



**Volume 5, Issue 12**

**December 2015**

**Mark Your Calendars:**

**National Influenza Vaccination Week (NIVW):**

**NIVW will be observed  
December 6–12, 2015**

**CDC ACIP Meeting  
February 24-25, 2016**

**Legislative Day at the Capitol  
February 11, 2016**

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Insider Quote:

**The mediocre teacher tells. The good teacher explains. The superior teacher demonstrates. The great teacher inspires."**

-- William Arthur Ward,  
writer

**Study: 12.5% of children susceptible to measles**

Melissa Jenco, News Content Editor; Copyright © 2015, The American Academy of Pediatrics

Nearly 9 million U.S. children and adolescents are susceptible to measles, according to a new study.

Researchers said vaccination rates are just barely above the herd immunity threshold and expressed concern about the potential for widespread illness if rates decline. "We don't have a very wide buffer before these population level immunity estimates start dipping below critical levels," said Robert Bednarczyk, Ph.D., lead author of the study and assistant professor in the Hubert Department of Global Health at Emory University.

Dr. Bednarczyk and his colleagues are presenting the findings at IDWeek 2015, the annual meeting of the Infectious Diseases Society of America, the Society for Healthcare Epidemiology of America, the HIV Medicine Association and the Pediatric Infectious Diseases Society. They performed an analysis using data from the National Immunization Survey-Teen and found roughly 12.5% of U.S. children 17 years and younger, about 8.7 million children, are susceptible to measles. Children 3 years and younger are at highest risk, with 24.7% likely to get ill if exposed compared to 7.9% of teens.

The study not only looked at overall vaccination rates, but took into account delayed vaccination and vaccine effectiveness. The Centers for Disease Control and Prevention and the Academy recommend children receive the first dose of the measles, mumps and rubella vaccine at 12-15 months and the second dose at 4-6 years. However, some children can't receive the vaccine because they are not old enough, while others have medical contraindications. In other cases, parents with religious or philosophical objections choose not to vaccinate their children.

Earlier this year, a multistate outbreak linked to Disneyland amusement park resulted in more than 100 cases of measles. Matt Zahn, M.D., medical director for epidemiology at the Orange County Health Care Agency in California where some of those cases occurred, spoke alongside Dr. Bednarczyk at Thursday's press conference and expressed his concerns.

"As a pediatrician and a public health officer, it is frustrating to admit children to hospitals with a disease that is very preventable, and generally we felt it (measles) was sort of gone," he said. "From a public health standpoint, it is sobering to recognize that one exposure event can cause so many public health ripples around the country." Carrie L. Byington, M.D., FAAP, chair of the AAP Committee on Infectious Diseases, said in a phone interview the susceptibility rates were even higher than she expected and show "the vulnerability of our nation's protections from measles." "We do not want to return to the pre-vaccine era," she said.

Measles has a mortality rate of about one in 1,000 for children, and those who survive may face long-term health issues. The Academy provides education and resources to pediatricians and families on vaccinations, stressing they are safe and effective. "The consequences of our actions affect more than ourselves, and it's really important that we maintain our national protection against measles," Dr. Byington said.

## Most First-Time Moms Plan to Follow Vaccine Schedule

11 percent intend to spread out the recommended inoculations, survey finds

FRIDAY, Nov. 20, 2015 (HealthDay News) -- Three-quarters of first-time expectant mothers plan to follow the recommended vaccination schedule for their children, a new study finds.

But the survey of 200 American women pregnant with their first child also found that 10.5 percent planned to spread out the recommended vaccination schedule, 4 percent planned to have their child receive some but not all of the recommended vaccines, and 10.5 percent were still undecided in their second trimester of pregnancy.

First-time mothers who weren't planning on following the recommended vaccination schedule said they got most of their information about childhood vaccines from online sources or family and friends.

This shows the need to find ways to provide these women with information from pediatricians and family doctors, according to study co-author Glen Nowak, director of the Center for Health and Risk Communication at the University of Georgia. The university conducted the study with the U.S. Centers for Disease Control and Prevention.

"Most of the moms-to-be indicated they were interested in information on childhood vaccines, but many were not actively looking for such information, and very few had received any from a health care provider," Nowak said in a university news release.

The study -- conducted between June 2014 and September 2014 -- did not include first-time mothers who said their children would not receive any of the recommended vaccines, a group believed to account for about 1 percent of parents.

How important do these mothers-to-be consider vaccines? Nearly 60 percent said they were very important for keeping children healthy. One quarter said vaccines were important. Those who were uncertain about their vaccination plans or said they would delay or avoid some vaccinations had less confidence in the safety, effectiveness and value of recommended vaccines, according to the study.

While most of the mothers-to-be said they had heard or seen widely used educational messages about childhood vaccination, there were major gaps in awareness among the survey participants. Many said they did not believe some of the educational messages.

