

Why **Masks** Matter



What governments, businesses and citizens can do to help slow the spread of COVID-19 and prevent future pandemics

#WearAMask

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EXECUTIVE SUMMARY

In the absence of a vaccine to prevent, or medicine to treat COVID-19, hand hygiene, social distancing, and mask-wearing are the best tools we have against the disease. Although no single intervention alone is a panacea, face covering has become increasingly important as lockdowns are eased and people seek a full return to public life. Growing evidence is demonstrating that by wearing a mask in public places, everyone can help slow the spread of the disease and save lives.

Since the start of the COVID-19 outbreak, guidance on mask-wearing has been disjointed and inconsistent among world leaders, as well as among international and national health institutions. As of July 2020, 130 countries have mandated some mask usage nationwide (for example when on public transport), and 90 of these countries require mask-wearing anywhere outside of the home. Yet in many countries such as the United States, mask-wearing policies and enforcement still vary widely across and within states and localities. Governments and leaders at national, state, or regional and local levels around the world should provide clear and consistent guidance and mandates to ensure greatest possible adoption. Clear and enforceable policies coupled with effective public information campaigns can yield positive changes in behaviour and become social norms - as we've seen happen with other lifesaving behaviours, such as the use of seatbelts and bike helmets, and bans on indoor smoking.

The Pandemic Action Network has laid out recommendations for governments, businesses, and individuals to promote widespread mask usage as an evidence-based intervention against the spread of COVID-19.

GOVERNMENTS SHOULD:

- Make mask-wearing mandatory in public
- Enforce mask-wearing policy
- Consistently and repeatedly communicate to the public the behaviours (handwashing, social distancing and wearing a mask) that will save lives
- Ensure sufficient supplies of medical and surgical masks for health care workers while also promoting the use of cloth face coverings for the public
- Lead by example, requiring all elected officials, government officials and public sector workers to wear a mask in public

BUSINESSES SHOULD:

- Require and enforce mask-wearing
- Provide clear messaging that mask-wearing is required on their premises
- Coordinate with local public health authorities
- Lead by example, with employees required to wear masks in their places of business

INDIVIDUALS SHOULD:

- Wear a mask in public
- Practice handwashing and social distancing as well as mask-wearing
- Keep it up and encourage their families, friends, and fellow citizens to do so

WHY MASKS MATTER



What governments, businesses and individuals can do to help slow the spread of COVID-19 and prevent future pandemics

The Pandemic Action Network has joined with partners to declare World Mask Week from 7-14 August. Our call to action for **all** governments at national, state/regional, and local levels is to make mask-wearing mandatory in public*, and we are calling on everyone to play their part in defeating COVID-19 by wearing a mask in public. To help prevent the disease from spreading, we advocate that mask-wearing should become the new normal, and be implemented before, not after, spikes in COVID-19 cases occur. This briefing sets out the case and summarises the growing evidence as to why masks matter, and ends with recommendations for governments, businesses, and individuals.

In the absence of a vaccine to prevent, or medicine to treat COVID-19, hand hygiene, social distancing, and mask-wearing are the best tools we have against the disease. Whilst no single intervention alone is a panacea, face covering has become increasingly important as lockdowns are eased, and as there is more mingling in public areas such as workplaces, shops, schools, restaurants, and public transport. The logic is that a simple barrier over the mouth and nose - even one that is homemade - can trap the respiratory droplets that an infected person may release (including asymptomatic and pre-symptomatic individuals), which in turn helps stop the majority of droplets from traveling into the air, therefore significantly reducing the likelihood of the mask-wearer passing on the virus to others.¹ Homemade masks increase in effectiveness when made of optimal material and construction (e.g. high-grade cotton, multilayer constructions such as silk-cotton) and fitted correctly.

There is increasing evidence that wearing a mask or other face covering also protects the wearer by reducing the amount of viral load the wearer can absorb, thereby lessening the severity of symptoms, or in some cases blocking infection entirely.² **By wearing a mask in public places, everyone helps slow the spread of disease and save lives.**

**"In public" refers to whenever a person is outside the home in a place accessible to other people, indoors or outdoors.*

Mounting global evidence on the benefits of mask-wearing

- Evidence suggests that **people infected with COVID-19 may start to be infectious 1-3 days before the onset of their symptoms**; they could be **most infectious in the 24 hours before symptoms appear**.^{3,4} Many others may **never show symptoms** at all and still infect others.^{5,6}
- Preliminary data suggest that **COVID-19 is resilient and stable in the air**. Once airborne, COVID-19 may retain the ability to infect people for up to 16 hours.⁷
- Many studies have found that the **use of face masks**, including cloth face coverings, is associated with a **lower risk of infection** by blocking large droplets before they become aerosolised.^{8,9,10,11,12,13,14}

