



Mark Your Calendars:

You are the Key to HPV Cancer Prevention

GA-AAP Webinar

Thursday, December 18, 2013

12:00 PM - 1:00 PM EDT

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Vaccine-Preventable Disease Among Homeschooled Children: Two Cases of Tetanus in Oklahoma
Abstract

Homeschooled children represent an increasing proportion of schoolaged children in the United States. Immunization rates among homeschooled children are largely unknown because they are usually not subject to state-based school-entry vaccination requirements. Geographic foci of underimmunized children can increase the risk for outbreaks of vaccine-preventable diseases. In 2012, 2 cases of tetanus were reported in Oklahoma; both cases involved homeschooled children without documentation of diphtheria-tetanus-acellular pertussis vaccination. We describe the characteristics of both patients and outline innovative outreach measures with the potential to increase vaccination access and coverage among homeschooled children. *Pediatrics* 2013;132:e1686–e1689

AUTHORS: Matthew G. Johnson, MD, et al

Seventh Case of Meningitis Possible at Princeton University, Officials Say

Times of Trenton (11/10/13) Mulvaney, Nicole

Another Princeton University student was hospitalized for probable meningococcal disease on Nov. 10, while the university awaits test results that would confirm the case as meningitis. This could be the university's seventh case of meningitis since March and the third case since the state Department of Health declared an outbreak at the school in May.

All six previous patients have recovered after contracting type B meningococcal bacteria. Four cases involved students living in campus dorms. All students living in university housing in New Jersey are required by state law to receive a meningitis vaccination, which protects against most strains of the meningitis bacteria except type B. To prevent the spread of bacterial meningitis, the university has been reminding students not to share their beverages. Meningitis can be spread through kissing, coughing, or other lengthy contact, especially among individuals who share living quarters. Actions that can help lessen the spread of disease include covering mouths and noses when coughing and sneezing; washing hands regularly; not sharing utensils, water bottles, and other items that come into contact with saliva; and avoiding smoking and excessive drinking.

How Vaccines Have Changed Disease Rates

More than 100 million diseases prevented because of vaccines in the US

(dailyRx News) Sometimes it's easy to forget how common many diseases were before vaccines for them were introduced. When the disease is not around, people may not notice as much. A recent study attempted to make these "missing" diseases more "visible" by calculating how many were prevented since the introduction of vaccines. The researchers found that more than 100 million cases of just seven diseases had been prevented since the vaccines were introduced. This conclusion was based on calculations using data that reached back into the previous century. More than 20 million cases have been prevented in just the last 10 years, they found.

This study, led by Willem G. van Panhuis, MD, PhD, of the Department of Epidemiology at the University of Pittsburgh, aimed to better understand the patterns of infectious diseases in the US and the effects of vaccination on them. The researchers first took all the data from 1888 to 2011 that was reported weekly to the Centers for Disease Control and Prevention (CDC) and digitized it. The data included the cases and deaths from 56 infectious diseases. Then the authors selected eight specific vaccine-preventable diseases to examine more closely: polio, measles, rubella, mumps, [Hepatitis A](#), diphtheria, and pertussis. For seven of these diseases, the authors estimated the number of cases that have been prevented since the vaccine for that disease was introduced. They could not calculate this figure for smallpox because the smallpox vaccine was introduced in 1800, before reliable record keeping of cases and deaths was available. Basically, the researchers subtracted the weekly cases of the diseases in the years after each vaccine was introduced from the total that would have been expected based on historical numbers. The researchers determined that there were an average 317 measles cases, 28 rubella cases, and 90 mumps cases for every 100,000 people each year before those vaccines were introduced. The authors noted that measles cases dropped very quickly after the vaccine was introduced, but it took longer for rubella and mumps cases to decline after those vaccines. The biggest drop for these diseases came after 1978, when the combined measles-mumps-rubella (MMR) was introduced. Overall, the researchers estimated that approximately 103.1 million cases of these seven contagious diseases have been prevented since 1924 due to vaccines. However, they estimated that the number could range anywhere from 75 million to 106 million cases, though this is likely underestimated since it only includes numbers from seven vaccine-preventable diseases. In just the last decade, approximately 26 million cases have been prevented. "The number of cases that were prevented per disease depended on the incidence rate before vaccination and the duration of the vaccination program," they wrote.

