



# Bureau of Infectious Disease Epidemiology and Surveillance

## Vaccine Safety—by Bea Burkholder, RN, Vaccine Safety Coordinator

During the Boston smallpox epidemic of 1721, in an attempt to protect people not immune to the disease, Cotton Mather (a Bostonian preacher) convinced a physician by the name of Zabdiel Boylston to begin ‘varioliating’ patients. The procedure involved scratching smallpox virus procured from the pustule of a sick patient into another person’s skin with a knife or other sharp object (toothpick, quill, etc.). This procedure often produced disease that proved fatal to the patient, but enough people recovered, with subsequent immunity to smallpox, that the procedure thrived. Boylston collected and published statistics (in one of the earliest, lengthy, medical case series) that ‘proved’ people were less likely to die of the disease if they got it through variolation than by getting it the normal way. In England, about the same time, Lady Mary Wortley Montagu was laying the groundwork there for variolation she had seen successfully practiced in 1718 by old Greek women in Constantinople. But for most people, the history of vaccination begins in the late 1700’s, with Edward Jenner, the county doctor from Gloucestershire who found, growing on cows, a nearly harmless virus that protected people from smallpox. The procedure for Jenner’s ‘vaccination’ was much the same as for Boylston’s variolation---and so developed the beginnings of vaccination as a way to protect people from infectious diseases.

“The Cutter Incident” of 1955, researched, examined, described and documented in the book by the same name by Paul Offit, follows the Salk polio vaccine fiasco of that year and lays a good foundation for vaccine safety issues in years to come. By the time all was said and done more than 220,000 people were infected with live polio virus, 70,000 developed muscle weakness, 164 were severely paralyzed and 10 were killed by ‘inactivated’ polio vaccine produced and marketed by Cutter Laboratories. The first permanent paralysis lawsuit to go to court was ‘*Gottsdanker vs Cutter*’ in 1956. Cutter was found innocent of negligence, but guilty on the charge of “implied warranty.” Implied warranty was defined for the jury: “When the buyer,

<b>Inside this Issue:</b>	<ul style="list-style-type: none"> <li>“I Just Got an Anomaly Notification by E-mail. Now What Do I Do?” Practice-based Approach to Anomaly Investigation</li> </ul>	4
	<ul style="list-style-type: none"> <li>Does Poison Control Center Call Volume Data Correlate with Emergency Department Registration Data?</li> </ul>	5
	<ul style="list-style-type: none"> <li>World Rabies Day</li> </ul>	7
	<ul style="list-style-type: none"> <li>Invasive Group A Streptococcal Disease Surveillance in Ohio, 2004-2008</li> </ul>	8
	<ul style="list-style-type: none"> <li>Quarterly Summary of Selected Reportable Infectious Diseases</li> </ul>	14
	<ul style="list-style-type: none"> <li>HIV Data</li> </ul>	15
	<ul style="list-style-type: none"> <li>Quarterly Summary of Sexually Transmitted Diseases and TB Cases</li> </ul>	16
	<ul style="list-style-type: none"> <li>Quarterly Announcements</li> </ul>	17
	<ul style="list-style-type: none"> <li>Contact Information</li> </ul>	20

## Vaccine Safety—continued

expressly or by implication, makes known to the seller the particular purpose for which goods are required, and it appears that the buyer relies on the seller's skill or judgment.....there is an implied warranty that the goods shall be reasonably fit for such purpose." \$125,000 was awarded to the Gottsdanker family. This judgment opened a door that affected all pharmaceutical companies for the next 50 years.

By 1962, the U.S. had switched to Sabin's live virus polio vaccine, dropped onto sugar cubes and given to millions of children. Public health officials knew it could **and did** cause paralysis, but felt the benefits outweighed the risk. Between 1980 and 1996 six to eight children developed paralytic polio because of Sabin's vaccine. The topic of vaccine safety became prominent during the mid-1970s with increases in lawsuits filed on behalf of those presumably injured by the diphtheria, tetanus and pertussis vaccine. Legal decisions were made and damages awarded despite the lack of scientific evidence to support vaccine injury claims. As a result of these decisions, liability and prices soared, and several manufacturers halted production. A vaccine shortage resulted and public health officials became concerned about the return of epidemic disease. In 1967, there were 26 companies making vaccines in the U.S., by 2006 only four major firms remained. Three overseas firms also manufacture flu vaccine for the U.S. market. No firm claimed that liability was the main reason they quit the vaccine business, but rather that the vaccine business was not profitable.

To reduce the financial liability of vaccine makers due to vaccine injury claims and respond to public health concerns, Congress passed the National Childhood Vaccine Injury Act (NCVIA) in 1986 (42 U.S.C. §§300aa-1 to 300aa-34). The legislation was designed to ensure a stable market supply and provide cost-effective arbitration for vaccine injury claims.

The NCVIA mandated several major programs:

1. The National Vaccine Program Office was established to coordinate immunization-related activities between all Department of Health and Human Services agencies including the Centers for Disease Control and Prevention (CDC), Food and Drug Administration (FDA), National Institutes of Health, and the Health Resources and Services Administration (HRSA).
2. The NCVIA established a committee from the Institute of Medicine to review the existing literature on vaccine adverse events occurring after immunization, regardless of whether there is a direct link between events, and identify the serious adverse events that are reasonably certain to be caused by vaccines. They developed the Vaccine Injury Table (42 U.S.C. §300aa-14), on which settlements are based.

<http://www.hrsa.gov/Vaccinecompensation/table.htm>

3. Under the NCVIA, the National Vaccine Injury Compensation Program (NVICP) was created to provide a federal no-fault system for compensating vaccine-related injuries or death by establishing a claim procedure involving the U.S. Court of Federal Claims and Special Masters, which went into effect Oct. 1, 1988. No-fault means people filing claims are not required to prove negligence on the part of either the health care provider or the manufacturer to receive compensation. As a predicate to receiving compensation under the act, injured persons are required to file a petition in the U.S. Court of Federal Claims demonstrating that: 1) an injury found on the Vaccine Injury Table occurred, or 2) that the vaccine caused the condition or 3) that the vaccine significantly aggravated a pre-existing condition. Hearings to determine eligibility under the NVICP usually last only one or two days. A case found eligible for compensation is scheduled for a hearing to assess the amount of compensation. Most claims found to be noncompensable receive awards for attorney's fees and costs. The program covers all childhood vaccinations routinely recommended by CDC. Since Oct. 1, 1988, awards are paid from the Vaccine Injury Compensation Trust Fund which is funded by an excise tax on each dose of vaccine purchased. Individuals who believe they have been injured by a covered vaccine should file a claim against the Department of Health and Human Services in the U.S. Court of Federal Claims seeking compensation from the Vaccine Trust Fund.

<http://www.hrsa.gov/osp/vicp/>

4. For injuries or deaths resulting from a vaccine administered **on or after Oct. 1, 1988**, the following restrictions apply:

# Vaccine Safety—continued

- a. In the case of an injury, the claim must be filed within 36 months after the first symptoms appeared. The effects of the injury must have lasted at least six months after the vaccine administration, or the injury must have resulted in inpatient hospitalization and surgical intervention.
- b. In the case of a death, the claim must be filed within 24 months of the death, and within 48 months after the onset of the vaccine-related injury from which the death occurred.

