Philippines hit by deadly Measles outbreak – a wakeup call?

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Dear Editor,

Measles is a highly contagious disease characterized by acute respiratory viral illness caused by the paramyxovirus family. It is transmitted through aerosol droplets via coughing, sneezing and direct contact with nasal secretions. According to the World Health Organization (WHO), it can be regarded as one of the biggest public health challenges worldwide resulting in 110 000 deaths in 2017 globally, mostly among children under the age of five [1].

An overall MMR (Measles, Mumps and Rubella) vaccine coverage has been highly effective in interrupting the endemic transmission of measles and eliminating it. It prevented an estimated 21.1 million deaths during 2000-2017, reducing the global measles deaths by 80% [1]. However, recently, Department of Health (DOH) in the Philippines has declared an outbreak of this deadly virus which has spread rapidly from the capital, Metro Manila, expanding to various parts of the Philippines. Approximately, 25,676 cases of measles have been reported nationwide resulting in 355 deaths in 2019, with Philippines Red Cross (PRC) treating a total of 3,095 measles patients at 5 major Measles Care Units, in Metro Manila alone [2].

This fatal epidemic can be attributed to the lack of appropriate vaccination as the coverage dropped to below 70% in 2017 from above 80% in 2008. Moreover, 95% vaccination coverage is required for complete prevention by providing herd immunity; therefore, a massive drop of 25% led to the pool of children that is susceptible to this life-threatening disease to build up over time. According to the World Health Organization, 2.6 million children under the age of 5 in the Philippines are vulnerable to measles due to inadequate vaccination [3].

Multiple factors contributed to the outbreak in the Philippines. Lack of public confidence in the immunization programs led to low vaccination rates for measles as deaths resulted from the Dengvaxia vaccine which gave rise to a severe form of dengue and health consequences in people who have never been affected by the mosquito-borne flavivirus. This vaccine was only proven to be beneficial for those with prior infection [4]. Thus the vaccine hesitancy due to lack of trust resulted in the resurgence of measles in the Philippines. Another reason for low levels of herd immunity is the poor-functioning measles surveillance system in the country, with implementation of fewer immunization sessions by the primary health care services and inaccessibility of hard to reach areas in the Philippines, leaving a large proportion of population unvaccinated [3].

Additionally, high prevalence of measles cases in Manila could be contributed to the fact that it includes a large population living in small suburbs and slums, thus allowing the airborne virus to spread rapidly to other regions, alarming the Philippines Health Control Department and provincial authorities and motivating them to take prompt initiatives to alert mothers to be more careful and emphasizing residents to participate in government-sponsored measles vaccination program [5].

There has also been a resurgence of measles in the areas previously declared measles free such as several countries in the Western Pacific Region, in which fewer cases of measles and no major outbreak was reported in 2017. However, the number of measles cases increased by 250% in 2018, with more than two-thirds of cases in the Philippines. Even in countries where measles has been eliminated such as Australia and Cambo-

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dia, importation of the virus due to International travel from other countries to the Region puts people who are unvaccinated at risk of infection, and re-establishment of local transmission of the disease [6].

Thus, one of the most significant risk factors in developing measles, and its complications is a lack of immunity. This is an alarming situation and needs immediate attention. In addition to the Philippines, the measles outbreak has been previously reported in many countries. The United States (US) experienced the greatest outbreak in 2014, with 1264 cases of measles out of which many were internationally imported from the European Region, comprising unvaccinated foreign visitors and US residents [7]. Recently in 2019, the government of Rockland County confirmed 194 cases of measles with 80.8% people, not vaccinated with MMR vaccine [8]. Late diagnosis of measles by the health care professionals delayed its contact tracing and implementation of air-borne precautions which resulted in more exposures of this disease and further complications like pneumonia, encephalitis, diarrhea, and thrombocytopenia [7].

Additionally, parents avoid to vaccinate their children because of the misconception of possible relationship between MMR vaccine and autism. Therefore, to erase this misconception, Hviid et al. conducted a nation-wide study throughout Denmark which incorporated more than 600,000 children in 10 years. The study concluded that the MMR vaccination does not increase the risk for autism and is not associated with clustering of autism cases after vaccination [9].

A region-wide initiative should be taken by political and government authorities of different countries by arranging awareness and health education campaigns explaining the importance of population immunity to eliminate measles completely. Vigilant monitoring of vaccination coverage should be done in different areas; many NGOs could also collaborate to promote childhood immunization for measles.

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