

COVID-19 — MARCH 2021

Promoting mask-wearing during the COVID-19 pandemic:

A POLICYMAKER'S GUIDE

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Prevent epidemics is a project of Resolve to Save Lives, an initiative of Vital Strategies.

Executive summary

Use of face masks and cloth face coverings has been shown to [reduce transmission of SARS-CoV-2](#), the virus that causes COVID-19. [Along with washing hands and practicing physical distancing, wearing a mask](#) is a key measure that people can take to decrease their own risk of contracting COVID-19 and decrease the chance that they may infect someone else.

Promoting mask use is one of the key interventions governments, communities, businesses and other organizations can implement to control COVID-19. Mask use is most effective when combined with comprehensive, situation-appropriate actions to stop COVID-19, including limiting the use of indoor spaces when appropriate, protecting health care workers and health care facilities, strategic testing, rapid isolation, contact tracing, supportive quarantine and COVID-19 vaccination.

This document draws on scientific evidence from the COVID-19 pandemic and from prior public health research on behavior change, with the purpose of empowering governments to measure face mask use in their localities and promote widespread adoption of masks in the general population.¹

Key findings:

- There is scientific evidence that widespread mask-wearing in non-medical settings, as part of a comprehensive strategy to prevent disease transmission, can reduce spread of COVID-19.
- Not all masks protect equally: both medical and non-medical masks have been shown to reduce the spread of COVID-19, but some masks are more effective than others. Both mask construction and mask fit influence the protection a mask may offer.
- To be maximally protective, masks must be worn correctly and during all instances in whichh exposure to COVID-19 may be possible.
- Governments should monitor community-wide uptake of masks, conduct social science research to understand differing rates of adherence and assess epidemiological data to determine if the practice is having a variable impact on subpopulations.
- Evidence supports the effectiveness of mandates, policies that shape social norms and environments, strategic communication and advertising as well as community engagement to increase access to masks and provide positive social modeling. Governments should integrate these elements into a masking strategy.
- Widespread mask-wearing should be promoted as a “new normal” for the foreseeable future, until viral spread is extremely low or vaccination creates sufficient immunity in the general population. While vaccine distribution is ongoing, people should continue to wear masks.
- Hand-washing and physical distancing as well as reducing or eliminating exposure to high-risk environments (e.g., crowded indoor gatherings) are also critical to limiting the spread of COVID-19.

As a living document, this will be updated and amended as new evidence emerges: the most recent version is available at [PreventEpidemics.org](https://www.preventepidemics.org).

¹ This document does not cover the promotion and use of masks in health care settings.

I. Introduction

Wearing a mask is one of the simplest ways to reduce spread of COVID-19, and persuading people and communities to embrace mask use is a core intervention for curbing the pandemic. The [World Health Organization \(WHO\)](#), the [U.S. Centers for Disease Control and Prevention \(CDC\)](#), the [Africa Centers for Disease Control \(Africa CDC\)](#) and numerous other government and public health agencies have recommended that people use masks in public settings when SARS-CoV-2, the virus that causes COVID-19, is being transmitted in the community.

The evolution of recommendations for widespread mask-wearing in non-medical settings has understandably caused confusion in some communities. Early in the pandemic, before the accumulation of evidence that mask-wearing can reduce the spread of COVID-19, some countries with no history of the practice resisted adopting mask-wearing recommendations. Other countries modeled their mask policies on prior responses to pandemic influenza, recommending them only for specific groups such as pregnant women. In contrast, where populations had experienced prior epidemics of SARS or MERS (two other diseases caused by coronaviruses), and in settings, mostly in Asia, where mask-wearing is common for people with even a minor cold, people were more likely to consistently wear masks in public spaces, even without mandates.

As scientific understanding of COVID-19 has evolved, the importance of widespread use of masks has become clear, in part because of the transmission dynamics of the virus. People with COVID-19 are most infectious [early in the course of disease, including before symptoms develop](#), and a significant proportion of people infected with COVID-19 never develop symptoms at all. The prevalence of infections transmitted from people with no symptoms makes wearing masks crucial, even among people who feel healthy. Promotion of mask-wearing should be part of a package of measures that also includes handwashing, physical distancing, interventions to reduce indoor exposures, finding infected people and their contacts quickly, implementing rapid and supportive isolation and quarantine services and providing COVID-19 vaccines when available.

