

McHenry County Pertussis Outbreak 2011

Pertussis Information

Pertussis, also known as whooping cough, is a highly contagious respiratory disease caused by the bacterium *Bordetella pertussis*. Pertussis, historically known as the “100 day cough”, is known for uncontrollable, violent coughing which often makes it hard to breathe. After fits of many coughs, someone with pertussis often needs to take deep breathes which result in a "whooping" sound. Pertussis most commonly affects infants and young children and can be fatal, especially in babies less than 1 year of age. In 2010, 9,143 cases of pertussis were reported throughout California, this included ten infant deaths.

Culture (the gold standard) and PCR testing is the most accurate method using a nasopharyngeal aspirate or nasopharyngeal dacron swab.

Pertussis Outbreak patterns

Even with the success of vaccines, Pertussis is an endemic (common) disease in the United States. Over the past 5 years, between 10,000 and 27,000 cases have been reported each year across the U.S., with periodic epidemics every 3 to 5 years. Outbreaks in daycare centers, schools or hospitals, are common, taking place each year in many states. According to the CDC, this pattern of epidemics every 3 to 5 years is not completely understood, but that's why it's important that everyone get vaccinated. The DTap is given to infants and children and Tdap is available for anyone over the age of 11. As of 2011, Tdap is required for school attendance beginning in sixth grade. For adults, Tdap is recommended as a onetime replacement for the Td (tetanus) vaccine. If it weren't for vaccines, we'd see many more cases of whooping cough.

McHenry County has had outbreaks in 2004 (191 cases) and 2009 (51 cases). After an outbreak peaks, it can take many months for the case number to return to normal. McHenry County normally has 10 to 20 cases reported per year.

Overview of McHenry County Outbreak

On September 12, two cases of pertussis in Cary Grove High school students were reported to the Communicable Disease program. This raised concern, as it could signal a potential outbreak and, as a result, control measures were implemented by the McHenry County Department of Health (MCDH). Initially, the cases were centered in the High School cheerleading squad. Cases then spread to the football team, cross country team and band. Cases then were reported in an elementary school and middle school in Cary. Since MCDH first announced 8 cases of pertussis or whooping cough on October 14, the outbreak has risen to 145 cases in 6 weeks ranging in age from 3 months to 37 years old in 13 communities. Twenty-nine (29) schools, from elementary, middle, high school and college age,

have reported cases. The majority of cases have had mild illness and there have been no hospitalizations at this time.

Additional data on the outbreak is provided below.

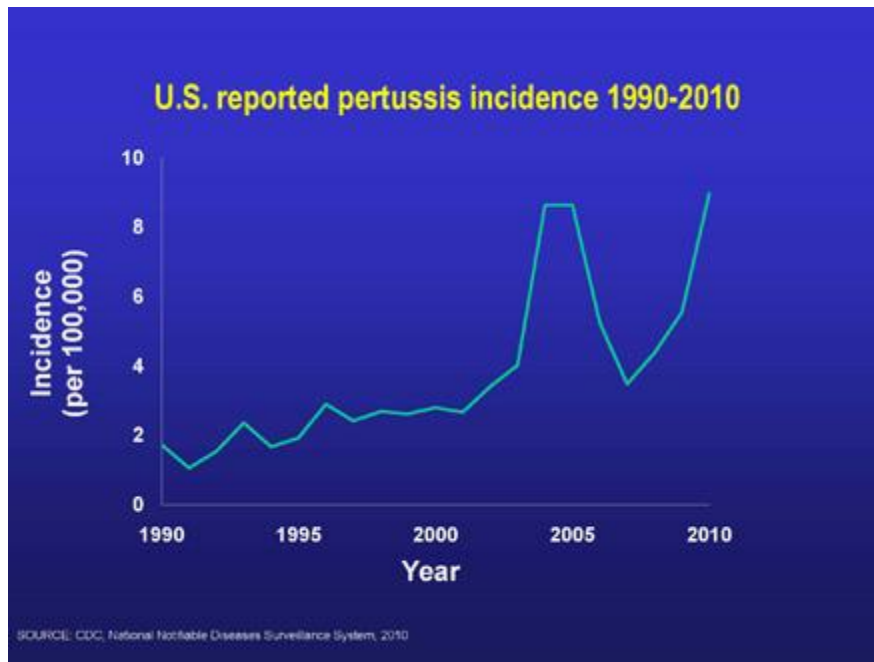
McHenry County Department of Health Response to Outbreak

Since the initial report of cases at Cary Grove, the Communicable Disease Program has instituted measures to control the outbreak with the primary goal being to decrease the number of cases and to prevent death among infants. Control measures taken include:

