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Rabies in Ohio by Scott O'Dee, MS, Planner, Zoonotic Disease Program

In Ohio there are three strains of rabies circulating among wildlife, each having specific animal reservoirs. The North Central skunk-rabies variant and the raccoon-rabies variant (RRV) are considered terrestrial animal rabies variants, and tend to have a certain geographic foci. The third variant is bat rabies, which is sporadic and geographically disbursed. All strains of rabies can infect humans and other mammals. No matter the variant, rabies is a viral disease that affects the nervous system and is nearly 100 percent fatal. It is transmitted when saliva from an infected animal enters an open wound or contacts a mucous membrane. Treatment is effective only if a series of vaccine and immunoglobulin is administered soon after the exposure. This is why Ohio law requires all animal bites be reported to the appropriate local health department within 24 hours. Through public health efforts, and a little luck, Ohio has not had a confirmed human case of rabies since 1970. Every year, an average of three people in the United States die from rabies (usually from bat rabies), while roughly 55,000 people die worldwide each year (mostly from canine rabies).

In 2007, more than 4,400 animals from Ohio were tested for rabies. The Ohio Department of Health Laboratories tested public health specimens (e.g., contact with humans or pets/ domestic animals) and the United States Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Service (USDA APHIS WS) tested animals collected for RRV surveillance in northeast Ohio. The Centers for Disease Control and Prevention laboratories conducted variant typing on rabies-positive animal samples and confirmed USDA APHIS WS samples.

Of those tested, 86 animals were positive: 66 were bats (76.7 percent), 11 were raccoons (12.8 percent) and nine were skunks (10.5 percent). All raccoons and skunks were positive for RRV. The overall number of confirmed rabid animals was greater than in 2006 (59) and 2005 (70). The increase was primarily due to a greater number of bat cases. The

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Rabies in Ohio—continued

percentage of raccoons testing positive in 2007 (0.9 percent) was the same as in 2006 and 2005, but still less than in 2004 (2.3 percent). Inversely, the percentage of bats testing positive in 2007 (7.0 percent) was higher than in 2006 (5.5 percent) and 2005 (4.3 percent).

In 2007, 47 people were exposed to rabid bats in Ohio. Of those, 46 started rabies post-exposure treatment (PET). One person chose not to start PET. Thirty-two cats and 18 dogs were exposed to 23 rabid bats. There were 20 rabid raccoon and skunk cases where neither human nor pet exposures occurred. There were no human cases.

In order to control RRV, Ohio participates in a program to vaccinate wild raccoons using an oral rabies vaccine (ORV). In 2007, three ORV operations distributed more than 1.1 million vaccine-laden baits over 5,076 square miles in 14 Ohio counties (Figure 1). Due to the apparent clustering of cases near Mentor, Ohio, that area was heavily supplemented with vaccine-laden baits in October for additional control. Robust surveillance by USDA APHIS WS, the Ohio Department of Health and local health departments in northeastern and eastern Ohio will continue in 2008. ORV operations are scheduled for May and August 2008.

Figure 1, 2007 ORV baiting zone

Where to Learn More about Rabies	
	Rabies and ORV in Ohio: *http://www.odh.ohio.gov/odhPrograms/idc/zoodis/rabies/rab1.aspx*
	Human Exposures and Treatment: *http://www.cdc.gov/rabies/*
	Animal Rabies and Animal Vaccines: *http://www.**nasphv**.org/Documents/**RabiesCompendium**.pdf*
	Oral Rabies Vaccination: www.**aphis**.**usda**.gov/

Community-Associated Methicillin-Resistant *Staphylococcus aureus*

by Jane Carmean, RN, BSN, CIC, Infectious Disease Control Consultant, Outbreak Response and Bioterrorism Investigation Program

Background

Staphylococcus aureus, often called "staph," are bacteria commonly carried on the skin or in the nose of healthy people. Approximately 25 percent to 30 percent of the population are colonized (when bacteria are present, but not causing an infection) with staph bacteria. Colonization by *Staphylococcus aureus* bacteria at these sites is often, but not always, a precursor to staphylococcal infections. Staph bacteria are one of the most common causes of skin infections in the United States.

Some staph bacteria are resistant to antibiotics. Methicillin-resistant *Staphylococcus aureus* (MRSA) is resistant to all available beta-lactam agents (penicillins and cephalosporins).

The epidemiology of infections caused by MRSA is rapidly changing. In the past 10 years, infections caused by this organism have emerged in the community. The two MRSA pulsed-field gel electrophoresis (PFGE) patterns in the U.S. most closely associated with community outbreaks, USA 400 and USA 300, often contain *pvl* genes and, more frequently, have been associated with skin and soft tissue infection (SSTI). Outbreaks of community-associated MRSA(CA-MRSA) infections have been reported in correctional facilities, athletic teams, military recruits and in newborn nurseries. CA-MRSA infections now appear to be endemic in many urban regions.

Signs and Symptoms

CA-MRSA most often presents as SSTI such as a boil or abscess. Patients may identify the infection as a spider bite. The site is red, swollen and painful and may have pus or other drainage. Staph infections also can cause more serious infections, such as bloodstream infections or pneumonia, which may, in some instances, lead to death.

Risk Factors and Mode of Transmission

In response to the reports of increased outbreaks, the Centers for Disease Control and Prevention (CDC) advises health care workers and the public to be educated about the risk factors for MRSA. In summary, the CDC has placed the risk factors for CA-MRSA into a category of “5 Cs;”

- **C**ompromised skin integrity
- **C**leanliness issues (i.e., poor hygiene)
- **C**rowding
- **C**ontaminated items (i.e., towels, razors, bar soap)
- **C**ontact (skin to skin)

MRSA is typically spread in the community by direct contact with a person who is colonized or has an active infection, or indirectly through shared personal articles, such as towels, razors, clothing or athletic equipment. CA-MRSA skin infections are not spread by coughing or sneezing.

