

EPI FOCUS

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Winter

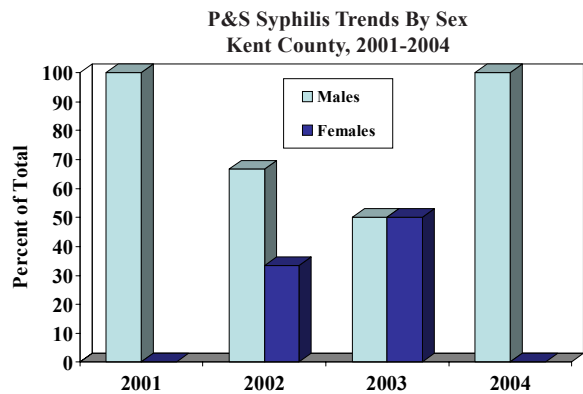
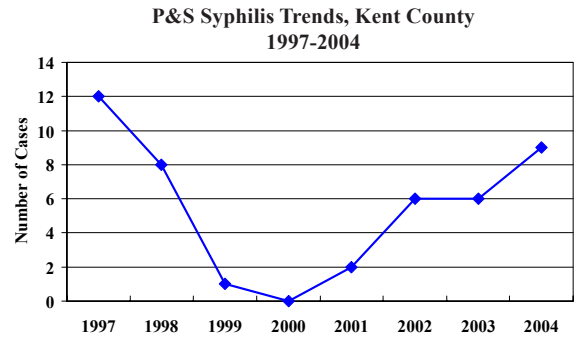
SYPHILIS: OUTBREAK IN MSM

In the past year, there has been a significant increase in the incidence of syphilis in Kent County. To date, 11 early syphilis cases have been reported, nine of which are primary or secondary syphilis. The median cumulative incidence for 1999-2003 is two.

The reported cases are among a population of men who have sex with men (MSM). All have been white and within the age range of 23-53. Internet dating seems to be a common behavior seen with several of the cases. Also pertinent is travel history to Chicago, Detroit, and countries outside of the United States.

Signs and Symptoms Syphilis is the “great imitator.” Symptoms are variable and often atypical. Presumptive diagnoses of genital herpes, genital warts, tissue-trauma with secondary infection, psoriasis, scabies etc. are possibly early syphilis, or co-exist with early syphilis. Any oral, genital or anal lesions or rash-like symptoms in a sexually active individual might be *early* syphilis.

Testing Clinician suspicion and serological testing are critical to containing this outbreak. It may be necessary to repeat the serology two weeks after a non-reactive test. Direct Florescent Antibody for *Treponema pallidum* (DFA-TP) is available free-of-charge through the Michigan Department of Community Health (MDCH) Laboratory.



Treatment:

- Long acting Benzathine Penicillin G (Bicillin L-A)
- Doxycycline for those with penicillin allergies

Reporting Report all positive syphilis tests in a timely and complete manner. We welcome all requests for assistance. Cazz Cabot, DIS, can be reached by pager, 616.680.6787 or telephone 616.336.2235. The KCHD STD Clinic telephone number is 616.336.3085.

*Graphs courtesy of Kathryn Macomber, MPH Michigan Department of Community Health

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CASE REPORT: *H. INFLUENZAE* TYPE B (HIB) IN A FIVE MONTH OLD

In November, KCHD received a report of meningitis due to *Haemophilus influenzae* type b in a five month old male admitted to the hospital with fever, weak cry, weak cough, decreased appetite, and decreased activity over the previous eight hours.

His mother reported that he received his two month immunization at the Kent County Health Department, but a review of the KCHD immunization database and the Michigan Childhood Immunization Registry revealed that he had not received any of his Hib vaccinations.

Because two siblings were under the age of four and not fully vaccinated, the eight members of the household were prescribed Rifampin as prophylaxis. The isolate was sent to MDCH for serotyping and identified as *H. influenzae* type b biotype II. It was then forwarded to the CDC for further study. The infant fully recovered and is believed to have suffered no sequelae.

PERTUSSIS (WHOOPING COUGH) IS ON THE RISE

There has been a rise in Pertussis in our community in the last year. As of November 30, 2004, there have been 11 cases reported to KCHD. The five year median cumulative through November 30 is seven. Those at risk include:

- Infants just recently starting the vaccination series.
- Teens and adults whose vaccine-induced immunity has waned.
- Those who have never received vaccination.

Case Definition

- Acute cough illness lasting \geq two weeks **AND**
- Paroxysms of coughing, inspiratory “whoop”, or post-tussive vomiting without other apparent cause
- Allergies or croup are common misdiagnoses

Reporting

Timely reporting of pertussis is essential to reduce further spread. Notify KCHD **immediately** if you suspect Pertussis so that contact investigation and prophylaxis can be initiated ASAP. Since the DFA screen can produce false negatives, waiting for culture results delays prevention measures.

