

Scott Walker
Governor

Kitty Rhoades
Secretary



State of Wisconsin

Department of Health Services

DIVISION OF PUBLIC HEALTH

1 WEST WILSON STREET

P O BOX 2659
MADISON WI 53701-2659

Telephone: 608 266-1251
FAX: 608 267-2832
dhs.wisconsin.gov

Annual Summary of Reported Pertussis, 2012, Wisconsin April 30, 2013

Using information reported to the Wisconsin Division of Public Health (DPH) via the Wisconsin Electronic Disease Surveillance System (WEDSS), this report summarizes pertussis case occurrence in Wisconsin during 2012.

DEFINITIONS

Case: An acute cough illness, with a completed investigation, meeting the CDC/CSTE case definition for confirmed or probable pertussis. CDC/CSTE definitions: <http://www.cdc.gov/pertussis/surv-reporting.html#case-definition>.

SUMMARY OF CASES

- As of April 29, 2013, 6,462 cases (4,685 confirmed and 1,777 probable) of pertussis with illness onsets during 2012 have been reported among Wisconsin residents (incidence = 113.3 cases per 100,000). During the first 12 months of the current statewide outbreak (July 1, 2011 through June 30, 2012), 4963 confirmed and probable cases were reported (incidence = 87 cases per 100,000). During the previous 12 months (July 1, 2010 through June 30, 2011) 659 cases were reported (incidence = 11.6 cases per 100,000). **See Figure 1.** Note: Additional cases may have occurred during recent weeks that have not been completely investigated or reported to DPH.
- The recent reported pertussis activity is the most observed since the large pertussis outbreak that occurred during 2004-05. More than 5,600 reported cases occurred during 2004. **See Figure 2.**
- All 72 Wisconsin counties reported at least one case during 2012. The greatest number of cases occurred in Milwaukee, Dane, and Waukesha Counties. County specific reported incidence of pertussis was greatest in Forest, Lincoln, Oneida and Columbia Counties. **See Figure 3.**
- Median age at cough onset was 12.3 years (range: <1 month to 91 years). Approximately half of all cases in each public health region occurred among children and adolescents aged 5 to 14 years. In the Southern region, 29% of cases were among adults aged ≥ 20 years. **See Figure 4.**
- In each public health region, the incidence of pertussis was highest among children aged <1 year and children aged 10 to 14 years. Although the largest number of cases occurred in the Southeastern region, the incidence of pertussis was highest in the Northern region, most notably among children aged 10 to 14 years and children aged <1 year. **See Figure 5.**
- Among case patients, 110 (1.8%) had reported hospitalizations. The median length of stay was 3 days (range: 1 to 27 days) and the median age of hospitalized case patients was 5 months (range: <1 month to 89 years).
- Non-Hispanic whites had the highest incidence of any racial/ethnic group (79.8 per 100,000), followed by Hispanic whites (68.7), American Indian/Alaskan Natives of non-Hispanic or Hispanic ethnicity (68.5) and Asians of non-Hispanic or Hispanic ethnicity (46.6). However, 27% of all cases did not have race and ethnicity specified.
- Among case patients aged ≤ 10 years, 73% were up to date for age with pertussis immunizations before cough onset. Additionally, 79% of case patients aged 11 to 18 years had reportedly received Tdap before cough onset.
- Vaccination against pertussis provided significant protection, but only during the years immediately following vaccination. Among Wisconsin children becoming age 5 years during 2012, the rate of reported pertussis was approximately 4 times higher among those who had received 0 doses of DTaP compared to those who were fully vaccinated (had received 5 doses of DTaP). Among children who had received 5 doses of DTaP, the incidence of pertussis increased with increasing time since last dose of DTaP. Similarly, among Wisconsin children becoming age 11 or 12 years during 2012, the rate of reported pertussis was significantly higher among those who had not received Tdap compared to those who had received Tdap. (Source of population immunization information: Wisconsin Immunization Registry.)
- Among 367 children aged <1 year with reported cases of pertussis, 64.6% were aged <6 months at cough onset, 3 (<1%) died, and 60 (16%) were hospitalized (for a median 4 days). Additionally, 55% were up to date for age

with pertussis immunizations, 17% were too young for immunization, 17% were under-immunized for age, and 11% were age-eligible for another dose but not delayed.