Diagnosis and Treatment

Clinicians are encouraged to collect specimens for culture and antimicrobial susceptibility testing from all patients with abscesses or purulent skin lesions, particularly those with severe local infections, systemic signs of infection or history suggesting a connection to an outbreak of infections among epidemiologically linked individuals (same family, group of friends, co-workers, or teammates). Incision and drainage constitutes a primary therapy for boils and other abscesses and should be performed routinely. For some patients with purulent skin lesions, empiric antimicrobial therapy may be administered in addition to incision and drainage. When empiric antimicrobial therapy is provided for treatment of a SSTI compatible with *S. aureus* infection, local susceptibility data should be used to guide treatment.

Community-Associated Methicillin-Resistant *Staphylococcus aureus*—continued

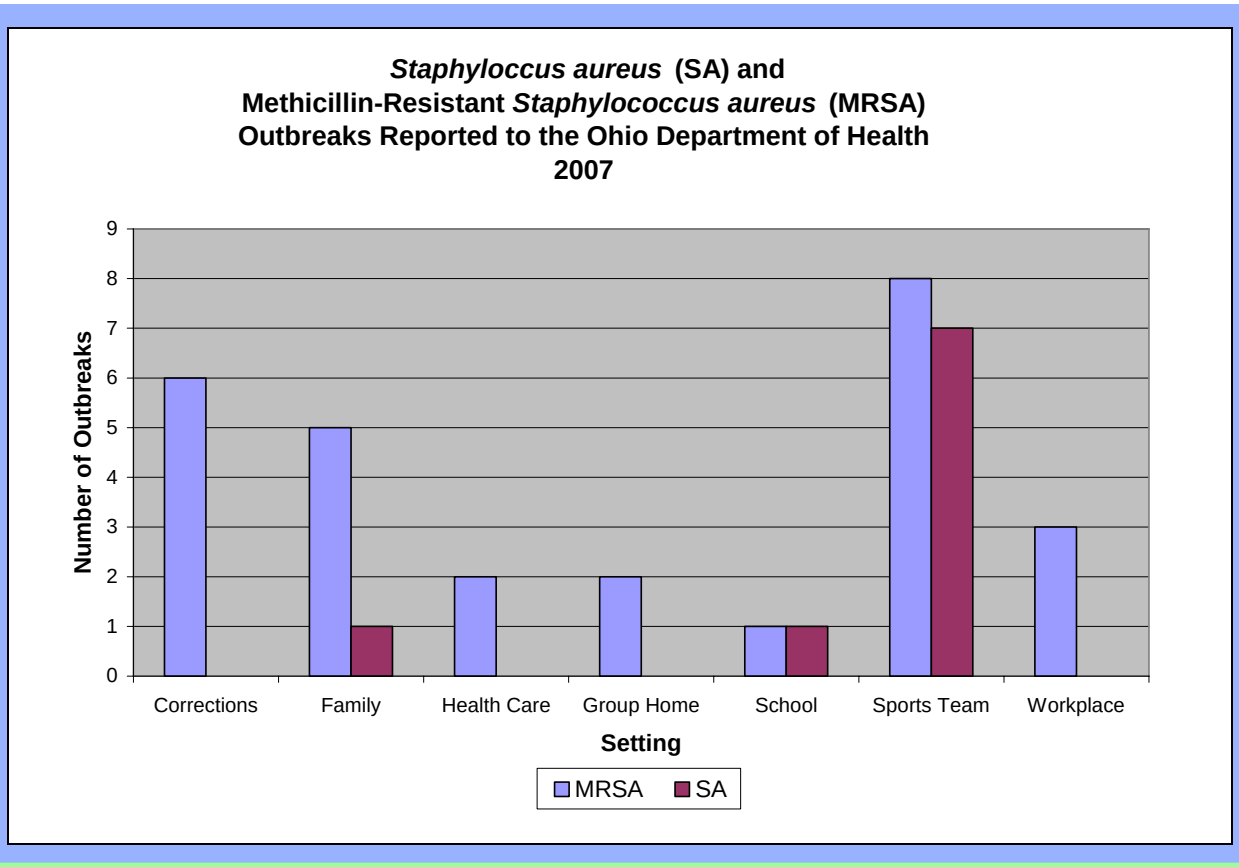
Fluoroquinolones (e.g., ciprofloxacin, levofloxacin) and macrolides (erythromycin, clarithromycin, azithromycin) are not optimal agents for treatment of MRSA skin and soft tissue infections because resistance is common or may develop rapidly. Patients with SSTIs treated on an outpatient basis should be clearly instructed to return promptly if they develop systemic symptoms, worsening local symptoms or if their symptoms do not improve within 48 hours. Ideally, a follow-up visit should be scheduled within 48 hours of the initial visit to confirm adequate response to therapy.

Role of Decolonization

In September 2007, the CDC, American Medical Association (AMA) and the Infectious Disease Society of America (IDSA), published a fact sheet titled "Outpatient Management of Skin and Soft Tissue Infections in the Era of Community-associated MRSA." Regarding decolonization, it is stated, "regimens intended to eliminate MRSA colonization should not be used in patients with active infections." It further states, "decolonization regimens may have a role in preventing recurrent infections, more data are needed to establish their efficacy and to identify optimal regimens for use in the community settings." The CDC, AMA and IDSA advise that after treating active infections and reinforcing hygiene and appropriate wound care, the clinician should consider consultation with an infectious disease specialist regarding use of decolonization if there are recurrent infections in an individual patient or members of a household.

Reporting Responsibilities

In Ohio, as stated in the Ohio Administrative Code (OAC) 3701-3-02, suspected or confirmed staphylococcal skin infection outbreaks (two or more cases with a common exposure) are reportable to local public health districts. The graph below depicts the number of outbreaks of *Staphylococcus aureus* (SA) and MRSA reported to the Ohio Department of Health (ODH) in 2007.



Community-Associated Methicillin-Resistant *Staphylococcus aureus*—continued

Conclusion

New strains of MRSA have emerged in the community, with implications for management of skin infections and other staphylococcal infections. Patient education on proper wound care is a critical component of case management for patients with skin infections. Strategies focusing on increased awareness, early detection and appropriate management, enhanced hygiene and maintenance of a clean environment have been successful in controlling outbreaks of infection.