There is no single strategy that will guarantee the widespread adoption of mask-wearing; this guide brings together evidence, tools and guidance to help policymakers develop a comprehensive plan to promote mask use, including best practices for policymaking, recommendations for using mass media to establish masks as a social norm and detailed guidance on how to measure mask use.

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II. Evidence that mask-wearing reduces COVID-19 transmission

The primary mode of transmission of the virus that causes COVID-19 is through respiratory droplets exhaled when a person breathes, coughs, sings, speaks or sneezes. Masks can prevent the spread of COVID-19 in two ways: by preventing a healthy person from acquiring the disease and by preventing an infected person from spreading the disease. In the latter case, known as source control, the mask acts as a barrier to prevent respiratory droplets from spreading to nearby people or to surfaces where the virus can remain viable.

There is [robust scientific evidence that widespread use of masks, including non-medical masks, prevents the spread of COVID-19](#). The [recommendation of international public health authorities](#) that mask-wearing in public settings should be part of a comprehensive COVID-19 control strategy is based on several lines of evidence.

First, numerous studies have shown that [cloth and surgical masks can filter droplets of many sizes](#). Some cloth masks, [especially those made of high thread-count materials](#) that include multiple layers of material, can efficiently filter even very small droplets.

Second, the fact that people may transmit the virus before symptoms develop (pre-symptomatic transmission) and that [a significant proportion of people infected with SARS-CoV-2 may never have symptoms](#) but still transmit the virus (asymptomatic transmission) means that [people without symptoms may significantly contribute to the spread of COVID-19](#). This provides a strong theoretical basis for widespread community mask use, as masks can prevent the spread of infectious droplets (“source control”) from those who feel well but may be infectious. Studies have shown that people with COVID-19 who [wear masks before they develop symptoms are less likely to transmit the disease to others in their households](#).

A third line of evidence to support widespread community mask use is that a mask can protect the wearer from COVID-19. There is [evidence from health care settings](#) that both medical procedure masks (also called surgical masks) and respirators (such as N95 respirators) protect the wearer from viral respiratory infections. Studies show that [cloth masks can protect wearers from droplet exposure, in some cases more efficiently than surgical masks](#).

Lastly, [multiple studies on the spread of COVID-19 in communities have shown that widespread mask use can decrease disease spread](#). A systematic review that included eight studies conducted in the community found that mask-wearing protects against respiratory infections in high-transmission community settings. A meta-analysis of whether masks may prevent the spread of COVID-19 showed that mask use [significantly reduces the spread of the coronaviruses that cause SARS, MERS and COVID-19](#) both in and outside health care settings. [The implementation of mask mandates has been associated with reduced spread of COVID-19 in multiple settings](#).

In Thailand, after health authorities had recommended community use of cloth face masks, among over 1,000 people interviewed during contact tracing investigations, [those who reported always wearing a mask during high-risk exposures had a 70% reduced risk of acquiring COVID-19](#) compared with those who did not report consistent mask use. On the USS Theodore Roosevelt, where an outbreak of COVID-19 infected over 1,000 people, [self-reported use of face coverings was associated with a 70% reduced risk of disease](#).

III. Best practices for mask-wearing

ALMOST EVERYONE SHOULD MASK WHENEVER THEY ARE IN PUBLIC

With few exceptions, everyone should wear a mask when in public.

Mask use is particularly important in environments where there is a higher risk of transmitting SARS-CoV-2. These include indoor environments, and particularly those with any of the [“Three C”](#) characteristics:

- closed/confined places with poor ventilation
- crowded places with many people
- close-contact settings where people may have close conversations

Mask use is also critical in settings where there are people who may be at increased risk of severe COVID-19, including people of [advanced age or with certain underlying illnesses or conditions](#).

MASKS SHOULD ALSO BE WORN IN NON-PUBLIC SETTINGS WHEN THERE IS AN INCREASED RISK OF COVID-19

For masks to effectively reduce transmission of SARS-CoV-2, they should be worn whenever there is potential for infection. Although mask use in private settings is often not mandated or monitored, it is important for the public to recognize the [extent to which household transmission contributes to the spread of COVID-19](#). Officials should recommend that masks are worn in the following settings because of the increased risk of COVID-19:

- private indoor settings involving people from more than one household;
- within a household if anyone has symptoms that could be due to COVID-19, has recently been in contact with someone with COVID-19, or has been diagnosed with COVID-19.

PEOPLE SHOULD USE MASKS WITH MAXIMALLY EFFECTIVE MATERIAL AND DESIGN, AND WEAR THEM CORRECTLY

Not all masks are created equal—but an imperfect mask is better than no mask at all.

