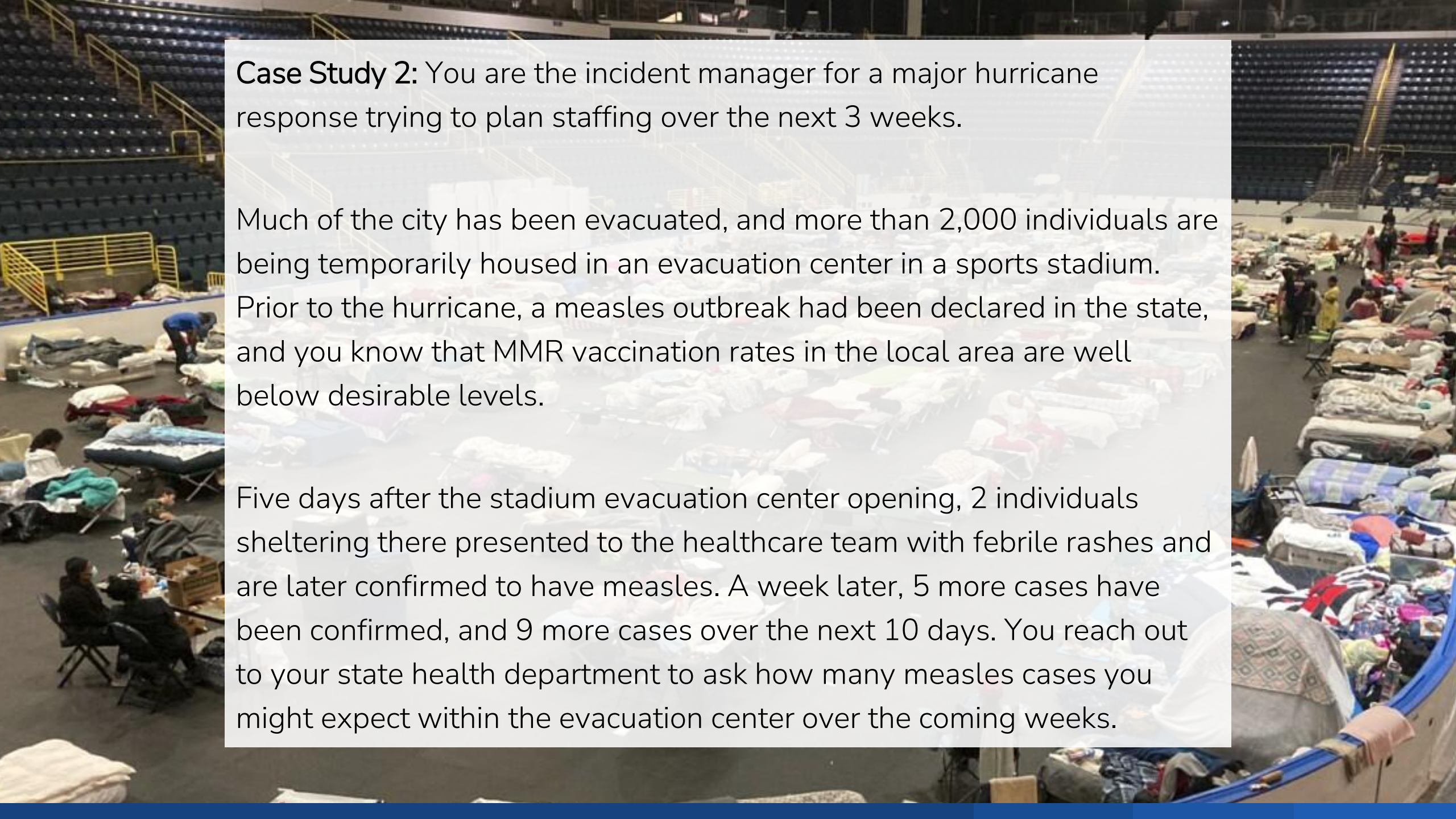


Activity 1: Deciding which analytic approach is best

Case Study 2 – Measles in a temporary shelter

A large sports stadium is shown, filled with people and temporary bedding, serving as an evacuation center. The stadium seats are visible in the background, and the floor is covered with rows of beds and blankets. People are seen sitting on the beds, and some are standing. The scene is dimly lit, suggesting an evening or night setting.

Case Study 2: You are the incident manager for a major hurricane response trying to plan staffing over the next 3 weeks.

Much of the city has been evacuated, and more than 2,000 individuals are being temporarily housed in an evacuation center in a sports stadium. Prior to the hurricane, a measles outbreak had been declared in the state, and you know that MMR vaccination rates in the local area are well below desirable levels.

Five days after the stadium evacuation center opening, 2 individuals sheltering there presented to the healthcare team with febrile rashes and are later confirmed to have measles. A week later, 5 more cases have been confirmed, and 9 more cases over the next 10 days. You reach out to your state health department to ask how many measles cases you might expect within the evacuation center over the coming weeks.

