The National Academies of
SCIENCES • ENGINEERING • MEDICINE

FORUM ON MICROBIAL THREATS

Towards a Post-Pandemic World: Lessons from COVID-19 for Now and the Future – A Virtual Workshop

Scenario Planning Exercise Breakout Room Guide
Friday, September 24, 2021
10:00 AM – 2:30 PM EDT

Brief overview of the day:

- 10:00 AM ET, Welcome and opening remarks
- 10:10 AM ET, Visionary statements
- 10:30 AM ET, Guidelines for scenario planning exercise
- 10:45 PM ET, Scenario planning breakout rooms
- 1:00 PM ET, Break
- 1:30 PM ET, Report out in plenary session
- 2:15 PM ET, Closing comments to adjourn the workshop

Join the meeting via Zoom:
https://nasem.zoom.us/j/99424747040?pwd=bE1ncnpESGZFSkttVnJBb1VmMkcrQT09

Full Zoom meeting info, including dial-in numbers, is at the end of this document. You can also find the login information in your Outlook calendar invite.

Please sign in to the Zoom call for a few minutes at your convenience between 9:30 and 10:00 AM for a quick audio/video/connectivity check.

During the workshop, contact Claire Biffl (202-334-2178, cbiffl@nas.edu) if you have any last minute updates or questions.

For other colleagues who are interested:
Please ask them to register and watch the webcast via the workshop page, https://www.nationalacademies.org/event/07-27-2021/moving-past-covid-19-lessons-learned-from-responses-around-the-world

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Do I need to prepare slides or other material?
The scenario planning exercises will be facilitated by staff. Please do not prepare slides or other materials. You only need to bring your expertise, experience, and a creative, open mindset.

BACKGROUND AND GENERAL INSTRUCTIONS

Additional information for participants:

- Use the above Zoom link to join the workshop but **do not share the Zoom link** with others (i.e., those who will be tuning in to watch but are not invited participants). Refer interested colleagues to our workshop page, where they can register for the event and watch the free webcast of the scenario exercise.
- Breakout Room 1 will be webcast for public view, Breakout Room 2 will not be publically webcast. Report out from both rooms will take place in a plenary session and will be available for public view.
- Each breakout room will have a moderator (workshop committee member), a staff facilitator, staff rapporteur, and participants who are experts from different sectors.
- Keep your video **on during the breakout discussion** and turn your video **off during the plenary report-out** unless the moderator requests your contribution. If your video is off, it will not show up on the webcast.
- Use the "raise hand" functionality in Zoom if you would like to speak. Feel free to use the chat box to communicate as well. You are encouraged to put links to external resources in the chat for the rapporteur and your colleagues.
- Please keep in mind that your fellow participants and audience members come from distinct disciplines and may be unfamiliar with technical details of your field. In explaining your ideas, please set an example for quality collaboration by striving to reach a diverse audience with common language.

Additional details for moderator:

- Moderators will be responsible for guiding the conversation and keeping the planning on-topic. Moderators will also be responsible for the report-out, though they may ask for contributions from individual participants.
- Please consider asking for a very quick round of introductions at the start of the breakout discussion (name, affiliation). This will include the staff as we may step in at times to help facilitate, clarify points, or help focus the discussion.

PURPOSE

This activity is prepared as part of ongoing efforts at the National Academies to focus the insights and emerging scientific understandings from expert discussions towards potential applicability and operationalization in the context of real-life scenarios.

In the exercise today, you are provided with a hypothetical example as a basis for action and an opportunity to operationalize the topics discussed over the previous three workshop days. The output will serve as a conceptual model for how to put the science presented in the workshop to work in the real world.

The goal of this activity is to assemble a collection of actions organized by approximate timeline (e.g., immediate, short-term, long-term) that is informative to decision-makers in this or related scenarios. This may also include a map of possible outcomes and leverage points or other depictions of the collaborative critical thinking process used to generate the actions. These output may be incorporated into the workshop proceedings, but are **not** characterized as consensus recommendations.

RATIONALE

Scenario planning is designed to challenge deeply held assumptions and allow the charting of a path forward through uncertain times. During an emerging crisis like a disease outbreak, strategic action must be taken rapidly despite a constantly shifting and imperfect knowledge foundation. As such, decision makers responding to such crises must consider a wide range of possible future states, and the strategies they act on must be agile, robust, and reliable across as many likely eventualities as possible.

