



**Pandemic  
Response  
Institute**

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# **Considerations for COVID-19 Risk Assessment and Communications**

November 2022

## Background

On August 25, 2022, at the request of the NYC Department of Health and Mental Hygiene (DOHMH), the New York City (NYC) Pandemic Response Institute (PRI) convened a workshop on COVID-19 Risk Assessment, Data, Policy and Communications. The goal of the workshop was to help guide the City's current and future approach to assessing and communicating the ongoing risk of COVID-19 to the public. This report distills contributions from workshop participants into a set of 23 considerations grouped into five categories. Although the considerations outlined in the following report were generated in discussions around COVID-19, most are applicable to other current and future public health crises.

No convening can be perfectly inclusive of all possible voices, and several stakeholder groups with valuable insights were undoubtedly missed. Many of the considerations below emphasize collaboration with representatives from affected populations, communities, and sectors. Similarly, future convenings such as this one should be as inclusive and collaborative as possible. We trust that the general principles described below will be informative in charting a way forward. This can serve as a living document that will be enriched by future input from specific sectors/groups as required.

### Guiding Principles

The considerations that follow are intended to support an inclusive and transparent approach to selecting COVID-19 risk metrics, determining thresholds for action, and sharing information with the public. Together, the considerations take into account the benefits and costs of mitigation measures as well as the need to update and refine risk-benefit analyses over time and in response to population- and sector-specific factors. Guidance for public health should consider:

1. Current state of the pandemic (e.g., transmission rate based on the best available data from estimates/surveys/surveillance, hospitalization rate, death rate, dominant circulating variants and their virulence, and their susceptibility to vaccines and treatment) as well as economic and operational measures (e.g., job loss, reduced economic activity, disruption of educational systems, increased demand for public assistance, anticipated time to deploy interventions).
2. Individual and community characteristics (e.g., vaccination/booster coverage, burden of COVID-19 cases/hospitalizations/deaths, prevalence of risk factors for severe illness such as age/co-morbidities, exposure to high-risk congregate settings, pre-existing inequity conditions that increase risk).
3. Implications of guidance for specific sectors, settings, or populations based on experience and ongoing consultations, including the anticipated social/economic tradeoffs.
4. Availability of and access to resources and expanded social services (e.g., masks, vaccines, treatment, financial support, access to health services, benefits programs, and policies) to facilitate adherence with specific guidance, especially for most-affected populations, communities and sectors.
5. Health equity principles and insights from the fields of health communication and behavioral sciences that can aid in the development and dissemination of guidance, with particular attention to engaging trusted messengers and champions, and leveraging established community relationships.

## Specific Considerations

The following brief specific considerations for assessing and communicating COVID-19 risk are based on discussions at the workshop. Each consideration is supported with supplemental detail in the subsequent document pages.

Because concerns and priorities related to COVID-19 risk vary across sectors and communities, and because the approach taken emphasized inclusion of multiple, diverse perspectives, some of the considerations may be, or may appear to be, inconsistent with one another. This is to be expected and is reflective of the reality that no perfect formula for assessing and communicating risk exists, and that complexity and tensions are intrinsic to any approach that considers diverse perspectives and interests.

### A. Clarity of Intent and Purpose in Risk Assessment and Communications

1. Define and communicate the rationale behind systems, policies, guidance, recommendations, and messaging.
2. Institute a routine, consistent approach to advising/alerting NYC residents of everyday public health risks that can also be leveraged during emergencies.
3. Describe anticipated positive and negative consequences of mitigation measures and policies for individuals, population groups, and sectors to ensure buy-in and full cooperation.
4. Acknowledge similarities or differences in alert systems/messaging between NYC and other entities (federal, state, or regional) and explain the rationale for maintaining a separate system or issuing different messaging.

