A study by Foundation of Medical Research FMR undertaken in collaboration with Municipal Corporation of Greater Mumbai (MCGM), Dr Vikas Oswal (private chest physician) and a private laboratory since June 2021 compared the nature of COVID 19 infection in the first and second wave experienced in Mumbai, the latter also being associated with the initiation of vaccination and the emergence of variants

Vaccines are the most potent weapon currently for controlling the pandemic. Although the efficacy of the current vaccines is well established for reducing disease severity, there is concern that the emergence of variants reduces protection against infection and transmission.

A study by Foundation of Medical Research FMR undertaken in collaboration with Municipal Corporation of Greater Mumbai (MCGM), Dr Vikas Oswal (private chest physician) and a private laboratory since June 2021 compared the nature of COVID 19 infection in the first and second wave experienced in Mumbai, the latter also being associated with the initiation of vaccination and the emergence of variants. The study undertaken in a total of 75 patients additionally focused on transmission risk using a surrogate innovative method for measuring viral load in expelled viral particles captured on masks worn by patients.

Compared to 2020, a 2-fold increase in the proportion of people expelling virus in their breath and a 100-fold increase in the amount of virus per patient reflects the increased transmission witnessed in the second wave. This proportion marginally decreased in fully vaccinated patients, thus suggesting new vaccine or booster design in future should focus on stronger break in transmission of disease besides reduction in severity. The study also fortifies

the emphasis on masking and behavioral norms for the foreseeable future till everyone is protected by vaccines.

Dr Nerges Mistry, Director-The Foundation for Medical Research said, “The importance of local research bears underlining. The waning of the second wave is the right time to gird up local research with strong data that can guide India to the right policy”

Dr Mangala D Gomare, Executive Health Officer, MCGM said, “Surveillance of COVID-19 is on top priority for MCGM now. Such studies help identify factors affecting the spread of the virus and thereby inform the action plan for its control”

Dr Daksha Shah, Deputy Executive Health Officer, MCGM said, “MCGM public health department is proactively taking up many such research studies with partners to know more about the dynamics of transmission and have also started its own WGS lab”

Sunil Sood, President HBS Club of India said, “At HBS Club of India we are keen to support cutting edge research in matters of critical importance. This research will provide vital information for re-opening of offices and other institutions”

The study aims to further explore the viral genomic make up with relation to increasing vaccine pressures and vaccine induced immunity. The method developed for capturing viral particles could be further used in the future as a screen for identifying transmission breaking vaccines.

Harvard Business School Club of India alumni network and board members supported the study by providing financial support. Funds were also received by FMR through general donations from Neville Shroff of the Zorastrian Trust Funds of Hong Kong.

The study has been selected for poster presentation at the 52nd Union World Conference on Lung Health.