BLOOMBERG HARVARD | City Leadership Initiative

COVID-19 Local Response Initiative

Answers to Mayors' Top Questions

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GETTING ORIENTED AND GETTING ORGANIZED

At the start of the COVID-19 Local Response Initiative, there were fewer than 10,000 confirmed cases of the novel coronavirus (SARS-CoV-2) in the US. The first priority of the initiative was to help mayors orient themselves and their cities in the timeline of the crisis, set up an agile crisis response process, and help them "flatten the curve" to avoid overwhelming their local healthcare system. The economically and politically painful steps they took by and large achieved this last goal and saved many lives, but as political pressure mounted and testing remained in short supply, many mayors had to ease restrictions with incomplete information about the level of risk in their communities. The question for many remained: Where exactly are we in this crisis and what should we be doing right now to protect the public? Below, experts respond to mayors' questions about how to get oriented and organized for effective action in a prolonged, multi-phase crisis. Because the COVID-19 crisis changes frequently, dates at the end of each question indicate when the expert provided an answer.

How do you assemble the right team for crisis response?

DUTCH LEONARD: There are three (possibly overlapping) groups of people you need engaged in the process of understanding the crisis and deliberating on responses:

1. People who understand and can represent the city's key priorities, values, and goals. (This does not mean people with identical interests! These people should represent multiple interests and points of view.)
2. People who have expert knowledge in areas relevant to the virus and its consequences (medicine, public health, logistics, interdepartmental and cross-sector coordination, etc.).
3. People who have intimate knowledge of the city, the community, and the workings of city hall.

Diversity is key: People with different backgrounds, perspectives, skills, expertise, experiences, and knowledge will enable you to consider a broad range of options and develop a better and more creative approach. You will likely need to reorganize and reconfigure the team as the event continues to unfold.

If you are recruiting for a dangerous and difficult mission, be blunt with people about how hard it will be. That way your applicants will be self-selected for toughness, or at least for thinking of themselves as tough. People who step forward are likely to be those who are comfortable in a very uncertain environment. Then you can look for ways to test for that: Who can actually demonstrate the necessary flexibility and the ability to work effectively across boundaries? (3/19/20, 4/30/20)

NANCY KOEHN: For his polar expedition, Ernest Shackleton hired for attitude and trained for skill. He sought people who were comfortable in uncertainty and attitudinally ready for a very real, very serious challenge. Think about the attitude, the work ethic, and the resumé, but that's only part of a much broader set of criteria in hiring people for great uncertainty and high-stakes situations. (4/29/20)

For more on teams and teamwork, see the key takeaways from Session 1, Session 6, and Session 9.

In the absence of statewide action, what is the appropriate trigger for a city to issue or reinstate a "shelter in place" order?

DUTCH LEONARD: There is almost certainly no single, universal indicator for when you should choose to (re)institute a shelter in place or stay at home order. Here are some questions you might want to consider:

- *How are nearby cases being transmitted? For example, are public health officials able to link cases, or are they originating from unknown persons?* The latter would indicate that the virus is spreading widely in the local region and you should strongly consider a shelter in place order.
- *What are nearby communities doing?* If many are sheltering in place, your community can contribute to the greater good of the region by also sheltering in place.
- *What are the demographics of my community? Is there a large at-risk population, including seniors, low-income individuals, and individuals with health issues?* These individuals would benefit disproportionately from a shelter in place order.
- *Does a high proportion of individuals in my community rely on local institutions for basic needs? For example, do most students receive free and reduced-price lunch?* There must be a plan for distributing these essential services while sheltering in place.
- *What is the density of housing in my community?* The virus will spread more rapidly in dense communities.
- *Do people in my community typically rely on cars or public transit?* The virus will spread more rapidly in communities with a large public transit base.
- *What is the current and projected strain on hospitals/healthcare in my region (both with respect to COVID-19 and otherwise)? Do our hospitals have enough hospital beds, ICU beds, ventilators, and PPE?* Peaks and waves in the spread of the virus will put further strain on local hospitals and healthcare workers.
- *Have any healthcare/emergency workers in my community or in nearby communities tested positive?* The safety of healthcare and emergency workers must be prioritized. Issuing a shelter in place can help you achieve this.
- *Have you tried to get support from local community and business leaders?* It will likely be easier to achieve a successful shelter in place if you have the support and/or understanding of the community. (4/1/20)

For more on locating yourself in the timeline of the pandemic and understanding when more restrictive measures are needed, see the key takeaways from Session 1, Session 11, and public health slides from Session 2, Session 5, and Session 11.

How can we generate new ideas and get people comfortable with trying new things?

MITCH WEISS: Oftentimes, for a mayor, the status quo is actually a more dangerous choice than trying something new. In February and early March, I'm sure you were told, "Oh, we can't quarantine, we can't do this, we don't have all this in place." But as Dr. Frieden has told us, waiting two or three more days could have doubled the number of lives lost. You had to act because the status quo was actually the more dangerous choice.

Trying to generate new ideas with existing teams can be frustrating. This isn't because there's anything wrong with your existing teams. In fact, they're the experts in what they're doing. The problem is that they're "experts in the past," and what you need are people to help you become experts in the future. You need what Michael Tushman and Charles O'Reilly would call an "ambidextrous organization." You need parts of your organization continuing to do what they've done well in the past, supporting people in the community in ways they've always done. You also need the people who are going to explore the future.

When one mayor put an engineer in her homelessness working group, she got new solutions—fast. That is a perfect example. The trick is to organize and lead these teams so that you get enough cross-pollination but avoid what they would call “cross-contamination”—for example, if, in the first minute, the engineer hears, "That's never going to work. You shouldn't do that. That's not allowed. Don't try that." While bureaucracies certainly have constraints, some of the rules and procedures that public employees abide by are more flexible than many perceive.

Your job is to make sure you have people looking at the future and people executing in the present. Make sure those people are connecting with each other, but don’t mash them all into one team and say, “You're all innovators now.” If you recruit some people to be part of your innovation front, don't make it seem like they're better than other people. The last thing you want to do is create a schism. (5/5/20)

AMY EDMONDSON: Be explicit about the challenge you see. As a leader facing the major challenge of the pandemic, you might think, "This is overwhelming. How are we going to endure this indefinitely?" Your instinct is perhaps to think that this thought cannot be said aloud, but it can and it should. By naming it, you create space for others to be honest about their own concerns. Start by saying, "This is what we're up against, and yes, it can feel overwhelming. I don't have an answer for how to solve it, and so I'm going to need your help.”

Don't try to solve it alone—you cannot—but *do* try to name what you see and invite your team’s thoughts. It's a kind of crowdsourcing, with the small crowd that is your team. Ask them, “What ideas do you have?” The process of developing and sharing new, potentially better practices is a powerful source of creativity and bonding in a team.