General questions about MRSA and CA-MRSA can be directed to the ODH Outbreak Response and Bioterrorism Investigation Program at (614) 466-0265.

Resources

http://www.odh.ohio.gov

http://www.odh.ohio.gov/healthResources/infectiousDiseaseManual.aspx

http://www.cdc.gov/ncidod/dhqp/ar_mrsa_ca_04meeting.html

http://www.cdc.gov/ncidod/dhqp/ar_mrsa_ca_skin.html

http://www.cdc.gov/EID/content/13/2/236.htm

Swine Influenza in Humans Exhibiting Hogs at a County Fair by Jeanette O'Quin, DVM, Zoonotic Disease Program

In August 2007, the Ohio Department of Health (ODH) Zoonotic Disease Program was notified of two human cases of type A influenza. Both patients were swine exhibitors at the Huron County Fair. Swine at the fair were also reported to be ill with respiratory disease compatible with influenza. Cultures obtained from the humans and the swine were subsequently found to be positive for swine influenza A (H1N1) virus infection. Further genetic sequencing revealed the strain to be a triple-reassortant swine H1N1 virus (swine, human and avian influenza components) similar to the predominant influenza virus currently circulating among swine in North America. Virus isolated from one of the human patients was an identical match to virus isolated from swine housed on the fairgrounds during the fair; the other human isolate varied by only one non-coding nucleotide. Additionally, the isolated virus had the same genomic composition, with slightly different sequencing, as human isolates from Iowa in November 2006 and Illinois in August 2007. These two cases met the Council of State and Territorial Epidemiologists definition of a novel influenza A virus and were the first in the United States to be reported to the Centers for Disease Control and Prevention under this classification.

The Huron County Fair was held Sunday, Aug. 12 through Saturday, Aug. 18, 2007. On Monday, Aug. 13, exhibitors reported that several swine were ill. When the fair veterinarian examined them on Tuesday, Aug. 14, approximately two-thirds of the swine were exhibiting signs of respiratory disease characterized by high fever, lethargy and cough. More swine developed illness as the week progressed. The barn was closed to the public to help prevent further spread of disease.

On Thursday, Aug. 16, several swine exhibitors began complaining of influenza-like illness (ILI). A 10-year-old girl and her father were

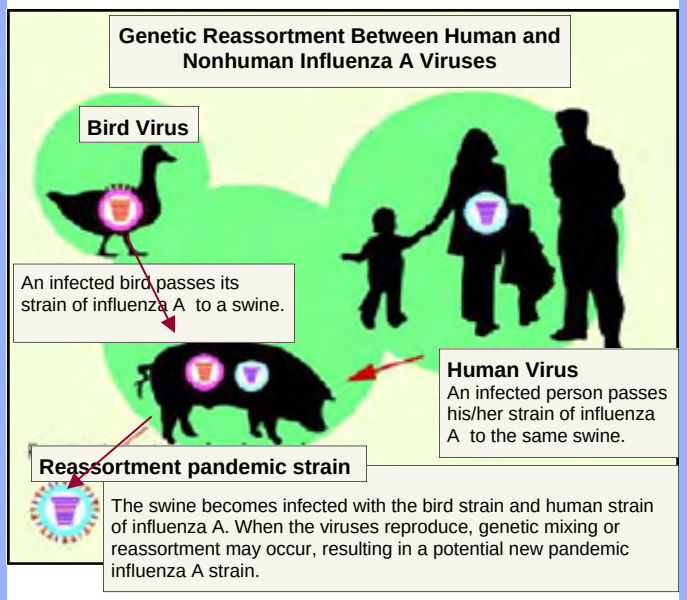
Swine Influenza in Humans Exhibiting Hogs at a County Fair—continued

two exhibitors who received medical care on the morning of Aug. 17. They both tested positive on a rapid diagnostic test for influenza A. The oral antiviral drug, oseltamivir, was prescribed and additional samples were obtained for ODH laboratories. By Tuesday, Aug.14, 26 persons associated with showing swine were reported to have received medical care for ILI. Of the 26, 14 (54 percent) were negative on a rapid diagnostic test for influenza A, two (8 percent) were positive, and 10 (38 percent) were not tested. No new cases or suspects were reported after Tuesday, Aug. 14, and local public health investigations revealed no human-to-human transmission.

From a public health perspective, this is a unique incidence of swine influenza transmission to humans with a clear epidemiologic link and laboratory confirmation. Swine influenza infections in humans living in the United States, Canada, Europe and Asia have been reported only sporadically in the medical literature. Serologic surveys of humans who work with swine demonstrated increased risk for swine influenza; however, it is not possible to clinically differentiate swine influenza in humans from other, more common subtypes. Therefore, the true incidence of transmission is unknown.

Previously reported case-patients usually had predisposing immunocompromised conditions, but those involved in this cluster were apparently healthy. The majority of those reporting respiratory disease associated with the county fair were closely involved in the care of the ill swine at the fairgrounds. Most were exhibitors or relatives of exhibitors who spent a great deal of time in the swine barns, thus increasing their exposure.

Swine have the ability to host and mix influenza viral strains of human and avian origin. This sometimes leads to re-assortment and the development of novel viruses. If a novel strain were able to efficiently infect humans and transmit illness from person to person, it could result in a pandemic threat. Those working closely with swine could play multiple roles in the transmission of swine influenza; they may pass human influenza to swine, leading to novel reassortment viruses; they may be the first to become infected, thus



serving as early sentinels; and they may aid in the dissemination of the virus to other members of the community.

This cluster underscores the importance of a continued coordinated effort between the departments of Health and Agriculture (ODA) to investigate any suspected cases of zoonotic influenza transmission. It also highlights the need for enhancing animal disease recognition, particularly in public venues such as county fairs. Huron County General Health District (HCGHD) first learned of the situation through patrons visiting the health district's booth at the fair, not from any official reporting channel. Still, they were able to quickly respond by contacting ODH and ODA for diagnostic support, and by working with the fair's board to issue a news release and provide information to the public. They also followed up with those who reported illness to ensure no human-to-human transmission occurred. Several swine exhibitors were students who left for college campuses immediately after the fair. Had human-to-human transmission occurred, this would have presented a dangerous scenario for perpetuating an outbreak.