Figure 1. Number of reported confirmed and probable cases of pertussis by week of cough onset, Wisconsin, January 1, 2011 through December 31, 2012

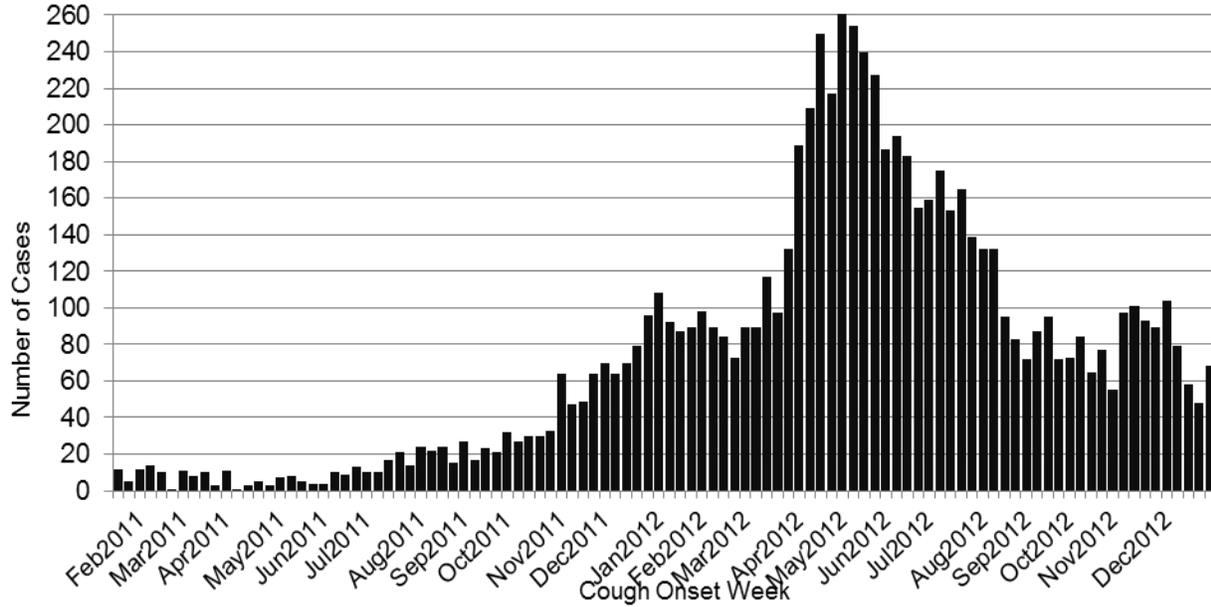


Figure 2. Number of reported confirmed and probable cases of pertussis by month and year of cough onset, Wisconsin, January 1, 2004 through December 31, 2012