By incorporating uncertainty and likelihood as integral features of the strategizing process, scenario planning encourages the confrontation of the unknowns, external forces, and uncontrollable factors that define the planning environment. While scenario planning must still be rooted in a rigorous evidence base, it allows experts to put data and understandings to work in ways that extend beyond what is immediately known or measurable.

In this exercise, we are asking you to fully immerse yourself in the hypothetical (but probable) scenario narrative. Do the best you can with the information you have. This may mean making a conscious effort to step out of your comfort zone in embracing some educated guesswork and cross-disciplinary thinking. In thinking systematically about the problem you're presented with, it's essential that you not only contribute generously from your own expertise, but also that you listen and learn attentively alongside collaborators who may come from disciplines unfamiliar to you. And remember, this is meant to be speculative, interactive, and fun!

SCENARIO PLANNING EXERCISE INSTRUCTIONS

1. **Establish the Basics – Knowns and Unknowns** (10 min).

Using the example table below as your template, extract the key pieces of information from the scenario prompt. Identify key understandings from your own knowledge that apply to this scenario. Based on this foundation, identify the critical drivers of uncertainty that will determine your level of confidence in the likelihood of certain outcomes.

EXAMPLE

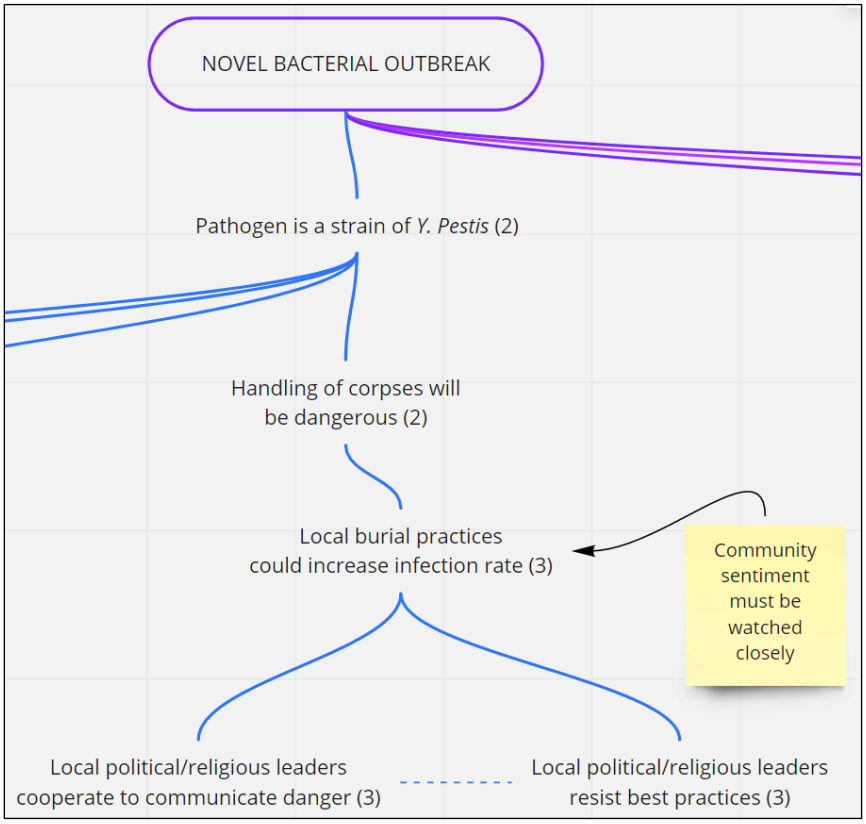
Situational Knowns • Extract from the scenario narrative • Use to construct the first row of consequence cascade	**Contextual Knowns** • From your knowledge base as it pertains to the scenario	**Drivers of Uncertainty** • The "known unknowns"
Pathogen is a Gram-negative bacterium	Pathogen is likely to be *Y. pestis* strain or relative	Location of initial exposure event
Symptoms include pneumonia, fever, headache, hemoptysis, dyspnea	Respiratory symptoms are likely to increase transmissibility	Case fatality
High percentage of intensive care	Fatality is likely to be 20-30%, higher the longer care is delayed	Regional healthcare system's capacity for and responsiveness to outbreak
R_0 is 5	Access to specialized PPE in this region is rare	Patients' responsiveness to antibiotic
Rate of infection is likely to overload area hospitals	Antibacterial access in the region is low	Social indicators of exposure susceptibility

2. **Build the Consequence Cascade** (50 min).