The NCVIA requires all health care providers who administer vaccines containing diphtheria, tetanus, pertussis, measles, mumps, rubella, polio, hepatitis A, hepatitis B, *Haemophilus influenzae* type b, trivalent influenza, pneumococcal conjugate, meningococcal, rotavirus, human papillomavirus (HPV), or varicella (chickenpox) to provide a vaccine information statement (VIS) to the vaccine recipient, or his or her parent or legal guardian, prior to each dose. Instructions for their use can be found at: <http://www.cdc.gov/vaccines/pubs/vis/downloads/vis-Instructions.pdf> A VIS must be given with every vaccination including each dose in a multi-dose series. Each VIS contains a brief description of the disease as well as the risks and benefits of the vaccine. CDC develops VISs and distributes them to state and local health departments as well as individual providers. The most recent VISs can be found at: <http://www.cdc.gov/vaccines/pubs/vis/> or <http://www.immunize.org/vis/>. Health care providers are required to make a notation in each patient's permanent medical record at the time vaccine information materials are provided, indicating:

- a. Edition date of the VIS provided
- b. Date the VIS was provided

This recordkeeping requirement supplements the requirement of 42 U.S.C. §300aa-25 that all health care providers administering these vaccines must record in the patient's permanent medical record (or in a permanent office log):

- c. Name, address and title of the individual who administers the vaccine,
- d. Date of administration and
- e. Vaccine manufacturer and lot number of the vaccine used.

5. The NCVIA also requires health care providers to report certain adverse events following vaccination to the Vaccine Adverse Event Reporting System (VAERS). Established by CDC and FDA in 1990, VAERS provides a mechanism for the collection and analysis of adverse events (side effects) associated with vaccines currently licensed in the United States. Adverse events are defined as health effects that occur after immunization that may or may not be related to the vaccine. VAERS data are monitored continually to detect unknown adverse events or increases in known side effects. Anyone can file a VAERS report, including health care providers, manufacturers, and vaccine recipients or their parents or guardians. To request a VAERS form or assistance in filling in out, call (800) 822-7967, or fill out a form electronically at <http://vaers.hhs.gov/>. A report to VAERS does not initiate a report to or file a claim with NVICP.

Our vaccine journey from the 'varioliations' for smallpox to the present day has been a tumultuous one, but vaccines of today are produced under strict quality manufacturing regulations and are safer than they have ever been.

## References

1. *The Cutter Incident*, 2005, by Paul Offit
2. *Vaccine: The Controversial Story of Medicine's Greatest Lifesaver*, 2007, by Arthur Allen

## Web Sites

- <http://www.cdc.gov/vaccinesafety/basic/history.htm>
- <http://www.immunize.org>
- <http://www.hrsa.gov/bhpr/vicp>
- <http://www.law.cornell.edu/uscode/42/300aa-14.html>
- <http://www.hrsa.gov/Vaccinecompensation/table.htm>
- <http://www.cdc.gov/vaccines/pubs/vis>
- <http://www.immunize.org/vis/>

# “I Just Got an Anomaly Notification by E-mail. Now What Do I Do?” A Practice-based Approach to Anomaly Investigation

by William E. Storm, MPH; Brian E. Fowler, MPH, Center for Public Health Statistics & Informatics, Ohio Department of Health

## Objective

The creation of a standard, statewide operating guideline (SOG) for timely and efficient investigations of syndromic surveillance anomalies by incorporating existing local protocols with practice-based experiences.

## Background

Ohio began using syndromic surveillance systems in late 2003 to monitor and track the trends of hospital emergency department (ED) registrations and over-the-counter pharmacy sales using the Real-time Outbreak & Disease Surveillance application, and later EpiCenter for ED data. The utility of syndromic surveillance during its infancy was primarily more for bioterrorism readiness and response rather than for true health event detection (e.g., naturally occurring diseases, seasonal health events, environmental events, etc.). Over the past six years, the primary function of syndromic surveillance systems shifted toward everyday utility for true health event detection and a concept referred to as situational awareness or monitoring (understanding and describing what’s “going on” around you). The EpiCenter application collects hospital ED registration data from 153 facilities in Ohio, representing a 94 percent coverage rate of all ED visits for Ohio. Anomaly e-mails are automatically generated and sent to local and state public health officials when there is a breach in threshold for a given syndrome or symptom classifier during a 24-hour period at the county and/or state level. The analysis of these anomalies aid in the detection of health events and provide daily situational awareness updates. The purpose of this project was to create a SOG and training presentation on how to investigate these anomalies in the most efficient and timely manner.

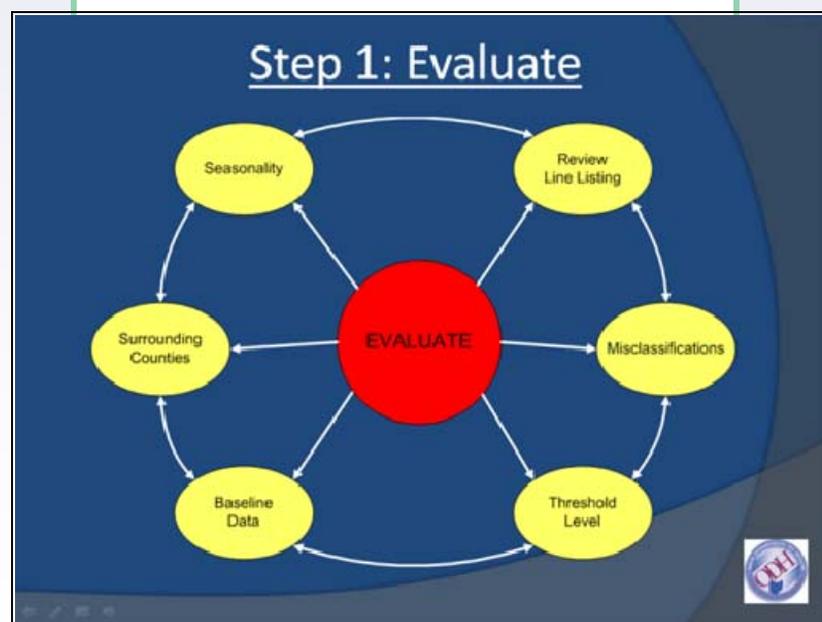
## Methods

Epidemiologists at the Ohio Department of Health (ODH) formed an epidemiology work group consisting

of 10 to 12 local health department representatives of various county population sizes. The work group met via teleconference and webinar on several occasions over a six-month period to discuss and evaluate current, local practices/protocols for the investigation of syndromic surveillance anomalies. Feedback from the members of the work group was collected and used as a foundation for creating a statewide SOG for anomaly investigation. Three caveats with this SOG included: 1) the SOG should be treated as dynamic guidelines versus rigid protocols; 2) the SOG minimize the undue strain on public health and hospital staff and 3) the SOG could be revisited if, at any time, true health events were undetected. The compilations from the work group meetings were used to create a PowerPoint® training presentation that ODH epidemiologists provided to local health departments.