A number of studies have compared the effectiveness of different types of masks at decreasing exposure to droplets or reducing the spread of COVID-19. [Cloth masks produced in the community can serve as efficient filters](#). A [meta-analysis showed that cloth, gauze, cotton and paper masks were all associated with a reduced risk of COVID-19 among healthy mask-wearers](#).

[Masks made from high-thread-count cotton and hybrid materials](#), as well as those made of multiple layers rather than single layers, are likely to reduce transmission most. There is evidence that [mask effectiveness is reduced when the fit is poor](#) and air can leak between the mask and the face without being filtered. However, it has been shown that homemade masks offer [greater protection against respiratory viruses than no mask at all](#), even if fit and adherence are not perfect. Modeling studies have corroborated this, demonstrating that even [masks which are only partially effective can substantially](#)

[reduce the risk of transmission](#), especially when enough people use them and when they are combined with other effective public health and social measures.

Currently available evidence indicates that the following guidance can help ensure maximum mask efficacy:

Mask material

- Cloth masks should be made of high-grade cotton or a hybrid material (such as cotton combined with a synthetic fiber). If such materials are unavailable, a substitute is preferable to having no mask at all.
- Cloth masks should be made of multiple layers of material. However, wearing a single-layer mask is preferable to having no mask at all.
- Materials that are not effective include plastic or other non-breathable material, because air exchange cannot occur through such material and thus must occur through holes in the mask or gaps around the sides. Overly breathable material, such as knit fabrics, are also less effective.

Mask structure

- Masks with holes that allow exhaled air to escape unfiltered are not effective, such as those with one-way valves.
- Masks that do not fit snugly against the face are also less effective because they allow unfiltered air to escape in and out. This includes bandanas folded over the nose and mouth but not fitted on the sides, surgical masks that fit too loosely as well as plastic face shields used without a mask underneath.

Which Masks Are Best for COVID-19?



Figure I. What to look for in a mask

Mask fit

- The mask should completely cover the entire mouth as well as the end of the nose including the nostrils. It should extend across both cheeks and down underneath the chin.
- The mask should be snug enough around the edges so that air does not escape unfiltered but rather is forced to pass through the material of the mask. A sufficiently snug fit is more likely if the mask includes bands around the ears or behind the head to pull the mask tight, a semi-rigid adjustable piece over the bridge of the nose, and elastic under the chin to eliminate gaps.
- It should be possible to breathe and speak easily while wearing the mask.

Appropriate mask use

- Wash hands thoroughly with soap and water or use hand sanitizer before putting on a mask and after removing it.
- The mask should be changed if it becomes damp, damaged, visibly soiled or touched by potentially contaminated hands.
- The mask should be changed regularly, ideally daily. The mask may be cleaned if the material is washable and the mask will not be damaged in the process; if the mask is not washable, it should be disposed of carefully with typical household waste.

Only a few groups of people should be exempt from wearing masks

It can be difficult for very young children to wear masks. In the United States, [CDC recommends that children under 2 years of age do not wear masks](#). Different public health guidelines include different age cut-offs.

Anyone who has trouble removing a mask without assistance should not wear a mask.

Clinicians may be asked to decide whether to recommend a medical exemption to mask-wearing. Guidelines for doing so are limited, but there are conditions that may impede mask-wearing, including facial deformities, mental health conditions or intellectual disabilities.

Wearing a mask that meets the standards recommended above does not reduce oxygen levels, so people with certain chronic lung diseases should not necessarily avoid masks. In fact, [people with lung diseases that place them at higher risk of severe COVID-19 should be particularly careful to strictly adhere to mask-wearing guidelines](#).

People at risk for severe COVID-19 who cannot wear masks for medical reasons should consider avoiding public places where there is a heightened risk of exposure. Policymakers should consider whether there are reasonable accommodations for people in these circumstances, such as additional services that facilitate shielding at home.

IV. Promoting mask-wearing with policy

Community-wide requirements to wear masks will be most effective if they are clear, consistent, legally sound and designed to encourage broad adherence. Although the details of any given policy will need to be tailored for each locality and each private setting where mask use is not required by law, some general guidelines should apply.

RULES ON MASK-WEARING SHOULD BE CLEAR AND COMPREHENSIVE

Rules should clearly indicate who must wear a mask, what types of masks are allowed, where² and when masks must be worn, and how they must be worn. Regardless of rules in a locality or private setting, mask-wearing reduces the risk of spreading COVID-19, which should be communicated to the public.

