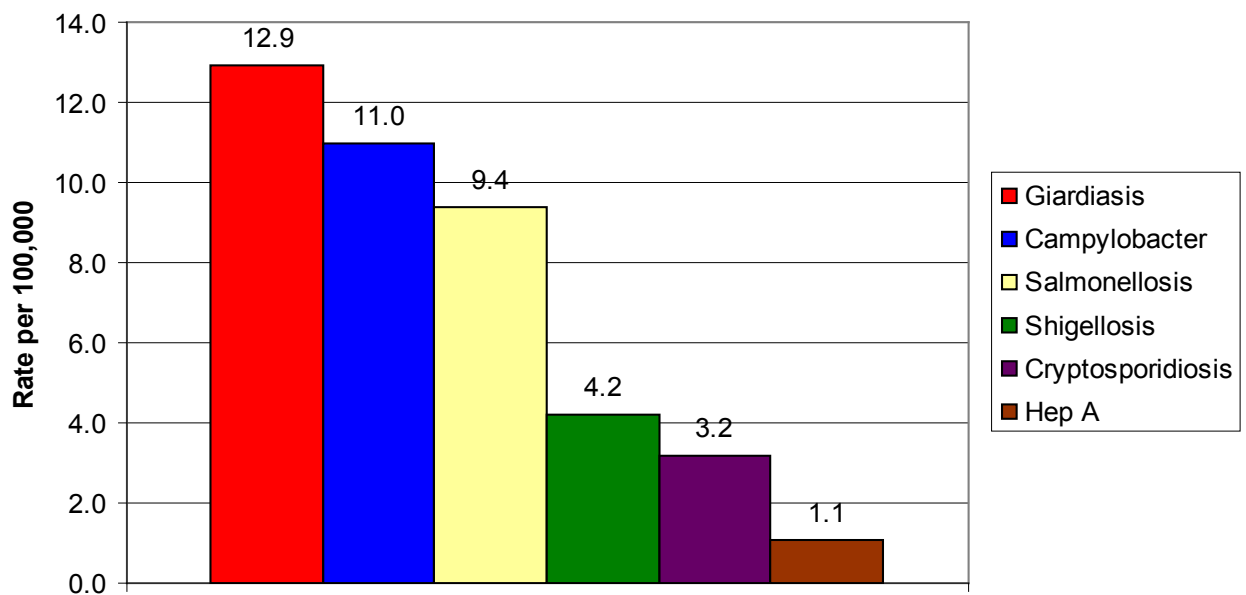
What are reportable diseases?

A reportable disease (see insert) 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, day care centers and camps to the local health department.

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 KCHD once a report of gastrointestinal illness is received.

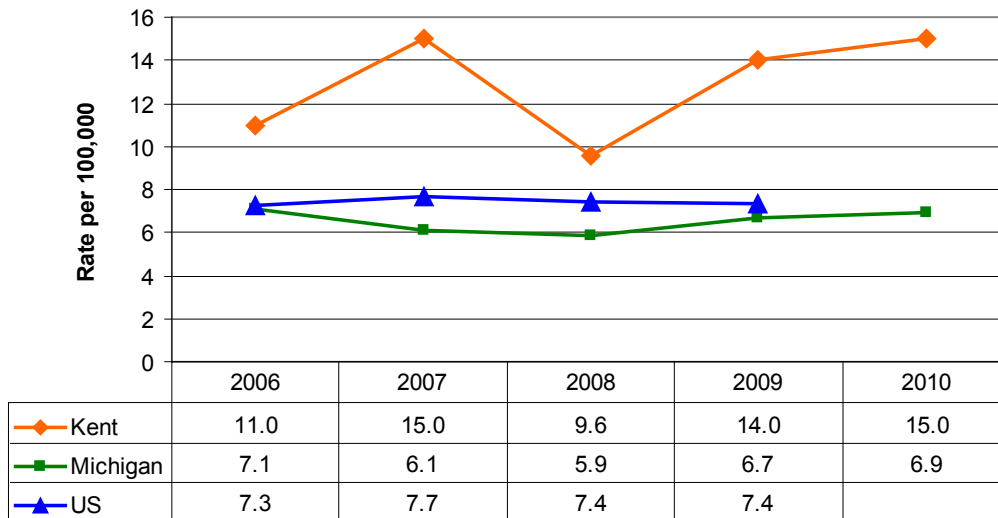
**Gastrointestinal Illnesses of Greatest Frequency, Kent County,
Five-Year Average (2006-2010)**



