

DOI: 10.4103/0971-5916.292093



Authors' response

We thank the authors for a close reading of our article¹. Given the known biases in recruiting study participants for a case-control study, we decided to choose symptomatic HCWs who were tested for SARS-CoV-2 infection to maintain evenness in the way cases and controls were selected. We would like to posit that the reasons for which asymptomatic HCWs got tested were likely to be different from those of symptomatic HCWs. Hence, to maintain comparability between the cases and controls, we decided to include only symptomatic HCWs. We tried to adhere to the basic tenets of case-control investigations - the cases and controls should be comparable, except in that the case group experienced the outcome of interest. In addition, we would like to add that an analysis of one million tests conducted in India between January and April 2020 has shown that about 28 per cent of SARS-CoV-2-positive patients are asymptomatic².

The standard practice in developing logistic regression models begins with the selection of independent variables using multiple strategies - known or established theories, existing evidence, exploratory analyses or a combination of these and other strategies³. The purpose of the univariate analysis was to identify the variables that were more likely to be statistically and biologically associated with the outcome of interest. To construct a parsimonious model, we chose to include biologically plausible variables which met a cut-off value ($P < 0.1$). This is clarified in the subsection titled 'multivariate analysis'. Further, we would like to emphasize that it is important to limit the number of independent variables to avoid a mathematically unstable model with limited generalizability beyond the current data⁴. In order for readers to appreciate the process, and to declare the associations observed through the univariate analyses, we chose to present both analyses.

While we acknowledge the lower response rate, this is a known shortcoming of telephone-based surveys. While in-person interviewing remains the method providing

the highest yield in terms of response efficiency and representativeness, it was an untenable strategy given the realities of the ongoing pandemic and restrictions imposed on the movement of people by the nationwide lockdown. Also noteworthy is that, compared to online, mail, or self-reported data collection, telephone-based surveys provide better representativeness, more complete data and higher data yield^{5,6}. To improve the response rate, we employed different strategies such as training of interviewers and multiple call attempts at different times of the day. Further, our study received higher response rates than similar methodologies employed to cover HCWs in India (paediatricians: 57%)⁷ and abroad (Germany: physicians, 56%⁸; France: physicians, 59%⁹ and USA: internists, 64%¹⁰).

The study participants were asked to declare the side effects experienced by them in our investigation. As noted in the 'Results' section, a very small proportion of the participants self-reported adverse effects linked to HCQ intake, and the frequency of occurrence of side effects was not significantly different across the case and control groups¹.

**Pranab Chatterjee¹, Tanu Anand⁷,
Kh. Jitenkumar Singh², Reeta Rasaily³,
Ravinder Singh⁴, Santasabuj Das⁸,
Harpreet Singh⁵, Ira Praharaj⁶,
Raman R. Gangakhedkar⁶,
Balram Bhargava[†] & Samiran Panda^{9,*}**

¹Translational Global Health Policy Research Cell, [†]Department of Health Research, Ministry of Health & Family Welfare, New Delhi 110 001, ²ICMR-National Institute of Medical Statistics, ³Division of Reproductive Biology, Maternal Health & Child Health, ⁴Division of Non-Communicable Diseases, ⁵Informatics, Systems & Research Management Cell, ⁶Division of Epidemiology & Communicable Diseases, ⁷Multidisciplinary Research Unit/Model Rural Health Research Unit, [†]Indian Council of Medical Research, New Delhi 110 029, ⁸Division of Clinical Medicine, ICMR-National Institute of Cholera & Enteric Diseases, Kolkata 700 010, West Bengal & ⁹ICMR-National AIDS Research Institute, Pune 411 026, Maharashtra, India
**For correspondence:*
director@nariindia.org

References

1. Chatterjee P, Anand T, Singh KJ, Rasaily R, Singh R, Das S, *et al.* Healthcare workers & SARS-CoV-2 infection in India:

- A case-control investigation in the time of COVID-19. *Indian J Med Res* 2020; 151 : 459-67.
2. ICMR COVID Study Group, COVID Epidemiology & Data Management Team, COVID Laboratory Team, VRDLN Team. Laboratory surveillance for SARS-CoV-2 in India: Performance of testing & descriptive epidemiology of detected COVID-19, January 22 - April 30, 2020. *Indian J Med Res* 2020; 151 : 424-37.
 3. Stoltzfus JC. Logistic regression: A brief primer. *Acad Emerg Med* 2011; 18 : 1099-104.
 4. Hosmer DW, Lemeshow S. Logistic regression for matched case-control studies. In: Shewhart WA, Wilks SS, editors. *Applied logistic regression*. Hoboken (NJ): John Wiley & Sons, Inc.; 2005. p. 223-59.
 5. Szolnoki G, Hoffmann D. Online, face-to-face and telephone surveys - Comparing different sampling methods in wine consumer research. *Wine Econ Policy* 2013; 2 : 57-66.
 6. Patnaik S, Brunskill E, Thies W. Evaluating the accuracy of data collection on mobile phones: A study of forms, SMS, and voice. International Conference on Information and Communication Technologies and Development (ICTD2009); 2009 Apr 17-19; Doha, Qatar. p. 74-84.
 7. Zhang RL, Thacker N, Choudhury P, Pazol K, Orenstein WA, Omer SB, *et al*. Comparison of two survey methods based on response distribution of pediatricians regarding immunization for children in India: Mail versus telephone. *Int J Trop Dis Health* 2016; 16 : 1-10.
 8. Gahr M, Eller J, Connemann BJ, Schönfeldt-Lecuona C. Subjective reasons for non-reporting of adverse drug reactions in a sample of physicians in outpatient care. *Pharmacopsychiatry* 2016; 49 : 57-61.
 9. Peretti-Watel P, Bendiane MK, Pegliasco H, Lapiana JM, Favre R, Galinier A, *et al*. Doctors' opinions on euthanasia, end of life care, and doctor-patient communication: Telephone survey in France. *BMJ* 2003; 327 : 595-6.
 10. DuVal G, Clarridge B, Gensler G, Danis M. A national survey of U.S. internists' experiences with ethical dilemmas and ethics consultation. *J Gen Intern Med* 2004; 19 : 251-8.