One of the most important things you can do is consistently reframe and recharacterize discussions about changes as a community innovation discussion rather than a political discussion. Keep bringing the focus back to the goal of building the future together, always setting a positive example of the messages and behaviors that you want others to embody as well.

By modeling a behavior (wearing a mask, for example) with the visibility of your position, you have an opportunity to emphasize the value of caring about others and to model the behavior that demonstrates that caring. Your job is to inspire and tap into intrinsic motivation. The fear of punishment is not as effective as inspiring people to live up to the community’s values. (5/19/20)

For more on fostering innovation, see key takeaways from Session 7 and Session 9.

COMMUNICATING IN A CRISIS

The number one job for mayors in any crisis that strikes a city is to communicate clearly, credibly, and effectively. This means conveying to the public not only factual information but also empathy and a rational basis for hope. It also means communicating thoughtfully, transparently, and strategically with partners and coproducers in government and across institutional divides. Over the weeks, mayors sought guidance on how to help their community members understand not just the facts, but also their interdependence and the need to look out for one another. They also solicited and shared information about how to work effectively with partners who held authority and resources they needed to combat the novel coronavirus.

What tactics can I use to sustain momentum around social distancing even as restrictions are lifted?

JULIETTE KAYYEM: It's true that we are sending inconsistent messages: "Take this seriously but be calm. Stay apart but come together." It's hard to balance, but the basic truisms of communication apply: Be clear, concise, credible and consistent.

It cannot all fall to you. Bring people to the table and make sure they have your back. Try to communicate to different populations using the people in city government who are part of that group. If you have a 23-year-old hipster who knows some social media platform that you and I have never heard of, have him use it. Use whatever messengers you can find in creative ways to echo the message you're trying to get across. For example, California Governor Gavin Newsom has tweeted video messages from comedian Larry David and rapper Snoop Dogg to reinforce the message #StayHomeSaveLives.

There is good data out there that shows social distancing works. Constantly repeat that. Consider using more active language. I now call it mobilizing at home, and it empowers people to realize they're part of this solution—part of the team rather than isolated.

The clearest message to send is that we cannot afford to relax social distancing prematurely because it could have profoundly negative effects, including putting the health of our elderly relatives and frontline workers at risk, as well as overwhelming already stressed healthcare systems. (4/6/20)

DR. JOSH SHARFSTEIN: There is no universal playbook: What works in one location with one population might not translate easily to another. You should assess and adjust as you experiment with messaging.

Press releases and press conferences alone are probably not going to be as effective as a broad-based communications campaign. What really changes people's behavior is not always hearing from an authority figure. There should be multiple messengers who are credible within the population you are trying to reach. You need people who can translate your message—not just in the literal sense, but also in terms of relatability. Local faith communities and radio stations can help.

City councilors and other city officials can use their networks to make doctors and other experts available for call-in sessions. These can reach a lot of people with helpful messages and answer questions. (4/6/20)

DUTCH LEONARD: Be cautious about dividing reassuring and cautionary messaging between different spokespeople. If you do that, then it looks like there's a conflict between the messengers, and the message gets

muddy. People will pick the message or the messenger they like best, and that's not going to generate a good outcome. (4/6/20)

For more on communication with the public around social distancing and other precautions, see the Center for Disease Control's communication resources and key takeaways from Session 2.

How can we get good information to everyone and counteract misinformation around the virus, testing, treatments, and vaccination?

DR. LISA COOPER: One strategy we've used in Baltimore is building on our relationships with well-known members of the various communities—for example, community partners who have worked with public health officials on providing services to individuals with HIV/AIDS or women in childbirth. We work closely with them to make sure we hear about what myths are circulating and then ask them to serve as messengers. Some high school students in Baltimore on a step team choreographed and filmed a socially-distanced dance routine that called on people in the African American community to wear masks outside and wash their hands.

We have to get creative when talking to different messengers with access to different groups, asking them what they think would resonate most and have the most impact. People in immigrant communities, for example, need reassurance that if they do show up for testing or care, they're not going to be turned in to the authorities or hit with a huge bill afterwards. (5/7/20)

JULIETTE KAYYEM: As we wait for a vaccine, it is very important that you take on disinformation about vaccination. Begin to grease that path now, because once the vaccine is available, it will be too late. You don't want 40 percent of your citizens feeling vaccination is unsafe.

Many of the ideas and conspiracy theories propagated by anti-vaccine activists are rooted in distrust of authority. They need to be addressed head on with communications and social media campaigns, as well as efforts at the local level to work directly with wary communities about the necessity of vaccinations. Disinformation feeds a vacuum and mayors must utilize their professionals—doctors, trusted spokespeople—to counteract it. In addition, rules regarding access to schools or other "privileges" based on vaccination should be publicly enforced. (5/5/20, 5/20/20)

DR. TOM FRIEDEN: There is some misunderstanding and misinformation around herd immunity. Herd immunity occurs when a large enough proportion of the population is immune to the virus to prevent it from finding enough hosts to spread quickly. The primary way we achieve herd immunity to communicable diseases is through vaccination. In the absence of an effective vaccine, the only way to achieve herd immunity for a highly contagious disease is for a large majority of the population to become infected. Exposing the general population to the virus in a deliberate effort to achieve herd immunity would lead to a spike of new cases that could quickly overwhelm local healthcare systems, leading to widespread suffering and death.

If there are stakeholders in your area using the idea of herd immunity to argue for lifting restrictions, look to local public health officials, healthcare executives, or other credible experts who can help explain the implications of doing so. (4/21/20)

DR. JOSH SHARFSTEIN: The success of a safe and effective vaccine will depend on its widespread use. To achieve herd immunity for measles, for example, at least 90-95 percent of the population needs to be vaccinated. The

novel coronavirus appears to be somewhat less contagious than measles but achieving herd immunity would still require large majorities of the population to get vaccinated.

Cities can take steps to promote widespread vaccination, including requiring it for daycare and school entry and encouraging stronger healthcare practices, such as in-depth discussion with hesitant parents and establishing routine vaccination as the default for medical check-ups. (5/5/20)

For more on counteracting rumors and misinformation, see the CDC's guidance here. CDC also offers guidance on improving vaccine coverage.

How can we communicate effectively with our partners at the county and state level?

DR. JOSH SHARFSTEIN: The county health department should be actively engaged in your city's response and helping to brief citizens. If the health department is not, you should raise targeted questions about important issues like the county's plan for testing, contract tracing, isolation, and quarantine. However, I would encourage striking a constructive tone. It's not just, ''Are you doing these things?'' but, ''How can I help you do these things?'' The amount of contact-tracing and support for isolation that will be necessary far exceeds what any jurisdiction or local public health department can do. One of the most important roles for mayors is to mobilize the business community (especially hotels) and universities. Offer and solicit help from all quarters.