Source: Michigan Disease Surveillance System

While rates of *Campylobacter* infection and shigellosis decreased in 2010 and *Salmonella* rates remained relatively constant, Kent County experienced an increase in the rates of illness caused by *Giardia* and *Cryptosporidium*. Between 2005 and 2009, on average, 75 cases of giardiasis were reported annually in Kent County. In 2010, 90 cases of giardiasis were reported to KCHD. Two-thirds of these cases were reported in foreign-born individuals who relocated to Kent County. Most of these individuals were asymptomatic refugees, who are required to be screened for parasitic diseases. In 2008, Kent County experienced the lowest reported rate of giardiasis in the last decade. It is possible that the increase in cases since 2008 may simply signal a return to the normal baseline rate of reported infection.

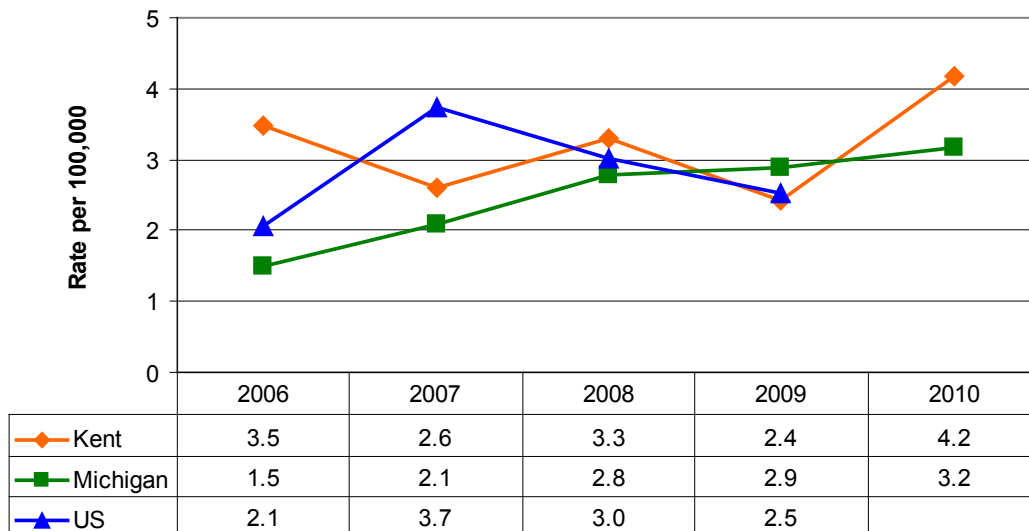
Giardiasis



Source: Michigan Disease Surveillance System and Summary of Notifiable Diseases, US

Between 2005 and 2009, on average, 16 cases of cryptosporidiosis were reported annually in Kent County. In 2010, 24 cases of cryptosporidiosis were reported. The state of Michigan has experienced an increase in cryptosporidiosis cases since 2006. In Kent County, 3 of every 10 cases of cryptosporidiosis were reported in children less than 10 years of age. Over half of all cases were reported during the summer months of June, July and August. This seasonality of reported cases likely coincides with increased use of recreational water, a known risk factor for cryptosporidiosis.