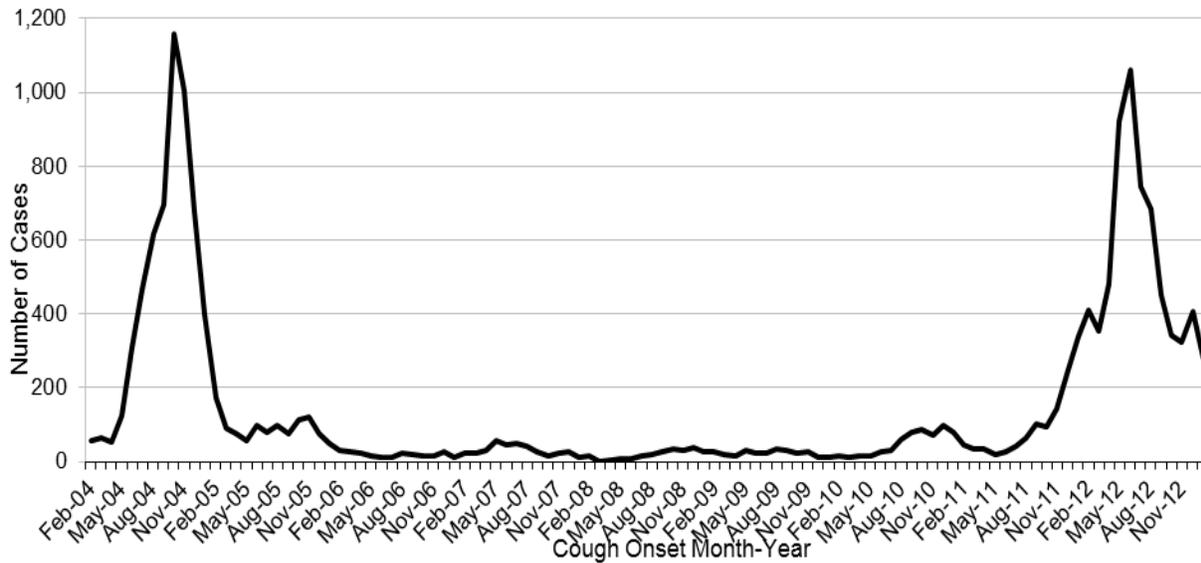
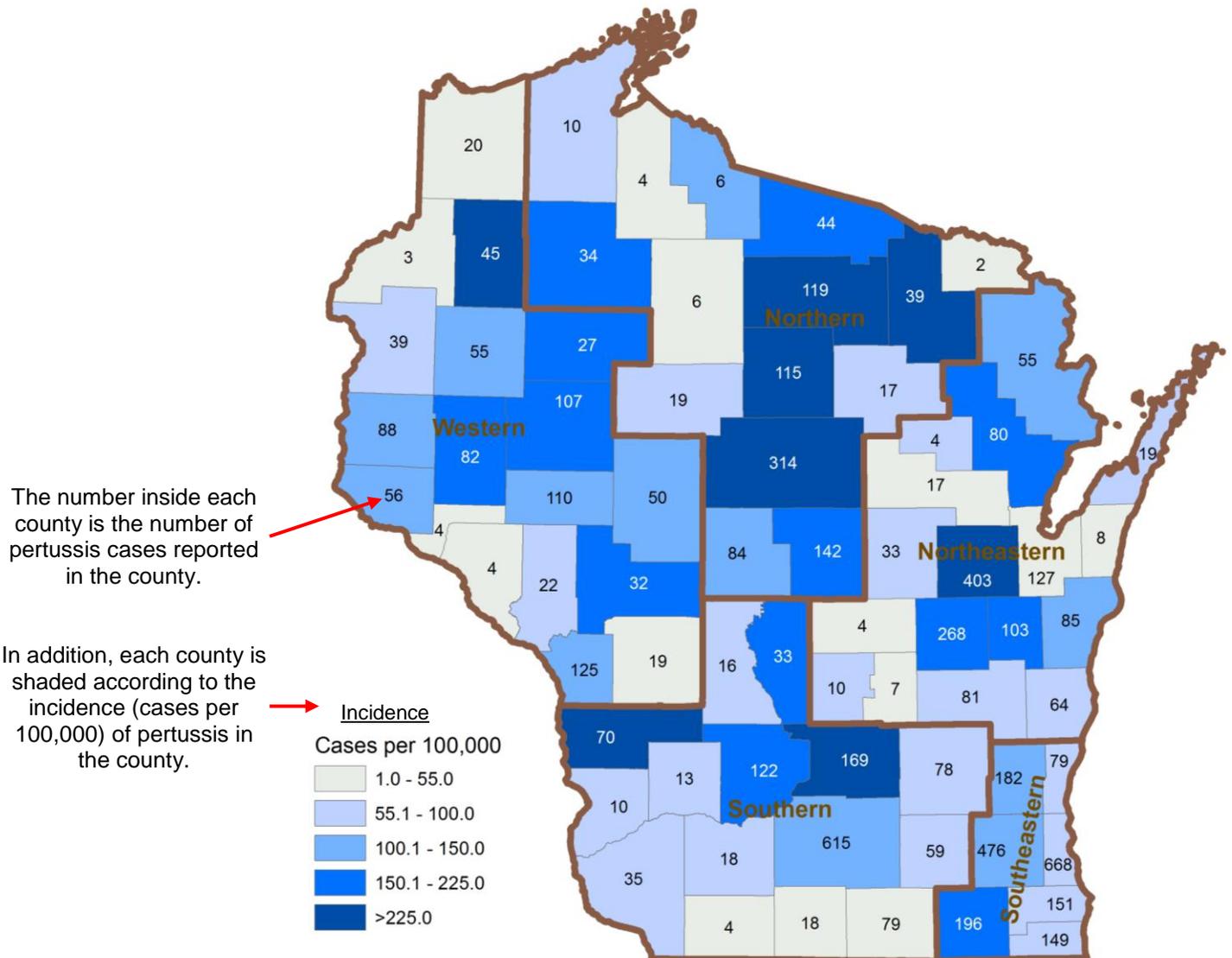


