



VaxFacts

Immunization Review

Volume 1 Summer 2010

To achieve its goal of preventing disease, disability and death from vaccine-preventable diseases the Immunization Program:

- ◆ Provides vaccine to immunization providers throughout the State;
- ◆ Provides education for medical personnel and the general public;
- ◆ Works with providers using the immunization registry to assure that all children in their practices are fully immunized;
- ◆ Assures that children who are in day care, Head Start, and school are adequately immunized;
- ◆ Conducts surveillance to evaluate the impact of vaccination efforts and to identify groups that are at risk of vaccine-preventable diseases.



New name! The Immunization Program's newsletter, formerly "IAP on Time", has been renamed "VaxFacts: Immunization Review" to reflect the broader focus of the newsletter.

Impact of 2-Dose Vaccination on Varicella Epidemiology: Connecticut — 2005–2008 *(reprinted from Connecticut Epidemiologist, Volume 30, No. 5, June 2010)*

Routine vaccination of children with 1 dose of varicella vaccine led to a dramatic decrease in varicella (chickenpox) incidence and varicella-related morbidity and mortality in the United States (1). By 2005, evidence suggested that the limits of control had been reached with the 1-dose childhood vaccination program (1-4). Consequently, in 2006, the Advisory Committee on Immunization Practices (ACIP) revised the varicella vaccine guidelines to include routine 2-dose vaccination for children by school entry with catch-up vaccination for those who had received a single dose (1). The initial impact on varicella epidemiology of the routine 2-dose recommendation is unknown.

In Connecticut, chickenpox has been a notifiable disease since 2001. Health care providers, licensed child daycare centers directors, and schools are required to report cases of chickenpox. Any report is accepted; laboratory confirmation is not required. Since 2000, the state has had child daycare and school entry requirements for 1 varicella vaccine dose or history of disease.

Surveillance data were analyzed to assess the initial impact of the ACIP's 2006 routine 2-dose varicella vaccination recommendation. Reports for 2005, the last year before the new recommendations, and 2008, the most recent year with complete data, were analyzed for age-specific incidence. Cases from 2008 were also analyzed for vaccination status and history of chickenpox. Potentially preventable cases were defined as those cases that were not up to date according to the 2006 ACIP varicella vaccination guidelines.

During 2001-2006, varicella incidence remained stable at approximately 50 cases per 100,000 population. In 2007, the rate began to decline. In 2008, the rate was 24.5 cases per 100,000 population and preliminary figures for 2009 show a further drop to 13.9 cases/100,000 (Figure 1, page 4). During 2005 - 2008, the rate decreased markedly among children aged 1–14 years, but increased slightly among infants, older adolescents, and adults (Table 1, page 4).

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Ask The Experts

Q. Can sterile water or saline be used in place of diluent?

A. No. Diluents are specifically designed to meet the volume, pH, and chemical needs of each vaccine so that optimal immune responses can be achieved. Neither sterile water nor saline should be used in place of diluent.

Q. We always hear about minimum intervals between vaccine doses in a series but never about maximum intervals. When is the spacing between doses so far apart that you would need to re-start a series?

A. There are no maximum intervals. Vaccine series do not need to be restarted because the interval is too long. As long as the minimum interval is met, continue with the series.

Q. What does “VFC eligible mean”?

A. VFC eligibility is defined as: (a) Medicaid enrolled; (b) no health insurance; or (c) American Indian or Alaskan native. In addition, individuals who are under-insured (the insurance does not fully cover the cost of immunizations) can be referred to Federally Qualified Health Centers (FQHC) to be immunized with VFC-supplied vaccine.

Do you have an immunization question you want answered by our immunization experts?

Email: debbye.rosen@ct.gov

2009 Day Care, School and College Surveys

Each year the Immunization Program works with day cares, schools and colleges across the state to conduct immunization coverage surveys. The results for the 2009 surveys are shown below.

Day Care (n = 55,040)

vaccine	% coverage
3 polio	98.5
4 DTP / DTaP / DT	98.1
1 MMR	98.4
1 Hib	94.3
3 hepatitis B	98.4
1 varicella	98.0
1 pneumococcal	98.5

The exemption rate (medical and religious) was 1.0%.

Kindergarten (n = 46,158)

vaccine	% coverage
3 polio	98.3
4 DTP / DTaP / DT	98.5
2 MMR	98.5
3 hepatitis B	98.4
1 varicella	98.4

The exemption rate (medical and religious) was 1.1%.

7th Grade (n = 44,665)

vaccine	% coverage
3 hepatitis B	99.1
2 MMR	99.1
1 varicella	98.9

The exemption rate (medical and religious) was 0.4%.