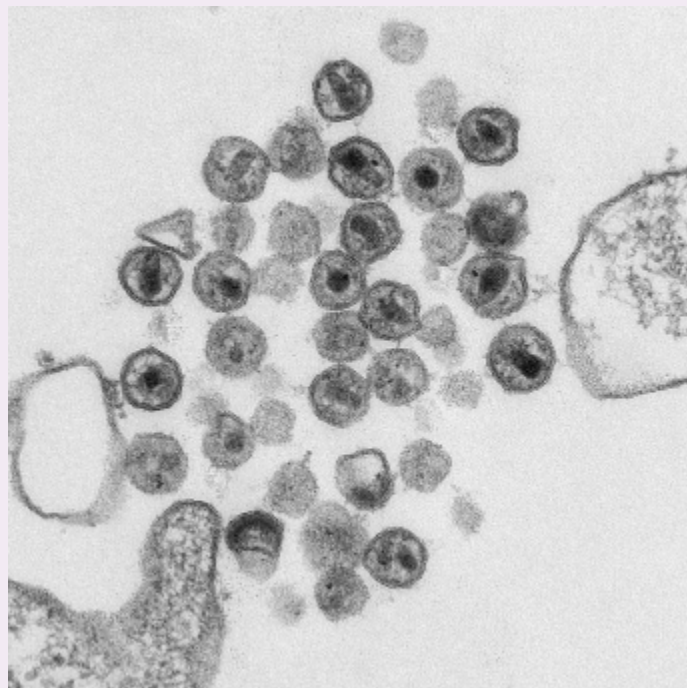
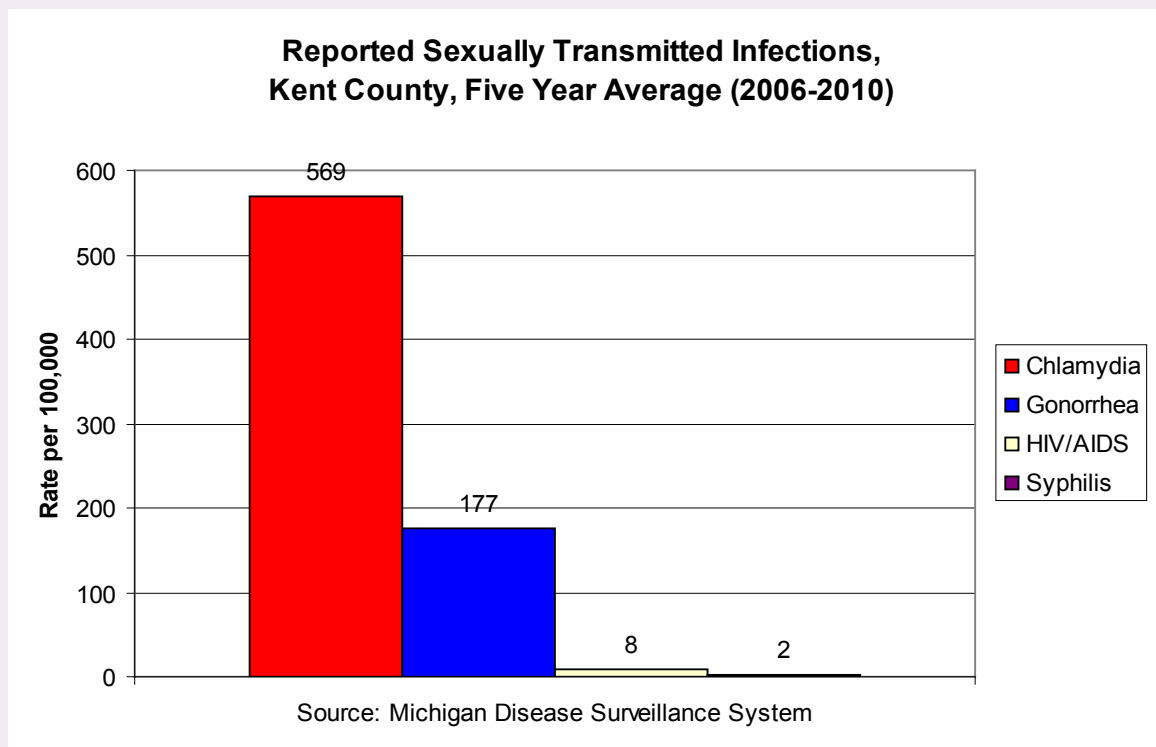
Cryptosporidiosis