### B. Contextual Awareness in Design of Risk Indicators, Thresholds and Policies

1. Develop a revised approach for measuring, tracking, and communicating levels of risk based on specific indicators and thresholds, with emphasis on timeliness, practicality, and transparency, in collaboration with representatives from affected populations, communities, and sectors.
2. Craft a predictive risk approach that uses multiple types of assessments to forecast impacts and support proactive guidance.
3. Work with diverse partners to incorporate a holistic accounting of the impacts of public health threats and the interventions to mitigate them.
4. Design a flexible, phased model for risk analysis that considers how risk tolerance evolves and shifts during emergencies and can explain why and how public health must adapt over time.
5. Ensure that risk indicators incorporate health, social, and economic factors, in addition to epidemiological data, to present a comprehensive picture of risk, including for people with risk factors for severe illness.
6. Establish action thresholds that are tailored to community and sector-level risk and can be adjusted as risk tolerance and risk perception changes.

### C. Utilize Behavioral Science to Inform Guidance and Actions

1. Communicate the “why” behind public health guidance and mandates to achieve adherence, foster trust and counter misinformation.
2. Avoid fear-based messaging to prevent negative behavioral reactions that reduce ability to adhere to guidance and mandates (such as reactance, fatalism, stress, anxiety, and fatigue).
3. Promote reasoned and positive messaging that enhances self-efficacy in taking steps to protect oneself, family and community from threats.
4. Recognize obstacles to adhering to guidance and mandates or unintended consequences for individuals, communities and sectors.
5. Provide harm reduction guidance that offers alternative mitigation measures and minimizes resource barriers, allowing greater adherence to guidance and mandates and maximizes reductions in all aspects of human suffering.

### D. Align Information and Resources to Enable Individuals, Communities and Sectors to Adhere to Public Health Guidance

1. Acknowledge known or potential adverse impacts on other health, social, and economic concerns when rolling out mitigation measures (e.g., education, mental health, social isolation of older and immune-compromised individuals), including their potential to create or exacerbate disparities.
2. Ensure access and equitable distribution of recommended or required mitigation items (such as PPE, testing, and access to health services), including for those without health insurance and who have limited resources.
3. Coordinate actions between government agencies to ensure that policies, waivers, and resources are aligned to (a) support adoption of recommended or mandated actions by individuals, communities and sectors and (b) minimize unintended negative consequences of adhering to mandates and guidance.

### E. Use Best Practices in Health Communication to Enhance Trust and Uptake of Recommended Behaviors and Actions

1. Communicate the rationale for the chosen risk assessment approach and policy in a clear and ongoing manner.
2. Acknowledge uncertainty, and that action thresholds and guidance may shift following changes in the epidemiological landscape and our understanding of it.
3. Articulate differential impacts for specific populations and sectors clearly and transparently without judgement and share information about additional resources and support available to those at higher risk for negative outcomes.
4. Utilize information dissemination channels that can reach different populations and sectors, including bidirectional pathways that allow recipients of the information to respond to communications.

5. Establish and sustain a dedicated and trusted group of critical communication champions representing diverse populations and sectors, engage them proactively prior to public dissemination of information, and seek their input for adapting and amplifying messages.
6. Take steps to solicit feedback after release/during implementation of measures in situations when time or other constraints limit opportunities for consultation.
7. Provide supportive documents and messaging assistance, tailored to multiple sectors.

## Supportive Information

### A. Clarity of Intention and Purpose for Risk Approach

**1. Define and communicate the rationale behind systems, policies, guidance, recommendations, and messaging.** When developing and issuing policies, guidance, recommendations, and messaging, state the goals or desired effects of adhering to the public health guidance and how doing so will benefit individuals, society at large, or both. Sharing why a policy or guidance is being enacted (e.g., who will be protected by the action, how it provides protection, why this action was chosen above others) will have a positive effect on understanding and willingness to adopt recommended actions. Including value statements that explain why it is important to protect this group in this way or take this particular action at this time increase the credibility and trustworthiness of the message, even if individuals disagree with the articulated value. Including such reasoning and clearly articulated values consistently across time, populations and sectors will build trust in the overall response, especially in situations such as the COVID-19 pandemic in which systems and messages must adapt to emerging science or evolving scientific evidence over time, changes in the status of the pandemic, and characteristics of populations and sectors. The underlying aim of protecting the health of the population is always consistent, even as indicators and thresholds change throughout the course of the pandemic.

