

Sarthak edit

The government needs to urgently get its preparation for the roll-out of a Covid-19 vaccine—should a candidate prove successful eventually—right. It seems to be far from ready at the moment; as a Quartz analysis of data from Duke University shows, while the US, Canada, Japan and the UK have above-100% coverage from their respective pre-order agreements with the makers of the three top candidates (Pfizer, Moderna and AstraZeneca), India has an agreement only with AstraZeneca, for vaccine-doses that will cover just 18.5% of its population. Given the duration of protection a vaccine will confer to recipients is not clear—immunity against the common cold, SARS and MERS coronaviruses dip over time, sometimes in as little as a few months—it is important to aim for universal vaccination for any meaningful control on the spread of the disease, and get the widest-possible coverage in the bargain.

Against such a backdrop, the government needs to get its communication on the vaccine strategy right. Health secretary Rajesh Bhushan saying that “the government never spoke about vaccinating the entire country” jars against such a goal. More so when the ruling party at the Centre promises free vaccines for the electorate in Assembly and local elections, even as there is no clarity on the funding the Centre and the states are pooling for the roll-out. ICMR director general Balram Bhargava talked of a ‘critical mass’ that will require vaccination in order to stall Covid-19 in India—the herd-immunity from vaccination, as opposed to the ethically and scientifically questionable calls on herd immunity from direct infection.

While herd immunity threshold (HIT) calculations are part of all vaccine strategy—indeed, for polio, it is estimated at 80%, for measles, at 95%, etc—this depends on various factors, from the pathogen’s characteristics to the disease setting. But, vaccination programmes are usually launched with universal coverage in mind so that the chances of achieving the HIT are higher. There are many uncertainties with SARS-CoV-2—mutations, co-morbidities’ impact on immune response, re-infection and related pathophysiology, etc, all of which contribute to inter- and intra-country variance in transmission.

Thus, the World Health Organization, in its note dated October 15, says making herd-immunity related predictions is “not possible”, based on the current scientific understanding of Covid-19. However, based on the simple formula of ‘HIT equals $1-1/R_0$ ’, an R_0 of, say, 3 (close to one of worst R_0 reported for Mumbai) yields a HIT of 67%. If India, ignoring all the caveats, is to adopt such a target, the government will have to explain the

scientific rationale behind it, in a manner digestible for the masses, instead of giving cryptic replies. And, it would still need to define who will comprise these 87 crore individuals who are to be covered by vaccination.

While there is consensus on priority inclusion of healthcare and other frontline workers as well as high-risk demography such as the elderly, those with co-morbidities, etc, there is still the question of identifying those that will make the remainder. On top of the complication ushered in by varying efficacy levels of different vaccines, such selection will be a fraught question. The Centre and the states have very little time to get ready. They need to make the funding plans clear. And, while the 'HIT through vaccination' talk is not to be dismissed, the government should try for universal coverage—and this, as FE has pointed out earlier, calls for the vaccine being made free for everybody while encouraging those who can afford to pay to do so.