



## Tick... tick... tick...

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### Public Health Notes

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 Disease Surveillance Program

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*Public Health Notes is a newsletter for health care professionals in Kalamazoo County.*

Public Health Notes is also available online:

[www.kalcounty.com/hcs/phnotes.htm](http://www.kalcounty.com/hcs/phnotes.htm)

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**269-373-5267**

The Michigan Department of Community Health (MDCH) has confirmed through tick surveillance that Lyme disease is officially endemic in Kalamazoo County. Lyme disease has been endemic along the lakeshore counties of west Michigan for many years and continues to move inland. Healthcare practitioners in endemic areas should become familiar with the clinical manifestations and recommended practices for diagnosing and treating Lyme disease.

Lyme disease is the most reported vector-borne disease in the United States. It is caused by the bacterium *Borrelia burgdorferi* and spread to humans through the bite of an infected *Ixodes scapularis* (black-legged) tick. It is anticipated that the number of cases reported in Michigan will increase due to expanding tick ranges and greater awareness by medical personnel and the public.

Lyme disease is most often a mild illness; however, in some individuals, serious problems involving the heart, joints, and nervous system may develop. The early stage of Lyme disease is characterized by the following symptoms: headache, fever, chills, fatigue, swollen lymph nodes, and aching joints and muscles. These symptoms may disappear or they may reoccur intermittently for several months. A characteristic bull's-eye rash, called *erythema migrans* (EM), may appear within 3 to 32 days after a person is bitten by an infected tick. The rash is circular in shape with a diameter of 2 to 20 inches and is not itchy or painful. EM is not restricted to the bite site. About 60-80% of infected persons will have an EM rash.

If untreated, the infection may spread to other parts of the body and cause symptoms that come and go, including additional EM lesions; Bell's palsy; severe headaches and neck stiffness due to meningitis; pain and swelling in large joints; shooting pains; heart palpitations; and dizziness due to various degrees of heart block. Many of these symptoms will resolve in a period of weeks to months, even without treatment. Approximately 60% of patients with untreated infection will begin to have intermittent bouts of arthritis, with severe joint swelling and pain. Up to 5% of untreated patients may develop chronic neurological complaints months to years after infection. These include shooting pains, numbness or tingling in the hands or feet, and problems with short-term memory. For further information, go to: [www.cdc.gov/lyme/healthcare/index.html](http://www.cdc.gov/lyme/healthcare/index.html).



**Serologic Testing** is available to support other diagnostic information, such as history of exposure to ticks and clinical findings. Usually a two-step test\* is performed. The first step is a sensitive test, typically an ELISA. If the first step is positive or equivocal, then it should be confirmed with the more specific Western Blot (WB). If a patient presents within 30 days of symptom onset, it is recommended that IgM-specific WB be performed. For patients presenting greater than 30 days from symptom onset or with symptoms consistent with late-stage Lyme disease, it is recommended that IgG specific WB be performed.

**Treatment:** For adult patients with early localized Lyme disease, in the absence of specific neurologic manifestations or advanced atrioventricular heart block, Doxycycline (100mg twice per day) or amoxicillin (500 mg 3-4 times daily) for two weeks. For early disseminated infection, antibiotics should be used for 3-4 weeks. For complete treatment details, see [www.cdc.gov/lyme/diagnosis/treatment/Treatment/](http://www.cdc.gov/lyme/diagnosis/treatment/Treatment/) or <http://cid.oxfordjournals.org/content/43/9/1089.full>

The State of Michigan Lyme Disease web page has current local information as well as tips and suggestions: [www.michigan.gov/emergingdiseases/0,1607,7-186-25890---,00.html](http://www.michigan.gov/emergingdiseases/0,1607,7-186-25890---,00.html)

\*We have included the CDC’s Two-Tiered Testing Decision Tree for Lyme disease as an insert with this newsletter. You can also find it online at [www.cdc.gov/lyme/resources/TwoTieredTesting.pdf](http://www.cdc.gov/lyme/resources/TwoTieredTesting.pdf)

**UPDATE!** 2012 Michigan Zoonotic & Vector-Borne Disease Surveillance Report is now available online: [www.michigan.gov/documents/emergingdiseases/MI\\_Zoonotic\\_Summary\\_2012\\_388446\\_7.pdf](http://www.michigan.gov/documents/emergingdiseases/MI_Zoonotic_Summary_2012_388446_7.pdf)