The disease most prevented by the introduction of a vaccine appeared to be diphtheria, which once affected 237 out of every 100,000 people a year. Since the diphtheria vaccine was introduced in 1924, about 40 million cases have been prevented. Meanwhile, an estimated 35 million cases of measles have been prevented since that vaccine was introduced in 1963. Measles was the most common of the seven diseases studied, and its cases declined the fastest after the arrival of the vaccine. Just five years after the vaccine had been licensed, 95 percent of measles cases that would have been expected each year were prevented. It took eight years for this to occur for polio, and then 19 years for diphtheria and 17 years for pertussis.

There were some diseases — especially measles, hepatitis A, diphtheria, and pertussis — whose rates varied considerably before vaccines were introduced, probably due to changes in sanitation, hygiene, demographics, or related factors. "In contrast, the striking and persistent reductions in disease incidence rates after vaccine licensure strongly support the conclusion that vaccination programs were a leading cause," they wrote. However, the researchers noted that there have still been resurgences of several of these diseases since the vaccines have been introduced, especially measles, mumps, rubella, and pertussis.

The authors attributed these to erosions in herd immunity, in which too few people in a community are vaccinated to prevent the spread of the disease through the population.

Herd immunity can be decreased when a person brings a disease in from a different community, when a person relocates or when individuals in a community refuse or delay vaccination.

"The current low overall incidence of contagious diseases has resulted in a perception that the risk of these diseases is low and, paradoxically, in increased concern about the costs and consequences of vaccination programs," the authors wrote.

This study was published November 28 in the *New England Journal of Medicine*. The research was funded by awards from the Bill and Melinda Gates Foundation and the US National Institute of General Medical Sciences.

Update on New Vaccine Mandates for Schools

Georgia Schools Notified of New Vaccine Requirements for Entry into Grade Seven

Recently, the Georgia Department of Education notified local school systems of the Tdap and meningococcal vaccine requirements for students entering grade seven. Even though the requirement begins with the 2014-15 school year, parents of children being affected by this new requirement may be contacting your office requesting additional vaccine for their children. The Georgia Certificate of Immunization (Form 3231) is currently being revised in GRITS to incorporate these new requirements.

Also, please take advantage of these encounters and urge parents to have their adolescent children vaccinated with HPV vaccine!!

Vaccine Recommendations at a Glance

Meningococcal conjugate vaccines (MCV)

Routine vaccination:

- Administer MCV4 vaccine at age 11–12 years, with a booster dose at age 16 years.
- Adolescents aged 11 through 18 years with human immunodeficiency virus (HIV) infection should receive a 2-dose primary series of MCV4, with at least 8 weeks between doses.

Catch-up vaccination:

- Administer MCV4 vaccine at age 13 through 18 years if not previously vaccinated.
- If the first dose is administered at age 13 through 15 years, a booster dose should be administered at age 16 through 18 years with a minimum interval of at least 8 weeks between doses.
- If the first dose is administered at age 16 years or older, a booster dose is not needed.

Tetanus and diphtheria toxoids and acellular pertussis (Tdap) vaccine.

Routine vaccination:

- Administer 1 dose of Tdap vaccine to all adolescents aged 11 through 12 years.
- Tdap can be administered regardless of the interval since the last tetanus and diphtheria toxoid-containing vaccine.
- Administer one dose of Tdap vaccine to pregnant adolescents during each pregnancy (preferred during 27 through 36 weeks gestation) regardless of number of years from prior Td or Tdap vaccination.

Catch-up vaccination:

- Persons aged 7 through 10 years who are not fully immunized with the childhood DTaP vaccine series, should receive Tdap vaccine as the first dose in the catch-up series; if additional doses are needed, use Td vaccine. For these children, an adolescent Tdap vaccine should not be given.
- Persons aged 11 through 18 years who have not received Tdap vaccine should receive a dose followed by tetanus and diphtheria toxoids (Td) booster doses every 10 years thereafter.
- An inadvertent dose of DTaP vaccine administered to children aged 7 through 10 years can count as part of the catch-up series. This dose can count as the adolescent Tdap dose, or the child can later receive a Tdap booster dose at age 11–12 years.

The Architecture of Provider-Parent Vaccine Discussions at Health Supervision Visits

Pediatrics (11/13) Opel, Douglas J.; Heritage, John; Taylor, James A.; et al.

