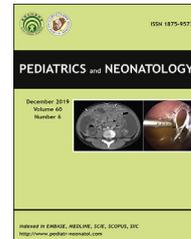


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## Editorial

# Vaccinate the unvaccinated, but how?



Successful prevention of diseases and mortalities by vaccination is one of the most significant achievements made by human beings in history. This success relies on adequate vaccination rates among different populations. Unfortunately, non-vaccination or under-vaccination remains problematic in many parts of the world. Identification of the main factors undermining vaccination coverage is the key to increase the vaccination rates. Recently, Ntenda PAM found that the major factors associated with non- or under-vaccination in Malawi were the children from the poorest households, who did not have postnatal care within two months, and had no health card.<sup>1</sup> These factors are closely related to inconvenience in assessing the vaccines and inadequate perception of the value of vaccines resulting from poverty and undereducation. The vaccination rate is expected to rise with economic growth and educational improvement.

In many other parts of the world, however, factors undermining vaccination programs are quite different. Vaccine-preventable diseases (VPDs) have become rare in countries with adequate vaccination coverages in the past decades. Parents increasingly assume that threats of VPDs are remote, and safety risks of vaccinations are in the vicinity.<sup>2</sup> The complacency of not getting sick and lack of confidence in vaccine safety may result in delay or refusal of vaccinations. Vaccine hesitancy was defined by a strategic advisory group of experts (SAGE) working group as a delay in acceptance or refusal of vaccination despite the availability of vaccination services.<sup>3</sup> Such hesitancy has been identified by the World Health Organization as one of the top 10 global health threats of 2019.<sup>4</sup> To deal with vaccine hesitancy, we also need to understand the factors behind this hesitancy and adopt different actions in different situations. Many parents may have a favorable attitude toward vaccination and even expect newer vaccines<sup>5</sup> but have little knowledge of different aspects of vaccination, including the design, manufacturer, pre-licensure trials, and post-licensure safety monitoring. Meanwhile, some people are perceiving vaccinations through a lens of distrust of vaccine manufacturers, vaccine experts, and regulatory bodies overseeing vaccine

licensure and safety. Health education and communication of correct information, especially for those who had negative vaccination experiences, are the cornerstones to improve this situation and to fight the widespread and ungrounded fears about vaccines. Educating future parents (college students), especially in communities where vaccine hesitancy is prevalent, by assigning them to communicate with VPD victims may decrease vaccine hesitancy in the long run.<sup>2</sup> Legislative and administrative interventions may be helpful but remain highly controversial.<sup>6,7</sup> Focusing on eliminating the medical exemptions could reduce the controversy that accompanies the attempts to restrict nonmedical exemptions.<sup>7</sup>

Identifying the factors for under-vaccination or non-vaccination is important for any given community. This is the only way by which the community can develop strategies for vaccinating the unvaccinated people and preventing unnecessary suffering from VPDs.

## Conflicts of interest

The authors have no conflicts of interest relevant to this article.

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