### Screening for Adverse STD Trends

Kalamazoo County is experiencing cases of anal Chlamydia, oropharyngeal gonorrhea, and syphilis in men who have sex with men. According to the Sexually Transmitted Disease Treatment Guidelines (2010 Center for Disease Control\*), subgroups of men who have sex with men are at high risk for HIV infection and other viral and bacterial sexually transmitted diseases. Adverse trends of unsafe sexual practices, substance abuse, and changes in sexual partners and networks such as using the internet are all thought to be part of the rationale for the increase in viral and bacterial sexually transmitted diseases in this subgroup. It is imperative that a sexual health history be obtained in all patients, as many patients do not come forth with their risk factors regarding sexual practices unless the clinician asks the patient the appropriate screening questions\*\*.

The clinician should ask patients about symptoms that are common in sexually transmitted diseases such as urethral

discharge, dysuria, genital and perianal ulcers, regional lymphadenopathy, skin rash, fever, and sore throat. Signs and symptoms associated with proctitis include discharge and pain on defecation or during anal intercourse. The following screening tests should be performed at least annually for sexually active men who have sex with men:

- HIV
- Syphilis
- Gonorrhea and Chlamydia (urethra, oropharyngeal, and anal testing using the Nucleic Acid Amplification test\*\*)
- Culture for Herpes Simplex Virus from symptomatic patients
- Assess for signs and symptoms of Human Papilloma virus on genitals, anus, and oropharynx
- Hepatitis B and C Screening
- Hepatitis A and B Vaccine

For more information, please contact Kalamazoo County Health & Community Services Sexually Transmitted Disease Clinic at 269-373-5203.

\*<sup>1</sup> [www.cdc.gov/std/treatment/2010/](http://www.cdc.gov/std/treatment/2010/)

\*<sup>2</sup> [www.rhrealitycheck.org/article/2012/04/27/april-is-std-awareness-month](http://www.rhrealitycheck.org/article/2012/04/27/april-is-std-awareness-month)

\*<sup>3</sup> <http://depts.washington.edu/nnptc/RandPNAATlabsApril142011-webv.pdf>

Julie Beeching, RN  
KCHCS STD/Imms Clinic Supervisor

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### Recent Uptick in County Salmonella Cases

In May, there were 14 Salmonella cases reported in Kalamazoo County. This is the single highest monthly total of the GI illness in the last five years. (There were only 17 cases reported in all of 2011.)

Twelve of the 14 cases were lab-confirmed, and two were probable by epi-link. The confirmed cases include four different serotypes (one serotype result remains pending at the time this goes to print):

- Enteritidis ..... 6
- Saintpaul ..... 2
- Mabandaka ..... 2
- Braenderup ..... 1

Enteritidis is a common serotype and our investigations did not lead to any epidemiological links among those county cases reported last month. The two Saintpaul serotypes were family members. Initially, the two Mabandaka serotype cases were not linked. However, our Region 5 MDCH Epidemiologist, Bethany Remink, found that statewide, there had been nine PFGE (*pulsed-field gel electrophoresis*—a



standard typing method for salmonella isolates) matching cases over the past 18 months. Five of these nine cases are in Kalamazoo County, which prompted MDCH to request expanded interviews focusing on demographics and high-risk food exposures concerning our two recent Mbandaka cases. MDCH is investigating further.

Michael Phillips, RN  
KCHCS Disease Surveillance/TB

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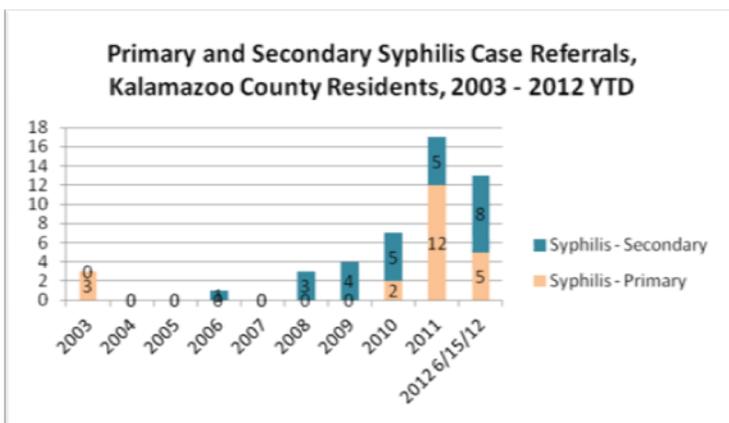
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## MDCH Laboratory Procedures and Considerations for Pertussis

Serology is not recommended for lab confirmation of pertussis.