## Results

A four-step process was identified for the investigation of syndromic surveillance anomalies: 1) Evaluate; 2) Gather additional information; 3) Classify and 4) Follow-up. Step 1: “Evaluate” is highlighted in Figure 1 and is generally the most time-consuming step for public health officials.



## **“I Just Got an Anomaly Notification by E-mail. Now What Do I Do?” A Practice-based Approach to Anomaly Investigation—continued**

Steps 2 through 4 involve gathering additional information to corroborate evidence on health event status, classifying the disposition of the anomaly appropriately, and monitoring the continued trends to rule out further spread or early warning signs of a larger outbreak.

### **Conclusions**

ODH epidemiologists will continue to provide training and technical support to local public health officials. The work group will be reconvened in the future to re-evaluate the practicality and validity of the dynamic SOG and training presentation for the investigation of syndromic surveillance anomalies.

Questions: Please contact Bill Storm at [William.Storm@odh.ohio.gov](mailto:William.Storm@odh.ohio.gov)

## **Does Poison Control Center Call Volume Data Correlate with Emergency Department Registration Data? by William E. Storm, MPH; Brian E. Fowler, MPH, Center for Public Health Statistics & Informatics, Ohio Department of Health**

### **Objective**

A correlation analysis was completed to evaluate the relationship between poison control center (PCC) clinical effect classifier data and syndromic surveillance emergency department (ED) symptom and syndrome classifier data.

### **Background**

In 2007, Homeland Security Presidential Directive-21 was created and signed into law as a complement to the Pandemic and All Hazards Preparedness Act. The directive called for state agencies to improve biosurveillance, event detection and tracking, and situational awareness/monitoring. Specific focus was provided for PCC partnerships to improve the early detection, surveillance and investigative capabilities of PCCs for chemical, biological, radiological and nuclear events. [1] Ohio partnered with the Ohio Poison Control

Collaborative, which is comprised of the three poison centers in Ohio, located in Cincinnati, Cleveland and Columbus, to meet this requirement. The partnership allowed for the incorporation of PCC data into Ohio's syndromic surveillance system for real-time monitoring and surveillance. There have been few studies completed to evaluate the relationship between using PCC data as a syndromic surveillance data source and the more traditional data sources, such as hospital emergency department registration data. The purpose of this study was to evaluate this relationship in Ohio.

### **Methods**

*Chief complaint* data from hospital ED and urgent care centers were collected and analyzed from Ohio's syndromic surveillance application, EpiCenter, for 2008. EpiCenter was also used to query clinical effect data from Ohio's three PCCs via a Web service transmission

# Does Poison Control Center Call Volume Data Correlate with Emergency Department Registration Data? continued

through the National Poison Data System for the same time period. These data were combined and a correlation analysis was performed, using Statistical Analysis Software® v9.1 to evaluate the relationship between the two data sets. Due to small counts of daily PCC call volume by specific clinical effects, the data were summed by month for all correlation analyses. Non-parametric procedures (Spearman correlations) were performed to generate correlation coefficients with p-values to assess the significance levels as the data were not normally distributed

## Results

Spearman correlations showed that many of the PCC clinical effect classifiers did not correlate well with the ED and urgent care center chief complaint data; however, there were some instances where the two data types did correlate well ( $r > 0.50$ ). Table 1 displays a table of those relationships with at least borderline significant correlations ( $p < 0.10$ ).

## Conclusions

Based on these results, the data suggest that PCC call volume data, generally, do not correlate well with more traditional syndromic surveillance data sources, such as hospital ED registration data. The inverse correlation with cough ( $r = -0.78$ ,  $p < 0.01$ ) and fever ( $r = -0.52$ ,  $p < 0.10$ ) classifiers suggests that the seasonal trends that are observed annually from hospital ED data do not exist in PCC call data; however, the utility of PCC call data may provide better detection capabilities for diseases or other exposures with non-seasonal patterns that could go undetected using hospital ED data alone. The vision and rash classifiers did correlate well between the two data types as shown in Table 1, suggesting that PCC call volume data may be a complementary data source to corroborate evidence when these types of hospital ED anomalies are generated. Additional analyses will need to be completed to further evaluate this relationship and determine if there are predictive characteristics between these data.

## Reference

[1] PHEP Cooperative Agreement, Budget Period 8: Available at: <http://www.bt.cdc.gov/planning/coopagreement/pdf/fy07announcement.pdf>

**Table 1.** Correlations of Poison Control Center clinical effect data with EpiCenter classifiers.

EpiCenter Classifiers	Poison Control Center Clinical Effects			
	Blurred Vision	Cough	Fever	Rash
Vision	$r = 0.56^*$			
Botulinic	$r = 0.51^*$			
Cough		$r = -0.78 \ddagger$		
Fever			$r = -0.52^*$	
Rash				$r = 0.90 \&$

\* $p < 0.10$ , † $p < 0.05$ , ‡ $p < 0.01$ , § $p < 0.001$

# World Rabies Day



Sept. 28, 2010 is World Rabies Day. Although only a few people in the U. S. die from rabies every year, rabies continues to circulate in wildlife and an estimated 30,000–40,000 people require human rabies post-exposure prophylaxis for potential animal exposures. If untreated, rabies in humans is almost always fatal. Rabies can threaten all members of the family, including pets.

To help address rabies awareness, beginning in 2006, September 28 was declared as World Rabies Day. A dedicated group of people assembled a toolkit to plan outreach efforts for

World Rabies Day events such as rabies vaccination clinics for pets, community runs/walks and grand rounds for health care providers.

The World Rabies Day Web site is now full of resources that educators, veterinarians and local health departments can use to educate the public about rabies prevention throughout the year. It includes pamphlets, PowerPoint presentations, public service announcements, lesson plans, animal bite safety programs and posters. Many materials are also available in Spanish. Please visit the World Rabies Day Web site at <http://www.worldrabiesday.org/>.

## Take steps in your community to “Make Rabies History.”

**IT'S THIS EASY  
TO PICK UP  
RABIES**

DID YOU KNOW...

- RABIES IS A DEADLY DISEASE TRANSMITTED IN SALIVA
- CATS AND DOGS ARE INFECTED WITH RABIES BY WILD ANIMALS EVERY YEAR
- BITES FROM UNVACCINATED PETS AND STRAY ANIMALS CAUSE MANY HUMAN EXPOSURES, BUT RABIES IS A PREVENTABLE DISEASE

Protect yourself, your pet and your community:

- Vaccinate all dogs, cats and ferrets against rabies
- Avoid contact with wildlife and stray animals
- If bitten, wash the wound thoroughly, see your doctor

*Working Together to Make Rabies History!*



WorldRabiesDay.Org

# Invasive Group A Streptococcal Disease Surveillance in Ohio, 2004-2008—by Kimberly D. Machesky, MPH, Infectious Disease Surveillance