Which approach is best?



Short-term
forecasts!

Which approach is best?

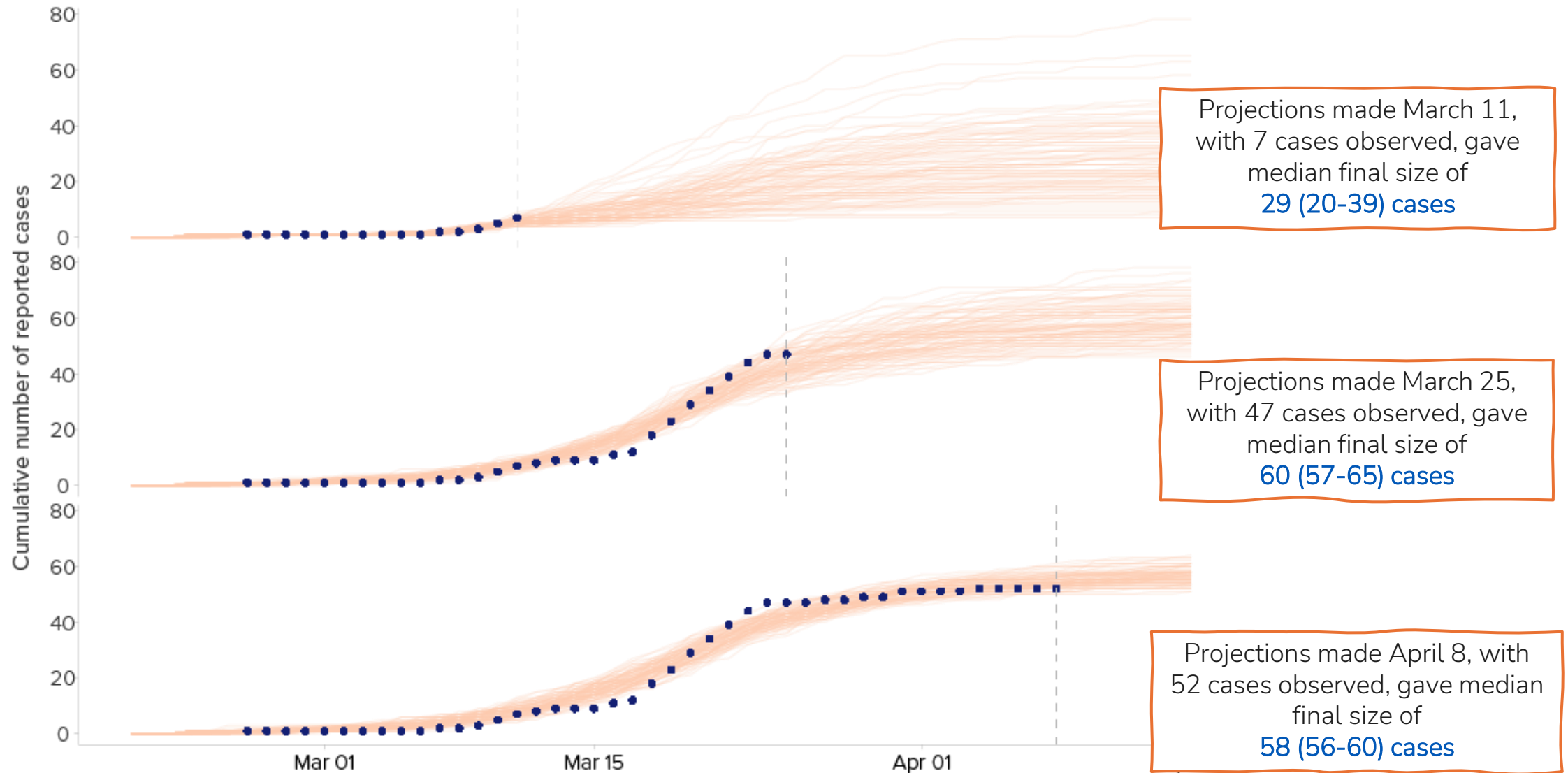


Short-term
forecasts!

Why short-term forecasts?

- We are interested in estimating the number of cases we might expect in the evacuation center
- Short-term forecasting works in this example because we have:
 - A defined population in a congregate setting
 - An initial number of confirmed cases
 - Known vaccination rates
 - Pathogen with well-characterized transmission parameters

Forecasts become more accurate with more data



Information relevant for the modeling and analytics team

- Data that would be helpful to share:
 - Current vaccination status of individuals in the evacuation center (at minimum, coverage rates for the community evacuating to the shelter)
 - Number of people sheltering in the evacuation center
 - Timeline of confirmed cases so far, formatted so that analysts can track revisions and reporting delays
- Relevant epidemiologic information:
 - Transmission dynamics of measles in congregate settings
 - Description of evacuation center to evaluate population contact and mixing (e.g., shared sleeping area, single bathroom, ventilation system)

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

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