- Phone calls to every reported case to complete a case investigation form, obtain names of people that may have been exposed, assure treatment, and to provide education
- Mass emails to county physicians, emergency rooms and immediate care with notification and updates on case numbers, guidelines and recommendations, clinic information, and current Communique newsletter on Pertussis
- Mass emails to school nurses with notification and updates on case numbers, school specific guidelines and recommendations, clinic information, and current Communique newsletter on Pertussis
- Communicating with school nurses on an almost daily basis to address questions, clarify guidelines, and brainstorm problems which arise
- Contacting Infection Control Practitioners at Centegra, Mercy and Advocate Good Shepherd to update them on the outbreak and provide them with guidelines to institute control measures within their hospitals.
- Posting current information and guidelines on the MCDH website, with pages specifically for health care providers and for school nurses as well as the general public. Much of the information is also offered in Spanish.
- Sending out press releases for the general public with information on prevention and vaccination, as well as information on walk in vaccination clinics
- Participating in conference calls with Illinois Department of Public Health and local physicians
- Partnering with Dominick's pharmacy to provide walk in clinics at sites around the county for Tdap vaccinations. Dominick's has lowered its price to \$50 and MCDH has been providing vaccinations to uninsured and Medicaid clients. Three clinics have been offered; one is scheduled at MCC on Dec.1.
- Offering Tdap to uninsured and Medicaid clients in other MCDH clinics in the county including churches and Migrant council.

Data

CDC, 2011

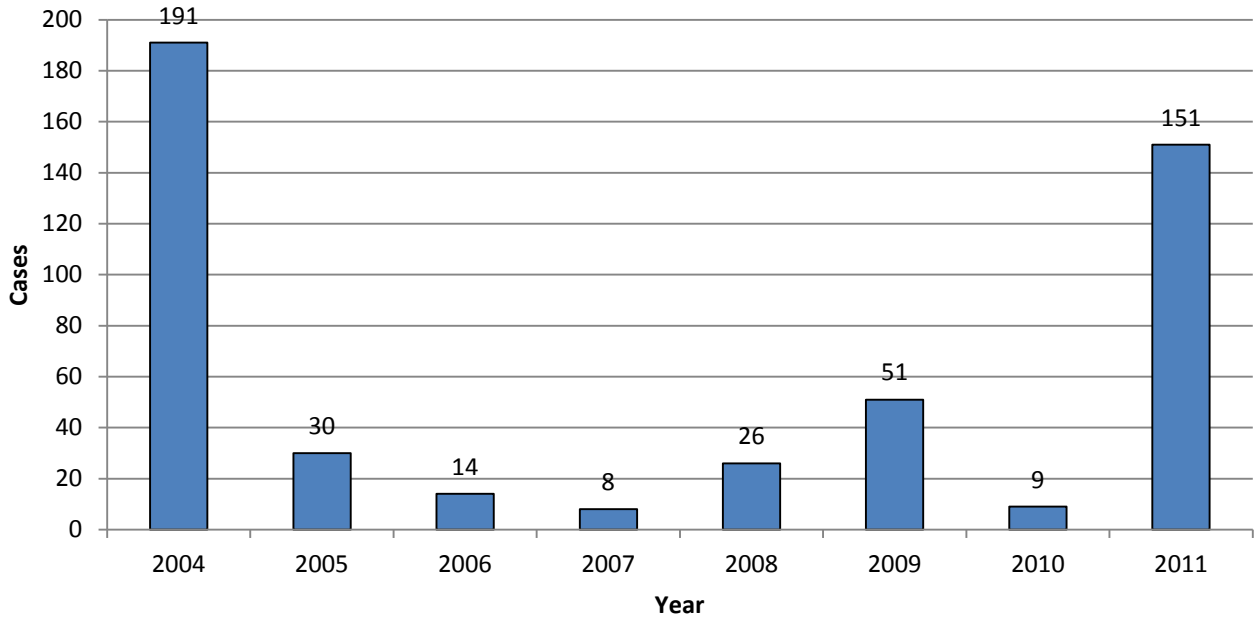


The incidence of reported pertussis began increasing in the 1980s. In 2009, the incidence of reported pertussis was 5.54 per 100,000 persons (CDC, unpublished data). While the reasons for this increase are not fully understood, multiple factors have likely contributed to the increase including;

- Decreasing immunity in teens and adults. Many have not yet gotten their Tdap vaccine booster.
- Unvaccinated children. Parents who opt out of vaccinating their children create pockets of vulnerability in the community.
- Change in pertussis testing. A newer test, called a PCR, has become the dominant method of testing and most likely more cases are being detected than would have been in the past.
- increased recognition of the disease
- increased reporting