This is a big challenge in some states, and it shows the gap in national leadership. My best advice is to stand with people in your healthcare system strongly to call on the state to follow the best-known scientific protocol. Rather than government to government communications, partner with emergency room doctors and nurses. Stand with them and say with one voice that this is a threat to the whole community, healthcare workers are putting themselves and their families at risk, and we need you to take this seriously.

If there's one level of government that seems afraid to try something different, you may want to ask around or even come to us at Johns Hopkins. Local officials who have wanted to do extra testing and been told "no" have come to us, and we've put the question to the state and the answer comes back "yes." It's not necessarily the case that everyone along the chain is opposed to your idea. Sometimes you can keep raising the question until you find somebody who's going to say, actually that would help me. Then you can find a face-saving way to proceed. (4/4/20, 5/19/20)

JULIETTE KAYYEM: Over time, as this broadens into a political and economic story, you may want to involve others in sending a message. Depending on your community, you could invite a National Guard member or a respected police chief, for example, to join you in your call for state action. Former state leaders, like governors or senators, may also be helpful messengers.

One option is to say that—based on sound public health guidance—you are going to advance on a certain day unless you hear otherwise. In other words, you don't need approval, you're just asking for it. That's going to focus them on your request rather than the 100 others they are juggling.

A second option is to remind them that there's really no right answer at this stage but there is one wrong answer, which is being too late.

You can also propose a pilot. Ask that they let you try something for a week or two, assess how it's going, and then bring it down or ratchet up, depending on results. You give them more options than an on-off switch, and sometimes that brings clarity. (4/1/20, 5/20/20)

DUTCH LEONARD: The facts are on your side if you're trying to maintain social distancing and reduce the spread of the virus. Those ignoring the facts will find it harder and harder to do so as the virus spreads. To bring them on board sooner, communicate, communicate, communicate. Think critically about the message you want to send, who is the best messenger, and what arguments will make most sense to the agencies you are trying to convince. These are not necessarily the same as the arguments that convinced you. How can you describe the situation to the agency in a way that makes the response you want from them seem like it will be the best possible course for *them*? (4/3/20)

NANCY KOEHN: How you show up, your body language, and your general demeanor and energy make a difference. People are hungry for guidance, confidence, and seriousness of purpose, and they take their cues from all kinds of nonverbal behaviors. Even the way you sit in front of the camera for a briefing or in front of your computer for a Zoom call affects how others respond to you and how they themselves should behave.

We need to get comfortable with a lot of uncertainty and chaos, with too little information and changing information, give others permission to not know what to do, and remind everyone that we are navigating point to point. We're not navigating to August then through to December and then through to the first vaccines in 2021 on some kind of GPS printout. We're navigating only to the next point, which is usually the point through which we think the waves are lowest and the winds the slowest.

We're going to pivot when we make mistakes, and we're going to learn from that pivot, and then we're going to navigate to the next point. You can't spend a lot of time thinking, “Oh my God, why did we make that mistake?” or casting blame. We learn and we move forward, point to point, and we need our teams and our citizens to become comfortable with that kind of navigation. (4/29/20)

AMY EDMONDSON: Mayors also have a real opportunity to help the public avoid the false dichotomy of caring about the economy versus caring about health. The opportunity is to switch from an “either/or” frame to a “both/and” frame; what we need is new thinking on “how”—how best to enable economic activity without harming people. The practical question for every city is this: How do we navigate the new reality to help people remain healthy while gradually, carefully, and deliberately bringing back aspects of community life? It’s going to be iterative and involve experimentation. This is a puzzle to be solved, not a decision to be made. And it is not something that mayors can do alone. Solving this puzzle is decidedly a team sport. (5/19/20)

For more on effective cross-boundary collaboration and dealing with conflict, see key takeaways from Session 5 and Session 9.

MITIGATING IMPACT

Without easy access to resources for testing and contact tracing at the levels required to eliminate the virus from American cities, mayors and city leaders have relied on various mitigation efforts to slow its spread. They have worked with local businesses, first responders, community groups, and city residents to reduce the risk of infection among the general population while continuing to provide essential services. Below are answers to mayors' questions about how to "flatten the curve" in their cities.

What can cities do to promote the use of masks in public and ensure that essential workers have the personal protective equipment (PPE) to stay safe?

DR. JOSH SHARFSTEIN AND DUTCH LEONARD: If used properly and in conjunction with social distancing techniques, cloth masks can help slow the spread of the virus in the general population. The CDC does not recommend that individuals purchase surgical masks or N-95 respirators for personal use, as there is still a critical shortage of these supplies for healthcare workers and first responders.

Cities can encourage the use of cloth masks in public through education and ensuring a sufficient supply, with enforcement as a last resort. The first step is to educate the public about the importance of wearing a mask to prevent the spread of the virus for those who have no symptoms because they could be asymptomatic or pre-symptomatic carriers.

Masks act as a physical barrier to protect *other* people from the wearer's viral and bacterial particulates. They are most effective in reducing spread from an infected person to others, but they likely have at least some benefit to the wearer as well. Leaders should make *both* arguments—that the masks protect both the wearer and others.

Cities can also request citizens to kindly remind their neighbors that wearing a mask is best practice or report when an individual is deliberately flaunting a mask-order or social distancing guidelines.

Many cities have set up drives to offer free masks to the public that include instructions on how to put on, use, take off, and clean or dispose of masks after use. For example, Cambridge, Massachusetts set up a mask giveaway through the police department, meal distribution sites, and drive-throughs at elementary schools. The City of Burlington, Vermont, has given away over 20,000 reusable face masks produced by local Vermont companies.

Mayors might also want to encourage virtual "sewing circles" in their communities to increase the supply of home-made masks for people who can't make their own. This would give some people in the community a way to constructively contribute to fighting the virus, and also has the benefit of helping to reserve N95 and surgical masks for the people with greatest exposure—healthcare workers, public safety workers, and essential service providers.

Some cities have announced that people violating COVID-related face cover policies could be fined, but also emphasized that law enforcement would initially focus on educating those individuals as opposed to penalizing them. (4/21/20, 5/27/20)

JULIETTE KAYYEM: This has become a political issue, but the majority of Americans—including conservatives, including supporters of the president—support mask-wearing. You need to tie mask-wearing with economic

recovery. Those go hand in hand. There's a confidence gap. The government can say, "We're open," any day, but most of us are not going out. The Europeans call it the empty table economy.

For more on PPE, see the CDC's educational materials on how to make and use cloth masks and matching resources and instructions for makers at GetUsPPE.org.

