Vaccine hesitancy in low- and middle-income countries: potential implications for the COVID-19 response

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At this point in the COVID-19 pandemic, children are relatively spared by the direct effects of the SARS-CoV-2 virus, but their role in transmission is less understood. Conclusions on these issues call for caution, as the nature of the pandemic and the virus changes. Global health organisations and national governments are pinning hopes for a return to quasinormality on the development of a safe and effective vaccine that can be quickly manufactured and supplied around the world for use at scale in record time. There are currently more than 100 such vaccine candidates with phase 1, 2 and 3 studies in progress. Adults who are at high-risk of COVID-19 may overwhelmingly choose to receive a vaccine, but it remains unclear if an exclusively adult targeted vaccine campaign would be sufficient to interrupt transmission. Some experts estimate that, at a minimum, 60% population level immunity will be required.1 This figure rises if R₀ increases. Particularly in low-income and middle-income countries (LMICs) with a high proportion of young people and less well-established adult vaccination programmes, widespread childhood vaccination may also be necessary. This leads us to consider the likely acceptability of a novel COVID-19 vaccination for children, who are—at this stage of the pandemic—mostly not severely affected by COVID-19.

The good news is that vaccinations are largely accepted in LMICs. According to the results of the 2018 Wellcome Global Monitor, a survey of 140,000 individuals in 140 countries regarding public attitudes to health and science, 94% and 90% of participants in South Asia and East Africa, respectively, described vaccination as effective. Similarly 95% and 92% of those in South Asia and East Africa perceived vaccines as safe.2 In comparison with Western Europe, only 59% of participants believed vaccines to be safe. Of note, this perceived safety was highest in low-income, lower middle-income and upper middle-income countries where respondents reported higher levels of trust in scientists, doctors and nurses. The WHO SAGE Working Group on Vaccine Hesitancy describes hesitancy on a continuum between full acceptance and outright refusal and recognises that hesitance can be to single or multiple vaccines.3 Research using the WHO SAGE Vaccine Hesitancy Scale suggested that even among an on-the-whole provaccine population of 2265 respondents from

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Bangladesh, China, Ethiopia, Guatemala and India (95% agreed that ‘childhood vaccines are important for my child’s health’) more than 50% agreed or were neutral with regards to the question ‘new vaccines carry more risks than older vaccines’. Work from high-income countries suggests that individuals are naturally willing to take more risks over new infant vaccines when the direct benefits are greater, but this may be a different situation for COVID-19 vaccine in children. As with all infections, there are children at higher risk, but even the impact of the infection directly on vulnerable child populations in LMICs, often with high burden of undernourishment and children living with or exposed to HIV, is yet to be fully described. A great deal of continuous local and national community engagement and trust building goes on to increase both acceptance and demand for all vaccines. It is important that among the urgency to use new vaccines, care is taken to ensure that established programmes maintain confidence and continue to protect children, taking account of parental confidence and the tendency to complacency and the importance of convenience (the ‘three C’s model’) in reducing vaccine hesitant behaviour. We have been here before. In 2017, ‘Dengvaxia’, a new dengue vaccine was found to have risks for those never exposed to dengue. In the Philippines, this news was met with political and societal outrage with drastic increases in vaccine hesitancy plummets in the Philippines following exposure when attending for immunisation, higher for countries in the WHO Africa region (89%). Nearly half of survey respondents suggested that the public hold concerns regarding risk of COVID-19 exposure when attending for vaccination (www.who.int/immunization/monitoring_surveillance/immunization-and-covid-19/). Urgent work is needed to make transportation and vaccination centres COVID-19 secure, along with linked public health messaging to address these fears.

We celebrate the scientific progress that means development of a vaccine for this novel virus is even a consideration. We can also be somewhat reassured that vaccine hesitancy in LMICs remains on the whole low. However, this lack of hesitancy is fragile and should not be taken for granted; communities and families must be incorporated into decision making to ensure that whole populations move together in solidarity. Small mistakes including safety problems as well as necessary social distancing measures may have large and unintended consequences for immunisation uptake for eventual COVID-19 vaccine and routine vaccinations. Care and caution are needed to protect our children.

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