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Editorial

Is It Already Too Late for Measles Elimination in Thailand?

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In the field of disease control, the ability or possibility to control or even eliminate a communicable disease depends on the availability of technologies or innovations for manipulating the three epidemiological determinants of disease occurrence: host, agent and environment. A perfect example is the positive outcomes of controlling coronavirus disease 2019 (COVID-19), which were achieved through host adaptation (by mask wearing and hand washing), environmental arrangement (by social distancing), and targeting the causative agent—SARS-CoV-2 virus (by COVID-19 vaccines). Some diseases can be controlled even without the need to address all three determinants; just one is enough. There are many successful pieces of evidence in global history. The success of smallpox eradication relied mainly on the use of smallpox vaccines, and that for yaws elimination was due to the availability of effective antimicrobials (mass treatment by penicillin and azithromycin). The low prevalence of yaws has led to an aim for global eradication. The key message here is that once the efficacious control measures are available, it is always possible to control, eliminate or even eradicate the target diseases. Thus, it is difficult to accept that many countries around the world are still unable to eliminate measles, a disease that can be ended simply by mass immunization.

Measles is a contagious disease that mainly affect children, and the health outcomes include high fever, respiratory tract symptoms, dermatological manifestations, internal organ damage (particularly to the lungs and the brain) or even death. Fortunately, the disease is preventable by immunization. Successful elimination was observed over 40 years ago in Finland, a country that began providing a 2-dose measles vaccine to children at the national level. As a result, the disease was eliminated. All new cases identified were mostly imported. Subsequently, 2-dose measles immunization has been widely accepted and become a global norm. The positive outcomes of measles immunization were so well documented that the World Health Assembly in 2012 agreed to set a global policy of measles elimination. Since then, efforts have been made around the world to eliminate the disease. The main principle is that if all countries can achieve over 95% of 2-dose measles immunization, the global elimination can then be successful. Many countries around the world had already declared the state of elimination. In the Southeast Asia region, the World Health Organization had verified measles elimination in Sri Lanka, Maldives, Bhutan, Timor-Leste and North Korea.

In Thailand, the 2-dose measles immunization was approved in 1996. The immunization scheme has long been included in the national expanded program on immunization (EPI) through the use of measles, mumps, and rubella (MMR) vaccine at the ages of 9 and 18 months. The question is, “Why were measles outbreaks still observed?” The answer is obvious: the country is still unable to attain a high level of immunization coverage. The overall coverage of MMR2 (the second dose) for 2024 was only 87.5%, and the coverage for some provinces was even much lower: 42.8% for Pattani Province, 55.9% for Narathiwat Province and 65.5% for Yala Province. Failure to attain over 95% immunization coverage of measles vaccines had resulted in several outbreaks of the disease. For 2024, the number of reported cases of measles in Thailand was 5,372, and many more suspected cases were reported.

Reasons for immunization failure may be many; one of which may be due to the epidemic of COVID-19 in the past few years, which had caused interruption of routine health services in most health care facilities. Since the COVID-19 epidemic is now over, it is time to catch up. The most important driving force that exists is the understanding of health personnel on the need for high vaccination coverage and to create herd immunity, as well as the willingness to protect the lives of children. We used to hear that

in Mongolia, a health worker carried vaccines in a freeze-prevention container traveling by horse in the freezing land just to vaccinate a child living in a ger (traditional tent in the country) very far away, who was at the age for diphtheria, tetanus, pertussis and polio vaccination. Responsibility to immunize all children relies on local health workers, and the monitoring efforts belong to provincial and central health leaders. To eliminate measles successfully, over 95% coverage of the measles vaccine has to be ensured.

Currently, the Ministry of Public Health of Thailand is planning to strengthen the immunization program for measles. Unfortunately, the plan is only for some selected provinces with the lowest coverage. Since no health region in the country had MMR2 coverage reaching over 95%, the strengthening efforts should be made nationwide. It is quite slow to target only a small number of provinces, as it is probably already too late for the country to achieve the goal for national measles elimination.