Swine Influenza in Humans Exhibiting Hogs at a County Fair—continued

HCGHD is working with its fair's board of directors to develop protocols to address the prevention of all zoonotic diseases at the fairgrounds. If other health departments would like to develop similar protocols, they will find a useful resource in the National Association of State Public Health Veterinarians' "Compendium of Measures to Prevent Disease Associated with Animals in Public Settings, 2007." This document is available on its web site:
http://www.nasphv.org/documentsCompendiaAnimals.html

College of American Pathologists Laboratory Preparedness Survey by William Becker, DO, Medical Director, ODH Public Health Laboratories

Each year, more than 1,300 clinical laboratories throughout the United States participate in the Laboratory Preparedness Survey (LPS), which is offered in collaboration by the College of American Pathologists (CAP), the Association of Public Health Laboratories (APHL) and the Centers for Disease Control and Prevention (CDC). This survey was developed to give laboratories an opportunity to exercise their ability to perform the American Society for Microbiology protocols for "rule-out" or "referral" of potential bioterrorism agents. The survey is also designed to test communications between sentinel laboratories and Laboratory Response Network (LRN) reference laboratories. Participation in the LPS is important to the nation's ongoing public health preparedness efforts.

The LPS was redesigned in 2006 as a collaborative effort between APHL, CDC and CAP. The intent of the enhanced survey is to more closely simulate the types of organisms laboratories in the United States might encounter during a bioterrorism event. Organisms included in the exercise, while **not** active agents, are attenuated or vaccine strains and may be capable of causing illness if not handled properly.

During the most recent LPS, distributed in mid-October 2007, a potential laboratory exposure to *Brucella abortus* RB-51 (vaccine strain), one of the five organisms contained in the LPS, occurred at a LRN laboratory. In the ensuing evaluation, it was learned the specimen was not handled utilizing the prescribed biosafety procedures and several laboratorians were recommended to receive antibiotic prophylaxis. None of these laboratorians have exhibited any signs of illness related to this event, and there is no risk of infection to family members or to the community from this exposure. Ohio has 35 sentinel laboratories participating in LPS, and the Ohio Department of Health Laboratories (ODHL) contacted all of them to assess the possibility of exposure to their employees. Although 15 high-risk exposures were reported to ODHL, no laboratorian has shown any sign of illness to date.

These surveys have allowed Ohio to test the notification algorithm that was developed for the reporting of potential select agents. Ohio sentinel laboratories have been instructed to follow the established communication process: namely the sentinel lab/facility is to notify the local health department. The local health department is then required to notify the Ohio Department of Health. The May 2007 survey showed that 89 percent of participating sentinel laboratories notified the local health departments. Data for the October survey are still being evaluated by APHL.

CAP, APHL and CDC are committed to ensuring that the LPS remains an effective process for assessing and improving the preparedness of laboratories throughout the United States. ODHL will continue to explore ways to enhance the LPS and strengthen laboratory efficiencies, including the provision of appropriate training and education.

Assessment, Feedback, Incentives and Exchange (AFIX) Awards Conference by Alexandra Gulacy, MPH, Immunization Program

On Dec. 5, 2007, the Ohio Department of Health (ODH), Immunization Program hosted the second-annual AFIX Awards and Exchange Conference at the Ohio Historical Society. While the snow fell without reprieve, Deborah Arms, PhD, RN, Chief of the Division of Prevention, and Amy Rae Bashforth, MPA, Immunization Program manager, began the conference with an overview of immunization rates in Ohio and highlighted the positive effects of the AFIX project on up-to-date immunization rates. Barbara Bradley, MS, RN, CIC, Chief of the Bureau of Infectious Disease Control, then announced AFIX-award winning physician practices and health departments in Ohio. Awards were based on achievement of high immunization rates for diphtheria, tetanus and pertussis; polio; measles, mumps and rubella; *Haemophilus influenzae* type b; and hepatitis B vaccines. Vaccination rates were assessed using the Centers for Disease Control and Prevention (CDC) Comprehensive Clinic Assessment Software Application software.

AFIX 90% Club Awards were given to those practices that achieved 90 percent or higher immunization rates by 24 months of age. They included:

- Findlay City Health Department - Hancock County
- Hancock County Health Department
- North Coast Pediatrics, Inc. - Cuyahoga County
- Pediatric Professionals - Cuyahoga County
- PriMed Pediatrics Beavercreek - Greene County
- Putnam County Health Department
- West Chester Pediatrics, Inc. - Butler County

AFIX Improvement Awards were given for outstanding improvement in immunization rates to five practices that obtained the highest increase in rates between 2004 and 2006.

They included:

- Children's Intensive Caring / Dr. Michael Pappas - Lucas County
- City of Hamilton Health Department - Butler County
- Columbus Public Health Immunization Program - Franklin County
- Henry County Health Department
- Mount Auburn Health Center - Hamilton County

Donna Weaver, RN, MN, of the National Center for Immunization and Respiratory Diseases at the CDC, provided the keynote address and spoke regarding the importance of adolescent immunization and the effects of vaccine-preventable diseases specific to adolescence. Adolescent immunizations have been prioritized in order to limit the spread of diseases such as pertussis that have affected many students in Ohio and across the United States. Her presentation was engaging, entertaining and very informative.

Assessment, Feedback, Incentives and Exchange (AFIX) Awards Conference —continued

The closing presentation was provided by Kent Ware of the ODH Immunization Program. He spoke about the development and use of Ohio's statewide immunization information system (SIIS), IMPACT SIIS. Current IMPACT SIIS usage data continued to demonstrate the benefits of improved record keeping, vaccine accountability and higher immunization rates for those practices that utilized the registry fully and for those that used the registry in a limited way.

The AFIX Project for Ohio is a continuous quality improvement program designed for immunization providers to assess and improve the immunization rates of children through 2- years-old. AFIX is a free service provided by the ODH Immunization Program and participating local health districts. For more information or to request an AFIX visit, contact the ODH Immunization Program at (614) 466-4643 or contact your local health district.

