Equity in vaccination against COVID-19: Lessons from child immunization

by Rajeev Sadanandan

Vaccination is an effective pharmacological measure against epidemics, including COVID-19. Therefore, universal vaccination is a necessary condition to return to normalcy. However, for a pandemic in a globalised world, this is possible only if a certain threshold of vaccination among the global population is reached. Child immunisation is much easier as only newly eligible cohorts need to be covered and vaccines have proven their efficacy. But since all health systems are familiar with child immunisation, lessons from it are useful to understand and address the issues connected with COVID-19 vaccination.

Vaccines come with significant biological risks and face behavioural resistance, due to a human tendency to discount an uncertain future event at a higher rate than current inconvenience. A systematic review showed that, even in child vaccines, beliefs about the potential harms from vaccines was the most common barrier to accepting vaccination (Munõz et al. 2015). This has been accentuated by the novel and untested technologies and the unprecedented speed with which COVID-19 vaccines were developed and approved. The social and political factors that determine access to health care and trust in government also impact vaccination.

The international development community, treating child immunisation as a global public good, had mobilised resources to procure vaccines for low-income countries. Similar support is not evident for COVID-19 vaccines. High and upper middle-income countries, with 13% of the world's population, have procured 60% of vaccines, while low-income countries have purchased 2% and COVAX, mainly serving low- and middle-income countries, 22% (Duke Innovation Centre 2021). If the population in low-income countries is not vaccinated, the probability of mutations that can evade vaccines will increase, threatening the foundation of current prevention strategies. The cost of vaccination would be far lower than the economic impact of a continuing pandemic in high-income countries, as shrinking world demand will affect them more (Çakmaklı et al. 2021). Support is also needed for adequate human resources, maintenance of cold chain, syringes, IT systems to register and manage vaccination, and surveillance systems to track adverse events from vaccination. Therefore, it is in the interest of high-income countries to ensure that all countries have access to vaccines, in the same manner as they have supported child immunisation.

Inequity in access due to social and economic reasons, familiar in child immunisation, is seen in COVID-19 vaccination too (Grumbach et al. 2021). An important barrier for a disempowered population, as in child immunisation, is the lack of trust in persons of authority due to one's past experience. Marginalised groups such as ethnic minorities, immigrants and poor people traditionally tend to distrust governments. While governments may be eager to ensure universal vaccination, they may not have conduits for communication and bridges for creating trust. The reluctance of poor and marginalised populations needs to be accepted as a legitimate response to years of neglect or even victimisation. Such acknowledgement shows respect for the communities and makes them partners in the process, enabling them to air their concerns and have them cleared by experts. Communities given the right to choose the vaccination sites and timing will choose locations they are comfortable with, say a site of worship instead of a government dispensary or after working hours instead of opening hours of a health institution. Community leaders can be co-opted to get vaccinated in public, to vouch for its safety and efficacy and to address the concerns of the community. Non-government groups who work with marginalised populations and are trusted by them have been acting as ambassadors and facilitators. But the temptation to use coercive methods, such as denying employment, will only worsen the problem.

Distrust of governments is a fertile soil for conspiracy theories

such as those that vaccines were created to harm certain communities or religious groups (Wouters et al. 2021). Since none of these allegations are founded on any evidence, but rather appeal to emotion and faith, they are difficult to counter. But every religion has respected leaders and professionals from the community who are capable of exposing such claims citing religious texts and testify for vaccination. Such campaigns have succeeded in weaning communities away from rumours against vaccination as in the Pulse Polio Campaign in India.

Unlike in child immunisation, where the same vaccine or vaccines of comparable efficacy are provided to all children, COVID vaccines that have been licenced differ in their efficacy and dosing schedules. It is possible that groups who are socially, economically and politically less powerful would get vaccines with lower efficacy, augmenting inequity. As finances for vaccines run low in many countries, they will be tempted to offload part of the cost by allowing private payment. The private sector may also be allowed to import high-cost vaccines from abroad. This may be an acceptable option if adequate public funding is available to ensure access of the poor to vaccines and the system for targeting is effective. Since the duration of protection provided by vaccines is unclear, booster shots may be needed, which are unlikely to be publicly funded. Given the current visibility of COVID-19 vaccination, resource-constrained countries may divert funds from child immunisation programmes or other crucial public health programmes, which will also adversely affect the poor.

Child immunisation is best delivered close to the home of the beneficiary. However, since COVID-19 vaccines are relatively new and untried and a case of severe adverse reaction could set back vaccination efforts, most countries carry out vaccination at locations where medical support is available, mostly in urban centres. This makes access difficult for persons who do not have transportation, the elderly who do not have anyone to accompany them, and care givers who cannot leave home for long periods. Since most registration systems use apps that run only on smart phones or laptops, access by the elderly is further reduced as IT savvy persons are able to reserve vaccination slots as soon as they open up.

Child immunisation provides the template to manage this. A registry of the eligible population, prepared using existing data sets and validated in the field by community workers or representatives, will ensure that no one is missed. Persons in the registry who are not likely to access vaccination on their own can be identified by field officials and managed individually. Counselling to dispel vaccine hesitancy, IT support to book vaccination slots, arranging transport to the vaccination site and back and mobilising social support will improve uptake of vaccination. But, as in child immunisation, some persons would still be left out. Intense mop-up operations and investing additional time and energy on them would be required to cover the persons who remain resistant. Managers would have the temptation to leave out the most difficult to reach or convince when the threshold needed for effective prevention of the epidemic is reached. But persons who are left out are at risk of personal vulnerability. Since they are also likely to be among the poorest and most marginalised, considerations of equity demand that government and communities go the extra mile to cover them too. Unlike child immunisation, the COVID-19 vaccination process risks spreading infection. Careful management of the process based on a registry will enable allotting dedicated slots to individuals to prevent overcrowding.

As in child immunisation, the persons who need COVID vaccination the most are least likely to get them. The factors that reduce their access to the vaccine are the same that make them vulnerable to infection. If a pool of infection remains in any country or section of the population in the country, it will re-emerge to haunt the world again. Universal vaccination against COVID-19 is as much a global public good as child immunisation against vaccine-preventable diseases, and international agencies and national health managers need to use the lessons learnt from child immunisation to implement COVID vaccination effectively.

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