- Another study shows through mathematical modelling that a face covering that is 60% effective at blocking viral transmission and is worn by 60% of the population would reduce the R0 (reproductive) number for the virus to below 1.0, and that **masks worn by 80-90% of the population coupled with social distancing could eventually eliminate the disease.**^{15,16}
- The **effectiveness of universal masking could be comparable to that of a societal lockdown**, without the enormous economic, social, health and educational costs of closed workplaces, schools, and public spaces and limited geographical mobility.¹⁷
- An August 2020 report by the Institute of Health Metrics and Evaluation found that consistent mask wearing in the United States could save 70,000 lives and that **mask mandates could increase mask wearing up to 15%.**¹⁸ In July IMHE reported that **mask mandates may delay the need for re-imposing closures of businesses** and have huge economic benefits.¹⁹
- An Oxford University study found that in countries in which face coverings have been introduced as a national policy (often but not always alongside other measures), **transmission rates fell in the subsequent days.**²⁰
- **Consistent and clear public messaging on the importance of masking is vital to public adherence.** Conflicting policy advice generates confusion and lack of compliance.²¹
- Masking contributes to **global solidarity.** “My Mask Protects You, Your Mask Protects Me.”
- **Reusable face coverings made from biodegradable fabrics** can help **reduce the adverse environmental effects** of widespread use of disposable and non-biodegradable facemasks.²²

How does COVID-19 spread?

According to the World Health Organization (WHO), current evidence suggests that SARS-CoV-2, the virus that causes COVID-19, is transmitted primarily through direct, indirect, or close contact with infected people through infected secretions or through their respiratory droplets, which are expelled when they cough, sneeze, talk, or sing. Respiratory droplets from infected individuals can also land on surfaces, leading to the infection of people who touch them and subsequently touch their eyes, nose or mouth before cleaning their hands. Emerging evidence strongly points to the possibility of aerosol transmission in indoor spaces (e.g. supermarkets, restaurants, bars, gyms, schools, places of worship) as well as crowded outdoor spaces, potentially leading to ‘super spreader events’ (transmission from a small number of people to many others).²³ The WHO updated its recommendations on airborne transmission of the virus in July 2020 at the urging of 239 experts from around the world.²⁴ WHO’s position is that masks should be used as part of a comprehensive strategy of measures (including hand washing, social distancing and test and trace policies) to suppress the virus transmission and save lives.

How can wearing masks slow the spread of COVID-19?

Masks, including homemade cloth face coverings, can reduce the aerosolization of the virus into the air and onto surfaces by blocking large droplets when they are emitted, and hence significantly reduce the risk of infection.²⁵ In particular, mask use is a significant protective measure against contagion from infected people who are yet to develop symptoms or don’t show any symptoms, and hence are unaware that they may spread the disease. The evidence suggests that people may start to be contagious 1-3 days before symptom onset and that they could be most infectious in the 24 hours before symptoms appear.²⁶ A study which examined the transmission of COVID-19 within families in

Beijing found that face mask use before a family member developed symptoms was 79% effective against spreading the virus.²⁷

Research shows the differences in mortality rates between countries with varying policies on mask-wearing. A study using data from Virginia Commonwealth University found among 198 countries that the “duration of mask-wearing by the public was negatively associated with mortality.”²⁸ Association is not causation, but the highly consistent findings suggest a powerful impact of this policy when effectively implemented. For example, other research found that there is not a single country that introduced face coverings within 15 days of the declaration of the pandemic that experienced high mortality rates.

Masking Success Stories

- U.S. CDC reported that at a hair salon in Springfield, Missouri, two stylists with COVID-19 symptoms worked closely with 139 clients before receiving diagnoses of COVID-19, and none of their clients developed COVID-19 symptoms. Both stylists, and 98% of the clients interviewed, wore face masks.²⁹
- One man flew from China to Toronto wearing a mask for the entire flight. He started showing symptoms the next day and tested positive for COVID-19. None of the other passengers or crew became infected.³⁰

Wearing masks: simple, cheap and can help minimise lockdowns

Until there is a vaccine or a treatment against COVID-19, mass masking, social distancing, and handwashing are the best tools we have against the disease and the best alternative we have to societal lockdowns. In July 2020, U.S. Centers for Disease Control and Prevention (CDC) Director Robert Redfield said the United States could get COVID-19 “under control” within a matter of weeks with universal masking.³¹ Goldman Sachs has estimated that a national mask mandate in the United States could substitute for future lockdowns that would otherwise subtract nearly 5% from Gross Domestic Product (GDP).³² The evidence suggests that, even with continued social distancing, without community-wide face coverings, the COVID-19 infection rate will increase as lockdowns are eased. One study using modelling techniques found that social distancing and mask-wearing at 50% and 80-90% of the population, respectively would result in a substantial reduction of infections, with 80-90% masking eventually eliminating the disease.³³