Researchers analyzed 111 provider-parent vaccine discussions involving 16 providers from nine practices, half of which involved vaccine-hesitant parents (VHPs). They found that 74 percent of providers used presumptive formats instead of participatory formats to initiate vaccine recommendations. This means providers generally said something like, "Well, we have to do some shots," instead of asking, "What do you want to do about shots?" VHPs accounted for most of the 41 percent of parents who showed resistance to provider initiation. Researchers found that parents were more likely to resist vaccine recommendations when providers used a participatory initiation format. Half of the providers pushed their original recommendation when parents resisted, and 47 percent of parents then accepted the provider's recommendation. The researchers concluded that parental vaccine acceptance is affected by how vaccine recommendations are initiated and pursued by providers.

Georgia Vaccines for Children Program Update

(The following information has been provided to us by the Georgia VFC Program Office)

Vaccine Storage by Funding Split: CDC has extended the VFC Inventory Funding Split implementation to **January 1, 2015**. GA VFC encourages providers to share best practices related to inventory splits so that we may compile a list to share with all current and future VFC providers. As a reminder, providers are being asked to accommodate CDC's new requirement to store vaccines according to funding splits as outlined on your packing slips (VFC, 317, and CHIP/PeachCare)

Tips to Assist with Separation of Vaccine Inventory by Funding Source

- 1) Colored Bins/Trays
- 2) Colored Labels/Stickers
- 3) Using different shelves of the unit for each funding type
- 4) Using different storage units for each funding type
- 5) Keep shipping receipts in a separate notebook categorized into separate tabs labeled into the categories of: CHIP, VFC, and Private
- 6) If the shipping receipt has 2 categories listed; make a second copy and file accordingly
- 7) Label the trays used for vaccine administration to carry syringes into patient rooms according to category (CHIP, VFC, and Private)
- 8) Keep generic sign out tally sheets according to category plus colored coded (patient name, name of vaccines administered, and date) for assisting with inventory balancing.

* CDC suggests using funding splits listed on the McKesson packing slips to determine storage splits for direct ship vaccines - ProQuad and Varivax. For example if 10 doses of DTaP are received and the packing slip assigned 4 doses to VFC and 6 doses to CHIP, then you can assume a 40/60 split between VFC and CHIP doses for your clinic. For every shipment, 40% of each direct ship order should be stored as VFC and 60% stored as CHIP. See the CDC FAQ document sent on October 16 for more information.

Manual Excel Reporting deadline extended to February 2014

VFC's transition to total electronic reporting has been pushed back to **February 2014**. Sites currently utilizing the Excel form for monthly reporting should plan to make the switch to GRITS reporting prior to February 3 to ensure continued vaccine deliveries. Send requests for GRITS inventory management training to gavfc@dhr.state.ga.us. (Continued page 5)

New Report Processing Email Notifications (Continued from page 4)

As of Nov 4, providers began to receive email notifications when comprehensive reports are processed. Notifications are sent for orders that have been entered into our vaccine ordering system (VTrckS). As a reminder, vaccine orders will be placed according to amounts listed in column J of the GRITS Vaccine Accountability Report and the Doses of Ship column of the Excel Manual Comprehensive Report.

Contacts listed for each site will receive one of the following two messages:

Dear VFC Provider,

Your Vaccines for Children Comprehensive Report and Vaccine Accountability Statement has been received and processed. We placed your vaccine order on 10/31/2013. Please expect receipt of your shipment within 3 to 5 business days from the date of order.

Thank You for participating in Georgia's Vaccines for Children Program.

Dear VFC Provider,

Your Vaccines for Children Comprehensive Report and Vaccine Accountability Statement have been received and processed. According to your report, no additional vaccines are needed at this time. If we may be of additional assistance, please let us know.

Thank You for participating in Georgia's Vaccines for Children Program.

Manual Reporting Update (VTrckS Order Uploads)

Important tips to remember when submitting inventory counts each month:

1. Do not include prefixes and suffixes with your VFC lot numbers – Enter vaccine received from VFC using the lot number listed on the outer carton of the vaccine box. Providers should not include prefixes and suffixes with the lot numbers (i.e. AC52B085CA-VFC or VFC- AC52B085CA).

**You may add prefixes/suffixes to your privately purchased vaccine.

2. Do not fax GRITS reports to VFC – the only exception to this rule is faxed copies of corrected reports, which include an explanation of errors. If your site is transitioning from manual reporting to GRITS, contact VFC to finalize the switch today!