Mandates should define the types of masks allowed and the types prohibited, striking a balance between precision and flexibility. (Overly strict requirements could create supply issues or make adherence difficult, while overly permissive rules could encourage masks that provide little or no protection.) They should specify that the mask cover the nose and mouth at all times. If surgical masks or other specialty masks, such as N95 masks, are in short supply, policymakers may restrict them to health care workers, requiring the general public use other types of masks.

Mandates should generally be applied to indoor places accessible to the general public or used collectively, including places of work³ and public transportation.⁴ Private homes are generally not considered a public place, but if visitors from outside the household are present, physical distancing should be maintained and masks should be worn there, too.^{5,3} Mandates may also apply to heavily trafficked outdoor places, where it is difficult to consistently maintain physical distance.

Localities may impose modified mask rules on activities that are difficult or impossible while wearing a mask.⁶ Activities should only be exempt if minimum physical distancing requirements can be maintained, or if nearby people are wearing masks. (For example, a dental patient could temporarily remove their mask during a procedure, but the dentist should continue to wear one.) For

2 The Framework Convention on Tobacco Control offers a helpful parallel in the creation of smoke-free spaces. The FCTC requires Parties to prohibit smoking in indoor workplaces, public transport, indoor public places, and, as appropriate, other public places. The FCTC guidelines provide suggested definitions for each term.

3 Mandates should define workplaces as any place used by people during their employment or work, including not only those places at which work is performed, but also all attached or associated places commonly used by the workers in the course of their employment, including corridors, lifts, stairwells, lobbies, shared facilities, cafeterias, toilets, lounges, lunchrooms and outbuildings such as sheds and huts. Vehicles used in the course of work are workplaces and should be specifically identified as such.

4 Public transport should be defined to include any vehicle used for the carriage of members of the public, usually for reward or commercial gain, including taxis. Some jurisdictions may choose to extend the mask mandate to any vehicle carrying people from more than one household.

5 For example, California requires masks in “high-risk areas,” including any room or enclosed area where other people (except members of the person’s own household or residence) are present and unable to physically distance. Localities may wish to extend this mandate to private places whenever domestic workers, such as childcare or maintenance workers, are present.

6 Some cultural or religious traditions may be difficult to perform while wearing a mask. Policymakers should work with community leaders to develop culturally acceptable techniques that reduce viral spread.

some activities that require extreme exertion or exhalation, further distancing requirements should be considered.

Activity-based exemptions to a mandate might include:

- Eating or drinking;
- Playing sports or exercising;
- Practicing or playing a musical instrument;
- Activities that involve getting the face wet, such as swimming or showering;
- In circumstances when a person is asked to verify their identity for lawful purposes;
- Communicating with an individual with a hearing impairment;
- Receiving a dental or medical examination or treatment that cannot be performed through a mask.

Evidence from US states: mask-wearing mandates work

Natural experiments in [South Carolina](#) and [Kansas](#) provide evidence that locales with mandates on the use of masks see further decreases in COVID-19. In both states, different counties and cities took different approaches. In South Carolina, **locales with mask mandates saw a 46.3% greater decrease in total number of COVID-19 cases** compared to locales without a mandate. In Kansas, **15 counties that adopted mask mandates saw a greater reduction in cases** than 90 counties that did not.

MASK MANDATES SHOULD BE ISSUED BY THE MOST APPROPRIATE GOVERNMENT AUTHORITY

Policymakers should consider which government body is the most appropriate to issue a mask mandate. An executive agency, such as a ministry of health, or a leader such as a governor, mayor or county executive, may or may not have clear authority to issue such rules. If not, the legislature may need to authorize such rules or create the rules through law.

Multiple agencies—or national, regional and municipal governments—may have overlapping authority to issue rules. Without coordination, this can lead to a conflicting or confusing patchwork of regulations. Policymakers should strive to balance consistency with local variation, especially as different areas could face drastically different risks.

In general, policymakers should strive to set minimum standards that work for their entire community while allowing localities to impose more stringent rules. Private businesses or property owners should also be allowed to impose more stringent rules for their employees and people on their property. It is problematic when a larger geographic entity blocks more protective local requirements (for example, when a state prohibits cities from requiring masks) and can undermine a community's ability to protect itself.

Policymakers should also be sensitive to the public's perception of the issuing agency. The public should view the rules as evidence-based, not politically motivated. The choice of which agency issues the rules may affect the public's perception of the rule and their adherence to it.

