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Application of the CDC EbolaResponse Modeling Tool to disease predictions

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Highlights

- Here, we extend the EbolaResponse Modeling tool, a model initially developed by the CDC in the midst of the 2014 West African outbreak, to participate in the synthetic Ebola Forecasting Challenge.
- The model is a mechanistic SEIR-like model including 3 transmission risk categories (Ebola Treatment Unit, community with safe burials, community with no intervention), for which parameters are estimated from daily incidence data.
- Short-term 1 to 4 week-ahead incidence projections were well correlated with synthetic observations ($\rho \sim 0.8$), and overall the model ranked 4th among the 8 teams participating in the challenge. Predictions of final size, peak size and

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