

## Safety and immunogenicity of homologous versus heterologous boosters and COVID-19 vaccine hesitancy: Is there any link?

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Madam, the catastrophic death toll from the ongoing COVID-19 pandemic has reached above six million as of April, 2022. It has become a global challenge to put an end to this pandemic and hence the exacerbated loss but disparities in international vaccine availability. Ongoing anti-vaccine movements both online, and on-site and the surging mistrust among the masses are the major impediments in achieving substantial international herd immunity. The lack of which causes emergence of new COVID-19 variants/Primary vaccination against COVID-19 may decrease over time especially against new SARS-COV-2 strains requiring booster dose administration. However, this has led to the development of growing misbelief among the population that the primary vaccination was not efficacious enough and so will be the booster shots, thus, fostering ambiguity and, therefore, vaccine hesitancy in the general population and healthcare workers.<sup>1</sup> Concern is being raised about the safety and efficacy of booster doses, particularly of the heterologous regimen, in the context of emerging Covid-19 variants.

The shifting trend from homologous vaccination regimen to heterologous vaccination is being increasingly investigated at several study sites across the globe. Studies suggest that the serum antibodies against COVID-19 have increased in the booster dose recipients compared to the non-recipients,<sup>2</sup> and higher titer of antibodies are formed in heterologous booster recipients.<sup>3</sup> The booster vaccination is well-tolerated among all the recipients irrespective of the booster regimen.

The awareness campaigns running in Pakistan seem not to yield a significant response in eliminating the widespread apathy for booster shots. The rampant

dissemination of misinformation,<sup>4</sup> slack of impactful counselling for people and multi-brand vaccination have led to many doubts about vaccine development programmes. People ponder over receiving a vaccine that would be effective against multiple COVID-19 variants so that they would not be required to receive any more booster doses. Overcoming the vaccine hesitancy would require the public health professionals to have interactive online and physical awareness sessions with the public, which the collaboration of influential personalities may aid through various electronic and social media platforms.<sup>5</sup> This milestone can also be nailed by propagating the authentic hospital records of comparative post-vaccination robustness in immune responses and differences in hospitalization rates, in a manageable easy and comprehensible way, through the print and mass media.

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