Letter to the Editor

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Global outbreak of deadly measles in 2019

Sir,

Measles is an infection of the respiratory system caused by a virus, especially a *Paramyxovirus* of the genus *Morbillivirus*, a single stranded negative sense RNA virus. Infants younger than 12 months, school-aged children or young adults depending upon local immunization practice are highly susceptible for the disease.

Measles is one of the world's most contagious diseases, with the potential to be extremely severe. In 2017, the most recent year for which estimates are available, it cause closed to 110,000 deaths. Even in high income countries, complication results in hospitalization in up to a quarter of cases and lead to life-long disability from brain damage and blindness to hearing lost.¹

Meanwhile, measles cases have continued to climb into 2019. Preliminary global data shows that reported cases rose by 300 percent in the first three months of 2019, compared to the same period in 2018. This follows consecutive increases over the past two years. ¹

All regions of the world experienced outbreaks and Africa was the worst impacted with cases up 700%. The WHO said that the actual numbers could be far greater because only one in ten cases globally gets reported. So far this year, 170 countries have reported 112,163 measles cases to the WHO and during the same time frame last year, 163 countries reported 28,124 cases.²

According to WHO, Ukraine, Madagascar, India, Pakistan, Philippines, Yemen, Brazil, Myanmar, Republic of Congo are the most affected countries.

As of April 2019, Madagascar's health officials recorded more than 69,000 measles cases and 1,200 related deaths in the largest-ever measles outbreak on the island nation. Ukraine has experienced 72,000 cases, and the Philippines 19,000 cases.³

In US, measles was eliminated in 2000 but in the first five months in this year (2019), the virus has already been confirmed in 26 states with 971 cases according to Center of Disease Control and Prevention.

In 2018, where 372 cases were reported. These outbreaks were more concentrated in New York, New Jersey, Washington and California. And among those the vast

majority of cases (more than 600) have occurred in the Orthodox Jewish communities in New York City and the sub-urb of Rockland. There, a minority of people who are vaccine skeptics have been opting out of shots on behalf of their children, driving vaccine rate down and creating space for the highly contagious virus to spread.³

Measles is extremely contagious. It can spread to others through coughing and sneezing. Also, measles virus can live for up to two hours in an airspace where the infected person coughed or sneezed. If other people breathe the contaminated air or touch the infected surface, then touch their eyes, noses, or mouths, they can become infected. It is estimated that around 9 in 10 people who are not already immune will become infected following exposure.⁴

Measles can be deadly, from the prominent rash it can develop into infuriating encephalitis, pneumonia, severe diarrhea and dehydration and /or permanent disability. In developing countries, approximately 1 of every 100 children with measles will die from the disease or its complications.⁴

The reasons for outbreaks differ in each country — from vaccine refusal to problems with health care access or access to vaccines, to civil unrest and low awareness about the need to vaccinate. But what all these causes have in common: These factors are driving down the rate of vaccine coverage.³ In addition to these international travelers are also the factors for spreading measles.

The disease is almost entirely preventable through two doses of safe and effective vaccine. MMR vaccine is highly effective for prevention of measles. According to immunization schedule, one dose should be given at the age of 12-15 months and another booster dose at the age of 4-6 years. Two doses of vaccine are about 97% effective in preventing measles according to CDC.

In conclusion, measles, as of today, is a re-emerging disease whose priority for prevention and control must be placed on the top. The disease is behaving deadly in early 2019 all over the globe primarily due to lack of vaccine awareness, shortage of health care services, improper vaccine doses and many other factors. Hence, proper MMR vaccine, vaccine awareness programs, availability of vaccine along with health care services must be provided to eliminate the disease.

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