Acceptable laboratory tests are bacterial culture and PCR. Culture confirmation is preferred but not common. PCR method is more widely used. Positive PCR results are considered confirmatory if the illness meets the clinical case definition (which is a medically-reported cough illness of at least 2 weeks duration with paroxysms of coughing, and/or inspiratory “whoop,” and/or post-tussive vomiting without other apparent cause). PCR specimens should be obtained from the posterior nasopharynx (not the throat). Only Dacron swabs in Regan Lowe transport medium are recommended.

Additional information from MDCH Bureau of Laboratories is available at [www.michigan.gov/documents/LSGBordetella\\_pertussis\\_Culture\\_8242\\_7.doc](http://www.michigan.gov/documents/LSGBordetella_pertussis_Culture_8242_7.doc)



## Syphilis: A Re-emerging Public Health Threat

Syphilis is making a comeback as a public health problem both locally and nationally. In Kalamazoo County, 12 cases of

primary syphilis were reported in 2010. In 2011, 24 cases were reported. Through the end of March 2012, 12 cases have been identified. Nationally, most of the 36,000 cases reported are young people between the ages of 20-39 years. **How is syphilis spread?** It's passed from person to person by contact with a syphilis sore mainly occurring on the external genitals, in the vagina, anus, or rectum, but also potentially on the lips or in the mouth. It can't be spread from contact with toilet seats, shared utensils, swimming pools, or other objects. Infected people can remain asymptomatic for years and syphilis sores can go unrecognized allowing spread from person to person without being noticed. In the primary stage, which occurs an average of 21 days after exposure to a syphilis sore, one or more sores appear at the exposure site. These heal spontaneously within 3-6 weeks. Left untreated, the disease will progress to a secondary stage consisting of a generalized rash along with fever, swollen glands, sore throat, hair loss, weight loss, muscle aches, and fatigue. If untreated, progression into late stages including neurosyphilis will occur. Clinical signs include cranial nerve dysfunction, meningitis, stroke, acute or chronic altered mental status, loss of vibration sense, and auditory or ophthalmic abnormalities.

**Who gets syphilis?** The risk exists for any individual with an infected sex partner. Kalamazoo County is seeing an increase in syphilis among both men and women with same-sex or opposite-sex partners. A person infected with syphilis is 2-5 times more likely to become infected with HIV if they have sex with someone who is HIV-positive when syphilis is present. The HIV threat is increased because primary-stage sores make it easy for infections such as HIV to enter the bloodstream.

**What is the treatment for syphilis?** Syphilis can be readily treated in the early stages. According to the CDC 2010 STD treatment guidelines, Penicillin G (standard benzathine penicillin product only) parenterally is the preferred drug of choice for all stages of syphilis. Dosage and length of treatment will depend on disease stage and clinical manifestations. Treatment for syphilis can be done through your local health department. All pregnant women should be tested for syphilis and any woman delivering a stillborn infant after 20 weeks' gestation should be tested for syphilis.

**Diagnostic considerations for syphilis:** Two types of testing for presumptive serologic testing include: 1) nontreponemal tests (VDRL, RPR) and 2) treponemal tests (FTA-ABS, TP-PA, EIAs). Due to the limitations of each test, including chances of false-positive results, one test is not sufficient for a definitive diagnosis. Upon receiving a positive treponemal screening test, a standard nontreponemal test with titer results should be performed. Titer results should correlate to the syphilis activity in the patient. Please note: many patients with a past history of a reactive treponemal test may

show reactive results for the rest of their lives regardless of treatment.

**How can syphilis be prevented?** The best way to prevent syphilis and other sexually transmitted diseases is to abstain from sex. If sexually active, your patient can decrease the risk by using protective barriers such as latex or polyurethane condoms for oral, vaginal, and anal sex, and dental dams for oral-anal and oral-vaginal sex and minimizing the number of sexual partners. When there is more than one sexual partner, it is important all get tested every 3-6 months to reduce the spread of disease.