How can we improve and/or better coordinate our testing capacity?

DR. JOSH SHARFSTEIN: The testing strategy is different for different times and places. Where tests are scarce, we encourage people with mild symptoms not to get tested. If your city has testing capacity and only a few cases, you should be recommending the opposite: that everyone with symptoms get tested so they can be isolated and contact traced, and their contacts can be quarantined. But wherever public health and healthcare systems are stressed, individuals with mild symptoms seeking tests may infect others and use up scarce resources such as test kits, protective equipment, healthcare supplies, and worker time. If you test positive and your symptoms are not severe in an area with widespread transmission, the recommendation will be to stay home, which is exactly what you would have done if you had not had a test. The key is to coordinate with your health department and doctors.

Our healthcare system at its baseline is confusing and scattered. When you're building testing on top of that, you get a scattered system for testing. It is the job of public health officials and mayors to try to make that more coherent. Where should people go? How can they get there? How do they access the system?

Unfortunately, nobody really knows whether testing needs are being met. If a mayor were to say, "I'm going to ask 10 people in the city to try to get tested today and rank how easy it was," you'd have some of the only data that exists about that question. Similarly, a mayor could survey nursing homes and ask, "Can you get the testing you need for people who are sick?" then, if the answer is no, you could turn around and say to the state, "My nursing homes can't get the testing that they need." That would have an effect, because people just don't know where the gaps and bottlenecks are.

Just a few months ago, the idea that mayors would be fundamentally involved with medical testing would seem very odd to people, but a lot has happened since then. From a public health perspective, mayors may have the best view of the gaps. A mayor's ability to recognize those gaps and then marshal the means—whether through moral authority, coordination, or direct investment—to plug them is an amazing transformation and very important for the control of a pandemic.

How quickly we can get test results matters. Getting contact tracing started is important, but doing it well is extremely important, and timely results are a part of that. (5/13/20, 5/29/20)

DUTCH LEONARD: Sometimes, decentralization and fragmentation can be an advantage because they allow us to do different things in different places and to respond effectively to a heterogeneous problem. That is not the case with tracing and tracking down contacts, which is a very precise endeavor that requires trying to get people tested as quickly and consistently as possible to break the spread of the virus.

For testing and contact tracing, command, control, and centralization are really important to try to get all this information collected and collated in a credible place, and to make sure that everybody's reading from the same database. (5/29/20)

For more on testing, see public health slides from Session 3, the Association of Public Health Laboratories' page on COVID-19 response, and resources at the John Hopkins COVID-19 Testing Insights Initiative.

What are the best ways to do contact tracing and what can I do to build support and infrastructure for it?

DR. TOM FRIEDEN: Contact tracing is a tried and true public health method. We do it for TB, sexually transmitted diseases, HIV, and for vaccine-preventable diseases such as measles. There's a whole set of skills that goes along with it. Contact tracing involves building trust with the patient and quickly warning the patient's contacts. We absolutely have to protect privacy and confidentiality. When it's done well, public health earns, gains, and maintains patient trust and is able to get the most sensitive information reliably from people.

Early in the outbreak, many health departments began systematic contact tracing, but rapidly became overwhelmed. Now that cases are coming down again, we have to do it in simpler, more scalable, and faster ways. This is all still in process. Public health departments can't imagine working at ten or a hundred times the scale to make this successful, but people working together to build trust and understanding is what makes this work.

One of the best examples we can look to is Singapore, where, for a population of a few million, a thousand people are doing this full time. They do a video conference with every case. They track down 30 to 40 contacts per case and warn them. This is an enormous effort. There are emerging best practices. (4/14/20, 4/21/20)

DR. JOSH SHARFSTEIN: Mayors can be very helpful in getting health departments to understand and embrace the scale up that's necessary. Some state and local governments, such as Massachusetts and the cities of New Haven and San Francisco, are partnering with nonprofits including academic medical centers that have local and global public health knowledge.

In other places, they're using city or county employees such as school nurses to do contact tracing. Other areas are reaching out to universities and getting hundreds of students involved. Sometimes with these local departments there's a small team for the usual contact tracing on STDs and HIV, and mayors can connect them to resources to help them figure out how to scale up.

Cities can coordinate with other cities and towns in their county or look to coordinating bodies such as the California Conference of Local Health Officers (CCLHO) for help in aligning and collaborating county-wide public health efforts. Coordination efforts could involve directing testing resources to where they are needed most, supporting contact tracing, or creating task forces to address the needs of those living and working in assisted-living facilities or other high-risk living situations. Communication with county health departments is essential for cities to make strategic choices about when local action can effectively supplement county-level activities.

Multiple technology platforms are emerging, but technology should be seen as an enabler of a smart, well-explained, coordinated, contact tracing strategy—not as a solution unto itself. Moreover, an effective public health response requires people to be able to explain quarantine and link people to resources that make quarantine possible. Scaling up human resources will be necessary.

The report cited above has a section on technology as a force multiplier for contact tracing, as well as cautions about appropriate safeguards. (4/11/20, 4/21/20, 4/29/20)

DR. HOWARD KOH: There are underutilized human resources right now. A lot of students have been let out of school early and are eager to volunteer. Local public health departments have been under-resourced for a long time, so there are not nearly enough professionals to do contact tracing. (4/21/20)

DUTCH LEONARD: When someone is contacted by a contact tracer, they are mainly being asked to help other people—it provides only a little help to them (in the form of advice about what to watch for and how to make sure they don't infect family members or others, for example). And they are being asked to disclose information that they may feel is sensitive. People are sometimes nervous about how the data will be used or shared ("Are you going to disclose who I am? Is somebody going to know that I gave it to them?"). This is where mayors' leadership is essential. We can't safely do reopening without cooperation—and mayors, through their messaging, can help build that. (5/29/20)

For more on contact tracing, see public health slides from Session 4, the proposed national plan released by the Johns Hopkins Bloomberg School of Public Health and Association of State and Territorial Health Officials (ASTHO) and the New York Times *article on Paterson, New Jersey. For the Johns Hopkins free contact tracing course, click here.*

How should we think about enforcing physical distancing in various locations as we begin to reopen?

DR. CAITLIN RIVERS: Outdoor activities will be safer than indoor activities, and they're also important for mental health and helping people get through this difficult time. I encourage outdoor activities where possible, with the normal physical distancing that we recommend in any setting. People from the same household don't need to observe that, but between households, people should be encouraged to keep space. (5/26/20)

DR. JOSH SHARFSTEIN: The CDC has released guidelines for outdoor parks and recreational facilities that advise against the use of playgrounds (which may have contaminated surfaces) and participation in organized sports that cannot be played while maintaining physical distance. Sports that can be played while maintaining distance, such as tennis and golf, may be permitted with clear guidance on safe play. The United States Tennis Association and the Professional Golfers' Association both maintain web pages with COVID-specific safety information.

