



Volume 10

Dr. Jacob Lazarovic
SVP/Chief Medical Officer

Measles and More

TAKING OUR PULSE

The current measles outbreak in California, now rapidly spreading to at least 16 other states, is a reminder that infectious diseases still require vigilance, that vaccine-preventable infections may reappear if our compliance levels decrease, and that attention to adult immunization guidelines remains a priority in order to help prevent workplace disability.

First, let's catch up on measles.

Measles is a highly contagious disease, transmitted by respiratory aerosols when an infected person coughs or sneezes. The virus can live for up to two hours on surfaces or in an airspace where the infected person coughed or sneezed. The incubation period ranges from 7-21 (average 10-12) days and an individual can pass the virus to others before feeling ill. The signs and symptoms of measles include: fever, malaise, runny nose, cough and conjunctivitis ("pink eye"). A raised, red rash typically appears ~3 days after onset of illness and the ill person continues to be infectious for about 4 days after the rash appears. The rash initially appears behind the ears and on the forehead, spreading down the neck, upper extremities, trunks, and lower extremities (including palms and soles). It may last for 5-7 days before fading. Complications from measles may include: middle ear infection, bronchopneumonia, croup, diarrhea, acute encephalitis, and death.

All suspected measles cases should be reported to county health departments immediately.

JUST WHAT THE DOCTOR ORDERED

The Centers for Disease Control and Prevention (CDC) has developed a comprehensive workplace health model containing several health promotion building blocks.

Adult immunization programs constitute one element of a systematic approach to workplace health.

Vaccine-preventable diseases are infectious diseases that can be prevented by immunization (vaccination). Traditionally, vaccines have been associated with protecting young children, but far too

many adults become ill, are disabled, and die each year from diseases that could easily have been prevented by vaccines. Vaccines not only prevent disease in the people who receive them but often create “herd immunity,” meaning that even unvaccinated individuals are at lower risk of disease if most of their community is immunized. Everyone from young adults to older adults can benefit from immunizations.

Among vaccine-preventable diseases in adults, influenza has the greatest impact in the U.S. population.

- An average of 36,000 deaths and over 200,000 hospitalizations associated with influenza occur each year in the United States.
- The combination of influenza and pneumonia was the eighth leading cause of death among all persons in the United States in 2005, accounting for 63,000 deaths.
- The overall national economic burden of influenza-attributable illness for adults, age 18 years and above is \$83.3 billion. Direct medical costs for influenza in adults totaled \$8.7 billion including \$4.5 billion for adult hospitalizations resulting from influenza-attributable illness.
- Influenza is also responsible for substantial indirect costs (\$6.2 billion annually), mainly from lost productivity. Each year, among adults age 18 to 64 years, 17 million workdays are lost to influenza-related illness.

However, influenza is certainly not the only condition that is addressed in an adult immunization program. Based on recommendations from the National Advisory Committee on Immunization Practices (ACIP), current guidelines include:

- Diphtheria and tetanus (Td) booster every 10 years for persons younger than 65 years. One of the Td boosters should be replaced with tetanus/diphtheria/acellular pertussis (Tdap) to provide protection against pertussis (whooping cough).
- Influenza (annually for adults age 50 years and older)
- Human papillomavirus (HPV) for women ≤ 26 years of age
- Varicella (chickenpox) immunization (2 doses) for people with no evidence of immunity such as a history of varicella infection. Very few adults actually need the varicella vaccine because most adults had chickenpox as children
- Zoster (shingles) for adults age 60 years and older. Shingles can be extremely painful and debilitating.
- Pneumococcal (for adults age 65 years and older). One major change in the 2015 schedule is that it is now recommended that two types of pneumococcal vaccines be administered: the traditional PPSV23, as well as the newer conjugate vaccine, PCV13.
- Other immunizations, such as hepatitis A and B; pneumococcal (for persons younger than 65 years based on high risk conditions such as diabetes); measles, mumps, and rubella (1-2 doses for persons born after 1957); and meningococcal vaccines

<http://www.cdc.gov/vaccines/schedules/downloads/adult/adult-schedule-easy-read.pdf>

Business travelers going abroad should be aware of destination-specific initial vaccinations and boosters, as recommended by the CDC, to maximize protection from locally prevalent infections, e.g. hepatitis A and B, typhoid, rabies, polio, yellow fever, meningitis, encephalitis and others.

Health care workers also have special needs with respect to their immunization schedules, related to potential blood-borne exposures.

Employees should encourage and facilitate employees’ compliance with the ACIP immunization guidelines, and employees should discuss this with their primary care physicians to ensure a safe and effective vaccination protocol.

CIRCULATING IN THE PRESS

“Anti-Vaccine Movement Causes Worst Measles Epidemic in 20 Years”

Steven Salzberg, Contributor, Pharma & Healthcare, 2/1/15, Forbes.com.

Measles is now spreading outward from Disneyland in California, in the worst outbreak in years. The epidemic is fueled by growing enclaves of unvaccinated people.

The CDC reports that in just the past month, 84 people from 14 states contracted measles, a number that is certainly an under-estimate, because the CDC doesn't record every case. California alone has 59 confirmed cases, most of them linked to an initial exposure in Disneyland. A majority of people who have gotten sick were not vaccinated.

For years, scientists (including myself) have warned that the anti-vaccination movement was going to cause epidemics of disease. Two years ago I wrote that the anti-vaccine movement had caused the worst whooping cough epidemic in 70 years. And now it's happening with measles.

Finally, though, the public seems to be pushing back. Parents are starting to wake up to the danger that the anti-vax movement represents to their children and themselves.

What's sad about this – tragic, really – is that we eliminated measles from the U.S. in the year 2000, thanks to the measles vaccine.

But we had 644 cases in 27 states in 2014, the most in 20 years. And 2015 is already on track to be worse. Measles may become endemic in the U.S., circulating continually, thanks to the increasing numbers of unvaccinated people. Until now, each outbreak was caused by someone traveling from abroad and bringing measles to us. The anti-vaccine movement has turned this public health victory into defeat.

Anti-vaxxers have been relentless in the efforts to spread misinformation. Despite overwhelming scientific evidence that vaccines are beneficial, they endlessly repeat a variety false claims, such as:

- Vaccines cause autism. **They don't.**
- The preservative thimerosal in vaccines causes autism. **It doesn't.**
- Natural immunity is all you need. **It isn't.** Measles infects 90% of people exposed to it unless they are vaccinated.
- A healthy lifestyle will protect you from measles. **It won't.**

Where does this breathtaking science denialism come from? It's been building for years, as I and many others have written. The wave began with a 1998 paper published in *The Lancet* by Andrew Wakefield, claiming that the MMR vaccine was linked to autism. Wakefield's work was later shown to be fraudulent, and his claims about the vaccine “dishonest and irresponsible.” After lengthy investigations, the paper was retracted and Wakefield lost his medical license. Despite this very public repudiation, Wakefield has stuck to his claims, though, and has spent much of the past 15 years speaking (or perhaps “preaching” would be a better term) to anti-vaccine groups, to whom he is a kind of folk hero.

Make no mistake, measles is a very dangerous infection. In the current outbreak, 25% of victims have ended up in the hospital. And it is extremely infectious: the CDC's Schuchta explained that:

“You can catch it [measles] just by being in the same room as a person with measles even if that person left the room because the virus can hang around for a couple of hours.”

REFERENCES:

<http://www.cdc.gov/workplacehealthpromotion/model/index.html>

<http://wwwnc.cdc.gov/travel/destinations/list>