Case study: Minnesota's mask-wearing policy

On July 25, 2020, Minnesota Governor Tim Walz implemented [Emergency Executive Order 20-81](#) requiring Minnesotans to wear a face covering in certain settings to prevent the spread of COVID-19. This best practice policy addresses each of the issues discussed throughout.

- **Who:** Everyone is required to wear a mask, with limited exceptions for children under two or people with certain medical conditions.
- **What:** A wide array of masks are permitted, including paper or disposable, cloth masks, neck gaiters, scarfs, bandanas or religious face coverings. Coverings that incorporate a valve or have visible gaps in the design or fabric (e.g., mesh) are not allowed.
- **Where:** Masks are required in all indoor public spaces and indoor businesses. Workers are required to wear masks outdoors when distancing cannot be maintained. Special rules apply to schools and other settings.
- **When:** Temporary exemptions to mask-wearing are allowed if people are actively engaging in activities where mask-wearing would be impractical, such as eating, drinking, exercising,⁷ showering, swimming, or receiving a medical exam.
- **How:** The covering must cover the mouth and nose completely, should not be overly tight or restrictive and should feel comfortable to wear.
- **Other:**
 - Localities and businesses are expressly permitted to enact more protective measures.
 - Violators of the mask requirements may receive a petty misdemeanor citation and fine up to \$100.
 - Businesses are responsible for ensuring staff and customers are wearing masks and must clearly post signage at places that are visible to all. Failure to comply may result in license suspension or termination, fines of up to \$25,000, or criminal charges for business owners.

Minnesota published a [plain language FAQ](#) explaining the mask mandate and made it available in several local languages, including English, Spanish, Somali and Hmong.

NARROWLY TAILOR SANCTIONS FOR NON-COMPLIANCE

Ideally, communities will widely adopt mask-wearing requirements without the need for sanctions. Promoting social norms for widespread use of masks (through strategic communication and community engagement strategies described below) is likely to be more effective than enforcement. In some areas, policymakers may still choose to implement sanctions for non-compliance.

Before implementing sanctions, policymakers should ensure that they have clearly communicated the rules, that people have access to masks, and that leaders are modeling good behavior. If these conditions are met and sanctions are still deemed necessary, they should be proportionate to the misbehavior. In rare instances where other efforts fail to correct repeated or egregious violators, policymakers may apply graduated sanctions that become increasingly more severe so long as the punishment remains proportionate to the offence. For example, a warning for first offense, a nominal fine for second offense, and harsher fines for additional offenses. For most people, the threat of

⁷ Minnesota extended the mask mandate to all gym or fitness centers – including when exercising (Executive Order 20-103 on December 18, 2020).

sanctions may be enough to encourage adherence, and governments may consider publicizing the existence of sanctions in the news media to generate awareness.

Law enforcement should be careful to ensure sanctions are applied consistently across the population and avoid targeting any particular groups. Enforcement efforts may backfire if the law is perceived as a tool of discrimination or harassment against certain populations, or if these efforts escalate situations where violence may occur.

ENGAGE BUSINESSES IN PROMOTING MASK-WEARING

Policymakers can extend the reach of mask mandates by imposing special responsibilities on businesses. Governments can condition reopening of businesses on adoption of new rules, including physical distancing, handwashing and mask-wearing.

Retail and other businesses often have a face-to-face relationship with their employees and customers, which can be a powerful way to disseminate public health messages. Requirements for businesses should establish and reinforce community norms and improve compliance with mask mandates. Localities should help businesses succeed in this role by providing educational resources, free signage or other incentives.

Businesses should be required to prominently post signs informing all customers and employees to wear a mask at all times on the premises and should instruct employees to inform customers about the rules and provide masks if available. If customers refuse to comply, staff should refuse service, ask them to leave the premises, and if necessary, call the authorities.

Employees should be required to wear a mask as a condition of employment, and employers should suspend or terminate employees who refuse to do so without legitimate cause.⁸

In most instances, governments should avoid punishing businesses that do not comply perfectly with the mask mandates. In rare instances, sanctions may be appropriate, such as for businesses that encourage customers or employees to flout local regulations. In these cases, penalties should be stringent enough to deter additional violations and could include non-monetary sanctions, such as a license suspension or revocation.

V. Promoting mask-wearing with strategic communication

In addition to policies that promote mask-wearing, governments should develop communication approaches to support widespread use of masks as the “new normal” for the foreseeable future.