CDC guidelines suggest that while swimming itself may be a relatively safe activity, community pools and public beaches should only reopen with strict guidelines in place to maintain physical distancing practices and keep gatherings restricted to fewer than 10 people. The CDC also advises against opening water playgrounds or water parks. Riverside County in California has released guidance for reopening private pools in residential communities.

A report from the Center for Health Security reviews the guidelines for many kinds of activities—maybe not to the level of nail salons, but containing a lot of specific CDC guidance that is definitely actionable. The truth is that there may be some businesses that can't open early. There's no safe way to do a big indoor concert.

This report examines the inherent risks in different kinds of activities and how much these can be modified. Some are low-risk activities, some have high inherent risks but are very modifiable, so that's how people should be thinking about the order in which things are opened. Certain activities where you really can't do social distancing are going to have to come later in the process. (5/5/20, 5/9/20)

JULIETTE KAYYEM: Every day will be different; there isn't an on-off switch, and you all are going to be pushed to lift restrictions before the ideal circumstances arrive. You're balancing things. But even if you are opening up

under not-ideal circumstances, there are still baseline safety precautions everyone should take and talk about: social distancing, staying home when possible, protecting vulnerable populations, and masks. For buildings and businesses, the Harvard School of Public Health put together a five-layered defense approach for safe buildings, hazard elimination, personnel substitution, engineering controls, administrative controls, and PPE. (5/5/20)

For more on mitigating risks in reopening, see public health slides by Caitlin Rivers from Session 9 and fact sheets on opening workplaces from the American Industrial Hygiene Association.

PROTECTING VULNERABLE POPULATIONS

The risk of contracting the coronavirus—and suffering dangerous or fatal complications of COVID-19—is not evenly distributed across the population. With grim statistics on racial disparities and viral spread within nursing facilities, densely populated immigrant communities, and homeless shelters, mayors have focused resources on efforts to protect vulnerable populations in their cities. Below are answers to mayors' questions about how to take care of those who are suffering the impact of the pandemic disproportionately.

What can we do to protect elders in long-term care or assisted living facilities?

DR. JOSH SHARFSTEIN: There needs to be a public health response that monitors for potential infections anywhere that elderly people are living in close quarters and intervenes immediately with testing, isolation, infection control, and quarantine.

Mayors can talk to hospitals, labs, or health departments about setting aside testing for nursing homes, and then work to establish a team to go out and perform tests for patients and staff. In Maryland, for example, there is a process where the health department identifies a nursing home outbreak, and then Johns Hopkins or another entity sends a team, with protective equipment, to test everyone and give advice on infection control. Mayors can play an important role in connecting parties to get the tests where they need to be. (4/4/20, 4/29/20)

DR. JENNIFER NUZZO: Ideally, we would be doing surveillance testing in all high-risk groups, for healthcare workers and perhaps seniors and those living in senior housing. However, I don't see us getting there soon. In an ideal world, we wouldn't be moving staff around between all these facilities and retroactively trying to identify where they potentially could have exposed lots of people. This is another reason why access to personal protective equipment and, we hope, routine screening is very important.

In independent senior living communities specifically, when there is an outbreak, widespread testing is important to reduce further spread. For assisted living and nursing homes, regular testing of residents and staff is prudent, provided there are resources. Once outbreaks are detected, there should be aggressive testing to find everybody who may be infected. The challenge in protecting nursing homes is that the broader population-level restrictions are not very good at protecting them once the virus is in the facility. If you reduce the probability that the staff gets sick out in the community, there's less chance of bringing the virus in, but once you have cases in these facilities, the interventions are different.

You can use your position as mayor to advocate for the facilities in your community—especially as additional resources may be coming into the state, and nursing homes may experience challenges accessing them. You can step in and be their voice.

Caring for the mental health of elders in assisted living or nursing facilities, who are cut off from in-person visits from family as well as interaction with their peers, is also an important part of responding to this crisis.

The city of Barcelona offers seniors an application called VinclesBCN to simplify communication by text messaging, photographs, or video for elderly smartphone and tablet users. It allows them to set up a personal network of family and friends as well as a group network of fellow seniors who live nearby or share common interests. It also helps connect them to local online activities.

The app now features a health channel, managed by medical professionals, to provide information on COVID-19 and answer users' questions via text or voice message. (4/29/20)

DUTCH LEONARD: As we are seeing, elderly people who live in high-density residential facilities like nursing homes are especially vulnerable because their residential situation provides opportunities for transmission and their age and/or underlying medical conditions makes them differentially likely to develop severe, potentially lethal symptoms. Seniors in these facilities should not be gathering in groups for recreation or meals (or any other reason!). This means even more isolation, and we can't just tell them to stay alone in their rooms. You need to provide new mechanisms for them to remain socially engaged even while physically isolated. This is particularly difficult because many of them will not have the devices and technology skills that others are using to stay connected. Try to assemble a local group to invent new methods of interaction that can work for them. (4/3/20)

For more on protecting seniors and those living in assisted living facilities, see Dr. Jennifer Nuzzo's slides from Session 6.

How can we help address racial and class disparities in access and outcomes?

DR. TOM FRIEDEN: We're seeing much higher infection and death rates among African Americans and, in some parts of the country, Latinos. That means we need to increase the sheltering and the shielding of the vulnerable populations, target them for testing and contact tracing, and work with communities to limit the spread.

We can work to build personal and community resilience by addressing some of the underlying conditions that are contributing to the greater vulnerability of communities of color, like lack of access to health care and higher rates of hypertension and diabetes. (4/21/20)

DR. JOSH SHARFSTEIN: These increased rates are a result of a constellation of factors, including greater representation among essential workers (who may not have had access to sufficient protective equipment), less opportunity for social distancing in crowded or unstable living arrangements, less ability to stay home because of income constraints, and greater levels of chronic illness.

Mayors can ask: If somebody does not have a doctor, how can they get testing and follow-up care, and have a safe place to isolate and quarantine? Public health authorities can set up call centers and special clinics to make sure everyone has access—not just to testing but also to services like food and medicine delivery.

Making sure that people are hearing reliable and relevant messages from people they trust in every community in your city is also important. Different rumors or myths get traction in different communities; these need to be tracked and countered effectively with the facts. We also need to invest in supporting low-wage essential employees, listen to their fears, take them seriously, and act to protect them. (4/21/20)

DR. LISA COOPER: The more granular and specific we can get with the data, the more helpful it will be. Cities and hospitals can work with county or state health departments to get this information for the communities they serve. The CDC has made an effort to weight data based on the particular communities within a state, to account for the difference in distribution of people of different racial and ethnic groups across a larger geographic area. It's even more informative to have the data at a zip code or neighborhood level, if possible.

