Coding Errors in Study of Factors Associated With SARS-CoV-2 Antibodies in Health Care Personnel

To the Editor

On behalf of my coauthors, I write to report errors in our Research Letter, “Prevalence of SARS-CoV-2 Antibodies in Health Care Personnel in the New York City Area,” published online first on August 6, 2020, and in the September 1, 2020, issue of JAMA.1

Our cohort study determined the prevalence of antibodies against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) among 40,329 health care professionals in the Northwell Health System in the New York City area. We also analyzed associations of seroprevalence with demographic variables, primary work location and type, and suspicion of exposure to SARS-CoV-2. We reported a 13.7% prevalence of SARS-CoV-2 antibodies among these health care professionals. We found in the fully adjusted model that a previous positive polymerase chain reaction (PCR) test result and a reported high suspicion of virus exposure were associated with seroprevalence.

After being notified by the journal that a reader questioned the concordance of the reported relative risks with the absolute numbers, we examined the data and found a statistical coding error. The R statistical package defaults to coding “true” and “false” for the outcome as “2” and “1.” These should have been coded as “1” and “0,” respectively, for the antibody and PCR test results. This coding discrepancy was of concern, as our Poisson risk ratio estimates assumed that these outcome variables followed a Poisson distribution that requires correctly coding the outcome to 0 and 1.

After the data were reextracted, recleaned, and remerged, the relative risks for the variables assessed have changed. The main findings that SARS-CoV-2 antibody seroprevalence was associated with a positive PCR test result and a reported high suspicion of virus exposure have not changed, but the relative risks and 95% CIs for each association are now higher. In addition, working in direct patient care (but not intensive care) is now significant in bivariable but not multivariable analysis, and several demographic variables (including increasing age and non-White race or ethnicity) that were previously reported as not associated with seroprevalence are now significantly associated in multivariable analysis. The authors have explained the errors and corrections in a Letter,2 and the Research Letter has been corrected online.

Data inaccuracies in text and tables. The authors have explained the errors and corrections in a Letter,2 and the Research Letter has been corrected online.

Karina W. Davidson, PhD, MASc

Author Affiliation: Feinstein Institutes for Medical Research, Northwell Health, Manhasset, New York.

Corresponding Author: Karina W. Davidson, PhD, MASc, Northwell Health, 130 E 59th St, Ste 14C, New York, NY 10022 (kdavison2@northwell.edu).

Conflict of Interest Disclosures: None reported.


CORRECTION

Data Inaccuracies in Text and Tables: In the Research Letter titled “Prevalence of SARS-CoV-2 Antibodies in Health Care Personnel in the New York City Area,” published online first on August 6, 2020, and in the September 1, 2020, issue of JAMA, there were inaccuracies that resulted from a coding error. The errors, once corrected, affect the relative risks and 95% CIs for the associations reported in the tables. Working in direct patient care (but not intensive care) is now significant in bivariable but not multivariable analysis, and several demographic variables (including increasing age and non-White race or ethnicity) that were previously reported as not associated with seroprevalence are now significantly associated in multivariable analysis. The authors have explained the errors and corrections in a Letter,2 and the Research Letter has been corrected online.


Guidelines for Letters

Letters discussing a recent JAMA article should be submitted within 4 weeks of the article’s publication in print. Letters received after 4 weeks will rarely be considered. Letters should not exceed 400 words of text and 5 references and may have no more than 3 authors. Letters reporting original research should not exceed 600 words of text and 6 references and may have no more than 7 authors. They may include up to 2 tables or figures but online supplementary material is not allowed. All letters should include a word count. Letters must not duplicate other material published or submitted for publication. Letters not meeting these specifications are generally not considered. Letters being considered for publication ordinarily will be sent to the authors of the JAMA article, who will be given the opportunity to reply. Letters will be published at the discretion of the editors and are subject to abridgement and editing. Further instructions can be found at http://jamanetwork.com/journals/jama/pages/instructions-for-authors. A signed statement for authorship criteria and responsibility, financial disclosure, copyright transfer, and acknowledgment are required before publication. Letters should be submitted via the JAMA online submission and review system at https://manuscripts.jama.com. For technical assistance, please contact jama-letters@jamanetwork.org.

Section Editor: Jody W. Zylke, MD, Deputy Editor.