Congratulations to all the award winners!

Recent Increases in Chlamydia, Gonorrhea and Syphilis Cases and Rates in Ohio

by Rhiannon Benroth-Richman, M.P.H. and Lisa Mills, Ph.D., STD Surveillance

Background

Chlamydia, gonorrhea and syphilis are the three most common reportable sexually transmitted diseases (STD) in the United States and Ohio. Recent media coverage has focused on the increasing numbers of STDs nationally. Ohio data reflect the same increases. Chlamydia and gonorrhea are transmitted through vaginal, anal or oral sex; or from mother to baby during childbirth (1). The highest rates of chlamydia and gonorrhea occur in adolescents and young adults and are often asymptomatic. If left untreated, complications such as chronic pelvic pain, pelvic inflammatory disease (PID), ectopic pregnancy or infertility can occur (2). Because many of the signs and symptoms of syphilis are indistinguishable from other diseases, syphilis has been referred to as "the great imitator." It can be transmitted through direct contact with a syphilis sore during vaginal, anal or oral sex. The sore can occur on a person's external genitals, vagina, anus or mouth. A mother can also pass it to her baby during pregnancy (3). The profile of syphilis in Ohio differs from that of chlamydia and gonorrhea in that the highest rates are found in middle-aged males who have sex with other males. Syphilis and other STDs increase susceptibility to HIV infection (2).

Chlamydia and Gonorrhea

The Centers for Disease Control and Prevention (CDC) released 2006 data showing the highest number of chlamydia cases ever reported in the United States in one year: 1,031,911 cases (347.8 per 100,000 population). This is an increase of 5.6 percent over the 2005 number of incidence cases and the first time the number of chlamydia cases reported to CDC has exceeded 1 million. Nationally, chlamydia rates in African-Americans are eight times higher than rates in Caucasians. Female rates are three times as high as male rates, and rates are highest in the 15–19-year- old age group (2).

There were 358,366 cases of gonorrhea reported in the United States in 2006 (120.9 per 100,000 population). This is a 5.5 percent increase over the number reported in 2005. Rates of gonorrhea in African-Americans were 18 times higher than rates for Caucasians, and the age group with the highest rates of gonorrhea was 20–24-year-olds (2).

Recent Increases in Chlamydia, Gonorrhea and Syphilis Cases and Rates in Ohio—continued

In Ohio, the number of reported chlamydia and gonorrhea cases has also increased over the past few years. The number of chlamydia cases diagnosed in 2004 was 39,124 (341.7 per 100,000 population) and increased to 41,781 (364.5 per 100.000 population) in 2006 (Figure 1). The incidence rate of chlamydia among African-Americans is 11.5 times higher than that of Caucasians. Females have a rate three times higher than males, and the 15–19-year-old age group had the highest rates (4).

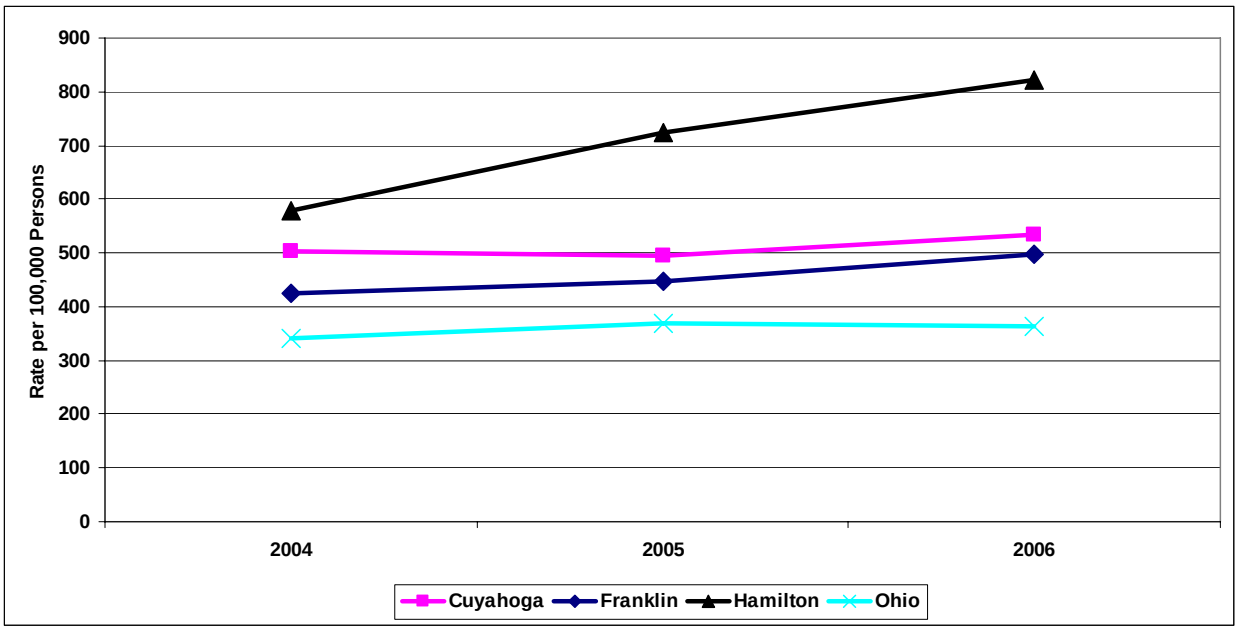
Gonorrhea shows a slight decrease from 2004 to 2006, decreasing from 20,227 (176.7 per 100,000 population) to 20,190 (176.1 per 100,000 persons) (Figure 2). African-Americans have a gonorrhea rate 23 times higher than that of Caucasians, and rates are highest in the 20-24-year- old age group. Gonorrhea rates in females are only slightly higher than that of males (4).

The CDC report ranked Ohio 21st in the United States for reported cases of chlamydia in 2006, with the three most populous counties, Cuyahoga, Hamilton and Franklin, ranking 22nd, 24th and 32nd, respectively, among U.S. counties. For reported gonorrhea cases, Ohio ranked ninth in the nation, Cuyahoga County ranked eighth among U.S. counties, Franklin County ranked 15th and Hamilton County ranked 16th (2).