## What is Invasive Group A Streptococcal Disease?

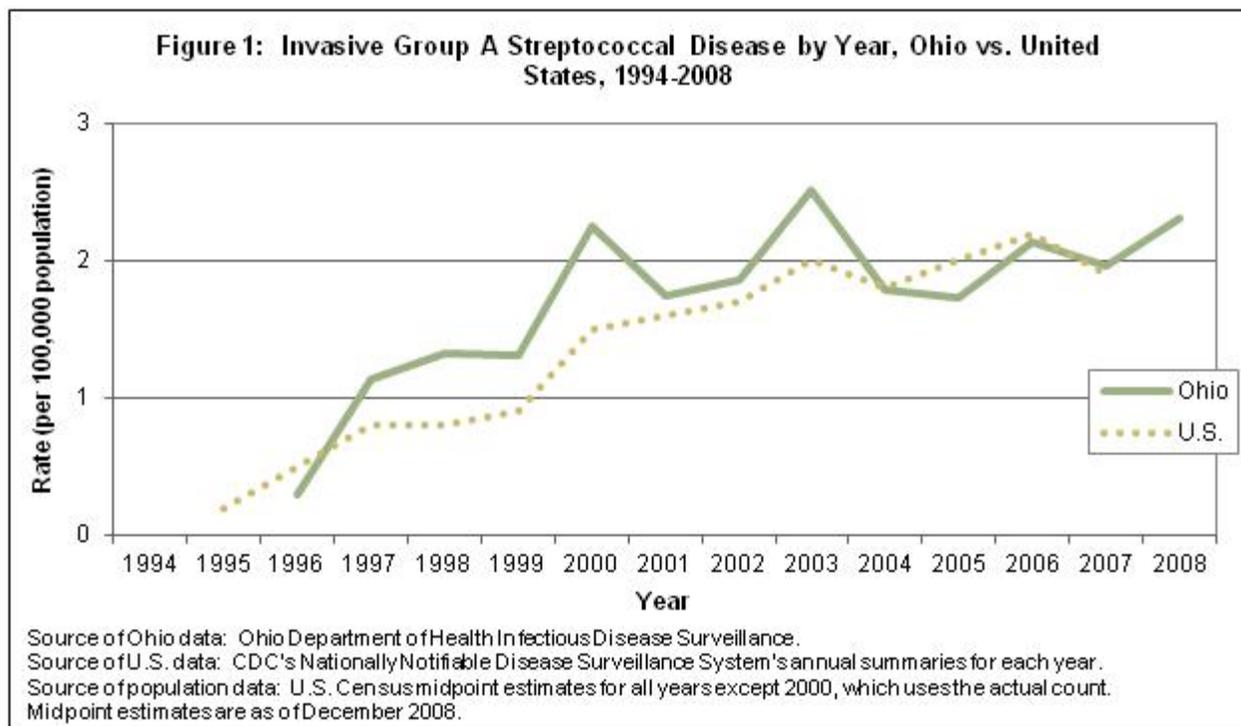
Infection with group A *Streptococcus* can produce a myriad of diseases ranging from mild, such as pharyngitis and impetigo, to moderate, such as scarlet fever and erysipelas, to severe, such as necrotizing fasciitis, meningitis and streptococcal toxic shock syndrome.<sup>1</sup> The majority of group A streptococcal infections are mild, but severe, invasive disease occurs when the bacteria infect normally sterile sites such as the blood, cerebrospinal fluid, bone, joint, muscle or other internal organs.<sup>2</sup>

## Public Health Reporting Requirements

Invasive group A streptococcal disease became nationally notifiable in 1995 and reportable in Ohio in 1996. In Ohio, it is a class B(2) reportable disease, meaning all cases, suspected cases and positive laboratory results are to be reported to the health department by the end of the work week. A confirmed case is defined as a clinically compatible individual with isolation of group A *Streptococcus* by culture from a normally sterile site.<sup>3,4</sup> Although streptococcal toxic shock syndrome is also reportable in Ohio and the United States, the focus of this article is invasive group A streptococcal disease.

## Burden of Invasive Group A Streptococcal Disease

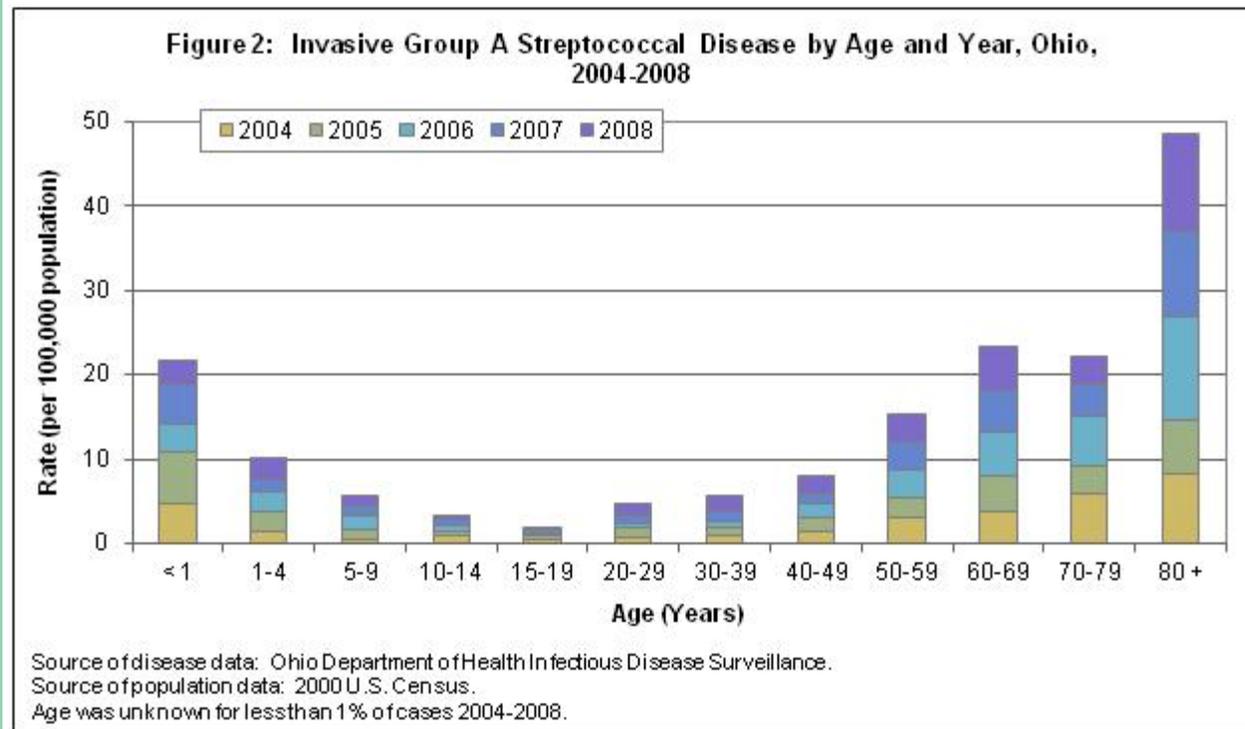
Each year, between 9,000 and 11,500 cases of invasive group A streptococcal disease occur in the U.S., of which 1,000 to 1,800 result in death.<sup>2</sup> Figure 1 demonstrates the incidence rate of invasive group A streptococcal disease rising approximately nine and one-half times in the U.S. since public health surveillance for the condition began. Ohio followed this nationwide upward trend, where the rate of disease increased seven-fold from 1996 to 2008. Moreover, Ohio's incidence rate exceeded the national incidence rate (1997–2003) while rates were comparable from 2004 to 2007.



