Vaccinate Vermont

Vermont Department of Health

August 2014

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***Dr. Anne Schuchat**, Assistant Surgeon General, United States Public Health Service; Director, National Center for Immunization and Respiratory Diseases visited Vermont July 15-16 to emphasize the importance of our mission.*

Vaccine Safety Review in the Journal *Pediatrics*

Serious adverse events resulting from vaccines routinely used in the United States are rare, according to a report in the July, 2014 issue of *Pediatrics*. The Agency for Healthcare Research and Quality report is based on a scientific review of the evidence that included the results of the 2011 Institute of Medicine (IOM) report, plus 166 studies published after the IOM report was developed. It provides the most comprehensive review to date of published studies on the safety of routine vaccines. The results from the report support findings of the 2011 IOM report and build on it by reviewing additional vaccines such as pneumococcal, rotavirus, Haemophilus influenzae type b, inactivated poliovirus and zoster.

Vaccines are a major public health achievement and this review of the evidence provides important reassurance that recommended vaccines are safe. This independent report reaffirmed that while serious adverse events can occur, they are rare.

The report found scientific evidence that addresses several common concerns about a variety of vaccines, including:

- There is not a link between MMR vaccines and autism.
- There is not a link between pneumonia and influenza vaccines and cardiovascular or cerebrovascular events in the elderly.
- There is not a link between MMR, DTaP, Td, Hib and Hepatitis B vaccines and childhood leukemia.

The report also found there is moderately strong scientific evidence that:

- There is not a link between HPV vaccines and appendicitis, stroke, seizures, venous thromboembolism, onset of juvenile arthritis or onset of type 1 diabetes.
- There is not a link between inactivated influenza vaccines and adverse pregnancy outcomes (such as miscarriage, low birth weight, and premature birth) for women who receive the vaccine while pregnant.

Some extremely rare adverse events were identified, such as a risk of Guillain-Barré syndrome with the use of H1N1 vaccine in adults. The risk of rare adverse events from vaccination should be weighed against the protective benefits that vaccines provide.

It is important that the safety of vaccines continue to be monitored and independently researched in order to minimize any adverse effects and ensure adequate vaccination rates to assure herd immunity in the U.S. and beyond.

CDC Releases 2013 NIS-Teen Data

Question: How are we doing in vaccinating teens?

Answer: It varies depending on the vaccine

The 2013 National Immunization Survey-Teen provides data on the percentage of 13-17 year olds who are immunized, by vaccine. Notable results for Vermont include:

Tdap – At 91.8 percent, Vermont's Tdap rate was five percent higher than the national rate, and over 20 percent higher than it was in 2009. Continuing to vaccinate children with Tdap prior to 7th grade in order to meet school requirements will ensure the 90 percent immunization goal is met.

Meningococcal – Although the rates of meningococcal disease are decreasing it is still important to protect teens against this disabling and sometimes deadly disease. For the first time, the percentage of Vermont teens (79.2%) immunized against meningococcal disease was higher than the national average (77.8%). Nice work!

HPV – HPV is a safe and effective vaccine that prevents cancer. It is recommended for all, starting at ages 11-12. The percentage of females in Vermont who received all three doses of HPV vaccine dropped in 2013 to 43 percent, and only 60 percent had at least one dose. Although HPV was recommended for males in 2010, acceptance appears higher. In Vermont, rates for males exceeded national rates — 22 percent of males received all three doses and 41percent who had at least one dose. HPV immunization rates will improve when parents better understand the protection the vaccine offers, and providers consistently offer a strong recommendation for the vaccine.

For more detailed information, find the NIS-Teen data at the CDC website.

Highlights from the Child Care Immunization Report

Since 2011, child care providers in Vermont have been required to report the aggregate immunization status of children enrolled at their facility.

The Vermont Department of Health Immunization Program staff collects and analyzes the data, and then provides a summary report.

For the 2013-2014 reporting period, an online survey was sent to 1,154 licensed and registered child care facilities in Vermont. About 60 percent of the providers completed the survey.

Results from the 2013-2014 survey showed that:

- 90.2 percent of children were up-to-date* with the required immunizations.
- 5.5 percent of children were admitted provisionally (Provisional status not to exceed six months from admission to child care).
- 3.9 percent of children had a philosophical exemption on file.

* Children are up-to-date when they have been given the immunizations required for entry to child care by age.

Which immunizations are required for entry into child care?

Age when enrolling:	Immunizations required:
2 – 3 months	1 each of DTaP, Hep B, Polio, Hib, PCV
4 – 5 months	2 each of DTaP, Hep B, Polio, Hib, PCV
6 – 14 months	3 each of DTaP, Hep B, Polio, Hib, PCV
15 – 17 months	3 each of DTaP, Hep B, Polio 1 each MMR, Varicella 1–4 doses each of Hib and PCV
18 months – 4 years	3 polio, 3 Hep B, 4 DTaP 1 each of MMR, Varicella 1–4 doses each of Hib and PCV

DTaP: diphtheria, tetanus -lock jaw, pertussis -whooping cough, Hepatitis B, **Hib:** haemophilus influenzae, **Varicella:** chickenpox, **MMR:** measles, mumps and rubella, **PCV:** pneumococcal, Polio
Hepatitis A, rotavirus, and influenza vaccines are also strongly recommended, but not required.