Data from public opinion surveys suggest that there are multiple reasons why people might not wear masks (see Figure 2) and that often people who do not follow mask-wearing norms or regulations may experience multiple, overlapping barriers to mask use. Strategic communication campaigns

⁸ Employees with disabilities or other concerns may request exemption from mask mandates. Employers should understand under what conditions they might be required to provide reasonable accommodation to these employees in accordance with law. As mentioned previously, if an employee cannot wear a mask because they have severe respiratory conditions, the employee will be especially vulnerable to COVID-19 and should limit exposure.

may be used to change knowledge, attitudes and practices and influence perceived social norms around mask-wearing, addressing some of these barriers. It's important to periodically conduct barrier analysis to understand why people aren't wearing masks. This can help target messaging and identify trusted sources of information for the audience

Figure 2: Why don't people wear masks?



Moving from intentions to habits

Often, people who want to adopt new behaviors such as mask-wearing are inhibited by small barriers such as forgetting a mask or momentary inconveniences (“it’s hard to breathe through while I’m jogging”).

Campaigns that support the formation of new habits—such as leaving a mask by the front door or in the car—may help bridge the gap between intentions and action.

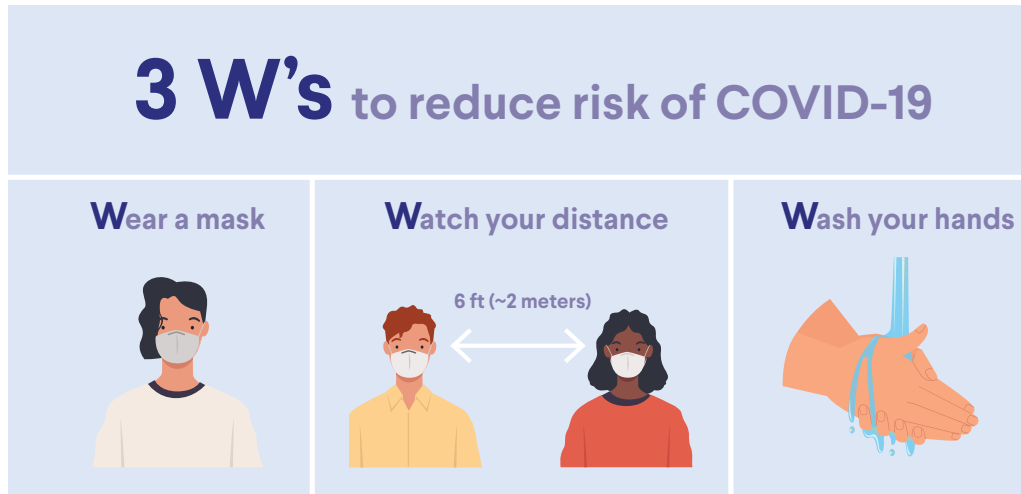
GOVERNMENTS SHOULD TEST EFFECTIVE MESSAGES, CHANNELS AND MESSENGERS

Ideally, messaging should be informed by communication research conducted with focus groups or by survey to ensure key points are understood and perceived as credible, relevant, culturally appropriate and effective. The chosen messages will be most effective if they engage and address the needs of their intended audiences and if these messages are delivered by trusted spokespeople, including community leaders. Governments should consider both communication research and timely epidemiological data together to identify and target the most important audiences: those at the highest risk and those for whom behavior changes can have the greatest impact. It’s also important to be prepared with counter-messaging to address any misinformation, which can spread quickly within communities and particularly online.

GOVERNMENTS SHOULD SUSTAIN MESSAGING AS PART OF A LARGER PUBLIC HEALTH STRATEGY

Most audiences need repeat exposure to messages to trigger sustained behavior changes, so public health authorities should endeavor to deliver effective messages via trusted sources that are repeated over time and over different media channels and activities. Messaging should be as simple as possible, consistent and sustained across different channels, including in local media, government-owned digital properties such as websites or social media pages, and paid advertising and marketing on TV, radio, print, outdoor billboards, digital or social media. Make sure messaging is accessible to all communities by translating into local languages and making messages highly visual for communities with low literacy rates.

These communications should be conveyed in coordination with additional messages that promote avoidance of higher risk environments such as crowds, indoor spaces with poor ventilation and close-contact settings such as meetings. Vital Strategies and Resolve to Save Lives promote these steps using the “3 W’s” prompt:



“3 W’s” messages provide an excellent “umbrella” campaign for all audiences that should be complemented with more targeted communication focused on smaller audiences, such as at-risk minority and harder-to-reach populations, demographics with low rates of mask-wearing or people who are in high-risk geographies or demographics. These segmented campaigns may use community messengers that appeal to subpopulations, use targeted media buys to serve culturally appropriate messages to key audiences, or provide geographically targeted media placements such as billboards or digital ads. Messages can also be spread through popular art like murals in public spaces or songs performed by popular artists.