These three counties also account for the highest increases in chlamydia and gonorrhea in Ohio. Hamilton County chlamydia cases increased 41.1 percent between 2004 and 2006, while gonorrhea cases increased by 18.9 percent. Cuyahoga County showed a modest increase in chlamydia cases with only a 5.2 percent increase. However, Cuyahoga County gonorrhea cases are up by 16.2 percent since 2004. In Franklin County, chlamydia has increased by 17.7 percent, while gonorrhea cases have increased by 16.4 percent (4, Figure 1, Figure 2).

Certain cities in Ohio show a marked rise in recent chlamydia and gonorrhea cases. The city of Cincinnati has seen the largest increase in cases since 2004. From 2004 to 2006, chlamydia cases in Cincinnati increased by 40.7 percent and gonorrhea cases increased by 18.3 percent. Columbus showed a 12.8 percent increase in chlamydia cases and a 13.8 percent increase in gonorrhea cases from 2004 to 2006.

Figure 1. Chlamydia Rates for Ohio and Cuyahoga, Franklin, and Hamilton counties, 2004-2006

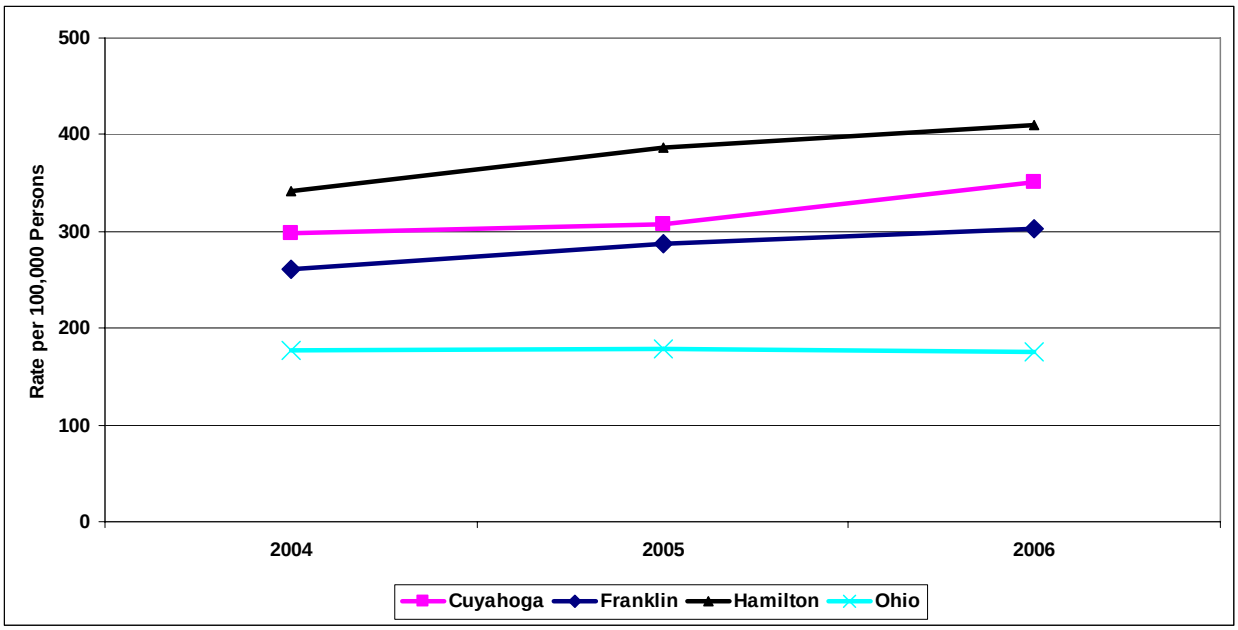


Recent Increases in Chlamydia, Gonorrhea and Syphilis Cases and Rates in Ohio—continued

Chlamydia cases in Cleveland actually decreased slightly from 2004 to 2006, and gonorrhea cases increased by 12.7 percent from 2004 to 2006 (4). The Big Cities Health Inventory report ranks two of Ohio's cities in the top 10 of U.S. cities with the highest rates of chlamydia in 2005. Cincinnati is ranked second, Cleveland is ranked seventh, and Columbus is ranked 22nd.

More startling are the rankings for gonorrhea in Ohio cities. Cincinnati ranks first, Cleveland ranks second, and Columbus is ranked 20th (5).

Figure 2. Gonorrhea Rates for Ohio and Cuyahoga, Franklin, and Hamilton counties, 2004-2006



Syphilis

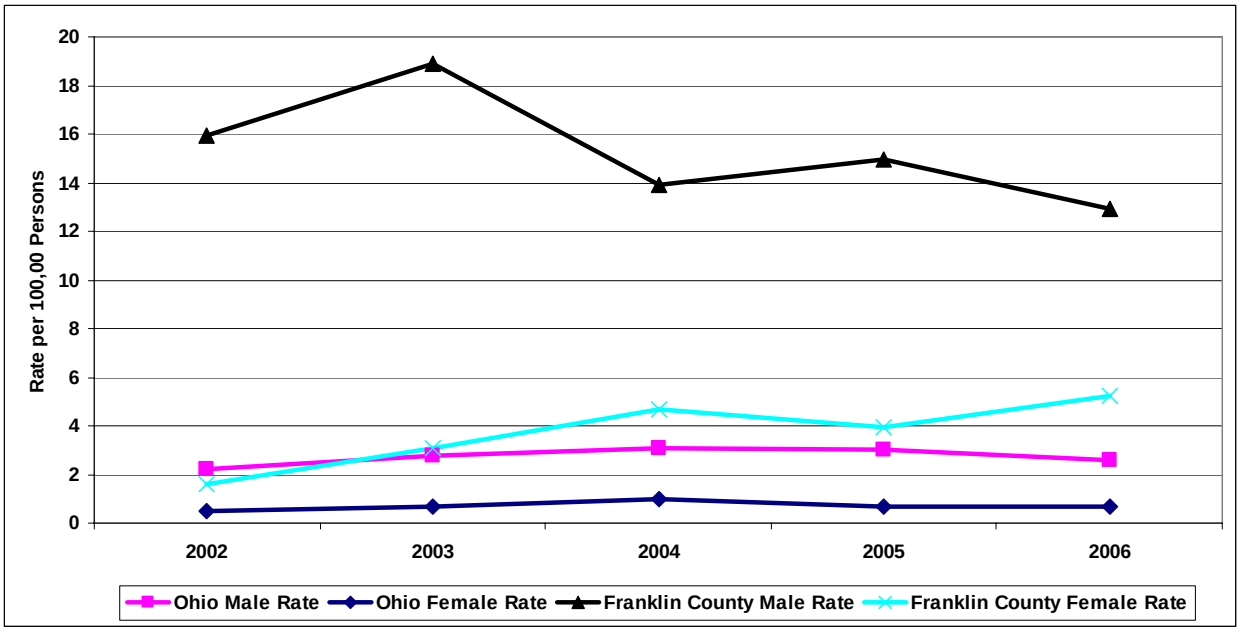
In *Sexually Transmitted Disease Surveillance, 2006*, the CDC ranked Ohio 29th out of the 50 states for reported cases of primary and secondary (P&S) syphilis, with a rate of 1.6 per 100,000 population. This was below the U.S. rate of 3.3 per 100,000 persons. However, Franklin County itself is ranked 24th out of the 57 high-incidence areas for P&S syphilis with a rate of 9.2 per 100,000 persons (2). In Ohio, slightly more than half of the syphilis cases are reported in Franklin County.