3. Review the Vaccine Accountability Statement for “Doses to Ship” in column J. – Orders will be entered for the preferred vaccine indicated with “#” and only for items with doses listed in column J. Once you submit your order, review, and if necessary, send your vaccine order adjustments to gavfc@ehr.state.ga.us or you may call in your order to (404) 657-5013.

What to Do if You Get Invited to a Chickenpox Party: Don't Go

Slate (11/15/13) Moyer, Melinda Wenner

(Published in National Network for Immunization Information)

Some parents who choose not to vaccinate their children against chickenpox instead try to build up the kids' immunity by directly exposing them to the germs of another child infected with chickenpox. There are several chickenpox-party Facebook groups, organized by geographical region. The chickenpox vaccine was first licensed in 1995. At the time, only about 100-150 U.S. children died of chickenpox each year, largely because of underlying immune-system problems. Before the vaccine was available, about one in 400 children who caught chickenpox was hospitalized, or about 11,000 children each year. As much as one-fifth of otherwise healthy children who are hospitalized for chickenpox suffer neurological problems such as strokes, meningitis, convulsions, and encephalitis, and may experience other severe conditions such as septic shock, pneumonia, and necrotizing fasciitis. The vaccine is intended to prevent many of these complications. One University of Michigan study found that hospitalizations related to the infection dropped by 75 percent within six years, and other trials indicate that after the first dose of the vaccine, given between the ages of 12 and 15 months, kids are between 80 percent and 94 percent less likely to catch chickenpox compared with unvaccinated children. Research also suggests that the chickenpox vaccine can prevent shingles, though it is still too early to know for sure.

ACIP Approves 2014 Child/Adolescent Immunization Schedule

Troy Brown, RN, Medscape Medical News October 23, 2013

The Centers for Disease Control and Prevention's (CDC) Advisory Committee on Immunization Practices (ACIP) unanimously approved the 2014 Child/Adolescent Immunization Schedule today, which includes some changes to the current schedule. The committee works closely with the American Academy of Pediatrics, American Academy of Family Physicians, and American Congress of Obstetricians and Gynecologists to develop the guidelines, which are updated annually.

The 2014 guidelines include the following changes:

- **Pneumococcal vaccine:** A section in the footnotes separates various risk groups by age (ages 24 - 71 months and 6 - 18 years) and provides recommendations regarding 13-valent pneumococcal conjugate vaccine and 23-valent pneumococcal polysaccharide vaccine. There are separate guidelines for children aged 6 to 18 years who are immunocompromised and for those with chronic conditions who are not immunocompromised. A vaccine catch-up table is also included.
- **Hepatitis A vaccine:** The guidelines now include individuals who travel to or work in countries with high or intermediate endemicity of infection, men who have sex with men, those who use injection or noninjection illicit drugs, those who work with hepatitis A virus (HAV)-infected primates or with HAV in a research laboratory, those with clotting-factor disorders, and those with chronic liver disease.
- **Human papillomavirus vaccine:** The guidelines have been changed to add that the third dose should be administered "at least 12 weeks after the second dose AND at least 24 weeks after the first dose," according to information provided at the meeting.
- **Meningococcal vaccines:** The guidelines [now recommend](#) that the MenACWY-CRM (*Menveo*, Novartis Vaccines) vaccine may be given as early as 2 months of age for those with high risk for meningococcal disease. The guidelines include detailed instructions for use of the vaccines, as well as catch-up recommendations.
- **Tdap vaccine:** Those aged 11 years and older who have received no Tdap vaccine should have a Tdap followed by tetanus and diphtheria toxoids booster doses every 10 years after that. The committee does not recommend repeat doses of Tdap, except for pregnant adolescents, during each pregnancy. The guidelines also advise that in adolescents (aged 11 - 18 years) who inadvertently receive a pediatric DTaP, that dose should be considered the adolescent Tdap booster.

Sometimes the language in the child and adolescent guidelines overlaps with that in the adult guidelines and should be clearer, said voting member and committee chair Jonathan L. Temte, MD, PhD, a professor of family medicine at the University of Wisconsin School of Medicine and Public Health in Madison. Regarding the pneumococcal vaccines "for the asplenic and the sickle cell, it might be worthwhile to provide guidance as to what happens after they turn 19," Dr. Temte noted.