**2. Institute a routine, consistent approach to advising/alerting NYC residents on everyday public health issues that can also be leveraged in emergencies.** Consistent communication systems help build public knowledge and trust as well as lay the foundation for future messaging on new threats. Consider creating an ongoing “forecast,” potentially modeled after the pollen forecast or heat index warning, that includes citywide and neighborhood-/community-specific information, along with explanations of how to use that information in personal decision making. Embed emergency alerts as needed. The “forecast” system should transparently acknowledge inherent uncertainty/imprecision in its forecast and use data over time to improve forecasts.

**3. Describe anticipated positive and negative consequences of mitigation measures and policies for individuals, population groups, and sectors to ensure buy-in and full cooperation.**

Incorporate the potential health, social, and economic impact of mitigation measures and policies on individuals, population groups, and sectors into messaging. Provide a timeframe for the predicted duration of policies and the consequences of these policies. Clearly define potential costs and benefits to individuals, families and communities. Consider framing policies as goals to be achieved, when appropriate. If the timeframe cannot be predicted or is influenced by changing

circumstances, share that information with the public. When possible, communicate information on how decisions were arrived at and what consultations were held with groups most likely to experience negative consequences before enactment.

**4. Acknowledge similarities or differences in alert systems/messaging between NYC and other entities (federal, state, or regional) and explain the rationale for maintaining a separate system or issuing different messaging.** Differences in guidance issued by government entities have the potential to create confusion and to compromise comprehension and credibility, especially if they are not explained clearly or persuasively. NYC should consider aligning with state and/or federal alert system nomenclature and thresholds insofar as they do not contradict the considerations in sub-sections B and C. If the selected approach differs noticeably from state and federal approaches, the structural or evidence-based reasons for the differences should be transparently outlined and communicated using value statements as described under consideration A1.

## **B. Contextual Awareness in Design of Risk Indicators, Thresholds, and Policies**

**1. Develop a revised approach for measuring, tracking, and communicating levels of risk based on specific indicators and thresholds, with emphasis on timeliness, practicality, and transparency, in collaboration with representatives from affected populations, communities, and sectors.** The expertise required for a full assessment of risk extends beyond public health expertise. Include other disciplines and expertise, particularly those likely to utilize the outputs from the risk assessment system in its development to increase the likelihood that the public will adopt the guidance.

**2. Craft a predictive risk approach that uses multiple types of assessments to inform proactive guidance.** Ground alert system in measures that provide advance warning or real-time information such as those from wastewater surveillance, sentinel testing or infection/syndromic surveillance. Such measures should have a direct link to prevention and transmission interruption policies and actions. More distal measures like hospitalization and mortality data provide important information on burden of disease and can help predict strains on health system capacity and community impact.

**3. Work with diverse partners to incorporate a holistic accounting of the effects of public health threats and the interventions to mitigate them.** To respond appropriately to complex public health threats, it is important to convene experts from multiple disciplines/sectors to detail social costs, economic harms, mental health impacts, and other potential harms arising from the threat itself and from recommended mitigation measures. Such costs should be considered as part of the public health threat assessment but should not minimize morbidity and mortality concerns. Another consideration when weighing costs across populations and sectors is how best to balance tradeoffs at different phases of public health emergencies. Incurring substantial short-run costs in the early phase of an emergency may lead in the long-term to savings in total costs. In addition, as the outbreak subsides and/or novelty declines, social and economic costs/harms might need to be

weighted more heavily in decision-making. Assessments of the effects of mitigation measures on different sectors can help anticipate tradeoffs and estimate the impacts of future policy/guidance scenarios.

**4. Design a flexible, phased model for risk analysis that considers how risk tolerance evolves and shifts during emergencies and that explains how and why public health guidance needs to adapt over time.** Approach risk assessment with the understanding that both knowledge of and tolerance for a public health threat will shift over time. Contextual approaches should be employed, while avoiding arbitrary or obscure criteria and thresholds. Epidemiological measures like case counts are often appropriate early in an emergency. As more data accrues, these can be supplemented or replaced with other outcome-driven indicators, such as the likelihood of serious illness, hospitalization or death. Consider impact of changes in policies and situation on the interpretation of trends in disease related statistics. As New Yorkers become more familiar with the threat and risk tolerance grows, public health guidance and thresholds for action should seek to more fully account for tradeoffs.