Vermont Vaccine Purchasing Program

New legislation regarding the Vermont Vaccine Purchasing Program (VVPP), which removes references to the prior "pilot" status of the program went into effect on July 1, 2014.

This legislation ensures sustainable funding for the universal purchase of vaccines for Vermont children and adults. This permanent program is the result of an ongoing partnership between the Health Department and health insurers covering Vermonters. Through the VVPP, vaccines are purchased at a significantly reduced rate when compared to private sector costs.

For more information regarding the Vermont Vaccine Purchasing Program, please visit the new website.

Vaccine Storage and Handling Best Practices

The CDC Vaccine Storage and Handling Toolkit that came out in May 2014 is a comprehensive resource for providers on vaccine storage and handling recommendations, and best-practice strategies. It includes **considerations** for equipment, storage units and temperature monitoring devices, strategies for maintaining the cold chain, routine storage and handling practices, inventory management and emergency procedures for protecting vaccine inventories.

One of the best practices for temperature control is to stabilize temperatures with water bottles and frozen coolant packs. Water bottles and frozen coolant packs will help maintain stable temperatures with frequent opening and closing of unit doors, or in the event of a power failure, and will serve as a physical barrier to placing vaccines in an area where there is greater risk for temperature excursions.

Place water bottles on the top shelf, floor and in door racks of the refrigerator. The Joint Commission on Accreditation of Healthcare Organizations does not recommend storage of food or beverages in a medication storage unit, so label water bottles "Do NOT Drink."

Place frozen coolant packs along walls, back, and bottom of freezer and inside door racks. Place items in unit doors carefully so they cannot dislodge or possibly prevent doors from closing or weighing them down so much that seals are not tight.

More information can be found on the CDC website.

Stabilize temperature in a refrigerator with water bottles labeled "Do NOT Drink." Stabilize temperature in a freezer with frozen coolant packs.

Hepatitis A Vaccine schedule: Two doses, six months apart

When you follow the Advisory Committee for Immunization Practices (ACIP) schedule for administering immunizations, it's easy enough to find the answers to your scheduling questions on the familiar Vermont Recommended Vaccination schedule. Sometimes, if the child is "off schedule" for whatever reason, the answers to vaccine scheduling questions can be deep in the footnotes.

Vaccine schedules can be challenging, and vaccines like Hepatitis A, which are newer to the schedule, can be even more so. A review of Vermont Immunization Registry data for the time period July 1, 2012 to July 1, 2014 revealed 1,978 pediatric instances where the second dose of Hepatitis A vaccine was administered too soon. According to the ACIP schedule, the second dose of Hepatitis A vaccine should be administered no sooner than 6 months after the first in order to maximize the antibody response.

Invalid doses of Hepatitis A vaccine were noted in 115 Vermont primary care practices, so this is a common error. It's confusing because the second dose of the similarly named Hepatitis B vaccine is appropriately administered one month after the first. Hepatitis A, however, is a two dose series. Keep in mind that the last dose of both vaccine series is recommended to be six months after the previous dose.

ACIP bases its' recommendations on vaccine research, clinical trial results and package labeling. Each year the ACIP recommendations are approved by the Centers for Disease Control, the American Academy of Pediatrics, and the American Academy of Family Physicians. The recommendations list specific age ranges for administration, and dosage spacing that will elicit the highest immunological response. In the case of Hepatitis A vaccine, ACIP has indicated that two doses best assure long term protection. They also specify that the second dose should be given at least six months after the first to maximize the antibody response.

The Hepatitis A vaccine was first recommended by the Advisory Committee on Immunization Practices in 1996 for children in high-incidence areas. In 2006, it was recommended that all children should receive two doses of Hepatitis A vaccine beginning at age one year (i.e., 12-23 months). Children who are not vaccinated by age 2 years can be vaccinated at subsequent visits.

To find out if your practice has been administering Hepatitis A second dose too soon, run the Invalid Doses report in the Vermont Immunization Registry. This will give you a quick list of all the instances where immunizations at your practice have conflicted with the recommended schedule. Talk with your staff to make a plan for preventing this error in the future. One excellent approach would be to use the Vaccine Forecaster in the Vermont Immunization Registry before you immunize. The Print Forecaster Results Report with Immunization History will give you the information you need.

What to do about the invalid doses already administered? Technically, these persons have not received the optimal dosing. Practices should review invalid doses and make a clinical judgment regarding the need for revaccination based on timing and individual risks.

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