Build a consequence cascade, starting with the **situational knowns** identified from the scenario (the first column of the table above). Next, think about all possible consequences that could occur in the next steps based on the **contextual knowns** and **drivers of uncertainty**. For each node on this tree, assign on a certainty values based on your best judgement and experience (1 = guaranteed to occur, 5 = most unlikely but still possible). Think about the likely timeline for each in the evolution and response to the starting scenario – group these consequences on the same or differ rows. Mutually exclusive ("either/or") consequences can be distinguished using a dotted line.

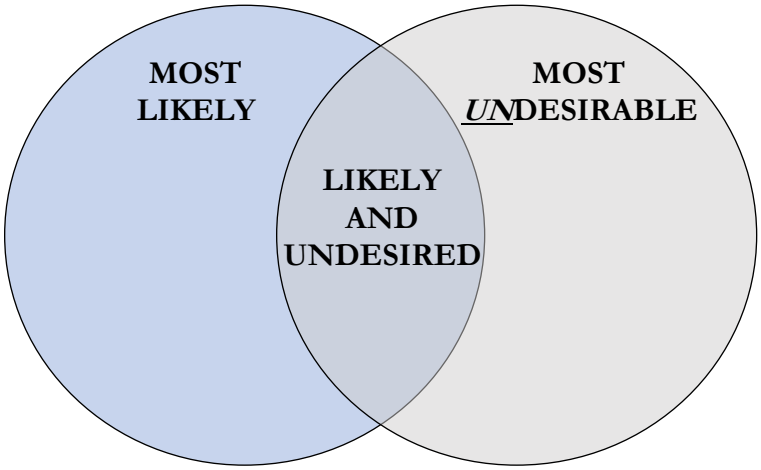
3. **Signposting** (10 min).

Review the consequence cascade to identify where and what key knowledge or characteristics of the crisis may arise and could filter out some possible future states. Indicate nodes in the tree (especially the ones near mutually exclusive consequences) where a critical indicator might denote the direction for the scenario's evolution. What data or facts will you need in order to point leaders and decision-makers towards one of two likely paths?



4. **Identify Key Characteristics of the Future** (15 min).

Looking at the confidence scores on the consequence cascade, draw the pathways that contain the most likely and least desirable features of a possible future. Fill the Venn diagram template (optional: attach the evidence for likelihood for each).



5. **Propose Strategic Actions** (40 min).

Based on the above, propose single-sentence discrete actions that strive to be:

a. robust across a variety of likely and undesirable future states you've identified.
b. agile enough to be diverted, adapted, or halted as certain signposts appear.
c. free of or have few negative externalities (e.g. are "consequence-free").
d. supported by existing evidence.
e. immediately actionable with resources at hand.
f. able to mitigate negative outcomes while capturing potential positive ones.
g. accountable to specific actors.

IMMEDIATE (crisis mitigation)	**SHORT-TERM** (adaptive as new knowledge arises)	**MEDIUM-LONG TERM** (systemic resilience-building for the future)
Include: - ***Who** (actor)* - ***What** (action)* - ***Why** (assign evidence for rationale)*		

6. **Prepare for Report-Out** (10 min).

Making any final notes or key considerations to share. The main report-out material will consist of a brief summary of the brainstorming process to build the consequence cascade, the Venn diagram, and the table of proposed actions.

FULL ZOOM LOGIN INFORMATION

September 24, 2021

Join from PC, Mac, Linux, iOS or Android:
https://nasem.zoom.us/j/99424747040?pwd=bE1ncnpESGZFSkttVnJBb1VmMkcrQT09
Password: 710439

Or iPhone one-tap :
US: +16465588656,,99424747040# or +16513728299,,99424747040#
Or Telephone:

Dial(for higher quality, dial a number based on your current location)：

US: +1 646 558 8656 or +1 651 372 8299 or +1 301 715 8592 or +1 312 626 6799 or +1 470 250 9358 or +1 646 518 9805 or +1 669 900 6833 or +1 720 928 9299 or +1 971 247 1195 or +1 213 338 8477 or +1 253 215 8782 or +1 602 753 0140 or +1 669 219 2599

Meeting ID: 994 2474 7040
Password: 710439
International numbers available: https://nasem.zoom.us/u/aLjhqEALa

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https://nasem.zoom.us/test

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