**5. Ensure that risk indicators incorporate health, social, and economic factors, in addition to epidemiological data, to present a comprehensive picture of risk, including for people with risk factors for severe illness.** Monitoring and reporting on a group of indicators can provide evidence-based grounding for interventions or decisions, particularly when the component measures reflect the priorities and concerns of diverse individuals, communities, and sectors. Incorporate the multisectoral approach in assessing risks and benefits. One consideration is to include unbiased population-level findings such as data from SARS-CoV-2 infection surveys of a random sample of New Yorkers, sentinel surveillance of specific populations, and wastewater sampling. Variations in individual risk should be taken into account by using measures that capture vaccination status, age, neighborhood, employment, exposure to congregate settings, among others. Measures such as vaccination/booster coverage, hospitalization rates, death rates, (healthcare system capacity) should be examined at multiple levels: citywide, communities/zip code, and the broader ecosystem surrounding the city. The selected risk indicators should be distilled into an easy-to-understand score that provides the public with a clear sense of how risk level is shifting over time.

**6. Establish action thresholds that are tailored to community and sector-level risk and that can be adjusted as risk tolerance and risk perception change.** Risk assessment should distinguish between giving clear risk information and providing risk-based mandates or guidance. The weather analogy can be useful here; distinguishing between providing a weather report versus an evacuation order. Similarly, clear thresholds should determine when public health moves from reporting risk status to requesting or mandating action. It is important that thresholds based on health outcomes (e.g., death or hospitalization rates) reflect the current level of public concern regarding the pandemic. To increase motivation and trust in efficacy of key public health interventions (e.g., masking, vaccination, booster doses), consider foregrounding the uptake rate of such interventions in the thresholds for action, such that higher coverage is associated with lower probability of a mandate or shorter duration of a mandate. In later stages of the pandemic

when risk is concentrated among specific populations, consider prioritizing additional resources, outreach, and interventions for those populations over broad recommendations that may not have a strong evidence base.

## C. Utilize Behavioral Science to Inform Guidance and Actions

See Appendix A (pg. 11) for more detail on these considerations.

**1. Communicate the “why” behind public health guidance and mandates to achieve adherence, foster trust and counter misinformation.** The psychology behind persuasion explains that clearly articulating the “why” behind public health decisions increases both the credibility of the messenger and the public’s trust in the messenger, increasing the likelihood that people will adhere to public health guidelines. Transparent communication behind public health guidelines can also make individuals less receptive/susceptible to misinformation.

**2. Avoid fear-based messaging to prevent negative behavioral reactions that reduce ability to adhere to guidance and mandates (such as reactance, fatalism, stress, anxiety, and fatigue).** Fear-based messaging<sup>1</sup> is psychologically taxing for the public and can lead to reactance<sup>2</sup>, fatalistic beliefs/fatalism<sup>3</sup>, stress, anxiety, fatigue, and sentiments of infringement on one’s autonomy.

**3. Promote reasoned and positive messaging that enhances self-efficacy in taking steps to protect oneself, family and community from threats.** Positive messaging rooted in self-efficacy<sup>4</sup> is more likely to increase uptake of public health guidelines.

**4. Recognize obstacles to adhering to guidance and mandates or unintended consequences for individuals, communities and sectors.** Explicit verbal and written recognition that not everyone is at the same starting point for implementing preventive and protective actions will help build trust in public entities.

**5. Provide harm reduction guidance that offers alternative mitigation measures and minimizes resource barriers, allowing greater adherence to guidance and mandates and maximizing reductions in all aspects of human suffering.** A harm reduction approach that suggests behaviors individuals can take to protect themselves when they cannot fully adhere to the gold standard recommendation will reduce the number of people who ignore the guidelines altogether and will increase self-efficacy as well.