We should also realize a lot of the data presented in the media is not adjusted for age. The white population is older, on average**,** than most populations of color. If we accounted for age differences, we would find that African Americans are actually dying at even higher rates than expected because they're younger than the white population. There are lots of other things that need to be taken into account, but more granular information is most helpful. (5/7/20)

DR. JENNIFER NUZZO: Cities have enacted targeted testing strategies for communities of color. Salt Lake City opened up some of their first testing facilities on the west side of the city, for example. Houston has created a mobile testing unit to ensure testing capacity in neighborhoods with at-risk communities. Buffalo's city council voted unanimously to establish a testing site on Buffalo's Eastside, a predominantly African American community. Las Vegas has made a concerted effort to place two of their testing facilities in North Las Vegas and have completed an outreach effort in partnership with a community church to encourage testing. (5/13/20)

For more on addressing health disparities, see Dr. Lisa Cooper's slides from Session 7.

How can we best protect and provide services for those experiencing mental health concerns, domestic abuse, substance abuse, food insecurity, and homelessness?

DR. KIM LEARY: These are among the most critical issues that we're hearing about in the mental health community. Because stress can be cumulative, vulnerable people are most likely to bear additional stress in the current crisis.

Survey data confirms a rise in domestic violence around the country and increased substance abuse. What you can do right now is push out continuous updates of local, state, and national mental health resources, including crisis hotlines and "warmlines" staffed by peer volunteers, and work to connect vulnerable populations—especially the homeless and others with substance use and mental health diagnoses—with resources.

We're thinking in several time frames: about the mental health challenge right now; about the period 2-4 months from now; and what we can we do at the 4-6 month mark, to make sure that we restore pathways for people to get the care that they need. Work to expand telehealth counseling options and sponsor innovation in supports for mental and behavioral health.

Any in-person mental health service exposes providers and patients to infection risk at present. The CARES Act describes federal initiatives to expand mental healthcare. The American Psychological Association and American Psychiatric Association have also put forth policy prescriptions to expand and enhance mental healthcare via technology including tele-mental health, telephonic mental health, and the use of apps and phone lines. (4/9/20, 4/12/20)

DUTCH LEONARD: For those with concerns about domestic violence, it's a huge challenge that many courts are now functioning under different and unfamiliar procedures for processing restraining orders, complicating the challenges of navigating an already complex system. Figuring out how to communicate the new procedures to the people who need them so as to keep those processes accessible and underway should be a high priority. (4/6/20)

DR. JOSH SHARFSTEIN: Addiction medicine doctors are worried both about their current patients and about people who are still using drugs but seeking treatment. All the social disruptions are disrupting drug markets, and we're seeing more people seeking treatment even as the clinics are thrown off by social distancing. There are

opportunities for your drug treatment programs to take advantage of this situation through innovations in telemedicine. This could be a moment to treat more people, in new ways.

A separate challenge is harm reduction. Not too long ago, our message for people using opioids was always do it in a group to reduce the risk of death from overdose. Now we're supposed to be doing social distancing. It's a big challenge. I recommend talking to harm reduction groups in the area to learn about the challenges they are facing and what might be done to help.

Other populations of high concern are those living in homeless shelters as well as jails and prisons. Consider a moratorium on detaining people for low-level crimes. For homeless people, work to find them housing or temporary shelter to decompress shelters. Infection control procedures need to be put in place for these settings—but the best thing is to have as few people as possible in them.

It's important to have domestic violence shelters for people who are not safe at home. It's also important to help families address stress in these incredibly stressful circumstances. Cities should reach out to their network of organizations that deal with this every day to surface ideas. In Baltimore, a pro bono network of mental health clinicians offers support. (3/19/20, 4/6/20, 5/5/20)

DR. LISA COOPER: It's important to meet people's basic needs because that will help them stay safe. Making sure people have food or know where to pick it up or whether it can be delivered for free or for a reduced fee is critical. (5/7/20)

DR. HOWARD KOH: People experiencing homelessness need facilities that allow for good sanitation, handwashing, and social distancing. Working with universities to utilize dormitory space or with the business community to create new shelter spaces or tents for hospital testing sites could be helpful. We need to be able to isolate and track people who test positive and care for them if they become acutely ill, which was tough before this pandemic started and is tougher now. (4/21/20)

DR. TOM FRIEDEN: Going forward, there's a risk that if unstably housed people go back to the streets or into shelters with less health support and space for physical distancing, there could be a new outbreak. You have to weigh the need for people to go back to work against the possibility that, if you relax the extraordinary measures for vulnerable populations, you'll end up with an even bigger problem. (4/21/20)

For more on mental health during this crisis, see key takeaways from Session 4 and Dr. Kim Leary's slides from Session 4. For help thinking through the impact of policies and policymaking around a wide range of socio-economic questions, see "An Ethics Framework for the COVID-19 Reopening Process" from experts at John Hopkins.

METRICS FOR RESPONDING AND REOPENING

As the axiom goes, it is hard to manage what you cannot measure. Mayors working to get the virus under control have had to figure out quickly what numbers to watch, collect, and report. As they have prepared for an incremental reopening in a risky environment, the question of what to measure, where and when, and how to interpret what they were seeing loomed large. Below are answers to mayors' questions on metrics.

What metrics are important to include in a dashboard to track my city's response to the virus?

DR. JOSH SHARFSTEIN: Cities should identify priority initiatives to slow the spread of the virus and use a dashboard to create accountability. One component of any city's dashboard could focus on what towns and cities can observe any day, such as hospital facility utilization rates. (4/4/20)

DUTCH LEONARD: Mayors may want to work together to propose some metrics that all cities should include in their dashboards. We need to use reliable numbers that can serve as the best guide to what's actually happening in the crisis today—but the numbers you most want are still highly unreliable (e.g., How many cases are there in my city? What fraction of the population has been exposed and has now recovered?) (4/3/20)

JULIETTE KAYYEM: There is a group of former Deputy U.S. Chief Operating Officers on U.S. Digital Response that will match highly qualified volunteers in data and digital service fields with government teams for rapid response to COVID-19. The initiative has recruited more than 1,000 vetted tech/data/engineering volunteers. State or local leadership can sign up here to request digital assistance. (4/1/20)

For more on creating a dashboard for pandemic response, see key takeaways from Session 3.

How do we know if we're testing enough people—or the right people—or using the right tests?

DR. JENNIFER NUZZO: Having robust testing means that testing is available in sufficient quantities to cover priority groups. That's more important than an arbitrary number of tests being conducted. When we believe that we have enough capacity to reach the people who need to be tested, that it is well distributed and not just concentrated in one or two places, then we look at the positivity.