College (n = 40,214 for measles/rubella requirements, 49,539 for meningococcal requirement)

vaccine	% coverage
2 measles / 1 rubella	86
meningococcal	98.6

The Immunization Program thanks the day care providers, school nurses and other staff who complete these surveys and the immunization providers who keep Connecticut's children up-to-date with their immunizations. The surveys allow us to monitor immunization trends over time and to take corrective action as needed. We also report our results to the Centers for Disease Control and Prevention so Connecticut's results can be compared with those of other states.





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New Day Care Requirements

Beginning September 1, 2010 all children born on or after January 1, 2009 who attend a child day care center, group day care home, or family day care home ages 12–23 months are required to have one dose of the Hepatitis A vaccine; two doses are required for those aged 24 months and older.

By January 1, 2011 and each January 1 thereafter, children aged 6–59 months attending a child day care center, group day care home, or family day care home are required to receive at least one dose of influenza vaccine between September 1 and December 31 of the preceding year. The table below provides more information.

Vaccine	Start Date	Description	Age	Doses Required
Hepatitis A	Sept. 1, 2010	Children born Jan. 1, 2009 or later	12-23 months	1
			24 months and older	2
Influenza	By Jan. 1, 2011 & every Jan. thereafter		6-59 months	1
				2 doses if this is the 1 st time child is receiving influenza vaccine

Also the supply of Hib vaccine is now sufficient to reinstate the Hib booster dose for children attending day care. Child care providers should ensure that children have received 3 doses of HbOC (ActHib or Pentacel) or 2 doses of PRP-OMP (PedvaxHIB) by age seven months (the primary series) plus a final booster dose of any Hib vaccine type on or after 12 months of age and by age 16 months.

For more information on the new day care requirements and the Hib booster dose, click on this link to our memo posted on the DPH website: http://www.ct.gov/dph/lib/dph/daycare/pdf/DCC_Flu_and_Hep_A_requirement_2010.pdf

New College Requirements

Beginning August 1, 2010 all incoming freshman (full-time or matriculating) will be required to show proof of 2 doses of measles, mumps and rubella vaccine and 2 doses of varicella (chickenpox) vaccine.

For more information on the college requirements, click on this link to our memo posted on the DPH website: http://www.ct.gov/dph/lib/dph/infectious_diseases/immunization/2010/college_immunization_regs_guidance_5_6_2010.pdf

No Benefit to Delaying Immunizations

Some parents concerned that their children are receiving too many vaccines at too young an age are requesting doctors to postpone their children’s immunizations. A study examined data from the U.S. Vaccine Safety Datalink found that delaying vaccines has no benefit with regards to children’s long-term mental development and can increase the incidence of vaccine-preventable diseases. The study examined test results from over 1,000 children vaccinated from 1993 to 1997 and compared their results for a group vaccinated on time with a group that had delayed immunizations. The results of the tests showed that timely vaccination during infancy had no adverse effects on neuropsychological outcomes 7 to 10 years later. For more details, see the complete report in the June 2010 issue of *Pediatrics*.

Save The Dates



August 5, 2010:

CDC will present its annual "Immunization Update" on August 5, 2010. This satellite broadcast and webcast will feature several topics and highlight current and late-breaking immunization issues. For more information and to register for the update, click on the following link:

<http://www2.cdc.gov/PHTN/immupdate2010/default.asp>

Sept. 15, 2010: Flu Conference

The CT Influenza and Pneumococcal coalition will host the 2010 Annual Influenza Update at Woodwinds in Branford, CT from 8am - 3:30 pm. Topics include: lessons learned from H1N1, vaccine production, mandatory influenza vaccination and more. For registration information, please email: debbye.rosen@ct.gov

Sept. 21, 2010: Vaccination of Health Care



Workers Teleconference

DPH, the CT chapter of AAP and the CT Infectious Disease Society will present a teleconference from 12 noon – 1pm. Dr. Michael Parry, Dir. of Infectious Diseases and Microbiology at Stamford Hospital, and Dr. Ed Septimus, FIDSA, FACP, FSHEA, Medical Director, Infection Prevention at HCA Healthcare System will present. CMEs and a letter to obtain CEUs for nurses are available. For registration information, please email: tracey.ctaap@gmail.com