Source: Michigan Disease Surveillance System and Summary of Notifiable Diseases, US

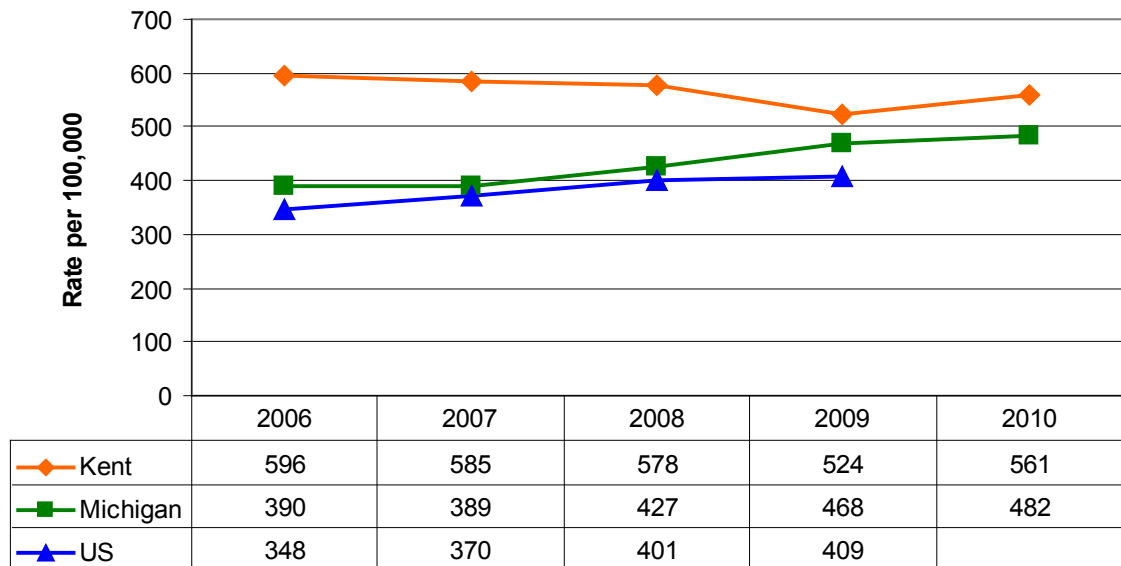
Sexually Transmitted Infections

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 must report all confirmed cases of chlamydia, gonorrhea, syphilis and HIV to the health department and can get information on reporting procedures by calling (616) 632-7171.



