## Yale school of public health



Public Health Modeling Unit Seminar Series

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The COVID-19 Forecast Hub: Collaborative Forecasting of Short-Term COVID-19 Trends

to Support Public Health in the United States

> Monday, October 17, 2022 12-1 pm Eastern

Starting on April 6 2020 and continuing every week since then, the COVID-19 Forecast Hub has collected, aggregated, and disseminated short-term forecasts of cases, hospitalizations, and deaths due to COVID-19 in the U.S. Since its inception, forecasts have been contributed to the Hub by over 100 teams from across academia, industry, and government in a standardized and open format. Each week, the Hub produces an ensemble forecast that combines the individual forecasts contributed by these teams to produce a unified summary. All of the forecast results are shared with the U.S. Centers for Disease Control and Prevention (CDC), and the ensemble forms the basis for official CDC communications about forecasts each week. In this talk, I will give an overview of the Forecast Hub's organization, and describe experiments we have conducted to evaluate strategies for constructing the ensemble forecast.

Dr. Evan L. Ray is a Research Assistant Professor of Biostatistics in the Department of Biostatistics and Epidemiology at the University of Massachusetts, Amherst, and co-Director of the US COVID-19 Forecast Hub along with Dr. Nicholas Reich. Dr. Ray's research focuses on non-parametric and flexible parametric models for prediction and classification tasks with time series data that are relevant to public health. In the last few years, this work has centered on forecasting infectious diseases such as Dengue fever, influenza, and COVID-19. He has developed forecasting models using kernel conditional density estimation, copulas, and hierarchical Gaussian processes, as well as ensemble methods to combine forecasts from multiple individual models.

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