The 2005 racial distribution in the United States for P&S syphilis among Caucasians was 1.8 per 100,000 population and 9.8 per 100,000 population for African-Americans (5). In Ohio, Caucasians had a P&S syphilis rate of 10.7 per 100,000 population and African-Americans had a rate of 26.0 per 100,000 population. Overall, the P&S syphilis rate in Ohio has held steady for the past five years. However, in Franklin County, the rate has fluctuated. As of 2006, the rate for Franklin County males has decreased while the female rate has increased 25 percent since 2005.

The Big Cities Health Inventory ranked Columbus 10th (13.5 per 100,000 population) out of 50 big cities in P&S syphilis rates by gender and race/ethnicity for 2005. In the United States, the 2005 rate for P&S syphilis was 5.1 per 100,000 population for males and 0.9 per 100,000 population for females. However, males in Columbus have a P&S syphilis rate of 21.7 per 100,000 population, while females have a rate of 5.7 per 100,000 population (5). Figure 3 illustrates the marked difference between male and female

syphilis rates in both Ohio and Franklin County. The increase in syphilis rates is attributable to rising numbers on male cases. The majority of male Franklin County syphilis cases identify as males who have sex with males.

Figure 3. Primary & Secondary Syphilis Rates in Males and Females in Ohio and Franklin County, 2004-2006



Conclusion

The recent increase in chlamydia, gonorrhea and syphilis in Ohio is most likely due to a combination of several factors: an increase in the number of cases due to high-risk sexual behaviors such as having unprotected sex and multiple partners, expanded screening efforts and improved disease reporting. For chlamydia and gonorrhea, the highest rates of disease are found in adolescents and young adults, and both diseases are frequently asymptomatic. If left untreated, complications such as chronic pelvic pain, PID, ectopic pregnancy and infertility can occur. For syphilis, the highest rates are found in older males who have sex with males. More than half of the syphilis cases in Ohio occur in Franklin County. Regardless of the reasons behind the increase, more education is needed in specifically targeted groups to not only stop the further increase in number of cases, but to ultimately decrease them.

For additional information regarding STD statistics, please contact ODH STD Surveillance Program at (614) 466-1388. Current data are available at http://www.odh.ohio.gov/healthStats/disease/std/std1.aspx .

References

1. Centers for Disease Control and Prevention, Division of STD Prevention, at http://www.cdc.gov/std/chlamydia/default.htm (December 2007).
2. Centers for Disease Control and Prevention. Sexually Transmitted Disease Surveillance, 2006. Atlanta, GA: U.S. Department of Health and Human Services, November 2007.

Recent Increases in Chlamydia, Gonorrhea and Syphilis Cases and Rates in Ohio—continued

3. Centers for Disease Control and Prevention, Division of STD Prevention, at http://www.cdc.gov/std/syphilis/default.htm (December 2007).
4. Ohio Department of Health, STD Surveillance, STD*MIS. Data current as of Nov. 30, 2007.
5. Big Cities Health Inventory: The Health of Urban America, 2007, National Association of County and City Health Officials, Benbow, N., Editor. Washington, D.C., 2007.

ID Quarterly – Winter 2008

Announcements

The Ohio AIDS Coalition, in collaboration with the HIV CARE Services Section (HCS) of the Ohio Department of Health and the Pennsylvania/Mid-Atlantic AIDS Education & Training Center (AETC), will hold the 11th annual Leadership Conference April 14–15, 2008, at the Midwest Hotel & Conference Center in Columbus. The focus of this conference is People Living with HIV/AIDS.

The 2008 conference participants will include community activists, social workers, health care providers, mental health professionals and other HIV professionals, as well as people living with HIV/AIDS. The conference provides excellent multi-level education and training opportunities targeted to attendees with beginning-to-advanced levels of knowledge and skills. Continuing education credits will also be available.