The ACIP and CDC will revise these guidelines based on today's meeting and will submit finalized guidelines to the American Academy of Pediatrics, American Academy of Family Physicians, and American Congress of Obstetricians and Gynecologists by January 1, 2014. The CDC will publish the guidelines on its Web site in January 2014, and *Pediatrics* and *American Family Physician* will publish them in February 2014.

One of the voting members reported that her institution receives grant money from pharmaceutical companies for research. The other voting members have disclosed no relevant financial relationships.

IAC updates "MMR vaccine does not cause autism: Examine the evidence!"

IAC recently updated [MMR vaccine does not cause autism: Examine the evidence!](#) by referencing additional journal articles. This handout provides conclusions, citations, and links to abstracts from 23 peer-reviewed articles that refute a connection between MMR vaccine and the development of autism. This resource allows concerned parents and practitioners to compare the balance of evidence about MMR vaccine and autism.

Even Healthy Kids Can Die From Flu Complications

USA Today (10/26/13) Hellmich, Nanci

Centers for Disease Control and Prevention (CDC) researchers report that most of the 830 children who died from flu-related complications from October 2004 to September 2012 were not vaccinated, and pneumonia was the most commonly reported complication. Moreover, 43 percent of these children were otherwise healthy and free of asthma, diabetes, cancer, congenital heart defects, neurological disorders, and other high-risk medical conditions. CDC Director Tom Frieden says, "All too often, people dismiss flu as a mild illness, but every year, children, including healthy children, die from flu." The researchers note that the number of deaths may be underestimated, as only those confirmed by a flu test were included in the tally. "Prevention is the best strategy, and the best strategy we have is vaccination," says Karen Wong, lead author and medical officer at the CDC, which recommends that all children six months and older receive the flu vaccine each year. The study was published in *Pediatrics*.

Parents Refusing Vaccines

Boston Globe (11/11/13) Brown, Karen D.

A growing number of parents are refusing to have their children vaccinated, or follow an "alternative" immunization schedule, even though medical groups such as the American Academy of Pediatrics and the Centers for Disease Control and Prevention have vouched for vaccines' safety. Vaccination can cause side effects in rare cases, but medical researchers say that there is a greater risk by not vaccinating. A 2010 pertussis outbreak in California that caused 10 deaths has been traced to voluntary under-vaccination. Also, Massachusetts public officials noted two cases of measles in Boston hospitals earlier this year, when there were no cases reported in the state last year. The risk of disease not only affects intentionally under-immunized children but also infants too young for some vaccines and people with compromised immune systems. The concept of "herd immunity," in which enough people are vaccinated to prevent the spread of disease, can protect most vulnerable individuals, but many people may "hide in the herd," said Amherst pediatrician and national vaccine advocate Dr. John Snyder. There are also concentrated pockets of under-vaccination, such as Franklin County, Mass., which has a vaccine refusal rate of 6 percent. In many states, parents can claim a religious exemption to public-school vaccine requirements, or get a medical exemption. Some medical experts have called for stricter state policies on vaccination. The Massachusetts Department of Public Health is releasing a detailed immunization registry to find particular towns and neighborhoods with high rates of vaccine refusal, where healthcare providers can receive extra support and educational materials from public-health officials.

W.H.O., Fighting Polio in Syria, Says More Children Need Vaccinations

New York Times (11/07/13) P. A14 Gladstone, Rick

In its efforts to stop the spread of polio in Syria, the World Health Organization (WHO) says that more than 20 million children in the Middle East are in urgent need of vaccination, two times the WHO's previous estimates. Dr. Bruce Aylward, WHO's top official in charge of eradicating polio, said the organization's projection of a two-month vaccination campaign for 10 million Middle East children would now take six to eight months and require at least 50 million doses of vaccine. Originally, 2.5 million children in Syria and more than 8 million in six neighboring countries were to be vaccinated, but Aylward says the decision to double that number was made at a meeting of the WHO regional committee for the eastern Mediterranean last week, after the outbreak of polio in Deir al-Zour, Syria, had been confirmed. Experts believe that the strain of polio in Syria is the same as the one first detected in Pakistan, and it has been found recently in sewage from Egypt, the Palestinian territories, and Israel. Polio, which primarily strikes children ages five and under, had not been seen in Syria for 14 years until last month. The reemergence is blamed in part on the collapse of Syria's public-health system due to civil war and unrest. The vaccination effort in Syria may be difficult because the government does not control some parts of the country, and some international relief agencies have accused it of hindering emergency aid to civilians.