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Messaging that focuses on harm and negative consequences that individuals will experience if they do not adhere to public health guidelines

<sup>2</sup> The negative reaction that emerges when people believe a public health message is limiting their personal freedom or choice, causing them to act contrarily to the message

<sup>3</sup> The negative cognition that events are unavoidable

<sup>4</sup> Individuals’ belief that they can carry out a behavior that will positively impact their lives



## D. Align Resources to Enable Individuals, Communities and Sectors to Adhere to Public Health Guidance

**1. Acknowledge known or potential adverse impacts on other health, social, and economic concerns when rolling out mitigation measures (e.g., education, mental health, social isolation of older and immune-compromised individuals), including their potential to create or exacerbate disparities.** Mitigation measures could cause health, social, and economic harm, such as social isolation and loss of employment. Complex environments driven by ongoing structural disparities require intersectional approaches to address harm. It is important to recognize the harm that is caused by mitigation measures and the ways in which inequities such as structural racism will impact how harms are distributed across the population.

**2. Ensure access and equitable distribution of recommended or required mitigation items (such as PPE, testing, and access to health services), including for those without health insurance and who have limited resources.** Before mitigation measures or mandates are announced, ensure that a broad-based resource system is in place based on an analysis of potential harms. Explicitly allocate these resources to help address structural health disparities, as inequities are likely to worsen during an emergency. These resources should be announced along with the guidance. Enlist the private sector and others to provide supplemental resources, especially in cases in which the government may not be able to provide adequate resources with the required urgency.

**3. Coordinate actions between government agencies to ensure that policies, waivers, and resources are aligned to (a) support adoption of recommended or mandated actions by individuals, communities and sectors and (b) minimize unintended negative consequences of adhering to mandates and guidance.** Surge safety net services to create greater substantive support and counteract harms associated with mitigation measures. Examples of support include eviction protection, unemployment benefits, food assistance, and Medicaid expansion. These protections and the messaging and support around them are critical to mitigate negative economic and social consequences of mitigation measures.

## E. Use Best Practices in Health Communication to Enhance Trust and Uptake of Recommended Behaviors and Actions

**1. Communicate the rationale for the selected risk assessment approach and policy in a clear and ongoing manner.** Effective health messaging does not assume that the public will understand the purpose behind a particular message or action. Repeatedly voice the rationale for interventions and the underlying values throughout public health messaging so interventions do not seem meaningless to the public. In all messages, consider foregrounding the goals or desired effects of engaging in the proposed behavior and whether participation will benefit individuals, society as a whole, or both. Risk perception should not be a driver of public health interventions but should be candidly acknowledged and addressed as part of this rationale.

**2. Acknowledge uncertainty and that action thresholds and guidance/policies may shift following changes in the virus or situation and our understanding of it.** Transparently

acknowledge the uncertainty that underlies interventions and the intention to shift guidance as new information is revealed. Aim to provide messaging that exhibits proactive near-term risk prediction that acknowledges perceived risk of the general population. Use real life situations and personal outcomes as examples to ensure clarity. Tailor messages consistently as new information develops to uphold credibility in a time of frequently changing information.

**3. Articulate differential effects on specific populations and sectors clearly and transparently without judgement, and share information about additional resources and support available to those at higher risk for negative outcomes.** Acknowledge differences in risk by age, demographics, social factors, comorbidities, geography, or other factors and tailor guidance accordingly. Consider working closely with communities and provide direct resources to groups at heightened risk to reduce disparate outcomes and mitigate stigma. Describe the risks faced by different groups of individuals or communities and the reasons for these risks. For some populations, the risk of infection may be low while the cost of avoiding infection may be high; for others, the risk of infection itself may be much higher. Messages that recommend, mandate, or advise any intervention should include language discussing the intervention's accessibility, social and economic costs, and what will be done to proactively address those costs.

