Measles

Agent: Measles virus
Mode of Transmission: Primarily person-to-person transmission by inhalation of respiratory droplets or direct contact with nasal or throat secretions of infected people; however, airborne transmission via aerosolized droplet nuclei has been documented.
Signs/Symptoms: Fever, cough, conjunctivitis, coryza, and a typical rash on the third to seventh day after onset of symptoms.
Prevention: Measles vaccine should be given as part of the measles, mumps, and rubella (MMR) series beginning at 12-15 months of age followed by a second dose at age 4-6 years. Infants <12 months of age traveling internationally should be vaccinated with an additional dose if at least 6 months of age.
Other Important Information: Measles is highly communicable, with secondary attack rates greater than 90% among susceptible people who have close contact with the infected person. Measles elimination has been maintained in the United States since it was declared no longer endemic in 2000. Measles remains endemic in parts of the world, but progress is being made toward elimination as demonstrated by a 67% decrease in reported cases from 2000-2013. Imported cases, many that originate in Asia and Europe, continue to occur in U.S. residents who were exposed while traveling abroad and by persons visiting the United States. As cases are imported and can be costly to control, it is important for individuals planning international travel to be aware of their immune status and obtain a vaccination if necessary.

Measles: 2014 Data Summary	
Number of Cases:	2
5-Year Average Number of Cases:	2.2
% Change from 5-Year Average:	-9%
Incidence Rate per 100,000:	0.0

Two cases of measles were reported in Virginia for 2014. These cases were epidemiologically linked and were the first to occur in two years; seven cases were reported in 2011, three cases were reported in 2010, and one case each for 2009 and 2008.

The Virginia index case in 2014 occurred in a young school-aged child who was exposed during international travel and was not age-appropriately vaccinated. The second case occurred in an adult following direct contact with the index case. The second case was fully vaccinated, but was a vaccine non-responder and had a mild case presentation. Both cases occurred in the northern region and resulted in a multi-jurisdictional response not only within Virginia, but also surrounding states.

In 2014, the U.S. reported the most cases since measles was declared non-endemic, with 668 cases from 27 states. Twenty-three outbreaks were reported across the U.S. and accounted for 89% of the cases in 2014. Outbreaks were reported in California, Florida, Washington, and Ohio. The Ohio outbreak accounted for 383 cases of measles and

occurred within unvaccinated Amish communities. This event was linked to an outbreak that was ongoing in the Philippines with a total of 21,420 confirmed cases and 110 deaths in 2014. By the end of 2014, California reported its second outbreak; investigation for this outbreak is ongoing. Epidemiologically linked cases from the California outbreak were reported for seven other states (Arizona, Colorado, Nebraska, Oregon, Utah, and Washington), and two other countries (Mexico and Canada). While vaccination with MMR remains high throughout the U.S. ($\geq$90% MMR vaccine coverage among children 19-35 months and adolescents), communities remain at risk as coverage varies at the local level. Outbreaks reported in 2014 demonstrate that groups that refuse vaccination, for either religious or philosophical beliefs, tend to cluster geographically. Ensuring high MMR vaccination rates continues to be the best defense against a widespread measles outbreak.