A new standard for reporting epidemic prediction research

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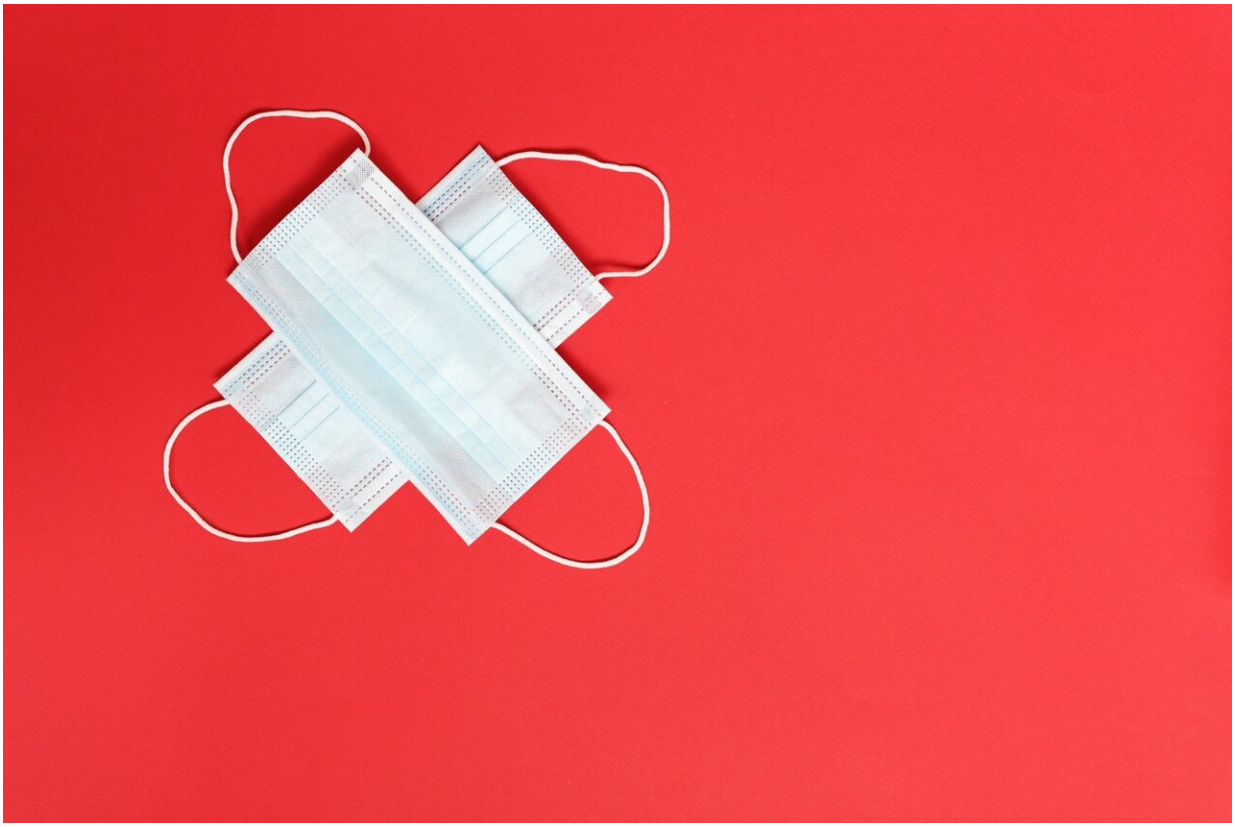

the medicine mask. Credit: nastya_gepp, Pixabay, CCO (creativecommons.org/publicdomain/zero/1.0/)

An international panel has designed new guidelines to standardize how scientists report research that involves forecasting and prediction of how

epidemics of infectious diseases unfold. Simon Pollett of the Walter Reed Army Institute of Research in Maryland, United States, and colleagues present the guidelines, called EPIFORGE, in the open-access journal *PLOS Medicine* on October 19th.

When reporting the results of certain kinds of medical research, such as clinical trials or systematic reviews of prior studies, researchers follow standardized checklists designed specifically for manuscripts published in those fields. Such guidelines are thought to improve the quality and usefulness of manuscripts; for instance, by making the research easier to understand, apply, or reproduce.

However, until now, no standard guidelines have existed for reporting epidemic forecasting and prediction research, despite the major impact of COVID-19 and other diseases for which epidemic predictions can have significant public health implications.

To meet this need, a six-person steering committee assembled several dozen panelists from around the world who either conduct epidemic prediction research themselves or apply predictions for public-health policy making and other uses. The panelists engaged in a Delphi process, in which they participated in several rounds of evaluating, removing, and adding proposed items to the final set of guidelines, which they call EPIFORGE.

The EPIFORGE checklist outlines 19 recommended items that manuscripts reporting epidemic predictions should include. For instance, one item calls for manuscripts to clearly outline the sources of any data that underlie their predictions. Another item calls for public availability of any computer code used to generate predictions.

The panelists hope that EPIFORGE will set new standards for reporting epidemic prediction research, thereby improving the quality and impact

of such reports. The also invite feedback on the EPIFORGE guidelines from other researchers, policy makers, medical journal reviewers, and additional stakeholders.

"Infectious disease modeling is helping to guide the pandemic response," coauthor Caitlin Rivers adds. "Right now, there are no clear standards for how results from models are reported. We brought together leaders from our field to define reporting standards so that models are better positioned to inform public health."

More information: Pollett S, Johansson MA, Reich NG, Brett-Major D, Del Valle SY, Venkatramanan S, et al. (2021) Recommended reporting items for epidemic forecasting and prediction research: The EPIFORGE 2020 guidelines. *PLoS Med* 18(10): e1003793. doi.org/10.1371/journal.pmed.1003793

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