The use of alcohol and other drugs increases the incidence of risky sexual behavior (not using protection, multiple partners) and thereby the possibility of contracting syphilis and other sexually transmitted diseases. Douching, washing the genitals, or urinating after sex do not protect against transmission of syphilis, HIV, and other STDs. If an individual notices unusual discharge, rash, or a sore, especially in the genital area, he/she should refrain from sex immediately and seek medical attention as soon as possible.

If your patient thinks he/she may have passed syphilis or another STD to a partner but does not know how to tell them, advise them to call Kalamazoo County Health and Community Services at 269-373 5233, or visit [www.inspot.org](http://www.inspot.org). Professional staff will contact the partner to let them know they should be tested without disclosing your patient's identity.

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Michelle Thorne, BSN, RN  
Josh Jacobs, MA, LPC, LMFT

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## Maternal-Infant HCV Transmission Screening

Last April, a newborn child was reported to our office as a suspect case of Hepatitis C. The child had a hepatic panel within the first month of birth and was positive for HCV antibody by immunoassay, hence the report to the local health department.

Generally, mother-to-infant transmission of the hepatitis C virus is uncommon. But because maternal anti-HCV freely crosses the placenta, virtually all newborns of HCV-infected mothers will have positive anti-HCV tests. For those infants not actually infected, the anti-HCV gradually declines and nearly all have resolution of anti-HCV by 18 months of age. Thus, testing for anti-HCV prior to 18 months does not reliably determine whether the child has acquired the infection and is not advised.

While the positive predictive value of antibody testing does increase from six to 17 months of age, the CDC

recommends delaying such testing in children born to infected HCV mothers. This conclusion is also supported by MDCH. Children born to HCV-infected mothers should not be tested sooner than 18 months. Lab-reported cases of positive anti-HCV in newborns are generally not counted as cases by County disease surveillance. In such instances, County disease surveillance will follow up with both health care providers and parents urging follow-up after the child's first 18 months. For more information, click [www.cdc.gov/hepatitis/HCV/HCVfaq.htm#-](http://www.cdc.gov/hepatitis/HCV/HCVfaq.htm#-)

Michael Phillips, RN  
KCHCS Disease Surveillance/TB




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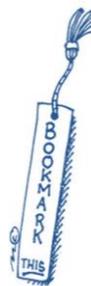
## Have you talked to your adult patients about vaccines?

There are vaccines that all adults should be receiving per the CDC recommendations. Some are age-specific, such as HPV. Tdap should be given particularly to those who have infant grandchildren. PCV13, a childhood conjugate vaccine for pneumonia, has now been approved by FDA for adults 50 years of age and older. New recommendations will be coming soon from CDC on the use of this vaccine.

If you have a patient traveling out of the country, there are vaccines they may need even if they are going to England or Europe. Make sure they have had MMR vaccine or measles disease. Measles is prevalent in Europe and England and is highly contagious, so take a few minutes to talk to your adult patients about vaccines at their next visit.

For more information, visit [www.cdc.gov/vaccine](http://www.cdc.gov/vaccine), or call 269-373-5239.

C. JoAnn Hyde, RN  
KCHCS Clinic Supervisor




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## Web-Only: Travel the Globe

If you do not believe that immunizations make a difference in the incidence of vaccine-preventable diseases around the world, take a virtual trip around the world and see for yourself:

[www.cfr.org/interactives/GH\\_Vaccine\\_Map/?cid=soc-Twitter-in-global\\_health-vaccine\\_map-050912#map](http://www.cfr.org/interactives/GH_Vaccine_Map/?cid=soc-Twitter-in-global_health-vaccine_map-050912#map)

Roxanne Ellis, RN  
KCHCS Immunization Action Plan

Nicole Wilson, RN  
KCHCS Disease Surveillance

## 2012 Tuberculin Skin Test Training

### Dates

Medical personnel involved in TB skin testing are welcome to attend our free workshops for certification or recertification.