Testing and Specimen Collection

DFA should be used for quick screening, but a culture is necessary for laboratory confirmation. As early in the course of illness as possible (preferably during the first three weeks after onset), a nasopharyngeal specimen using Dacron or calcium alginate (not cotton) swab should be obtained and placed in Amies Charcoal transport media. Pertussis kits are often obtained from the hospital where you have privileges unless the lab permits you to use your own supplies. Alternatively, you may need to send the patient to urgent care or ED.

Treatment and Prevention

- Treatment: Erythromycin x 14 days
- Prophylaxis: Erythromycin or TMP-SMZ x 14 days
- Azithromycin and Clarithromycin are commonly used for treatment but are not FDA approved for this indication, and therefore, not recommended by the CDC.
- Close contacts < 7 years old who have not completed their DTP or DTaP series should complete the series or receive a booster dose if it has been more than three years since their final dose.

QUICK FACTS:

- Section 9227 of the Public Health Code requires that health care providers report childhood immunizations they administer via the Michigan Childhood Immunization Registry (MCIR).

- Children under two years old are the most vulnerable to vaccine preventable diseases.

- There has been a 57% increase in the number of Pertussis cases in Michigan over the past year.

- Persons with symptoms of Pertussis are considered contagious until five days after beginning antibiotics.

HEPATITIS B: ORDERING THE RIGHT TESTS

Hepatitis B serological tests are widely misunderstood tests to order and interpret. If you suspect Hepatitis B, these four tests should be ordered:

HBsAg anti-HBc IgM anti-HBc anti-HBs

Interpretation of the Hepatitis B Panel

Interpretation of the Hepatitis B Panel		
HBsAg anti-HBc anti-HBs	negative negative negative	susceptible
HBsAg anti-HBc anti-HBs	negative negative positive (with ≥ 10 mIU/mL)	immune due to vaccination
HBsAg anti-HBc anti-HBs	negative positive positive	immune due to natural infection
HBsAg anti-HBc IgM anti-HBc anti-HBs	positive positive positive negative	acutely infected *report to KCHD
HBsAg anti-HBc IgM anti-HBc anti-HBs	positive positive negative negative	chronically infected *report to KCHD
HBsAg anti-HBc anti-HBs	negative positive negative	four possible interpretations*

- * 1. May be recovering from acute HBV infection
 2. May be distantly immune and the test is not sensitive enough to detect a very low level of anti-HBs in serum
 3. May be susceptible with a false positive anti-HBc
 4. May be chronically infected and have an undetectable level of HBsAg present in the serum

Note: Unusual results **WILL** occur. This table represents “typical” results and the most likely interpretation.

HEPATITIS B SEROLOGY NOMENCLATURE

HBsAg: *Hepatitis B surface antigen* indicates either acute **OR** chronic infection. This marker appears 1-10 weeks after exposure to the virus. If it persists ≥ 6 mo, it indicates a chronic infection. An HBsAg positive individual is considered to be infected and is able to transmit the infection to others through their blood or body fluids. **Report immediately if a pregnant woman is positive for HBsAg.**

anti-HBs: *Antibody to hepatitis B surface antigen* indicates an immune response to infection, vaccination, or passively acquired antibody.

anti-HBc: *Antibody to hepatitis B core antigen* indicates acute **OR** chronic **OR** resolved infection. Use **with** the HBsAg and anti-HBs tests for proper interpretation.

IgM anti-HBc: *IgM antibody subclass of anti-HBc* indicates acute infection. This marker lasts ≤ 6 months.

HEPATITIS B IN THE U.S. QUICK FACTS:

- About 30% of persons with Hepatitis B have no signs or symptoms.

- The risk of developing chronic infection is 90% if infected at birth.

- Highest rate of disease occurs in 20 - 49 year olds.

- Number of new Hepatitis B infections per year

1980s 260,000

2001 78,000

Sharpest decline is in children and teens due to routine vaccination.

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INFLUENZA ACTIVITY: A SLUGGISH START TO FLU SEASON

The influenza activity level in Michigan is currently local. The five levels, from lowest to highest, are: no activity, sporadic, local, regional, and widespread. MDCH determines the activity level based on many sources of information including: laboratory data, sentinel surveillance, Michigan Disease Surveillance System (MDSS) reports, and emergency department surveillance.

As of December 31, 2004, KCHD received ten reports of laboratory confirmed influenza cases. This year's first influenza case specimen was collected on November 22, 2004, two days later than last year's first case.

Physicians are reminded to report cases of influenza and influenza-like illness to KCHD.

In addition, **immediately** report either of the following:

- **Death in patients < 18 years old with lab-confirmed influenza**
- **Unexplained death with evidence of an infectious process in patients < 18 years old**

The CDC has requested this additional information due to last year's increase in influenza-related pediatric deaths.

All Reports should include:

- Clinical summary with history of illness
- Laboratory results, including documentation of influenza virus infection
- Influenza vaccination status
- Autopsy report if available
- Travel history.