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Measles: “I’ll Be Back”

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Measles, a highly contagious viral illness, has made an unexpected appearance in our area over the last few weeks. Since the end of May, Moses Lake, WA, has reported 18 cases of measles. If we are lucky, eighteen cases will be all that occur. On the other hand, measles, like most other viral diseases that are readily transmitted from person to person, will find a way to exploit any weakness in our defense.

A vaccine for measles has been available for over 45 years. It is very safe and very effective. Children are given one dose at a little over one year of age, and a booster is given when the child starts school. The two-dose schedule has been so successful that, in 2002, the World Health Organization declared that measles had been eliminated as an ongoing threat in the region of the Americas.

Prior to the development of a vaccine in 1963 and its widespread use, there were approximately 3 to 4 million cases of measles a year in the United States. Although measles is known as a disease that causes a high fever and a red rash, and most children recover from it uneventfully, there can be serious complications. In the pre-vaccine era, 400-500 children died from measles every year in the United States. Another 48,000 were hospitalized, and about 1,000 developed chronic disability from measles encephalitis (brain inflammation).

Outside the Americas, despite attempts at implementing the standard two-dose schedule for immunization, measles remains the number one vaccine-preventable killer of children under five years old. The World Health Organization estimates there were 35 million cases and 614,000 measles deaths in 2002. This is an unacceptable situation since we have the tools and the resources to prevent it.

Just because measles has been eliminated in the Americas is no reason for us to be complacent. Ongoing measles outbreaks around the world and modern patterns of international travel mean that re-introduction of measles in the US is a certainty. This was exactly the situation in Moses Lake. A visitor from Japan came down with measles shortly after attending a meeting in Kirkland, WA with several non-immune people from Moses Lake. Non-immune contacts of those cases also became ill. Because measles is spread by droplets and via the air, secondary cases will occur if immunity levels in the population don't exceed 90 – 95%.

Very young children are protected from measles by transfer of antibodies from mother through the placenta. This passive immunity lasts about six to nine months and fades naturally. Because measles vaccine is not very effective when given before one year of age, the first dose is not given until children are 12-15 months old. This leaves a large number of measles susceptible infants in the window period between 9 and 15 months old in any population. Older children and adults with immune system diseases are frequently ineligible for vaccination and therefore constitute another pool of people potentially susceptible to measles. Vaccination levels of all eligible children, as well as adults in health care settings and schools, need to be near 100% in order to stop the spread of imported measles.

We usually make the decision to vaccinate our children based on our desire to protect them individually. Measles teaches us that we need to vaccinate our children to prevent the spread of illness to other people who are not eligible for vaccine or who are not yet immunized. In that sense, vaccination is really a civic responsibility. If we carry out this responsibility with diligence and persistence, there may come a time when measles is no longer a threat to anyone anywhere. Measles, just like Small Pox, will be eradicated, if we don't carry out this responsibility, it will surely be back.