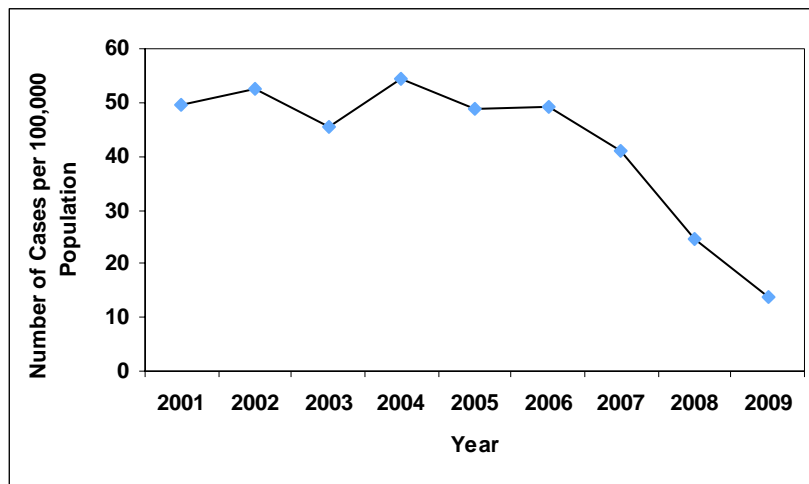
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The incidence and number of cases remain highest in children aged <15 years. The proportion of cases hospitalized (1%) and the proportion reporting a previous history of varicella (9%) in 2008 did not change compared to 2005. However, 13% of cases reported a history of having received 2 doses of vaccine in 2008 compared with <1% in 2005.

The majority (59%) of varicella cases in 2008 were potentially preventable by full adherence to the 2- dose ACIP guidelines; of these, 81% were among persons aged 5–14 years who either had only one dose (93%) or had never been vaccinated (7%).

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Figure 1. Varicella incidence in Connecticut, 2001–2009*



* 2009 data is preliminary

Table 1. Changes in varicella incidence by age, Connecticut, 2005 and 2008.

Age Group	2005		2008	
	No.Cases	Incidence*	No.Cases	Incidence*
<1	36	86.9	49	115.4
1–4	252	148.6	178	105.2
5–9	951	422.2	324	148.0
10–14	404	163.8	209	89.2
15–19	32	12.9	35	14.0
20–29	11	2.7	21	4.9
≥30	23	1.1	41	1.9
Total	1709	48.7	857	24.5

* per 100,000 population

Editorial Note:

Varicella incidence has declined rapidly in Connecticut coincident with the ACIP 2-dose varicella vaccination recommendation. Additionally, the majority of cases are

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PCV13 GO, SLOW, STOP? *Are my patients fully protected?*

On Feb 24th of this year, Wyeth Vaccines (now Pfizer) licensed a new version of the pneumococcal conjugate vaccine that added six additional serotypes of protection against invasive pneumococcal disease (IPD). IPD incidence was reported to be on the rise again due in large part to the prevalence of antigenic serotype 19A, which is now included in the vaccine. The ACIP recommendations advise a full switch over to the newly licensed PCV13.

<p>GO SLOW STOP then GO</p>	<p>Children not previously vaccinated should be started on PCV13 Children in progress should complete their series with PCV13 Children less than 5 years old who have already received 4 doses of PCV7 should receive a dose of PCV13 eight weeks after their last PCV7 dose to afford them protection against the six additional serotypes.</p>
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The full ACIP Recommendations on PCV13 can be found at: www.cdc.gov/vaccines/recs/provisional/downloads/pcv13-mar-2010-508.pdf

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among school-aged children and are potentially preventable. Thus, the 2-dose regimen can be expected to have further substantial impact on reducing varicella incidence. Disease incidence paradoxically increased slightly among infants, older adolescents, and adults, groups not directly targeted by the new recommendations. The reasons for these increases are unclear, but may indicate that the number of children vaccinated with 2 doses is not yet sufficient to reduce spread in the community. Continued monitoring of these groups is needed to determine whether the observed increase persists. Disease appears to be occurring among persons who have been vaccinated with 2 doses of varicella vaccine, a finding that was observed in studies comparing children vaccinated with 1 or 2 doses (5). It is unclear how many of these cases represent true varicella disease as laboratory confirmation is not required. This observation raises the question as to whether 2 doses will be sufficient to totally stop community-level varicella transmission. Further observation is needed to answer this question as the number of 2-dose recipients increases. This analysis suggests that routine 2-dose vaccination is an effective varicella prevention strategy. A regulatory change is currently pending in Connecticut to modify the school-based vaccination requirement from 1 to 2 varicella vaccine doses. This legislation is expected to help realize the full potential of the 2-dose varicella vaccination recommendation.

References

- Centers for Disease Control and Prevention. Prevention of varicella: recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR Recomm Rep* 2007;56(No. RR-04):1-40.
- Sosa LE, Hadler JL. Epidemiology of varicella in Connecticut, 2001-2005. *J Infect Dis* 2008;197 (Suppl 2): S90-3.
- Tugwell BD, Lee LE, Gillette H, Lorber EM, Hedberg K, Cieslak PR. Chickenpox outbreak in a highly vaccinated school population. *Pediatrics* 2004;113:455-9.
- Lopez AS, Guris D, Zimmerman L, et al. One dose of varicella vaccine does not prevent school outbreaks: is it time for a second dose? *Pediatrics* 2006;117:e1070-7.
- Kuter B, Matthews H, Shinefield H, et al. Ten year followup of healthy children who received one or two injections of varicella vaccine. *Pediatr Infect Dis J* 2004;23:132-7.