You want the overall percentage of positive test results to be low (less than 12 percent). If your rate of positive tests is higher than that, it suggests that you need to expand testing to fill in holes in the geographic coverage.

You want to look at new cases both by raw numbers and percentage from known contact lists. If the numbers of new cases are increasing, that's a bad sign, and means we have to do more testing. We would be slightly assuaged if we knew that cases were increasing, but those testing positive had already been under quarantine at home. That could suggest that we are capturing everybody while they're still incubating their infection and hopefully intervening before they can transmit it to others. When you find new cases, you want to see an increasing percentage of those cases coming from known contact lists. Ideally, it gets close to 100 percent, meaning that most new cases are people identified through robust contact tracing. With contact tracing in place, we want to see that we are catching people before they become a known case and hopefully before they can transmit it to others. Eventually, you should see absolute cases going down as the percentage of cases from contact tracing lists goes up. (5/13/20)

DR. JOSH SHARFSTEIN: Molecular tests look for evidence of an active infection. Serum antibody tests are a different kind of test that measure the body's response to infection: antibodies, which take time to develop—about five days or more after initial infection. There are different kinds of antibody tests. In general, molecular tests and antibody tests are not replaceable with one another, because they measure different things.

There are many antibody tests on the market, but some of these are of low quality. Over the next few weeks, we hope to see a sorting out of which antibody tests are the most accurate. It is not yet clear that the presence of antibodies suggests immunity to the virus. There is ongoing research to determine the extent to which antibody levels means that someone is not likely to become sick with coronavirus again. As a result, it is too soon to consider using antibody tests for "immune certificates" or other ideas that have been proposed. (4/4/20, 4/21/20, 5/19/20)

For more on testing, see public health slides from Session 3 and resources at the John Hopkins COVID-19 Testing Insights Initiative.

What are the benchmarks for reopening and is there a way to anticipate further peaks?

DR. JOSH SHARFSTEIN: You have to look at several different numbers together: How many tests are being done, how many are positive, and is that ratio changing? If a particular city has good access to testing, the number of tests is the same, and the number of positives is rising, then it may well be that the true number of cases is going up. On the other hand, if your testing capacity has changed by a factor of 10, and positive cases have too, the actual number of cases may not be fundamentally much different, so it's important to look at multiple data points.

Hospitalizations help you understand impact, but hospitalizations come later in the cycle of the disease. If you're waiting for data from hospitalizations alone, it may be too late to avoid a significant surge in cases.

If there is a single call center for people with symptoms, the number of calls should be tracked as one measure to watch. There are other emerging sources of data, such as fevers reported by companies that make internet-enabled thermometers.

The Johns Hopkins Coronavirus map is a good resource to examine the spread in other states and countries around the world. The map is updated in real-time as additional information is made available from a variety of sources, including the World Health Organization and the U.S. Center for Disease Control.

The White House recommends cities and metropolitan areas reopen their economies in a three-phased approach, and that they meet several key "gating criteria" before entering the initial reopening phase. To summarize, these criteria are:

1. A downward trajectory of (a) reported influenza-like illnesses within a 14-day period AND (b) of reported COVID-like syndromic cases within a 14-day period
2. A downward trajectory of documented COVID cases OR positive COVID tests as a percent of total tests within a 14-day period
3. Demonstrated ability of hospitals to treat all patients without crisis care AND a robust testing regime for at-risk healthcare workers

Cities and metropolitan areas should only begin to reopen—and in a gradual fashion—after meeting the criteria outlined above. Each subsequent reopening should only be undertaken if regions continue to make progress against these metrics even as more and more individuals reenter public life. See https://www.whitehouse.gov/openingamerica/ for further details. The White House notes that localities and states should "tailor" their application of this criteria, given that experiences with COVID-19 vary widely across the country. Moreover, local leaders should note that their respective states might have additional recommendations or requirements that they might also need to consider.

On May 20th, the CDC released additional recommendations for reopening, including metrics and industry-specific considerations.

The time interval between phases I think has to be looked at very carefully. There are a lot of places that are saying, "Let's just look every two weeks because that's the incubation period of the full infectious cycle of the virus." I think that may be too short. We know that it can take a while for people to get symptoms, and it may take a few generations before the cases get to be a lot. So I personally think that before any major move, people should be waiting at least a month. (4/1/20, 4/29/20, 5/27/20)

JULIETTE KAYYEM: Experts are predicting that there is likely to be at least another wave of COVID-19 infections, if not more. However, if we continue to stay at home and practice social distancing, this should mitigate the severity of future waves. Accordingly, it is critical that communities only begin to relax social distancing measures when there has been a meaningful and persistent reduction in the number of new cases per day. Further, when measures are relaxed, it should be in a gradual fashion. By "turning the faucet back on to a slow drip," we will be better positioned to implement techniques to contain the spread of the virus that we know work—testing, isolation and quarantine, and contact tracing—and we will greatly reduce the stress on our hospitals and healthcare workers. (4/11/20)

DUTCH LEONARD: We need to do this on a very gradual basis. It's like you're driving a bus down a crowded city street, but you can't see what's ahead of you, and you can't really even see out the side windows. The only thing you can see is what happened four blocks ago because the real reliable data that you have about what's going on in your city now will not be available to you literally for a month unless we go to some other kind of testing regime—like a daily random sampling of a large number of people in a whole bunch of communities, to see what's happening in terms of spread, which I don't hear anybody describing as a means of proceeding.

For more on metrics for reopening, see Tom Frieden's slides from Session 5 and Jennifer Nuzzo's Slides from Session 8. Additional resources on metrics for local officials are available here and here. Information on a metrics-based color-coded alert system is available here.

PLANNING FOR A RESILIENT RECOVERY

Even before they began thinking about lifting restrictions, many mayors and city leaders were looking ahead to a time when life would have to resume—if not quite as normal, then at least something closer to it. And as the COVID-19 crisis laid bare and amplified inequities and fueled social unrest, questions arose about what kind of a future they could expect and what could be done to make their cities stronger and more resilient in the face of ongoing and future crises. Below are answers to mayors' questions about planning for a resilient recovery.

What questions do we need to ask or answer right now in order to start thinking about a plan for a swift and equitable recovery?

DR. JOSH SHARFSTEIN: This won't be a case of, "Now we're ready, flip the switch." It's going to be gradual. An important question to bring up with businesses is, what could that look like? How do you operate at a level of one or two out of ten? In Singapore, for example, they had restaurants open but with tape blocking every other chair. The more you can think about and plan those gradations, the more you may feel comfortable saying, "Okay, everyone, let's go to phase one."