The incidence of pertussis remains highest among young infants

**McHenry County
Reported Pertussis Cases
2004 - November 18, 2011**



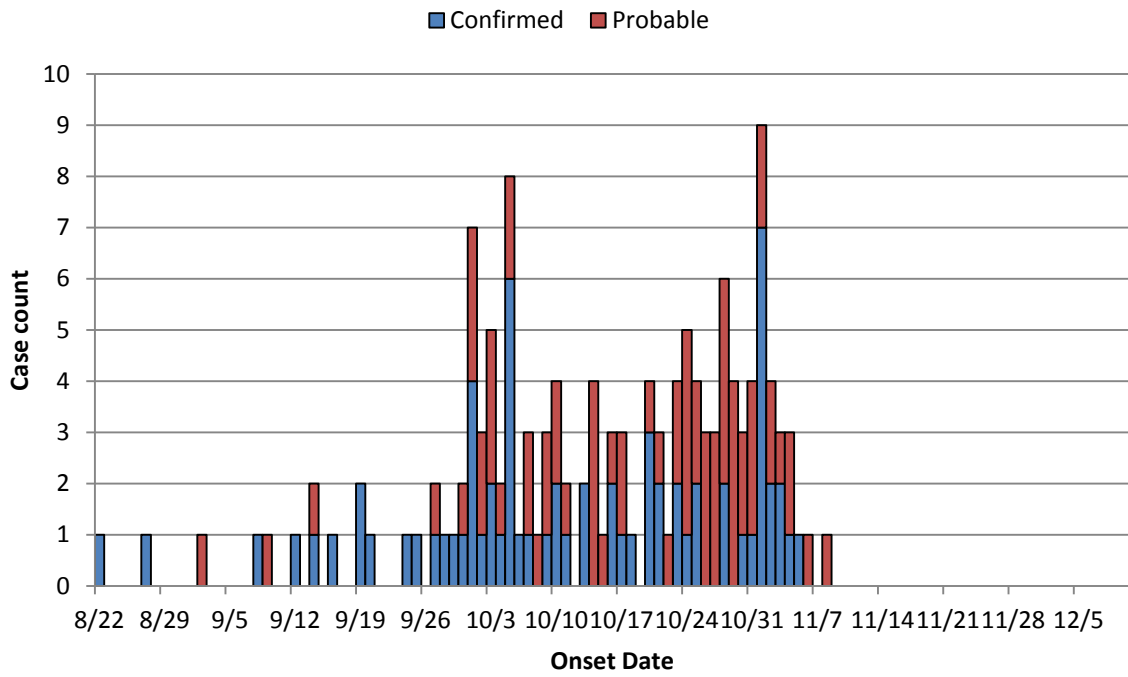
2011 State Cases As of 11/17/11 *Data is provisional*

Confirmed: 671

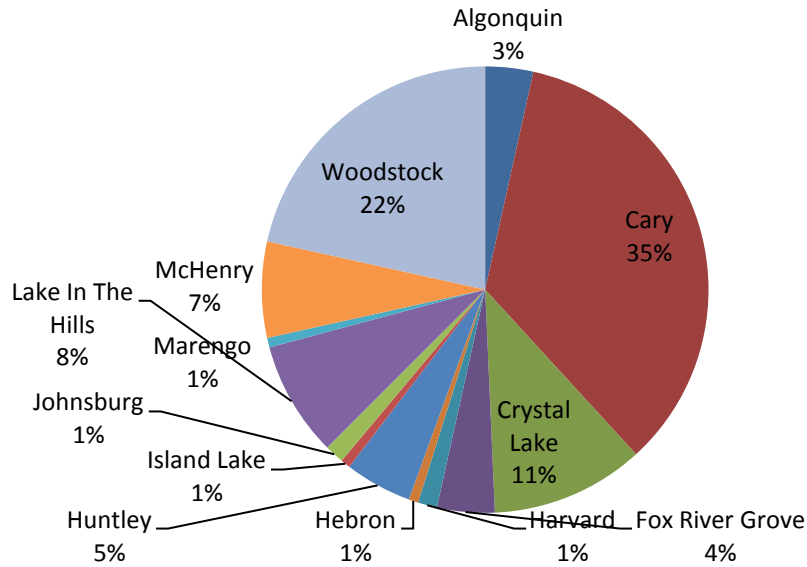
Probable: 157

Total: 828

Pertussis Outbreaks Aug 22 - Nov 30, 2011 Epidemic Curve



**Pertussis Outbreak
City of Residence Distribution of All Reported
Cases
Aug 22, 2011 - Present**



**Pertussis Outbreak
Age Distribution of All Reported Cases
Aug 22, 2011 - Present**

