

BREAKTHROUGH CHALLENGE: THE HINDU EDITORIAL ON COVID-19 VACCINES AND THE DELTA VARIANTS OF CORONAVIRUS

Relevant for: Science & Technology | Topic: Health & Sanitation and related issues

With [over 66 crore vaccine doses administered](#) since the vaccination drive commenced in January, India has now [inoculated at least half its adult population with at least one dose](#), and 16% with two. There is a small, discernible rise in the number of new infections. Kerala, which contributes the bulk of infections, also has among the highest proportions of the population who are double vaccinated. This apparent paradox underlies concerns about the rise in [‘breakthrough infections’](#), or confirmed infections in those who took the second dose at least two weeks earlier. A recent study by CSIR scientists found that nearly [a quarter of 600 fully vaccinated care workers were reinfected](#). Earlier studies from the CMC Vellore, and PGIMER, Chandigarh, too have reported between 1%-10% of fully vaccinated health-care workers as having been infected. However, less than 5% of them have required hospitalisation and no deaths have been confirmed, indicating the effectiveness of vaccines in preventing severe sickness and death. Internationally too, the trend is clear. Israel and the U.S. in spite of high vaccination coverage, continue to report new cases; though here too, the infection rate is much higher in the unvaccinated. The prime suspects, internationally as well as in India, are the Delta variants and related sub-lineages that are believed to form the bulk of coronavirus infections. The Indian SARS-CoV-2 Genomics Consortium (INSACOG) that tracks mutations in coronavirus strains has said that the breakthrough infections reported so far are [within “expected” numbers](#). That is, vaccines in large, controlled clinical trials had demonstrated 70%-90% efficacy but lost considerable ability to reduce symptomatic infections when confronted with the Delta variants, and so a certain fraction of those fully vaccinated would continue to be vulnerable.

While it is a fact of evolution that viruses would mutate to be able to avoid antibodies, and vaccines, therefore, would have to keep being upgraded, it seems that the moment appears to have come too soon. A country like India, in spite of being a major vaccine producer in the pre-pandemic era, has only now managed to get production lines to deliver one crore vaccines a day. While other vaccines are in the pipeline, all of them are designed on the Wuhan-virus platform and although companies claim that the strength of m-RNA and DNA-based vaccine platforms lies in the ability to quickly tweak them to accommodate new variants, there are no reports yet, anywhere in the world, of vaccine makers specifying a timeline for vaccines that are tuned to the Delta variants. Vaccine makers who may have got emergency-use authorisations but are a while away from launch, should ideally move to making vaccines for the Delta variants and not rely on their existing pipeline.

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From the abrogation of the special status of Jammu and Kashmir, to the landmark Ayodhya verdict, 2019 proved to be an eventful year.

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