**4. Utilize information dissemination channels that can reach different populations and sectors, including bidirectional pathways that allow recipients of the information to respond to communications.** Enlisting traditional media, popular social media influencers, and neighborhood communications as final messengers of information for their audiences can increase the distribution of messages and provide crucial opportunities for feedback on communication gaps or confusing messages. Consider requesting assistance from organizations, including within the private sector, that have the ability and expertise to support these and other core functions. Align messages between various aspects of government and the community or candidly acknowledge disagreement between entities and acknowledge the reason it exists to decrease confusion.

**5. Establish and sustain a dedicated and trusted group of critical communication champions representing diverse populations and sectors, engage them proactively prior to public dissemination of information, and seek their input for adapting and amplifying messages.** Identify representatives from the most affected communities, community organizations, businesses, and other sectors, including non-traditional representatives, who can guide the shaping and evolution of messages and policies. Develop relationships and mechanisms for providing input and feedback on the interpretation, understanding, and impact of actions, policies, and guidance during more stable periods of a current emergency or between emergencies. Incorporate solicited feedback into actions, policies, and guidance. Acknowledge what feedback cannot be accommodated and why to enhance credibility and build trust. Consider using online platforms to rapidly distribute questions about specific issues to stakeholders and representatives. Such platforms have the advantage of being adaptable to both ongoing/lower-intensity consultations and urgent situations requiring rapid feedback on well-defined issues. Keep in mind that electronic platforms may not be accessible to all stakeholders due to connectivity, cost, literacy or comfort communicating in written format.

**6. Take steps to solicit feedback after release/during implementation of measures in situations when time or other constraints limit opportunities for consultation.** When affected groups cannot be consulted prior to issuing guidance/policies due to time constraints or imminent dangers, admit these limitations. Arrange consultation with representatives (live meetings, conference calls, zoom, individual calls) as soon as possible and be open to adapting policies or issuing further supporting or explanatory documents that address community concerns.

**7. Provide supportive documents and messaging assistance tailored to multiple sectors.** When communicating guidance, multiple sectors will have different questions and needs based on that guidance. Detailed materials created for general readers can help meet those needs and ensure the guidance is executed well across the city. Provide frequently asked questions (FAQs), fact sheets, live or recorded explanation sessions that are tailored to the needs of different groups. Many groups have capacity and expertise and might be willing to draft these materials and host question and answer sessions for others in their sector as part of a coalition to support city government if requested.

## Appendix A: Applying the Psychological Science of Motivation to COVID-19 and other Public Health Communication

### **Applying the Psychological Science of Motivation to COVID-19 and other Public Health Communication**

Concept Sheet prepared by Sarit A. Golub, PhD, MPH  
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This concept sheet is based on the following premise: (1) public health communication is fundamentally a psychological process that is often treated as a logistical one; (2) there are a number of psychological constructs (supported by theory and empirical research) that can be harnessed to improve the impact of public health messaging; and (3) using these constructs as frameworks to guide development and enhancement of health communication will fundamentally improve its success. Below, I have synthesized seven recommendations that build on psychological constructs (in parentheses), with succinct explanations and references (more detailed information, trainings, and technical assistance related to these concepts are available upon request). Central to this framework is the fundamental need to design messages that reinforce individuals' intelligence, agency, and dignity.

