CDC Update on Pertussis

National Vaccine Advisory Committee Meeting
September 11, 2012

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Annual incidence by State, 2011*

Incidence 5.0
(n=15,216)

*2011 data are provisional. Incidence is per 100,000 population.
Source: CDC National Notifiable Disease Surveillance System, 2011
CDC Wonder Population Estimates (Vintage 2009)
Annual incidence by State, 2012*
Incidence 5.2
(n=16,181)

*2012 data are provisional and reflect data reported through July 5, 2012. Incidence is per 100,000 population.
Changes in Pertussis Notifications by State from 2011 to 2012* †

*Data for 2011 and 2012 are provisional and subject to change.
†Cases reported through Week 26 in 2011 were compared with cases reported through Week 26 in 2012; fold-changes were calculated for each state.
Pertussis Epidemic — Washington, 2012

Since mid-2011, a substantial rise in pertussis cases has been reported in the state of Washington. In response to this increase, the Washington State Secretary of Health declared a pertussis epidemic on April 3, 2012. By June 16, the reported number of cases in Washington in 2012 had reached 2,520 (37.5 cases per 100,000 residents), a 1,300% increase compared with the same period in 2011 and the highest number of cases reported in any year since 1942. To assess clinical, epidemiologic, and laboratory factors associated with this increase, all pertussis cases reported during January 1–June 16, 2012, were reviewed. Consistent with national trends, high rates of pertussis were observed among infants aged <1 year and children aged 10 years. However, the incidence in adolescents aged 13–14 years also was increased, despite high rates of vaccination with tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis (Tdap) vaccine, suggesting early waning of immunity. The focus of prevention and control efforts is the protection of infants and others at greatest risk for severe disease and improving vaccination coverage in adolescents and adults, especially those who are pregnant. Pertussis vaccination remains the single most effective strategy for prevention of infection.

180 of 966 total cases for the year had been reported during the same period in 2011 (Figure 1). Cases were reported in 32 of the 39 counties (median: 24 cases; range: 1–485 cases). Statewide incidence was 37.5 cases per 100,000 population, ranging from 4.9 to 414.9 by county. Incidence was highest in infants aged <1 year and children aged 10, 13, and 14 years (Figure 2). Among the 1,867 cases with known race and ethnicity, statewide cumulative incidence was higher in Hispanics than non-Hispanics (53.1 versus 24.6 cases per 100,000 population). Of the 155 reported pertussis cases in infants aged <1 year, 34 (21.9%) were managed in a hospital. Among these hospitalized infants, 14 (41.2%) were aged <2 months. Of the 2,360 cases involving children aged ≥1 year with known outcome, 14 of the children (0.6%) were hospitalized. No fatalities were reported.

Compared with the incidence in Washington, the national incidence for the same period in 2012 was lower overall (4.2 cases per 100,000 population). However, the national
The message gets through!
Maximizing the Vaccination Program

- Sustaining DTaP coverage
- Increasing Tdap coverage
- Vaccinating to protect infants
Cutbacks Hurt a State’s Response to Whooping Cough

By KIRK JOHNSON
Published: May 12, 2012

MOUNT VERNON, Wash. — Whooping cough, or pertussis, once considered a contagious respiratory disease now considered a deadly disease, struck Washington State this spring with a severity that officials say could surpass the toll of any year since the vaccine went into widespread use.

Although no deaths have been reported so far this year, declared an epidemic by health officials say the number of cases has reached staggering: 1,284 cases in May, the most in at least 20 years and 10 times more than at this time last year.

The response to the epidemic came with the recession, which has led to budget cuts.

Here in Skagit County, Alice Hansen, 2, got her vaccination. 

Related

Health Guide: Whooping Cough (Pertussis)

CDC Urges Pregnant Women to Get the Whooping Cough Vaccine

Dr. Tom Frieden
@DrFriedenCDC

All adults 19 & older should get a Tdap booster vaccine if they haven’t already go.usa.gov/wqJ #recommendations

9 hours ago via web

Replies

Clinton Balud @drclincoln
one of my admitted patients now, 2 month old infant is coughing like...
Recent ACIP Recommendations on Tdap

- No minimum interval from last Td
- Use for under-vaccinated children aged 7-10 years
- All healthcare workers
- Persons aged 65 years and over
- Pregnant women + cocooning
Selected Current and Future MVPD Activities

- Vaccine effectiveness investigation in WA state
- Improving diagnostic testing to improve surveillance
- Enhanced Pertussis Surveillance sites
  - Enhanced case ascertainment and improved data quality
  - Platform for analyses and studies
- Evaluating effectiveness of cocooning/maternal vaccination
- Evaluating Tdap duration of protection
- Assessing temporal trends in susceptibility/infection
  - Serosurvey
  - Modeling
Figure 3: Role of Section 317 funding in preventing infectious disease

- Critical functions of immunization programs
  - Develop evidence-based immunization policy
  - Communicate which vaccines are needed, benefits and risks
  - Improve access to immunization services
  - Assure quality immunization services
  - Assess vaccine effectiveness and safety
  - Monitor program performance
  - Respond to public health emergencies

- Updated ACIP recs
- Provider education & public awareness
- Vax campaigns, partnerships w/ complementary venues
- Guidance during shortage of combo product, Storage & handling support
- CA and WA state VE studies
- Surveillance for disease & coverage (NIS and NIS-teen, BRFSS 2013, NHIS)
- State & local epidemic responses, CDC scientific, communication and vaccine support

*Section 317 funds can be used to purchase vaccine
Acknowledgments

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