# Invasive Group A Streptococcal Disease Surveillance in Ohio, 2004-2008—continued

## Demographic Trends

Invasive group A streptococcal disease primarily affects infants and older persons.<sup>5</sup> Figure 2 reveals the highest rate of disease in Ohio occurred among individuals 80 years of age and older from 2004 to 2008. The incidence rate was also higher for infants and adults aged 50 years and older. Ohio's lowest rates of infection were observed among teenagers aged 15 to 19 years.

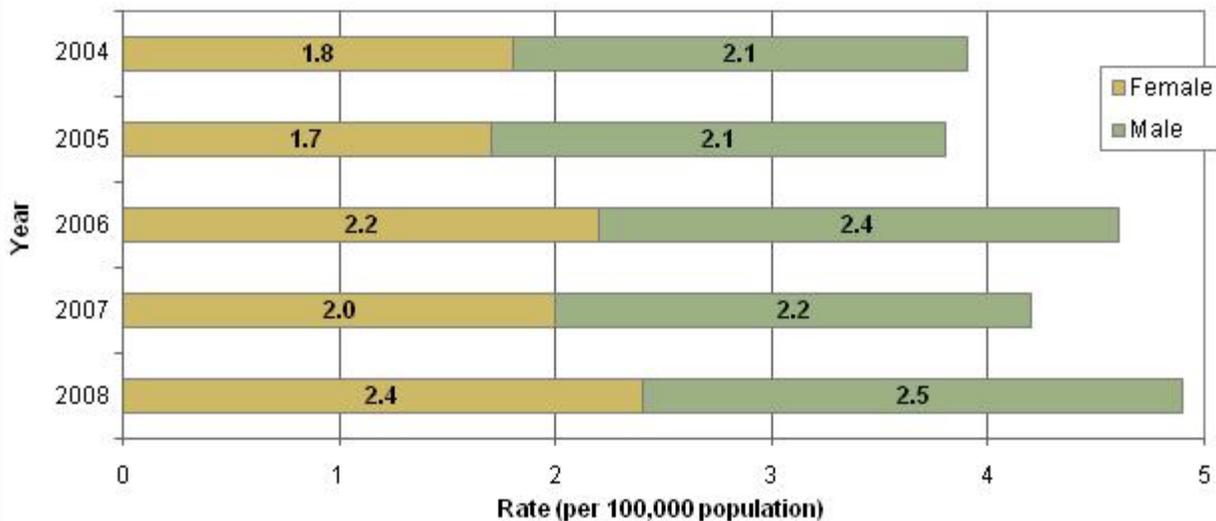


Invasive group A streptococcal disease does not disproportionately affect one sex over the other.<sup>6</sup> However, in Ohio, males had a slightly higher incidence rate compared to females in each year from 2004 to 2008 (Figure 3). The total rate for the five-year period examined was 2.0 cases per 100,000 population among females and 2.3 cases per 100,000 population among males. This slight disparity may reflect a greater prevalence of risk factors among men in Ohio.

Ethnic and racial disparities in invasive group A streptococcal incidence is linked to the social factors that can facilitate the spread and severity of disease such as overcrowding, poverty and inadequate access to medical care.<sup>6</sup> It is unknown how or if social factors influenced the differences observed among races and ethnicities in Ohio. The rate of invasive group A streptococcal disease in Ohio among blacks (2004–2008) was 1.8 times higher than the rate among whites (Figure 4). This disparity remained consistent for each year assessed. Ethnicity was not reported for 77 percent of cases, but among cases where ethnicity was known, Hispanics had rates four times greater than the rates among non-Hispanics (2.0 cases per 100,000 population versus 0.5 cases per 100,000 population, respectively) during the five-year interval. However, the validity of observed trends with respect to ethnicity cannot be interpreted with certainty due to the substantial amount of unavailable data.

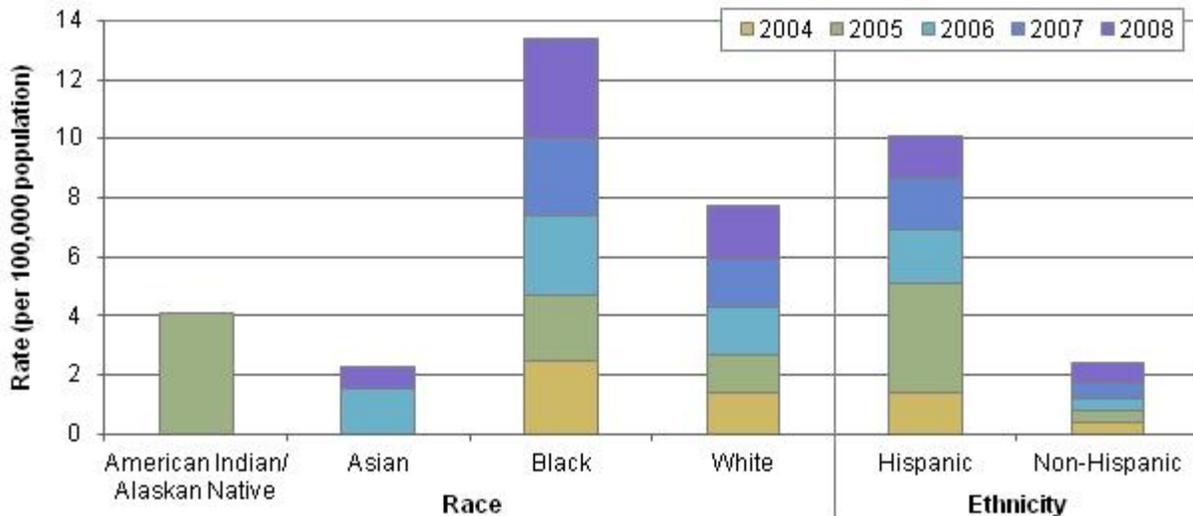
# Invasive Group A Streptococcal Disease Surveillance in Ohio, 2004-2008—continued

**Figure 3: Invasive Group A Streptococcal Disease by Sex and Year, Ohio, 2004-2008**



Source of disease data: Ohio Department of Health Infectious Disease Surveillance.  
 Source of population data: 2000 U.S. Census.  
 Sex was unknown for 2% of cases 2004-2008.