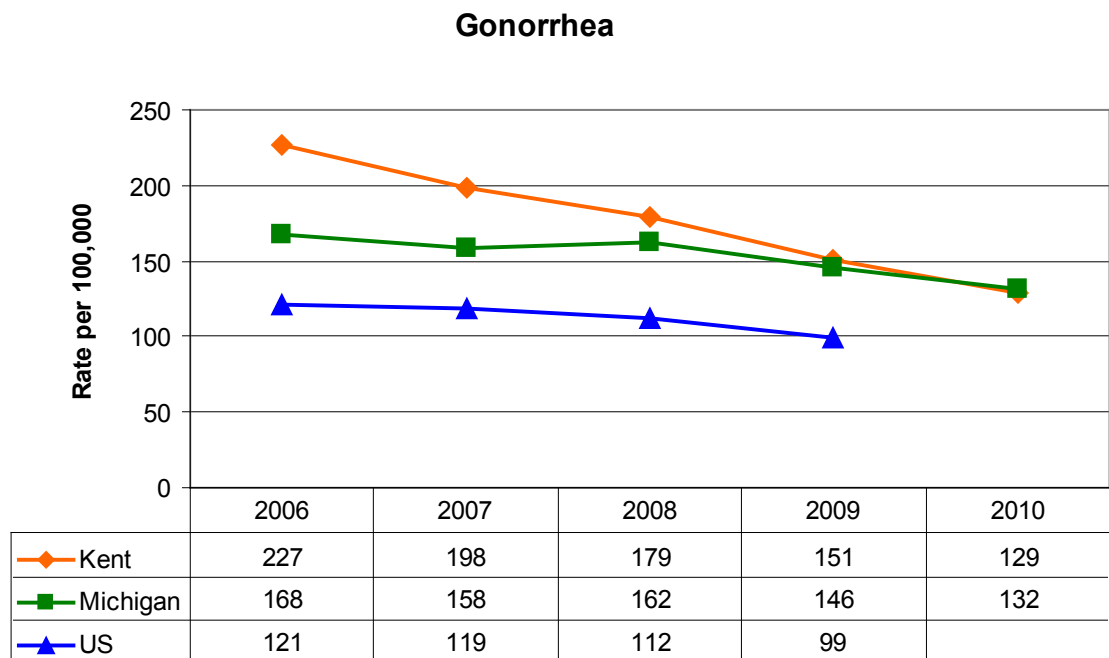
After experiencing a slight decline in the number of reported cases in 2009, there were 3,225 cases of chlamydia reported to KCHD in 2010. There was an average of 3,201 cases reported per year from 2005 to 2009. Data from 2010 reveal that 72% of cases in Kent County were between the ages of 15 and 24 years and 88% of cases were under the age of 30. Despite limitations of our local surveillance system due to the fact that a number of reported cases do not include race data, the available data do provide evidence of a disproportionate burden among Kent County African Americans. In 2010, the rate of reported chlamydia infection in Kent County African Americans was 1,728 per 100,000 compared to 150 per 100,000 in Caucasians. A gender disparity was also apparent among cases of chlamydia (727 per 100,000 in females vs. 338 per 100,000 in males). Due to the fact that up to 70% of sexually active women with chlamydia infections are asymptomatic, many infections go unreported and these numbers likely underestimate the true burden of chlamydia in Kent County.

Chlamydia



Source: Michigan Disease Surveillance System and Summary of Notifiable Diseases, US

There were 746 cases of gonorrhea reported to KCHD in 2010 after an average of 1,096 cases were reported per year from 2005 to 2009. Since 2006, the rate of reported gonorrhea infections has decreased from 227 per 100,000 to 129 per 100,000. In 2010, 66% of cases were between the ages of 15 and 24 years and 85% of cases were under the age of 30. Similar to chlamydia, disparities by race and gender also exist for gonorrhea. The racial disparity was greater than that for chlamydia (480 per 100,000 among African Americans compared to 18 per 100,000 among Caucasians), while the gender disparity wasn't as strong (140 per 100,000 in females vs. 109 per 100,000 in males).



Source: Michigan Disease Surveillance System and Summary of Notifiable Diseases, US