- 1. Use language that minimizes resistance to public health recommendations or messaging (*psychological reactance*).** Reactance describes the negative affect and cognitions that individuals experience when they feel that a public health message is constraining their options, restricting personal choice, or limiting their freedom. Reactance is not always rational, but it is an extremely powerful motivational state that drives individuals to re-assert their autonomy through direct or indirect action. Public health messaging that uses language like “don’t...,” “stop...” “you need to...” can engender reactance. There are several antidotes to reactance, including: choice-enhancing language (e.g., “you can...” “choose to...”), restoration scripts (e.g., “the choice is yours”), provision of choice alternatives, and use of narrative as opposed to didactic style.
- 2. Focus on the rationale – and values – behind policies, guidance, and decision-making (*source credibility/persuasive appeal*).** Often, public health messaging fails to fully explain *why* individuals are being asked to engage in or refrain from particular behavior, meaning what specific goal this request is designed to achieve. “Follow the science” might be a strategy, but it’s not a rationale. The psychology of persuasion demonstrates that messaging that promotes values-based decision making and clearly articulates the “why” behind a request increases the credibility of the messenger, the persuasiveness of the appeal, and the willingness of an individual to act. What has been missing in COVID-19 messaging has been strong statements of the reasoning – and values -- behind mandates or restrictions, i.e., “we have created this policy because we value *this over that*.” Even if people disagree with those values, the articulation of a rationale increases the credibility and trustworthiness of the message.
- 3. Beware of the allure of fear-based messaging (*fatalism/defense bias/knowledge resistance*).** Public health practitioners understand impending threats and want to protect the public from them. As such, we often believe that if we could effectively communicate how scary or dangerous a particular behavior is, then people would refrain from doing it. Unfortunately, these type of fear appeals tend to be effective for only short periods of time and for very immediate behaviors. Over time, individuals tend to shut down in the face of scary or upsetting information; they get overwhelmed, and they are motivated to either reject or dismiss the information (“that’s not going to happen to me;” the threat is overblown”) or become fatalistic (“terrible things are going to happen anyway, so I may as well just do what I want”). For this reason, fear-based messaging can lead to anxiety, depression, despair, and disempowerment.
- 4. Tell people what they *can* do to help themselves and their communities, and why these actions will work (*self-efficacy*).** The opposite of fatalism is self-efficacy, which is people’s belief that they can engage in a behavior that will have an actual positive impact on their lives. Both of these components are necessary – people need to believe that they will be able to engage in a given behavior (physically, logistically, financially) and that if they do, it will actually work. Creative anti-smoking advertisements have focused on the positive impacts of stopping smoking; COVID messaging might focus on levels of protection or decreased risk following proactive behavior (e.g.,

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wearing a mask reduces your risk of COVID exposure by X%; getting vaccinated reduces your risk of hospitalization or death from COVID by over Y% in just Z days).

5. **Communicate clear goals and thresholds for lifting restrictions (*fatalism/futility*).** It is easier for individuals to sustain behavior change when they know it is time-limited or when they see themselves contributing to an achievable goal. Early on in the pandemic, individuals were motivated by NYS metrics that were going to enable them to ease restrictions or stop the lockdown. Having an if/then goal reduces fatalism and feelings of futility, promoting action.
6. **Explain what you (as a government agency) are doing to provide resources that support behavioral “asks” and mitigate against the harm of behavioral restrictions (*norm of reciprocity*).** The norm of reciprocity is one of the strongest findings in the psychology of persuasion – people feel obligated to do something for someone who has done something for them. We don’t take advantage of this symbolism enough in public health messaging: e.g., “We are going to provide you with X and Y, and in exchange, you can do your part by Z.” It may seem obvious how hard the health department or other government agencies are working to promote health care, but this work is often unseen by the public. As noted above, explanation of this work needs to focus on what government is doing to support positive action, as well as to provide resources that mitigate against the negative impacts of behavioral restrictions. The messaging needs to focus on an understanding of the challenges and complexity of the public health “ask,” and a commitment to supporting it. Often, we are worried that if we acknowledge that an ask is challenging, we will be encouraging people to ignore it. But the public is generally not fooled. Validating the challenge while providing concrete support to address it is a more effective motivational strategy.
7. **When we “target” people, they feel targeted (*stigma/gaslighting*).** Health inequity is not a “bug” in our current public health system, it’s a feature. The public recognizes that the same groups and communities that experience poorer health outcomes and less access to care during public health emergencies experience these inequities in every aspect of morbidity and mortality. Targeting groups for behavioral intervention can seem patronizing, stigmatizing, and disingenuous. Especially in the context of an infectious disease, communities may feel that they are prioritized only to the extent that they might be “vectors” to other segments of society. Emergency response initiatives are most effective when they are integrated into broader health care concerns, and provide access to much needed health care resources on a more comprehensive level. To the extent that emerging threats can be used as a lever to increase health care resources to underserved communities and provide services that people actually want and need (in addition to what we might “like” them to do), these initiatives will be perceived as more attractive.

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