Figure 3. Number and interval incidence* of reported confirmed and probable cases of pertussis, by county of residence, Wisconsin, January 1, 2012 through December 31, 2012 (N=6,462)



*Interval incidence is the number of cases reported during the specified time interval per 100,000 persons

Figure 4. Number of reported confirmed and probable cases of pertussis, by age group and public health region, Wisconsin, January 1, 2012 through December 31, 2012 (N=6,462)

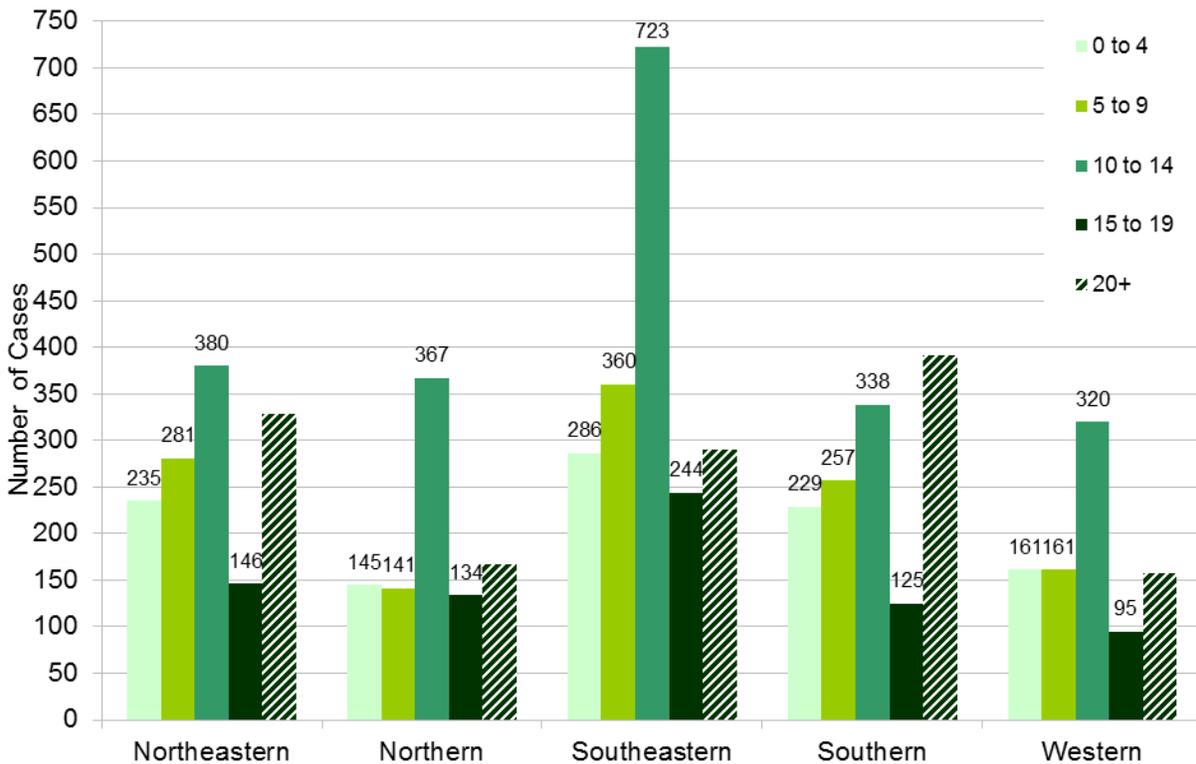


Figure 5. Incidence (per 100,000) of confirmed and probable pertussis cases, by age group and public health region, Wisconsin, January 1, 2012 through December 31, 2012 (N=6,462)