Vaccine Preventable Diseases

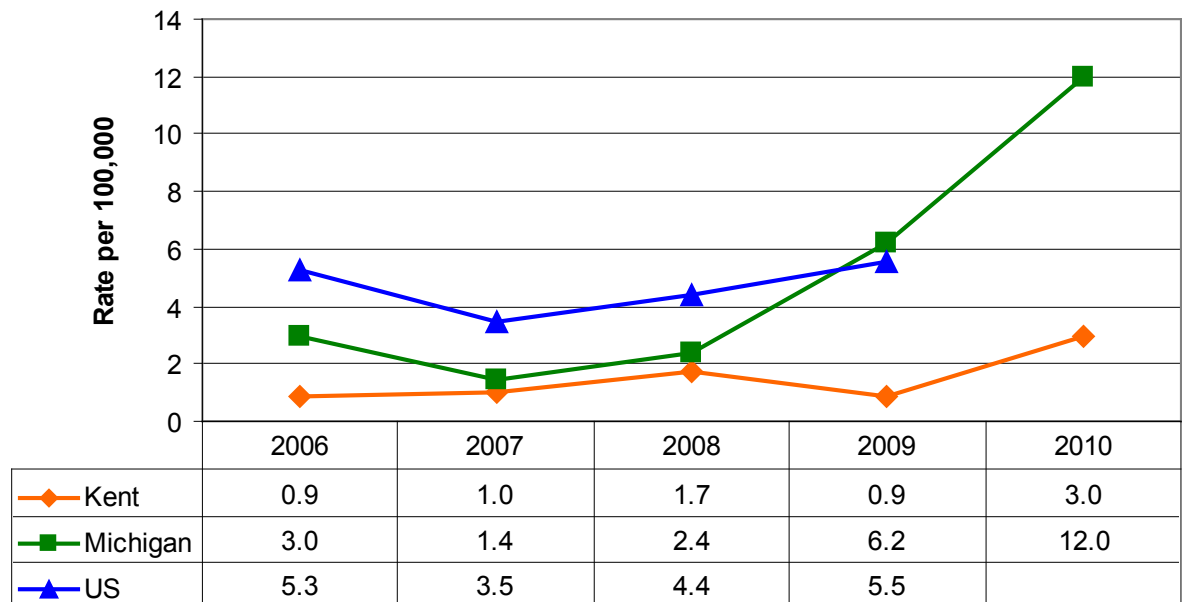
Prevention of many vaccine preventable diseases occurs not only through immunization, but also through post-exposure prophylaxis (PEP) of individuals identified as contacts of confirmed cases. When KCHD receives a confirmed report of pertussis, meningococcal disease, *Haemophilus influenzae* type B infection,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

There were 17 cases of pertussis reported in 2010 and an average of 8 cases reported per year from 2005 to 2009. Of the Kent County cases reported from 2005 to 2009, one-third were in infants less than 6 months old who were too young to have received their required doses of vaccine. In 2010, this age group again accounted for nearly one-third of the reported cases, but an increase in the number of cases reported in adults 18 years and older was also observed. In 2010, 30% of cases were reported in those 18 and older, compared to only 14% of cases during the previous 5 years.

Based on reported cases, it appears that the rate of pertussis has increased slightly in Kent County, but not nearly as rapidly as the Michigan rate. It is likely that pertussis is severely under-diagnosed in Kent County and its incidence is much greater than that which is detected through passive surveillance. Despite being the fourth largest county in Michigan, the number of Kent County cases reported in 2010 lagged behind smaller West Michigan counties such as Ottawa (42) and Muskegon (26).

In order to appropriately detect cases and allow for the prevention of further cases through appropriate PEP, physicians are encouraged to consider pertussis in the differential diagnosis of patients with cough illness lasting 2 weeks or longer. Suspected cases of pertussis should receive a culture via nasopharyngeal swab or aspirate. Serologic methods are not appropriate for diagnosis of pertussis (except in rare instances).

