Dear Editors,

This is a cover letter for our submission entitled: “Forecasting hospitalizations due to COVID-19 in South Dakota, USA”.

We use a Bayesian Weibull curve to forecast hospitalizations related to COVID-19 in South Dakota, USA. This work is novel because most modeling for COVID-19 has focused on cases or deaths, with hospitalizations predicted as derivatives of those metrics. However, unlike many other US states, South Dakota has released daily hospitalization data daily during the pandemic, allowing us to directly model hospitalization dynamics.

In addition, because South Dakota is a sparsely populated state with one two urban areas, we can capture hospitalization dynamics in different subsets of the population (rural vs urban). These results demonstrate that hospitalizations in South Dakota are out of phase between urban and rural curves. However, by modeling these subsets separately, our model makes different projections for cumulative and active hospitalizations compared to models with only state-aggregated data.

We declare no conflicts of interest and thank you for your consideration of this manuscript.

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