**Figure 4: Invasive Group A Streptococcal Disease by Race/Ethnicity and Year, Ohio, 2004-2008**

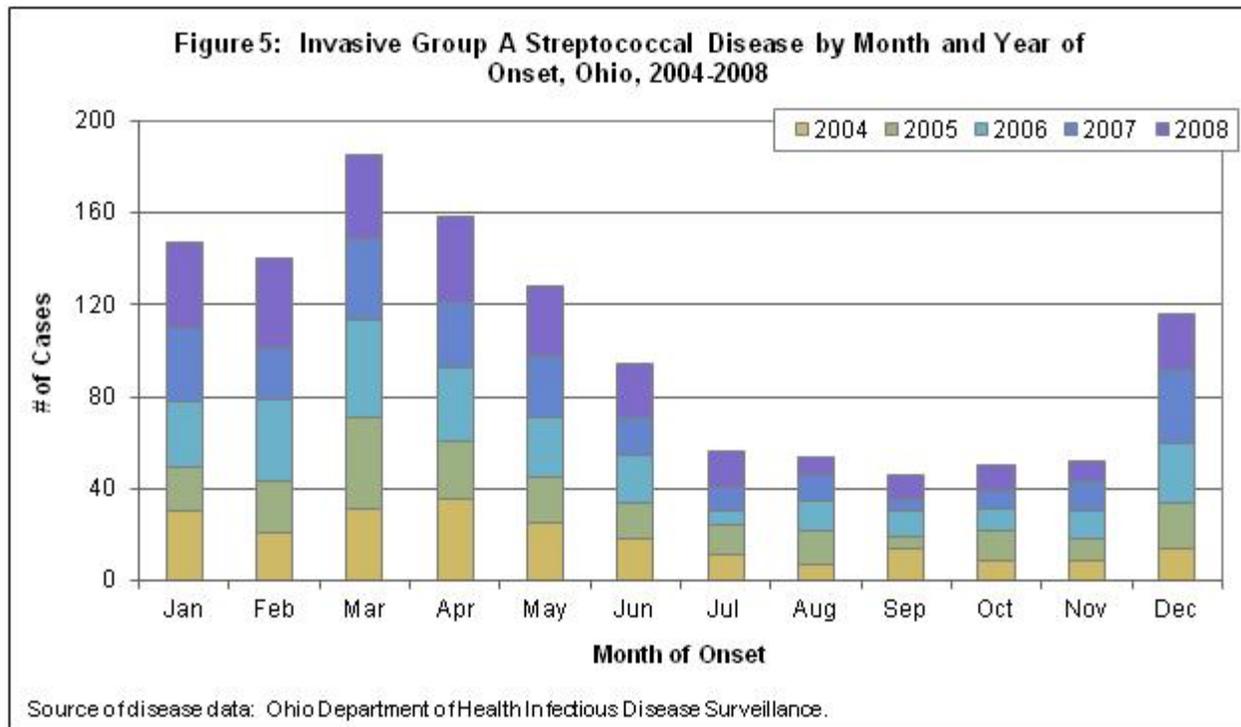


Source of disease data: Ohio Department of Health Infectious Disease Surveillance.  
 Source of population data: 2000 U.S. Census.  
 Race was unknown for 21% of cases and multiracial for 4% of cases; ethnicity was unknown for 77% of cases.

# Invasive Group A Streptococcal Disease Surveillance in Ohio, 2004-2008—continued

## Seasonal Variation

Figure 5 demonstrates the seasonal trends in Ohio's invasive group A streptococcal disease incidence. Incidence in Ohio peaked during the winter and early spring months, particularly in March, while the incidence of disease declined through the late spring and summer months over the five-year period examined.

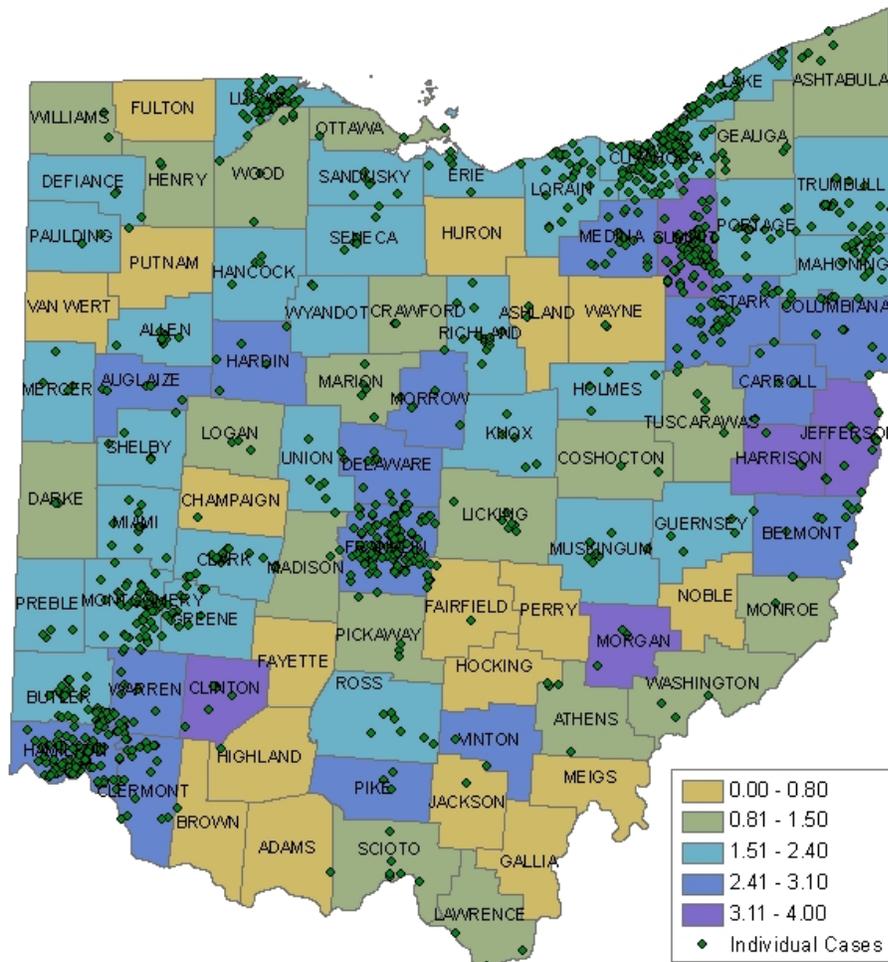


## Geographic Distribution

When observing geographic trends for invasive group A streptococcal disease in Ohio, the largest proportion of cases were concentrated within the urban areas of the state (Figure 6). However, when examining rates of disease, incidence was higher in some rural counties such as Clinton, Harrison, Jefferson and Morgan. Overall, incidence rates by county ranged from less than 1.0 to 4.0 cases per 100,000 population.

# Invasive Group A Streptococcal Disease Surveillance in Ohio, 2004-2008—continued

**Figure 6: Invasive Group A Streptococcal Disease by County, Ohio, 2004-2008**



Rates are per 100,000 population.

Source of disease data: Ohio Department of Health Infectious Disease Surveillance.

Source of population data: 2000 U.S. Census.

## Conclusion

The incidence of invasive group A streptococcal disease has risen in Ohio and the United States over the past decade. In Ohio, this emerging disease most often affected adults 80 years of age and older, infants and blacks over the time period studied. In addition, the majority of cases occurred during late winter/early spring and in and around the urban areas of the state. Incidence rates were higher in some rural counties due to the smaller population (denominator) variable.

# Invasive Group A Streptococcal Disease Surveillance in Ohio, 2004-2008—continued

The most effective way to prevent group A streptococcal infections is through diligent hand washing, especially after sneezing or coughing and preparing and consuming foods.<sup>2</sup> Several vaccines to prevent group A streptococcal infections are being researched with the goal of reversing this rising trend.<sup>7</sup> Such a primary prevention intervention can prove especially important for those most affected by invasive disease.

For a detailed report on invasive group A streptococcal disease surveillance trends in Ohio, please click on the following link: <http://www.odh.ohio.gov/healthStats/disease/idann/toc.aspx>.