"Along with suggesting that providing OB-GYNs with ways to connect first-time expectant mothers with vaccination information from health care providers, the findings indicate pediatricians and family physicians should be careful when it comes to assuming how familiar new parents are about childhood vaccines," Nowak said.

"Some new moms may have a high level of knowledge, but most probably do not -- and some of the things they are not aware of may help increase their vaccine-related confidence," he concluded.

The findings were published recently in the *American Journal of Preventive Medicine*.

### More information

The American Academy of Family Physicians has more about [childhood vaccines](#).

SOURCE: University of Georgia, news release, Nov. 5, 2015

## **Anti-vaccine websites are misinforming parents, study says**

Many anti-vaccination websites use a "considerable amount" of misinformation, as well as pseudoscience and anecdotes to reinforce the perception that vaccines are dangerous, according to research presented this week at the American Public Health Association's Annual Meeting in Chicago, IL.

### ***Researchers are looking for ways to counter skepticism about vaccination.***

Childhood vaccines are key to preventing diseases and epidemics, but growing numbers of parents choose to delay or refuse vaccination, for a variety of reasons. The Internet is often cited as a source of vaccine information - and also controversy.

In previous comparisons of pro-vaccine and anti-vaccine websites, pro-vaccination sites were found to focus on evidence-based scientific research about vaccines and government-endorsed vaccination-related practices.

In contrast, anti-vaccine websites focus on creating communities of people affected by vaccines and vaccine-related practices, creating a personal framework that is used to challenge the information presented in the scientific literature and government documents.

Mainstream health communities are concerned about the lack of success in persuading parents who do not wish to vaccinate, despite the use of educational and misinformation-correcting messages.

### **Unvaccinated people at risk of disease**

In 2014, the Centers for Disease Control and Prevention (CDC) recorded the highest number of [measles](#) cases since measles was declared eliminated in 2000.

#### Fast facts about vaccination

83% of children aged 19-35 months old are fully vaccinated against [diphtheria](#), [tetanus](#), [pertussis](#) (DTaP)

93% are fully vaccinated against [polio](#)

92% are vaccinated against measles, mumps and rubella (MMR).

### **[Learn more about immunization](#)**

The majority of those who caught it were unvaccinated. The CDC state that measles can spread when it reaches a community where groups of people have not received the vaccine. If the percentage of people vaccinated against measles, for example, is below 92%, this dramatically increases the chance of an epidemic.

Lead author of the current study, Meghan Moran, associate professor in the Bloomberg School's Department of Health, Behavior and Society, and colleagues wanted to understand the strategies through which anti-vaccine advocates create such strongly held anti-vaccine attitudes - and to use this insight to develop more effective vaccine promotion strategies.

They examined four search engines, Google, Bing, Yahoo and Ask Jeeves, using terms like "immunization dangers" and "vaccine danger," and others identified using Google Trends.

After eliminating duplicates, they had a mix of nearly 500 personal websites and blogs, Facebook pages and health websites.

The content was analyzed for persuasive strategies used, as well as for the specific beliefs about vaccines being presented, including vaccine misinformation and its sources.

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### Two thirds of anti-vaccine sites 'are misleading'

The team also coded websites for lifestyle indicators, in order to identify additional values, attitudes, behaviors and preferences associated with the anti-vaccine movement. Through analyzing behaviors and values co-promoted by the websites, they hoped to develop better-targeted materials that could help promote vaccination.

**Misinformation was common in the anti-vaccine websites: 65.6% claim that vaccines are dangerous, 62.2% that they cause autism and 41.1% that they cause "brain injury." To support these claims, 64.7% used scientific evidence and 30% used anecdotes.**

Regarding values, 41% mentioned choice, 20.5% freedom and 17.4% individuality.

Use of alternative medicine was promoted by 18.8% of sites and homeopathy by 10.2%. Healthy diet was promoted in 18.5% of cases, and 5.2% supported an organic diet. In 7.1% of websites, cleansing one's body of toxins was promoted, 5.5% supported breastfeeding and 6.8% co-promoted religiosity.

Moran says:

"The biggest global takeaway is that we need to communicate to the vaccine-hesitant parent in a way that resonates with them and is sensitive to their concerns. In our review, we saw communication for things we consider healthy, such as breastfeeding, eating organic, the types of behavior public health officials want to encourage. I think we can leverage these good things and reframe our communication in a way that makes sense to those parents resisting vaccines for their children."

Understanding the strategies used to further an anti-vaccine message is useful for the development of strategies to counteract the negative messages and promote childhood vaccinations. Gaining an in-depth understanding of the broader culture supporting anti-vaccine decisions can help to inform tailored pro-vaccine education and advocacy messages.

