Applying outbreak analytics to public health response

Practical Modeling Concepts for Public Health

Choosing an analytic approach depends on the context

- Public health need or question
  - Deciding between multiple possible interventions?
  - Improving your real-time situational awareness?
  - Predicting future trends?
  - Evaluating a past public health action?

Choosing an analytic approach depends on the context

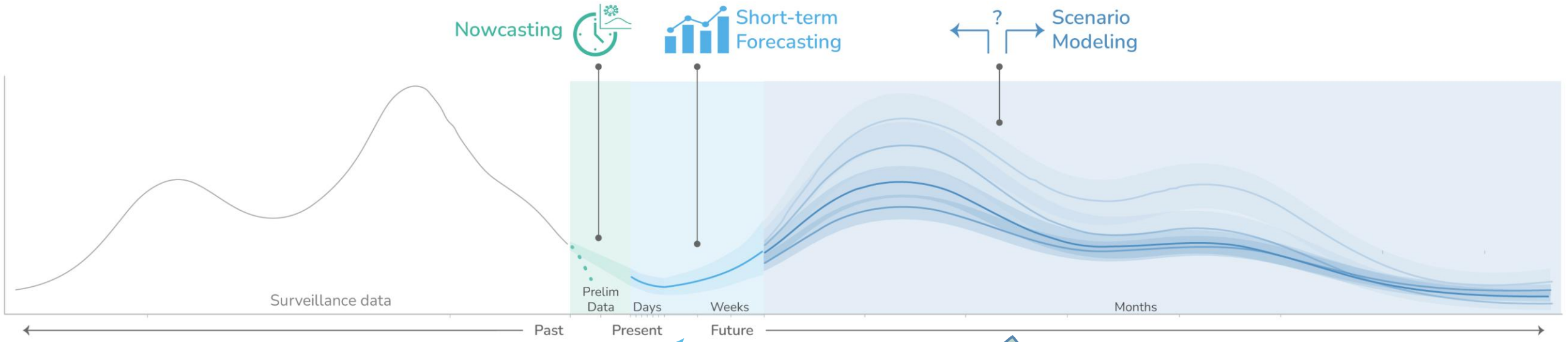
- Public health need or question
  - Deciding between multiple possible interventions?
  - Improving your real-time situational awareness?
  - Predicting future trends?
  - Evaluating a past public health action?
- Timing in outbreak

Choosing an analytic approach depends on the context

- Public health need or question
  - Deciding between multiple possible interventions?
  - Improving your real-time situational awareness?
  - Predicting future trends?
  - Evaluating a past public health action?
- Timing in outbreak
- Amount and quality of information and data currently available

Different types of qualitative assessments and modeling outputs are useful at different horizons

Qualitative assessments: Rapid, early evaluations of potential outbreak trajectory and risk posed to a population



Nowcasts: Estimate real-time disease burden based on partially reported data

Short-term forecasts: Predict disease burden in the coming days and weeks

Scenario models: Compare different potential futures (or pasts) under varied assumptions

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov