

## SCENARIO NARRATIVE

It is summer 2023. While the surge driven by the Delta variant has subsided, COVID-19 continues to persist in the U.S. Mask mandates, business closures, and transportation restrictions have been completely lifted throughout most of the country. Spring 2023 saw record travel and event crowds. Most Americans have returned to work in a hybrid capacity.

In mid-July, the CDC confirmed a cluster of breakthrough infections among elementary school-aged children at a summer day camp hosted by a suburban school district in a populous state. Sequence analysis confirmed the spread of a new SARS-CoV-2 variant. Distinct from earlier variants, this report found that a larger proportion of children presented with moderate to severe symptoms. Sixteen hospitalizations and nine fatalities have been attributed to the outbreak, with roughly 250 close contacts (family members and camp staff) estimated to have been exposed. It is now August and the outbreak has not been contained, with some young adult and middle-aged patients presenting with severe symptoms despite being fully vaccinated.

Fortunately, early evidence suggests a modification of an existing mRNA vaccine could be effective for the new variant. The biomarkers for protection against COVID-19 have been identified and are being used to assess the new vaccine. Unfortunately, this new vaccine will not be widely available for an estimated 4-6 months. In addition, opinion polls find the sentiment regarding vaccination, particularly for children, remain mixed despite the availability of data to demonstrate safety and efficacy.

A regional coalition of states near the location of the initial outbreak has quickly convened a regional Task Force, with support from the federal government. As members of this Task Force, you are charged with guiding preparation efforts for a medium-sized city (and its surrounding communities). Based on past experience, **you have approximately 30 days** before it is likely that cases of the new variant will begin to appear in the area (coinciding with the start of the school year).

This city has:

1. A small urban core, a broad suburban metropolitan area, and surrounding rural communities.
2. Two area hospitals with a combined (and recently upgraded) 200-bed ICU capacity.
3. A steadily trafficked international airport.
4. Public transit connections to two larger and densely populated cities in other states.
5. Large income disparities between neighborhoods correlated with race and ethnicity.
6. A documented history of repeated COVID-19 outbreaks in 2020/21, limited municipal health regulations, and morbidity/mortality rates higher than the national average.
7. A reported COVID-19 vaccination rate of 80%.

## CHARGE TO THE PLANNING GROUP

Using this scenario narrative, your first step is to extract the key pieces of information and identify the critical uncertainties. Next, you will build a consequence cascade that maps out possible sequences of events once cases arrive in your jurisdiction, based on the status quo and best-guess probabilities. This exercise is meant to draw a picture of what the future could look like **in the absence of intervention**. Once you've clearly articulated the problems, using your consequence cascade to pick out the most likely and undesirable future states, you will then generate an intervention strategy made up of discrete actions. Your suggested actions should address the five following goals:

1. **Community:** Mobilize existing infrastructure and community leadership to mitigate the cost and suffering associated with an impending outbreak of the new variant.
2. **Budget and capacity:** Efficiently budget out the unrestricted \$90 million that federal and state governments have allocated for your team to spend in the next 6 months. What resources do you need to gather? What capacities do you need to generate? How are you going to justify your expenditures to an oversight committee? What happens when your funds dry up?
3. **Data:** Establish relevant and reliable data-collection to inform equitable resource allocation. Who needs what, and how will you know?
4. **Communications:** Articulate an effective communication strategy that extends beyond mere messaging. What will you communicate and how could it be done effectively to the following audience: up and down the chain of command for the response effort, to the general public and the news media, to different communities in your jurisdiction? How will you listen to and incorporate what you hear and learn to inform tailored solutions for particular issues raised in different communities? How will you handle uncertainty surrounding risk as information availability continues to evolve – especially before the outbreak reaches the area?
5. **Resilience:** Build an outbreak response system that can serve as a lasting foundation for improved overall public health and outbreak security for the jurisdiction. This must include the medium-term capacity to effectively and equitably distribute the new vaccine once it becomes available, but should also apply to longer-term and broader considerations.