*Medical News Today* recently reported on fears that [not vaccinating children could lead to a measles epidemic in the US.](#)



**FROM THE GEORGIA CHAPTER AAP**

## Infant whooping cough infection tied to later epilepsy risk

BY KATHRYN DOYLE

(Reuters Health) – Children in Denmark who were diagnosed with pertussis, or “whooping cough,” in early childhood appear to have an increased risk of epilepsy later in childhood, according to a new study.

“Although the association we identify may be important on a population level, the individual child admitted to hospital with pertussis will have a very low risk of epilepsy,” said lead author Dr. Morten Olsen of the Aarhus University Hospital in Denmark.

Pertussis is an acute respiratory infection common in childhood, affecting about 16 million people per year. The resulting coughing spells are so bad that it is hard for infants to eat, drink, or breathe. The spells can last for weeks and may lead to pneumonia, seizures, brain damage and even death, according to the Centers for Disease Control and Prevention (CDC).

In the U.S., children get five doses of pertussis vaccine as part of the DTaP schedule, at two, four, six and 18 months of age and at four to six years. These shots also protect against diphtheria and tetanus, other bacterial diseases. For the new study, researchers used a national database in Denmark to identify all 47,000 patients born between 1978 and 2011 who had been diagnosed with pertussis, about half of whom were diagnosed before six months of age.

Compared to a group of similar people matched by sex and year of birth, the individuals who had been diagnosed with pertussis had a higher risk of childhood epilepsy. Close to one percent of those in the comparison group had an epilepsy diagnosis by age 10, compared to 1.7 percent of those in the pertussis group, researchers report in JAMA.

Children diagnosed with pertussis after age three were not at increased risk for epilepsy, the authors found. About 1.8 percent of adults in the U.S., or 4.3 million people, had a diagnosis of epilepsy or a seizure disorder in 2013, according to the CDC. It can be treated with anti-seizure medications or other management techniques.

It’s possible that low blood oxygen levels due to coughing fits as a young child may damage the brain and increase epilepsy risk later, said Dr. Eugene D. Shapiro of the Yale School of Public Health in New Haven.

Shapiro was not part of the study in Denmark. It is also possible that severe coughing could lead to increased pressure in the blood vessels in the brain and possible bleeding that can lead to neuronal damage, Shapiro told Reuters Health by email.

This is not a very strong association, but there can be many other complications of pertussis, which are all good reasons to continue vaccinating our children, he said. “It seems plausible that epilepsy would occur in children who had pertussis early in life,” and the infection may also increase the risk of other brain complications like mental retardation, said Dr. James D. Cherry, professor of pediatrics at the David Geffen School of Medicine at UCLA in Los Angeles who was not part of the new study.

“Presently we’re recommending vaccinating all pregnant women, so the antibodies transmitted from the mother would prevent pertussis” in infancy, helping to cover the gap between birth and first vaccine dose at age two months, Cherry told Reuters Health by phone.

SOURCE: [bit.ly/1RP7YF4](http://bit.ly/1RP7YF4) JAMA, online November 3, 2015.

### **Question of the Week**

**Issue 1217: December 2, 2015**

**We see many patients with multiple co-morbidities (COPD, heart disease, diabetes, dialysis, etc.). Which influenza vaccine should we give to this patient population?**

A person with chronic medical conditions should receive only inactive influenza vaccine. The vaccine should be given only to persons of the approved age range for that vaccine. For persons for whom more than one type of vaccine is appropriate and available, ACIP does not express a preference for use of any particular product over another.

### **Question of the Week**

**Issue 1215: November 18, 2015**

**Do you have any information on the use of aborted fetal cells in vaccine development?**

Please see this article which summarizes the use of cells which produced the MRC5 and WI138 cell lines for certain vaccines used in humans:

<http://www.historyofvaccines.org/content/articles/human-cell-strains-vaccine-development>.

The cells were taken from infants aborted for other reasons, and no new cells have been harvested since the 1960s. Rubella vaccine is one of those developed with such cells. Other commonly used vaccines from these cell lines include hepatitis A vaccines, varicella vaccine, and zoster (shingles) vaccine.

The National Council of Catholic Bishops has deemed use of such vaccines acceptable, if no other alternatives exist.

### **Question of the Week**

**Issue 1215: November 18, 2015**

**A 16-year-old female came to us prior to having an elective splenectomy for a congenital splenic cyst. Her primary doctor has given her PCV13, Menactra brand MCV4, and a dose of meningococcal B vaccine—all on the same day. Since PCV13 and Menactra were given on the same day, should I give her another dose of PCV13 and if so, when? She will also receive PPSV23 8 weeks after PCV13.**

While it is ideal if all recommended doses are given prior to splenectomy, this schedule is acceptable, since PCV13 is being given before PPSV23 and splenectomy. The recommendation to separate PCV13 and Menactra applies only to asplenic persons. When she received the vaccines she was not asplenic.