## References

1. Streptococcal Disease Caused by Group A (Beta Hemolytic) Streptococci. In: Heymann DL, ed. *Control of Communicable Diseases Manual*, 18<sup>th</sup> ed. Washington, DC: American Public Health Association; 2004: 507-514.
2. Center for Disease Control and Prevention National Center for Immunization and Respiratory Diseases, Division of Bacterial Diseases. Group A Streptococcal Disease. April 3, 2008. Available at: [http://www.cdc.gov/ncidod/dbmd/diseaseinfo/groupastreptococcal\\_g.htm](http://www.cdc.gov/ncidod/dbmd/diseaseinfo/groupastreptococcal_g.htm). Accessed December 15, 2008.
3. Ohio Department of Health. *Streptococcus*, Group A, Invasive Disease. In: *Infectious Disease Control Manual*. 2009; 1-5. Available at: <http://www.odh.ohio.gov/pdf/idcm/strpa.pdf>. Accessed January 9, 2009.
4. Center for Disease Control and Prevention National Center for Public Health Informatics, Division of Integrated Surveillance Systems and Services. Case Definitions for Infectious Conditions Under Public Health Surveillance: *Streptococcus* Disease, Invasive, Group A (*Streptococcus pyogenes*). January 9, 2008. Available at: [http://www.cdc.gov/ncphi/diss/nndss/casedef/streptococcosa\\_current.htm](http://www.cdc.gov/ncphi/diss/nndss/casedef/streptococcosa_current.htm). Accessed December 15, 2008.
5. American Academy of Pediatrics. Group A Streptococcal Infections. In: Pickering LK, Baker CJ, Long SS, McMillan JA, eds. *Red Book: 2006 Report of the Committee on Infectious Diseases*, 27<sup>th</sup> ed. Elk Grove Village, IL: American Academy of Pediatrics; 2006: 610-620.
6. Gray BM. Streptococcal Infections. In: Evans AS, Brachman PS, eds. *Bacterial Infections of Humans: Epidemiology and Control*, 3<sup>rd</sup> ed. New York, NY: Kluwer Academic/Plenum Publishers; 1998: 673-711.
7. World Health Organization Department of Child and Adolescent Health and Development, Department of Immunization, Vaccines and Biologics. Group A Streptococcal Vaccine Development: Current Status and Issues of Relevance to Less Developed Countries. In: *Discussion Papers on Child Health*. 2005. Available at: [http://www.who.int/child\\_adolescent\\_health/documents/ivb\\_05\\_14/en/index.html](http://www.who.int/child_adolescent_health/documents/ivb_05_14/en/index.html). Accessed June 19, 2009.

**Quarterly Summary of Selected Reportable Infectious Diseases**  
**First Quarter, 2010\***  
**January 3, 2010 – March 27, 2010**

Reportable Condition	Quarter	Year
Amebiasis	5	5
Botulism, Infant	1	1
Campylobacteriosis	199	199
Coccidioidomycosis	5	5
Creutzfeldt-Jakob Disease (CJD)	6	6
Cryptosporidiosis	68	68
Cytomegalovirus, Congenital	5	5
Dengue	5	5
<i>Escherichia coli</i> O157:H7	7	7
<i>Escherichia coli</i> , Shiga Toxin-Producing, Unknown Serotype	3	3
Giardiasis	192	192
<i>Haemophilus influenzae</i> , Invasive Disease	27	27
Hepatitis A	10	10
Hepatitis B, Acute	32	32
Hepatitis B, Chronic	477	477
Hepatitis C, Acute	2	2
Hepatitis C, Past or Present	1,686	1,686
Influenza-Associated Hospitalization	121	121
Legionellosis	43	43
Listeriosis	2	2
Lyme Disease	5	5
Malaria	9	9
Meningitis, Aseptic	120	120
Meningitis, Other Bacterial	20	20
Meningococcal Disease	9	9
Mumps	4	4
Pertussis	238	238
Salmonellosis	186	186
Shigellosis	60	60
<i>Staphylococcus aureus</i> , Intermediate Resistance to Vancomycin (VISA)	1	1
Streptococcal Disease, Group A, Invasive	63	63
Streptococcal Disease, Group B, in Newborn	8	8
Streptococcal Toxic Shock Syndrome (STSS)	5	5
<i>Streptococcus pneumoniae</i> , Invasive Disease, Drug Resistant/Intermediate	102	102
<i>Streptococcus pneumoniae</i> , Invasive Disease, Drug Susceptible/Unknown	286	286
Typhoid Fever	3	3
Varicella	379	379
Yersiniosis	14	14
<b>Total</b>	<b>4,408</b>	<b>4,408</b>

\* 2010 data include confirmed, probable and suspected cases reported to the 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 for all cases. This report includes only Class A and B 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 April 3, 2010.

Source: Ohio Department of Health Infectious Disease Surveillance.

**Diagnoses of HIV infection in 2008 and reported persons living with a diagnosis of HIV infection as of Dec. 31, 2008, Ohio – Data reported through Dec. 31, 2009**

**Diagnoses of HIV Infection in 2008**

HIV Diagnoses		AIDS Diagnosis		Total Diagnoses of HIV Infection	
No.	%	No.	%	No.	%
992	86%	162	14%	1,154	100%

Note: Diagnoses of HIV infection 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.

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

**Reported persons living with a diagnosis of HIV Infection as of Dec. 31, 2008**

Reported persons living with HIV		Reported persons living with AIDS		Total reported persons living with a diagnosis of HIV Infection	
No.	%	No.	%	No.	%
8,410	53%	7,354	47%	15,764	100%

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

**Quarterly Summary of Sexually Transmitted Diseases, Ohio**  
**First Quarter, 2010\***  
**January 1, 2010 - March 31, 2010**

SEXUALLY TRANSMITTED DISEASES	2010		2009	
	QUARTER	YEAR	QUARTER	YEAR
CHLAMYDIA	12,539	12,539	12,360	48,420
GONORRHEA	3,955	3,955	3,817	16,065
SYPHILIS	205	205	184	796
<b>TOTAL</b>	<b>16,699</b>	<b>16,699</b>	<b>16,361</b>	<b>65,281</b>

\* 2010 data include only confirmed cases, except for gonorrhea, which includes confirmed and suspected cases reported to the 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 incomplete but current as of June 18, 2010.

Source: Ohio Department of Health STD Surveillance

**Quarterly Summary of Tuberculosis Cases, Ohio**  
**First Quarter, 2010\***  
**January 1, 2010 - March 31, 2010**

	2010		2009	
	QUARTER	YEAR	QUARTER	YEAR
TUBERCULOSIS	32	32	32	180

\* 2010 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 June 18, 2010.

Source: Ohio Department of Health TB Surveillance

# ID Quarterly Announcements--Summer 2010

## Updated Immunization Requirements for School Entry

The Director's Journal Entry that details the immunizations required for school enrollment in Ohio was revised to more closely reflect recommendations of the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices (ACIP). The major changes for the 2010-11 school year are:

- Addition of a Tdap (tetanus, diphtheria, pertussis) booster requirement for 7<sup>th</sup> grade
- Addition of the 2<sup>nd</sup> dose of varicella (a progressive requirement starting with kindergarten for 2010) and
- Requirement that the 4<sup>th</sup> dose of polio be administered on or after the 4<sup>th</sup> birthday

For more information, please call the ODH Immunization Program at 614-466-4643 or visit the Immunization Program Web site at <http://www.odh.ohio.gov/odhPrograms/dis/immunization/immindex1.aspx>.