- **For more information, contact the Ohio AIDS Coalition at 1-800-226-5554.**

Quarterly Summary of Selected Reportable Infectious Diseases
Fourth Quarter, 2007*
September 30, 2007 - December 29, 2007

Reportable Condition	Quarter	Year
AMEBIASIS	14	33
BOTULISM, FOODBORNE	0	3
BOTULISM, INFANT	0	1
CAMPYLOBACTERIOSIS	249	1,060
CHOLERA	0	1
COCCIDIOIDOMYCOSIS	4	12
CREUTZFELDT-JAKOB DISEASE (CJD)	2	14
CRYPTOSPORIDIOSIS	153	609
CYTOMEGALOVIRUS (CMV), CONGENITAL	5	16
E COLI O157:H7	12	92
E COLI, SHIGA TOXIN PRODUCING, NOT O157:H7	1	15
E COLI, SHIGA TOXIN PRODUCING, UNKNOWN SEROTYPE	14	48
EHRLICHIOSIS, HUMAN GRANULOCYTIC (HGE)	1	2
EHRLICHIOSIS, HUMAN MONOCYTIC (HME)	0	1
ENCEPHALITIS, POST OTHER INFECTION	0	7
ENCEPHALITIS, PRIMARY VIRAL	7	25
GIARDIASIS	233	828
HAEMOPHILUS INFLUENZAE, INVASIVE	28	108
HEMOLYTIC UREMIC SYNDROME (HUS)	6	14
HEPATITIS A	16	68
HEPATITIS B, ACUTE	32	133
HEPATITIS B, CHRONIC	1,149	2,471
HEPATITIS C, ACUTE	6	22
HEPATITIS C, PAST OR PRESENT	3,264	11,372
HEPATITIS E	0	3
KAWASAKI DISEASE	7	42
LEGIONELLOSIS	56	215
LEPROSY	1	1
LISTERIOSIS	11	33
LYME DISEASE	3	24
MENINGITIS, ASEPTIC	258	821
MENINGITIS, OTHER BACTERIAL	12	53
MENINGOCOCCAL DISEASE	6	35
MUMPS	4	20
NOVEL HUMAN INFLUENZA A VIRUS	0	2
PERTUSSIS	53	610
RHEUMATIC FEVER	1	3
ROCKY MOUNTAIN SPOTTED FEVER (RMSF)	1	10
SALMONELLOSIS	300	1,323
SHIGELLOSIS	309	1,258
STAPHYLOCOCCUS AUREUS, INTERMEDIATE RESISTANCE TO VANCOMYCIN (VISA)	1	4
STREPTOCOCCAL DISEASE, GROUP A, INVASIVE	47	239
STREPTOCOCCAL DISEASE, GROUP B, IN NEWBORN	17	49
STREPTOCOCCAL TOXIC SHOCK SYNDROME (STSS)	1	11
STREPTOCOCCUS PNEUMONIAE, INVASIVE, DRUG RESISTANT/INTERMEDIATE (ALL AGES)	87	416
STREPTOCOCCUS PNEUMONIAE, INVASIVE, DRUG SUSCEPTIBLE/UNKNOWN (CHILDREN < 5 YEARS)	21	69
TOXIC SHOCK SYNDROME (TSS)	0	2
TOXOPLASMOSIS, CONGENITAL	1	1
TYPHOID FEVER	6	12
VARICELLA	1,016	4,536
VIBRIO PARAHAEMOLYTICUS INFECTION	0	3
VIBRIOSIS, OTHER (NOT CHOLERA)	1	3
YERSINIOSIS	13	58
TOTAL	**7,429**	**26,811**

* 2007 data include confirmed, probable and suspected cases reported to the Centers for Disease Control and Prevention (CDC). This report includes both quarter-specific and year-through-quarter cumulative frequencies for each disease. Quarter is determined by the MMWR week the case was sent to the CDC. This report includes only Class A reportable diseases. Data were reported to the Ohio Department of Health via the Ohio Disease Reporting System. Some reportable conditions may be under investigation. Therefore, all data in this report are provisional, but current as of January 18, 2008.

Source: Ohio Department of Health Infectious Disease Surveillance

Reported HIV/AIDS diagnosis in Ohio in 2006 [a]

	HIV	AIDS	HIV/AIDS
Diagnosed[b]	767	350	1117
PLWHA*	7,852	7,607	15459

[a] Data reported through Dec. 31, 2007.

[b] HIV/AIDS diagnoses include persons with a diagnosis of an HIV infection (not AIDS), a diagnosis of an HIV infection and later AIDS, and concurrent diagnosis of HIV infection and AIDS.

**Persons Living with HIV/AIDS*

Note: Living with HIV/AIDS represents all persons ever diagnosed and reported with HIV or AIDS and have not been reported dead as of Dec. 31, 2006.

Source: Ohio Department of Health, HIV/AIDS Surveillance Program.

Quarterly Summary of Sexually Transmitted Diseases, Ohio

Fourth Quarter, 2007*

Jan. 1, 2007 - Dec. 31, 2007

SEXUALLY TRANSMITTED DISEASES	QUARTER	YEAR
CHLAMYDIA	6,738	41,230
GONORRHEA	2,641	17,932
SYPHILIS	132	530
TOTAL	**9,511**	**59,692**

* 2007 data include only confirmed cases, except for gonorrhea, which includes confirmed and suspected cases reported to the Centers for Disease Control and Prevention (CDC). This report includes both quarter-specific and year-through-quarter cumulative frequencies for each disease. Quarter is determined by date of diagnosis. Some reportable conditions may be under investigation. Therefore, all data in this report are provisional, but current as of Jan.15, 2008.

Source: Ohio Department of Health STD Disease Surveillance

Quarterly Summary of Tuberculosis Cases, Ohio

Fourth Qurter, 2007*

January 1, 2007 - December 31, 2007

	QUARTER	YEAR
TUBERCULOSIS (TB)	71	252

* 2007 data include confirmed cases reported to the CDC. This report includes both quarter-specific and year-through-quarter cumulative frequencies for tuberculosis. Quarter is determined by count date, which is the date the ODH TB Surveillance Program determines the tuberculosis suspect meets the CDC Surveillance Case Definition for TB. All data in this report are provisional, but current as of Jan.15, 2008.

Source: Ohio Department of Health TB Surveillance

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Director of Health: Alvin Jackson, MD

Chief of the Division of Prevention: Deborah Arms, RN, PHD

Chief of the Bureau of Infectious Disease Control: Barbara Bradley, RN, MS

Editors: Amy Bashforth, MPA and Frank Romano, MPH

Designer: Beverly Henderson

For questions or comments or to add a free subscription,

e-mail amy.bashforth@odh.ohio.gov

or call 614-466-0261.

Ohio Department of Health

Bureau of Infectious Disease Control

246 North High Street

Columbus, OH 43215

http://www.odh.ohio.gov