Rapid Reviews COVID-19

Review 4: "Seroprevalence of SARS-COV-2 Antibodies in Scottish Healthcare Workers"

Ian Cockburn¹

¹Australian National University, John Curtin School of Medical Research, Australia

Published on: Dec 17, 2020

DOI: 10.1162/2e3983f5.26317778

License: [Creative Commons Attribution 4.0 International License \(CC-BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

RR:C19 Evidence Scale rating by reviewer:

- **Potentially informative.** The main claims made are not strongly justified by the methods and data, but may yield some insight. The results and conclusions of the study may resemble those from the hypothetical ideal study, but there is substantial room for doubt. Decision-makers should consider this evidence only with a thorough understanding of its weaknesses, alongside other evidence and theory. Decision-makers should not consider this actionable, unless the weaknesses are clearly understood and there is other theory and evidence to further support it.

Review:

This article by Abo-Leyah et al. reports a higher seroprevalence of SARS-CoV-2 antibodies among healthcare workers in and around Dundee, Scotland compared to the general population.

The findings appear confirmatory of numerous previous studies of healthcare workers both in the UK and around the world.

Nonetheless several novel and important observations are made. Notably the finding that Dentistry workers, HCA and Porters are high risk groups alongside Doctors. Previous findings that administrative staff are at similar risk to healthcare practitioners were not reproduced in this study.

Of note many individuals believed they had had COVID-19, even in the absence of a positive PCR test, but only around one quarter of these individuals were seropositive. However, only ~20% of antibody positive individuals did not believe they had previously been infected, suggesting that true asymptomatic as opposed to paucisymptomatic infections may be rare.

The main weakness of the study is the statistical analysis. The methodological description is not clear, and it is unclear how covariates have been controlled for. No confidence intervals have been given for the prevalence among different demographic groups or groups of healthcare workers. This is important as some of the more interesting finding are based on quite small numbers (e.g. 50 Dentists, and 27 Porters). Finally, the code for the statistical analysis should be presented as supplementary data.