LEADERS SHOULD ESTABLISH POSITIVE NORMS THROUGH NEWS AND SOCIAL MEDIA

People are heavily influenced by what they perceive as the values of their community. Governments should use news and social media to promote mask-wearing as a social norm. Some strategies include releasing polling data that demonstrate widespread community approval for masks, sharing monitoring data of widespread adherence and encouraging news stories about positive trends in mask-wearing as greater numbers of community members don masks. The results of a large-scale self-report survey administered across the U.S. suggest that the percentage of people who self-reported wearing a mask in public most or all of the time increased between October 2020 and February 2021. Those who defy mask requirements may receive outsized media attention relative to their numbers; public health authorities should avoid calling attention to them.

Those who defy mask requirements may receive outsized media attention relative to their numbers; public health authorities should avoid calling attention to them. As recently as June 2020, while two-thirds of Americans reported wearing masks all or most of the time, those surveyed perceived that fewer than half of Americans wore masks.

Government officials and health authorities should wear masks in public to model the behavior, including at news conferences when they are not speaking, and should share photographs of themselves wearing masks on their social media feeds. Government media should also exemplify this “new normal” by depicting people wearing masks and practicing physical distancing in print and video advertising.

COMMUNICATION SHOULD APPEAL TO EMOTIONS AND VALUES

Graphic imagery that emotionally conveys the health harms of not taking protective action is effective for many behavior change campaigns.

Vital Strategies' "Be The One" campaign, focused on the value of protecting one's neighbors and community, motivated focus groups to take action—especially for Black and Latinx audiences. Similarly, mask promotion videos from the [#MaskUp campaign](#) use this key message: "Whatever your mask says about you, it says you care about others."

[During Africa Mask Week](#), a multi-organizational outreach effort, leaders and communities across Africa rallied on social and traditional media to promote mask-wearing.

The campaign [reached 229 million people and resulted in an 18% increase social posting activity related to mask-wearing](#).

A proven communication strategy is to promote masks in ways that are in line with the identity of segmented audiences. In the United States, [research has demonstrated that partisan identity \(such as Republican and Democrat\) is a strong determinant of public health behavior during COVID-19](#). For some people, wearing a mask is a partisan act, with Republicans less likely to wear a mask and Democrats more likely to do so. Messages that highlight bipartisan support for mask-wearing and growing adherence may appeal to some segments of the population.

Formative research that examines knowledge, attitudes and behaviors may include exploratory qualitative research, in the form of in-depth interviews, focus groups or representative surveys, conducted by phone or internet. For a sample survey questionnaire, please see: [Annex I: Sample questionnaire on mask usage](#).

Case Study: "Be The One"

In July 2020, Vital Strategies, conducted focus group research among Black and Latinx audiences and community leaders to identify which campaign themes and messages were most likely to promote participation in contact tracing. Findings demonstrated that among these audiences, disproportionately affected by COVID-19 and likely less trusting of government authorities, the highest performing messages appealed to the community benefit of contact tracing. Audiences were motivated to "Be The One" whose actions helped protect their family, friends and peers.

VI. Promoting mask-wearing through community engagement

Communities have been affected by the COVID-19 pandemic in different ways. Community engagement strategies seek to involve community leaders and members in the public health response and deliver context-specific and culturally appropriate support to overcoming barriers and promoting positive information and behaviors. Such strategies are important during any public health intervention, and critically important during a pandemic.

ENGAGE AND EMPOWER COMMUNITY LEADERS

During the 2014 Ebola epidemic in West Africa, distrust of the government and public health authorities in many countries led some communities to forgo protective behaviors such as modified burial practices. Engaging and empowering religious leaders was considered one of the critical strategies to bring the outbreak under control.

During the COVID-19 pandemic, governments should engage leaders from ethnic and religious minorities, with an emphasis on any communities that are at higher risk. For instance, in the United States, Black and Latinx people are more than twice as likely to die of COVID-19. Engaging community leaders can provide powerful insights into what types of community engagement will best improve mask use, and community leaders can be important and trusted messengers for promoting mask-wearing. This could include measures such as asking leaders to reach out through community-based media such as WhatsApp or Facebook groups.