If you're investing in public health solutions, building that call center or the capacity to isolate and trace and quarantine, then you're going to be able to stay higher on that dimmer switch longer. It's an investment in being able to turn on more things faster. In Singapore, they have hundreds of people to jump on infections when they happen and that gives them confidence to be able to open businesses.

As we move forward, look for opportunities to address COVID plus other issues. COVID plus the food system, which I think many of you are already doing by addressing food insecurity. How do we get the food system to be more reliable, to have healthier foods more easily accessible? One strategy underway in Baltimore is to mobilize several different organizations, working with some of the major food suppliers to distribute food in neighborhoods with many immigrants. Food insecurity is a huge problem as a result of the pandemic, and it can drive people who should be staying home into situations where they risk infection or infecting others. What mayors are able to do on this issue can wind up indirectly affecting the course of the epidemic.

Also, look at COVID plus addiction. The rules for addiction treatment have changed. For example, treatment medicine for opioid addiction can now be prescribed over the phone without an in-person visit, which opens the door to some great collaborations between your treatment programs and your community-based programs to get people lifesaving treatment much faster than they could before the pandemic. COVID plus housing. We are really seeing the consequences of the housing crisis. This may be an opportunity to push on policies that really do expand the ability to create and make available housing. COVID plus violence. One interesting innovation is the use of antiviolence interrupters to spread the word about COVID. Building up public health approaches to violence could be an opportunity now to get benefits for both major challenges. (4/6/20, 5/28/20)

DR. LISA COOPER: The policy or legislation needs to be clear regarding who is eligible for what funding and what information is needed to process an application for the funds. We've been advocating with policymakers to make sure the requirements for completing these applications or applying for funds are not too onerous because when we do that, we automatically eliminate certain groups of people who may not have access to the information or the technology needed to complete the applications and submit them in a timely manner.

One strategy to increase equity in the distribution of funds would be to engage volunteers who have expertise in completing these kinds of applications to support organizations that may not be accustomed to completing complex computerized applications with a lot of required documentation. (5/7/20)

DUTCH LEONARD: It's important to start thinking about recovery because it signals to people there will be another side to this. We can't tell you when that's going to be, but there's going to be a time beyond and we can start thinking about it now.

Lots of businesses are having challenges getting the capital that they need to keep going right now—so that should be an immediate priority. But just the process of convening a group of business leaders to start thinking about the aftermath is a sign of hope. In the aftermath of World War II, we knew millions of people would be flooding back into the labor market. Business leaders were brought together around the country to try to figure out how to do that locally. It's probably too early to try to put policies in place, and you have to be careful not to signal that we're on the downside of the slope, but it's not too early to contemplate and start working together on the longer-term issues. (4/6/20)

JULIETTE KAYYEM: What just happened may have felt like the flip of an on-off switch, but we need to think about recovery as a dimmer. It's going to go up slowly, then it might have to come back down in response to a local outbreak. Business leaders also have to think about how to move from six or seven out of ten back down to two. There is tremendous work going on in this regard and we are learning from other countries, often regarding the risks of what happens if they open too soon. (4/6/20)

For more on planning for recovery, see key takeaways from Session 3, Session 7, Session 10, and Session 11

How can I plan a budget for the future amid so much uncertainty?

LINDA BILMES: These are unusual times, so the usual rules about micromanaging go out the window. You need to go through what's actually happening in the budget at a level of detail that is much different from business as usual, given the fiscal outlook. You can start by giving your finance team the numbers from the Congressional Budget Office and saying, "This is what we're seeing, and this is what the CBO is predicting, and this is what we know happened in 2008, where it took five years to crawl out of this."

To the extent that you're trying to help the departments be effective and offering activity-based budgeting as a better tool for thinking about how to cut the fat and not the bone, they will probably come along. Not every department is going to be as helpful as others, but you can get them to meet you some of the way. (5/13/20)

DUTCH LEONARD: This is the most difficult fiscal period you will face. The essential leadership skill is transparency and engagement, both with agencies and with the public, so that people understand, in advance, the possibilities and constraints. Start preparing the ground. It's going to take people a while to understand and come on board. Early and often, explain that it's a complicated story. That's not the story that people want to hear, yet that's the challenge. (5/13/20)

For more on budgeting and other financial considerations in this crisis, see the key takeaways from Session 8.

How can we scale up effective local innovations or initiatives when other levels of government are resistant?

REBECCA HENDERSON: Let them do the scenario analysis. Ask, “What could go wrong here?” Just play this forward and push them with what could go wrong. Then say, "Let's try thinking about this. If this happens and this happens, what do you think the odds are?" If you can get them to acknowledge the possibility of things going a certain way, and show them the consequences in your city, that can be quite helpful, but it must come from them. (5/29/20)

DUTCH LEONARD: The most important aspect of scenario analysis is getting people to imagine the alternatives. That conversation spreads out their thinking, so that they are no longer focused on optimizing against a single scenario or accustomed way of thinking.

You give the problem to them and ask, “What are some issues that might arise?” The decision makers might have a lot of experience and knowledge. But this situation is unprecedented, so everyone needs to be cautious about whether we’re getting it right and aware of why things might go wrong. Encourage them to think through those possibilities, and that will get them to start thinking about how they will optimize against all the different possible futures. (5/29/20)

For more on innovation, working across boundaries, and scaling up, see the key takeaways from Session 5, Session 7, Session 9, and Session 10.

How can scenario analysis help us balance the demand to reopen against the need to protect people and stop the spread of the virus?

REBECCA HENDERSON: It is the question of the moment. If I were you thinking that through, I would do the scenario analysis. Then I would ask, what are the likely consequences of these choices in these four different future worlds? I would make my choice, and I would be watching all the time for me to be wrong about which world we're in.

You wouldn't say to the public, "I've done the scenario analysis, and this is what I think’s best." You'd say, "I think there are three possible futures we face, or four. In this future, saying there's no real problem or no real downside to resuming business as usual could get us into a really nasty situation. I'm gambling that it's future X, and so I'm making decision Y” (which is how an academic thinks). This explanation may just be helpful for you and your team, and you don't need to explain it this way to the public. But being clear with the public about why you're making your decision is important.

One of the goals of this analysis is understanding that the future may be different from what you expect. As time goes on, you want to be asking yourself, was I wrong about the future? At what stage do I say this was a mistake and back off in either direction? If you keep things shut down too long, you risk worsening your economic problems. If you open up too fast, you risk serious health consequences. That's the choice you face. Being able to say, or think, something like, "I think we'll have a vaccine in six months, so perhaps we can go a little bit faster” might be helpful. (5/29/20)

For more on scenario analysis as a tool for future planning and supporting conversations, see the key takeaways from Session 10.