

Measles on the Rise The importance of vaccination

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MEASLES WAS THOUGHT TO BE ALMOST ERADICATED, however, recent reports from around the world are proving otherwise. In 2018, the World Health Organization (WHO) received reports of approximately 229,000 cases of measles; this represents an increase of approximately 35% compared to 2017.^{1,2} According to the United Nations International Children's Emergency Fund (UNICEF), 98 countries have reported a rise in measles cases in 2018. The countries that had the highest increase in the number of measles cases were Philippines, Yemen, Sudan, Thailand, Ukraine, France, Brazil, Venezuela, Serbia and Madagascar.^{1,2} In Oman, no cases of measles have been reported in 2018, which reflects a significant drop since a measles outbreak in 2016–2017.³ However, measles should be constantly monitored worldwide as, for example, Brazil declared the eradication of measles in 2017 yet had 10,262 cases in 2018.²

Measles is a very contagious disease that can be transmitted via aerosol particles or through contact with infected throat and nasal secretions. The disease can effectively spread in a travel-related manner especially in under-vaccinated populations.⁴ When exposed to the virus, individuals who are not immunised against measles have an approximately 90% chance of infection and each infected person can infect 9–18 other individuals in a susceptible population.⁴ Before the introduction of the anti-measles vaccine in 1963, the disease caused 2–3 million deaths per year worldwide, with a significant drop to <90,000 deaths per year in 2016. However, 2018 witnessed the death of 136,000 individuals due to measles, which constituted a 51% increase.^{2,4}

Several factors might have led to the current outbreaks of measles. These include wars and conflicts, unavailability of healthcare, lack of health education and the hesitancy to be vaccinated.² The challenge of eradicating measles is related to human factors rather than issues associated with the microorganisms themselves.

Measles can be completely prevented using existing vaccination. Two doses of the live-attenuated measles vaccine provides 97% protection, which classifies them as potent vaccines.⁴ The side-effects of the measles vaccine are minor, particularly when compared to the protection that the vaccine offers.⁴ Aside from medical contraindications—such as immunosuppression, pregnancy, among others—there is no valid scientific reason not to be vaccinated.⁵ Refusing vaccination is often related to incorrect beliefs regarding its safety. There is a widespread misconception that vaccination for measles has the potential to trigger the development of autism spectrum disorder.⁶ Such 'fake news' has been spread easily by the anti-vaccination movement, especially through social media and plays an important role in making people hesitant to be vaccinated.^{2,4,7} Vaccination hesitancy is among the top threats to global health according to the WHO.^{2,4,7} The relation between anti-vaccine campaigns and measles outbreaks suggests that the rate of other infectious diseases, that can also be prevented by vaccination, may increase as well.²

What are the solutions? Awareness and vaccination constitute an efficient arsenal to fight measles. Physicians, healthcare providers and educational institutions should discuss the importance of vaccinations and encourage the public to get vaccinated. Such healthcare providers can disseminate knowledge about the benefits of vaccination and clarify false information about its alleged detrimental effect. The public should be informed that the risk vaccination entails is similar to the side-effects of commonly utilised medications. It is highly advised to take the vaccine when the benefits are vital and outweigh the potential risks.

The measles vaccination led to an approximately 96.5% decrease in the number of measles-related deaths around the world.^{2,4} For example, the number of measles-related deaths in Brazil was estimated to be approximately 900 deaths per year before the introduction of vaccination

campaigns, which consequently reduced this number by 98%.^{8,9} An approximate 53% decrease in the percentage of children who have received the second dose of a measles vaccine preceded the surge in the number of measles cases in 2018.¹⁰ Social media companies should take measures to limit the spread of false anti-vaccination information and legislators and governments should take action to avoid the spread of such information.

Assessing the level of hesitancy to be vaccinated in a community will help establish strategic plans, potentially based on target groups, to deal with this hesitancy. Access to vaccinations should be available to all as vaccination is the most effective tool to eliminate the spread of measles. In addition, vaccination campaigns should be encouraged when necessary. A significant drop in the number of reported measles cases was observed after an anti-measles vaccination campaign in 2017 in Oman.^{3,11}

Healthcare providers, educational institutions, social media companies, legislators and governments should collaborate on strategies to spread knowledge about the benefits of vaccination, block false anti-vaccine information and establish successful vaccination campaigns.

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