

Prevalence and Causes of Diagnostic Errors in Hospitalized Patients Under Investigation for COVID-19—Response from Author



J Gen Intern Med 38(12):2840

DOI: 10.1007/s11606-023-08267-4

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Dr. Freund outlines several potential interpretations of our study's findings. It is correct that we did not find that COVID-19-related process faults were associated with the likelihood of diagnostic error (DE), and agree COVID-related diagnostic processes are closely related to "usual" diagnostic processes. Our adjudication process and tools took pains to categorize specific examples of COVID-related diagnostic challenges (e.g., slow COVID-19 test turnaround time, or difficulties with physical examination due to physical distancing). Nevertheless, it is possible that basic process faults such as clinical assessment were still the result of challenges caring for patients during the pandemic. We do note in the Discussion that our chart review process may have missed subtle issues such as anchoring on COVID-19 as a diagnosis. In addition, by increasing the specificity and validity of each measure, our approach may have biased our results towards the null given our overall small sample size.

We agree that a study of DE rates among diagnoses prone to a DE (e.g., non-respiratory infections, cancer, stroke) during the pandemic would be useful, but this would represent a different study than the one we performed. (We should note that patients admitted for other respiratory infections would likely have been included in our study given similar presentations to COVID-19 (e.g., cough, fever, dyspnea.) Our work focused on diagnostic processes taking place in patients undergoing evaluation for a new and evolving disease and the risks of DE in that context, so we cannot make claims outside that setting. Using a control group of patients not suspected of COVID-19, i.e., to address the direct impact of the pandemic on DE, would also be a different study, and would pose different challenges. For example, it would be hard to identify a pre-pandemic patient cohort with similar

symptoms (e.g., cough, fever, dyspnea) but under consideration for a novel diagnosis, or a control group during the pandemic suffering from these symptoms but not under consideration of COVID-19.

Finally, based on Dr. Freund's query, we examined whether the number of COVID-19-related symptoms (e.g., fever, dyspnea, diarrhea, loss of smell or taste, and myalgia) was associated with differences in rates of diagnostic errors. In bivariable comparisons, the number of COVID-19-related symptoms was statistically similar between patients with and without errors (1.28 symptoms in patients with a DE vs. 1.21 symptoms in patients with no DE, $p = 0.88$). While small sample sizes may influence this result, this finding reinforces our overall conclusion that DEs in PUI patients appear to be driven more by common issues in healthcare than by ones specific to COVID-19. We agree that further research needs to be done to more fully understand how novel diseases and syndromes influence risk for diagnostic errors.

Declarations

Conflict of Interest Drs Hubbard and Schnipper have no conflicts of interest to report.

Dr. Auerbach is founder of Kuretic Inc, which has no relationship to this work.

Andrew Auerbach, MD, MPH¹

Colin Hubbard, PhD¹

Jeff Schnipper, MD, MPH²

¹UCSF, San Francisco, CA, USA;

²Division of General Internal Medicine, Brigham and Women's Hospital, Boston MA, USA

Corresponding Author: Andrew Auerbach, MD, MPH; UCSF, San Francisco, CA, USA (e-mail: ada@medicine.ucsf.edu).

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Received May 23, 2023

Accepted June 2, 2023

Published online June 27, 2023