USE COMMUNITY-LEVEL ACTIVITIES TO INCREASE ACCESS TO MASKS

There is evidence of the effectiveness of health promotion campaigns that combine strategic communication with low- or no-cost products (e.g., condoms). Dispensing masks in low-resource, low-adherence communities, along with health promotion messages, may help increase mask use. This may include teaching community members how to make masks from materials ready at hand.

VII. Measuring use of masks in the community

Localities may monitor and measure the rate of community-wide mask use for a number of reasons. Aggregate data on mask adherence can inform governments, communities and other organizations about how well they are promoting proper mask use and help them implement and assess strategies to increase the proportion of people who use masks correctly. Monitoring mask usage can also identify locations for targeted messaging and intervention.

For example, if data show most people are wearing masks in public settings, this indicates that mask use is becoming a social norm and publicizing this may further improve adherence. If data show mask use is uncommon, this can trigger community engagement and education activities to improve adherence or policies to deter non-adherence, along with evaluations to refine the interventions.

METHODS FOR MONITORING MASK USE

First, governments must decide what to measure: overall mask use, correct mask use, the demographic characteristics of mask-wearers or reasons for wearing or not wearing masks. Authorities should choose measures that are guided by their overall goals, and only collect information that will inform decision-making. The data collected on mask use should be used to inform public health decision-making and improve outcomes rather than for punitive measures.

Second, governments must decide how to measure mask use, whether through direct observation by trained observers, or with other methods, such as self-reported surveys or the analysis of camera footage or other technologies.

[Direct in-person observation is considered the gold standard of data collection](#) when compliance with infection prevention and control measures is monitored among health care workers. Direct observation of mask use behavior by trained observers may provide reliable estimates of population mask use adherence, as well as facilitate measurement of mask type selection and if masks are worn correctly, across settings and time. Observers must be trained to consistently recognize what constitutes a public indoor space, what constitutes a mask and what constitutes appropriate mask usage; they should use a standardized instrument to collect and document data that can be compared between sites and across time.

If direct observations are performed, locations where mask use may be most important should be prioritized. Attention should be given to the “three C’s” (closed/confined places with poor ventilation; crowded places with many people; close-contact settings where people may have close conversations) in selecting locations for mask use observation. Some examples of locations include indoor shops, public transportation hubs, places of cultural or faith-based importance where crowding may be likely, markets and government offices. Care should be taken to select locations accessible to, and frequented by, diverse segments of society. In addition, locations in a diversity of neighborhoods should be selected, as this may shed light on mask-use patterns and allow for targeted messaging.

Observers should record data using standardized techniques that reduce potential for human error and facilitate rapid data collation and analysis. Helpful tools include smartphone applications, clipboards or punch counters. It is preferable that observations are made covertly, in order to avoid the Hawthorne effect, so a discreet data collection tool should be used.

Analyzing live or recorded video is an alternative method for measuring correct mask-wearing. Even rudimentary footage, such as that recorded by security cameras at store entrances or in some public spaces, can be used. Human observers can review the footage to determine the percentage of people who have masks and the percentage who wear masks correctly. Video may be particularly useful in observation points where it is difficult to collect data accurately in real time, or where the presence of an observer may affect mask-wearing behavior.

A second method for gathering data is to administer surveys in which people self-report mask use. Surveys can collect additional data points (mask type, demographic information such as age, gender, race/ethnicity) as well as information about beliefs and attitudes towards mask use. If done with a statistically sound methodology and rigor, self-reported survey data may add valuable granular information to observation data. Self-report surveys may be administered in-person, via telephone or via the internet. One potential advantage of self-report surveys is the relative ease and low cost of administration compared with direct observation.

If the human or financial resources to conduct an independent mask use study are not available, publicly available data from [large-scale self-report mask use surveys](#) can be used to generate real-time, robust, serial estimates of masking behavior. The data from such large-scale surveys may even offer advantages over data from smaller studies or from studies with alternative designs. However, [if such data are used, awareness of potential limitations is important](#) and, when possible, self-reported data should be validated through comparison with observation data.

[Some private companies](#) and [governments](#) have developed and employed more advanced technologies to monitor mask use, by automatically assessing mask adherence through machine learning. Due to a lack of data on their performance as well as privacy and legal concerns, it is not possible to endorse any specific technology platform at this time.

For further information, see [Annex II: Mask-use adherence measurement technical reference](#) and [Annex III: Seven steps to establishing a mask-use monitoring program](#).