

Dear Editor,

We would like to submit our paper entitled “Predictive performance of multi-model ensemble forecasts of COVID-19 across European nations” (by Katharine Sherratt et al.) for possible publication in *PLOS Global Public Health*.

Short-term forecasts of COVID-19 have been used by public health agencies throughout the pandemic to improve situational awareness and support short term planning. Still, considerable uncertainties remain about the best modelling approaches for such forecasts, about how far ahead such forecasts can be accurate, and about how best to jointly leverage the predictions from multiple models.

Here we report on one year of forecasts generated as part of the European COVID-19 Forecast Hub following its launch in March 2021. A joint endeavour between the European Centre for Disease Control and Prevention and the London School of Hygiene & Tropical Medicine, it invited teams from across the world to submit weekly forecasts of COVID-19 cases and deaths for up to four weeks in advance. Following similar “hub” projects on influenza and COVID-19 in the US, this was the first project extending this approach to multiple countries, encompassing 32 countries within Europe.

Confronting the forecasts so collated to the data in retrospect and thus evaluating the performance of the predictions we found that a median ensemble of all models consistently and reliably outperformed individual models in the vast majority of cases. This median ensemble also consistently outperformed other simple ensemble choices such as a mean, and was only slightly improved by weighing model contributions to the model by past predictive performance. We further found that case forecasts were reliable 1-2 weeks in advance, whereas death forecasts remained reliable at the longer horizon of 3-4 weeks.

We think that our study will be of interest to a broad range of readers with interest in global health, epidemiology and infectious disease modelling. For these reasons, we believe that *PLOS Global Public Health* would be the ideal platform for this study, and we hope that you will consider this manuscript for publication.

In order to improve the flow of the paper we have moved the Methods section before the Results. We believe this makes sense as many of the models discussed in the Results and Discussion sections are explained in the Methods section, helping understanding of the context and the details of the models.

The manuscript has been uploaded to the medRxiv preprint server with DOI 10.1101/2022.06.16.22276024.

Yours sincerely,
Katharine Sherratt
On behalf of all the authors