Delphi-Stat Forecasting Methodology EW44 Update

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Changes to Delphi-Stat Methodology

New method added to ensemble: modified time-weighted kernel density estimation: this version changes the weighting criteria used for matching simulated data for this year to past seasons; attempts to make simulated trajectories more closely resemble past seasons' data; and considers a wider range of past data by looking at other epi weeks.

When constructing trajectories, this version weights past seasons based on the previous week's wILI value; the sum of previous wILI values in the season; a weighted sum of wILI values stressing more recent weeks; and a weighted sum of the week-to-week changes in wILI stressing more recent times. With low probability, these weights are ignored and a random change in wILI is selected from historical data. The simulated data values are also pushed towards randomly selected historical data by a small amount. When simulating data at epi week t, instead of just looking at other seasons at week t, also considers nearby weeks, unless t is a time near the end of year holidays.

Clarification: older kernel density estimation method, direct target density estimation: only weight data based on the previous wILI value.