

S1: Definitions used for the purpose of this study

1. *Vaccine Breakthrough infection (VBT)*: A vaccine breakthrough infection was defined as the detection of SARS-CoV-2 RNA or antigen in a respiratory specimen collected from an individual who had received either one or two doses of vaccine.
2. *Partially vaccinated HCW*: The HCW who had received a single dose of vaccine or who developed infection before 14 days of the second dose was considered partially vaccinated.
3. *Fully vaccinated HCW*: The HCW who received two doses of vaccine and developed infection after 14 days of the second dose.
4. *Reinfection*: Reinfection was defined as detection of SARS-CoV-2 RNA on or after 90 days of the first detection of SARS-CoV-2 RNA and paired respiratory specimens (one from each infection episode) were available.
5. *Non-responder*: HCW with no detectable SARS COV2 IgG antibody response 14 days after the second dose of the vaccine.
6. *Low antibody levels*: SARS COV2 IgG antibodies detectable in the range of 1 to 4.62 signal/cut-off (S/CO) were considered Low level antibody response.
7. *Medium antibody levels*: SARS COV2 IgG antibodies detectable in the range of more than 4.62 to 18.45 S/CO were considered medium level antibody response.
8. *High antibody levels*: SARS COV2 IgG antibodies detectable in the range of >18.45 S/CO were considered high level antibody response.