## Teen Immunizations

Teenagers need immunizations too. Local health districts across Ohio initiated a number of activities to promote the need for teen immunizations through observing **June Teen Immunization Month**. The U.S. Centers for Disease Control and Prevention recommend immunizations for 11–18 year olds against tetanus, diphtheria, pertussis (whooping cough), measles, mumps, rubella, meningococcal disease, influenza, hepatitis B, chickenpox and human papillomavirus. Consider what steps you can take to ensure teens that you know are fully immunized. Send someone you know a Health-e-card to educate about the need for teen immunizations. Go to <http://www2a.cdc.gov/ecards/index.asp> to access Health-e-cards designed by the CDC. Contact the ODH Immunization Program at (641) 466-0261 for more information about teen immunizations.

## World Hepatitis Day



The global observance of **World Hepatitis Day** was on May 19, 2010. One in twelve people worldwide is living with either chronic hepatitis B or chronic hepatitis C, yet most are unaware of their infection(s). Also, general awareness of chronic viral hepatitis is low, even though the prevalence is higher than that of HIV. The aim of this international day focusing on chronic viral hepatitis is to raise awareness of these diseases within the general population, people at risk, health care providers and governments.

- For more information on the global campaign, please visit <http://www.worldhepatitisalliance.org>.
- For information on planning efforts in the United States, please visit <http://www.NVHR.org>.

## ODH is Using Social Media



You can now follow the Ohio Department of Health on Facebook and Twitter. You can access links on the ODH Web site at <http://www.odh.ohio.gov/>.

## **National Immunization Awareness Month**

August is recognized as National Immunization Awareness Month, a time to make an extra effort to increase awareness about immunizations across the life span, from infants to the elderly. August is the month when parents, students and immunization providers are preparing for the upcoming school year—as well as the upcoming influenza season. Communities are encouraged to plan health screenings, media events or other outreach efforts to promote the benefits of immunization. For information and links to resources for outreach efforts, visit the U.S. Centers for Disease Control and Prevention’s National Immunization Awareness Month Web page at <http://www.cdc.gov/vaccines/events/niam/default.htm> .

## **Ohio’s Immunization Rates**

The CDC released the results of the 2008 National Immunization Survey (NIS) in the fall of 2009. The primary measure that CDC reported for the 2008 NIS is the 4:3:3:1:3:1 vaccination series for children aged 19-35 months of age. The series completion rate for this series in the U.S. was 76.1 percent, which represented a decrease of 1.3 percent from the 2007 NIS results.

The news for Ohio is good. The 4:3:1:3:3:1 rate for Ohio was 81.8 percent, representing an increase of 4.1 percent from the 2007 rates. The 2008 NIS shows that Ohio has the third highest coverage for all states! The five states with the highest coverage are:

Massachusetts	82.3±5.6
Louisiana	81.9±4.6
Ohio	81.8±6.1
Tennessee	81.2±5.4
New Hampshire	81.0±5.2

Ohio also fared well for the 4:3:1:3:3:1:4 series. For children aged 19-35 months, the coverage rate for Ohio was 71.5 percent, which represents an increase of 7.0 percent from the 2007 results. This compares to a national rate of 68.4 percent.

The increase in rates for Ohio is wonderful news for Ohio’s children and for all those who have worked tirelessly for years to improve immunization rates in Ohio. But, as the goal is to ensure that 90 percent of children are immunized on time, there is still much work to be done.

## **PulseNet Award**

PulseNet is the name of the National Molecular Subtyping Network for Foodborne Disease Surveillance located in the Enteric Diseases Laboratory Branch (EDLB) of the Centers for Disease Control and Prevention (CDC). Laboratories participating in PulseNet perform standardized procedures to determine the characteristics of the DNA of bacterial agents linked to food borne illnesses. The DNA data is evaluated and then uploaded to a national database. This enables the DNA of suspect bacterial isolates to be compared on a national level thus helping to identify and track food borne illnesses across the country.

Each year, the EDLB/CDC and Association of Public Health Laboratories (APHL) presents the PulseStar Award for Outstanding Achievement in PulseNet. The award recognizes those individuals whose outstanding contributions to

PulseNet during the previous year resulted in significant improvements to the procedures (either laboratory or computer) or communications involved with PulseNet.

The criteria for selecting candidates is as follows: candidates will have shown excellence in science in public health, domestic or international, at the state, federal or local level; candidates' work will have been associated with PulseNet performing work related to laboratory, computer or programmatic activities; candidates may be nominated by anyone who is in a position to evaluate the work of the nominee and the contribution of the work towards improving public health; the awards committee consists of representatives of EDLB/CDC; CDC personnel are not eligible to receive PulseStar awards.

The Ohio Department of Health Laboratories (ODHL) is pleased to announce that Eric Brandt, Laboratory Scientist 2 at the ODHL, is the recipient of the PulseStar Award for Outstanding Achievement in PulseNet. Eric was recognized at the PulseNet Annual Meeting held from Sept. 22–25, 2009 in Snowbird, Utah. Eric is a dedicated and knowledgeable laboratory scientist with a background in food microbiology. PulseNet requires individuals to achieve and maintain certification in order to upload data to the national database. Eric is PulseNet certified in nearly every category. He completes an annual certification to maintain his status with PulseNet and regularly receives exceptional comments from the CDC on the quality of the work he submits. Most recently, Eric participated in assisting PulseNet with the update of the Pulsed Field Gel Electrophoresis (PFGE) protocol for **Listeria monocytogenes**, a major agent of concern related to food borne illnesses. He maintains frequent communication with the PulseNet at CDC and the regional PulseNet laboratory located in Michigan. He also works closely with the multiple-locus variable-number tandem repeat analysis laboratory at CDC to further differentiate clusters. Eric has assisted with the detection of numerous *Salmonella* and *E. coli* O157:H7 PulseNet clusters during this period. His work has been closely associated with *E. coli* O157:H7 cluster investigations that led to major food recalls by the U.S.D.A. Our state Epidemiology unit is in daily contact regarding local and regional cluster detection based on Eric's PFGE findings; Eric's work has been vital in local outbreak detection and elimination.



**Congratulations to Eric on receiving the  
PulseStar Award for Outstanding  
Achievement in PulseNet for 2009!**



**ODH Infectious Diseases Quarterly** is published by the Bureau of Infectious Disease Epidemiology and Surveillance of the Ohio Department of Health.

Director of Health: Alvin Jackson, MD

Chief of the Division of Prevention: Roger Suppes, RS, MPH

Chief of the Bureau of Infectious Disease Epidemiology and Surveillance : Sietske de Fijter, 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](mailto:amy.bashforth@odh.ohio.gov)

or call 614-466-0261.

Ohio Department of Health

Bureau of Infectious Disease Epidemiology and Surveillance

246 North High Street

Columbus, OH 43215

<http://www.odh.ohio.gov>