Pertussis

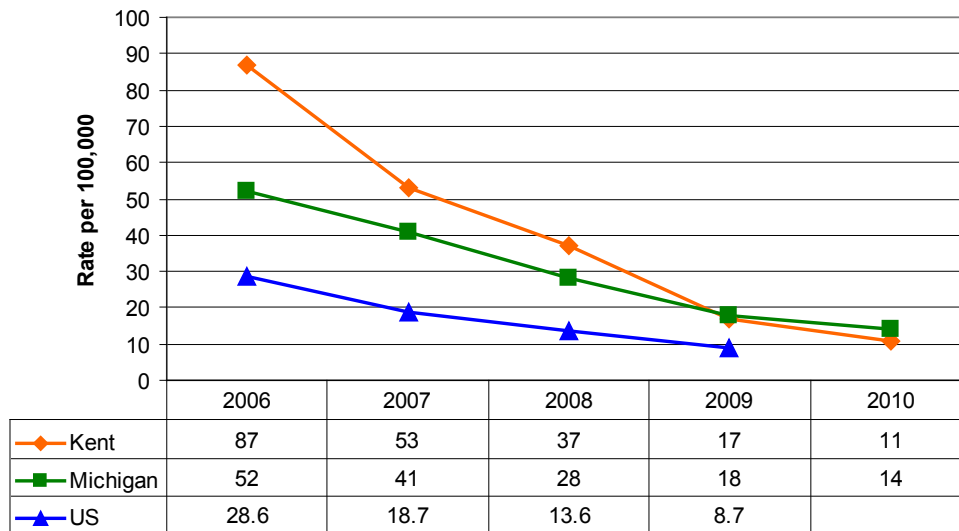


Source: Michigan Disease Surveillance System and Summary of Notifiable Diseases, US

After becoming an individually reportable illness at the start of the 2005-2006 school year, reports of chickenpox peaked in 2006. Since that year, reports of chickenpox have declined considerably in Kent County, with just 67 cases reported in 2010. Since September 2005, 60% of chickenpox cases have been reported in children 5 to 9 years of age. Among cases for which disease severity was available, 68% of cases had mild illness (<50 lesions) and 94% of cases reported having less than 250 lesions. Among cases for which vaccination information is available, 84% reported having at least one dose of varicella vaccine.



Chickenpox

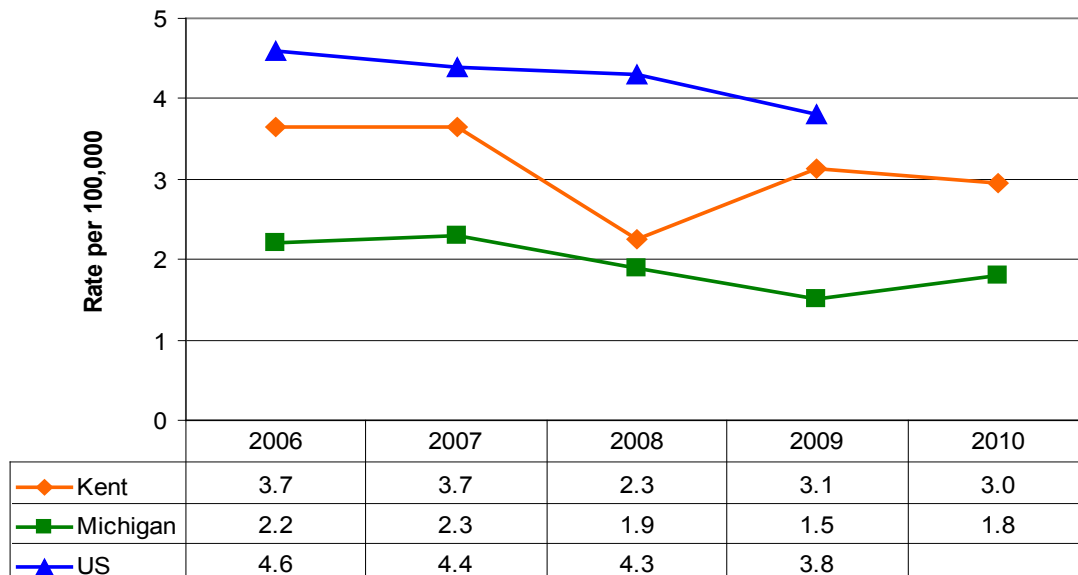


Source: Michigan Disease Surveillance System and Summary of Notifiable Diseases, US

Tuberculosis

There were 17 new cases of active Tuberculosis (TB) reported in 2010. In accordance with recent trends, greater than 75% of cases in 2010 were reported in non-whites, with individuals of Asian decent accounting for the greatest percentage of cases (35%). Over the five year period from 2006-2010, approximately 75% of active tuberculosis cases in Kent County were identified in foreign-born individuals. During 2010, 11 of 17 cases (65%) were reported in foreign-born individuals. Between 2006 and 2010, there were five tuberculosis isolates in Kent County identified as being resistant to one drug (2 isoniazid and 3 streptomycin) and one isolate identified in 2010 as being multidrug resistant (isoniazid and ethionamide).

Tuberculosis





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