Classes are held in Conference Room D, Kalamazoo County Health and Community Services building, Nazareth. Once the 4-hour Certification course has been passed, a 2-hour Recertification can be taken every 2 years. The remaining 2012 class schedule follows:

#### Certification

July 19, 8:00a.m.-Noon  
October 18, 8:00a.m.-Noon

#### Recertification

October 18: 1:00-3:30 p.m.

The workshops are free. Registration is required. If you would like to attend one of these classes, please call 269-373-5267. Recertification is recommended every two years.



## Rabies Season

As summer nears and the temperature rises, we are seeing an increase in animal bites and bat exposures. Until 1960, dogs were the reservoir of most of the rabies in the U.S.A. After mandating dogs to be vaccinated against rabies, local wildlife has become the greater threat. In 2011, MDCH Bureau of Laboratories tested 3,171 animals, of which 65 were confirmed rabid: 57 bats (1 in Kalamazoo County); 5 skunks; 1 fox; and 1 woodchuck. Just fewer than 5% of submitted bats were positive for rabies, whereas 20.8% of skunks tested positive.

Rabies is a viral infection that infects the CNS, causing brain disease and inevitable death. It is most often acquired with infected saliva through a bite, broken skin, or mucous membrane. Incubation period for rabies varies from 3-12 weeks (rarely, as short as a few days to several years). The length of incubation depends on wound severity as well as location with nerve supply and the relative distance from the brain.

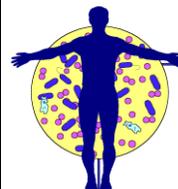
When a patient comes into your facility with a complaint of a mammal bite or bat exposure, it is crucial to inform Kalamazoo County Animal Services (their report form is available on the county website: [www.kalcounty.com/ac/pdf\\_files/kcase\\_bitereportform.pdf](http://www.kalcounty.com/ac/pdf_files/kcase_bitereportform.pdf)).

A person who was bit by a domestic animal will be contacted by Animal Services for information. If the animal is located, it will be placed under a 10-day quarantine. After 10 days, if the animal remains healthy, it will be released, and the victim will not need to proceed with post-exposure prophylaxis for rabies.

If the victim has a bat exposure (an exposure is defined as a bite, waking up in a room with a bat, or finding a bat in a room with a young child or a mentally-impaired person) or has been bitten by another wild animal, it is important the bat or animal be tested; advise them to contact Animal Services at 269-373-8775. If the animal is lost to follow-up and circumstances dictate post-exposure rabies prophylaxis, direct the patient to one of our local emergency departments for the rabies immune globulin and rabies vaccine.

Kalamazoo County's updated rabies brochure contains contact numbers for KCHCS and Animal Services and includes practical instructions on how to capture a bat. Print and distribute for patient education from online: [www.kalcounty.com/userfiles/hcs/hottopics/Rabies%20pamphlet%20rp%2003-2012.pdf](http://www.kalcounty.com/userfiles/hcs/hottopics/Rabies%20pamphlet%20rp%2003-2012.pdf)

Please call if you have any questions regarding rabies and/or post-exposure prophylaxis. Have a bite-free summer!



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Disease Surveillance Program  
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*Kalamazoo County  
is committed to equitable, culturally competent care to all  
individuals served, regardless of race, sex, color, national  
origin, religion, height, weight, marital status, political  
affiliation, sexual orientation, gender identity, or disability.*

## Electronic = Eco: -friendly, -nomical

A surprising number of printed newsletters are returned to us because a practice changed names, an individual moved on, an intended recipient’s capacity changed – and the post office does not forward. Please fill in the form\* below to assure you and your fellow HCPs digitally receive future publications of Public Health Notes.

\*Make copies of the blank form as needed for your colleagues and staff

**PLEASE PRINT CLEARLY!** Fax completed form(s) to 269-373-5060; or scan and e-mail it to KCHCS Disease Surveillance: [epihelp@kalcounty.com](mailto:epihelp@kalcounty.com). Thank you for helping us to keep costs down and the value of timely information sharing up!

Last Name	First Name	Title/ Capacity
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		<input type="checkbox"/> New <input type="checkbox"/> Additional or Update
Phone	Practice, Dept., Group, Section	
Organization		

Note: information provided on this form will be compiled in a KCHCS Epi/Disease Surveillance e-mail account accessible only to authorized program staff for the purpose of providing timely local public health news and advisories.