Early in the COVID-19 outbreak, some scientists and health organisations warned that increased mask usage would foster a false sense of security among mask wearers, who then might not be as diligent to adopt other countermeasures such as handwashing or social distancing. Yet a study published in July 2020 by researchers at the University of Cambridge and Kings College London found that people who use face coverings to protect themselves and others against respiratory diseases are either more likely to engage in other protective behaviours, or just as likely as they would have been without a mask. Moreover, protective behaviours can serve as cues for others to observe other behaviours. For example, wearing a mask may signal to others to keep a two-meter distance. As the researchers note, the overcorrection for “risk compensation” – increased risky behaviour following the adoption of a protective measure – seems to be a greater risk to public health than the phenomenon itself as it delays interventions.³⁴

Strong and consistent public messaging on masking by leaders is essential to adherence

As of 22 July 2020, 130 countries have made the use of masks mandatory, 90 of which have made mask-wearing a requirement everywhere in public, including Egypt, Peru, Saudi Arabia, South Africa and Thailand.³⁵ At the same time, in countries such as the United States mandates on mask wearing vary across and within states and localities. To be effective, face mask use must be widespread and consistent over time and across geographies; infectious diseases like COVID-19 do not stop at borders. Face covering must not be perceived as a temporary measure but become a new social norm. Until we have a vaccine and/or a treatment to end this pandemic, everyone should cover their face in public to contain the spread of the disease. But even when tools against COVID-19 are widely accessible, wearing a mask should remain the norm for anyone with symptoms to protect against the spread of seasonal flu and to help prevent future pandemics.

Consistent and clear public messaging on the importance of masking is vital to public adherence.³⁶ Coughing into the elbow, social distancing and self-isolation - for all of which there have not been any clinical trials - have been widely adopted in some regions, and among some communities, in part due to effective public health messaging. However, whilst most people can cough into the elbow, many are cannot practice self-isolation or social distancing whilst carrying out their daily lives, earning a living, caring for family members, or within their own homes. This fact is further reason why consistent mask-wearing is crucial for people to protect themselves and others in nearly any environment to help slow the spread of COVID-19 around the world.

Conflicting policy advice generates confusion and lack of compliance.³⁷ A study in Canada during the SARS outbreak found that inconsistent information on non-pharmaceutical interventions prompted individuals to question the credibility of available information.³⁸ Changing positions on the importance of face coverings for the general public have undoubtedly fuelled confusion and uncertainty about their effectiveness.³⁹ To overcome months of mixed messaging, all governments and relevant international organisations must immediately commence – and sustain – public information campaigns on the effectiveness and importance of wearing masks in public, and ensure masking is widely perceived as both a common sense measure and an act of national and global social solidarity. To address concerns that masks may be used incorrectly, clear masking techniques and norms need to be taught, just as proper handwashing and social distancing techniques have been taught.⁴⁰

Just as public information campaigns need to be clear and consistent, national policies and how they are enforced must also be clearly articulated and informed by public health guidance. It's notable that conflicting policies across local, state, and national levels in the U.S. have recently led major retail corporations such as Walmart, CVS, and Target to impose mask-wearing requirements in all of their stores, in order to ensure consistency across their companies, regardless of location.⁴¹ Even when masks are required by the state or locality, enforcement is too often lagging, putting the onus of protecting the public on the private sector alone, and most often disproportionately on frontline and retail workers.⁴² Clear and consistent mandatory mask-wearing policies by national, state and local governments during the pandemic would not only effectively help slow the spread of the disease, but would also take the onus off essential workers or individuals to police mask use, which has sometimes ended in aggressive or even violent confrontations.⁴³

Previous public policy initiatives have resulted in sustained social norms which have yielded safer and healthier communities. Mandatory seatbelt laws, for example, have proven to be very effective in increasing rates of seatbelt use when coupled with enforcement and public awareness campaigns.⁴⁴ Similarly, in the United States, restrictions on smoking in indoor workplaces lead to less smoking and decreased respiratory symptoms among workers.^{45,46} Experts agree that as with seatbelt usage, indoor smoking bans, and bike helmet adoption, policy mandates and public behaviour change campaigns are the first steps in establishing normative social habits.⁴⁷ Wearing a mask should become the new normal - to save lives, help slow the spread of COVID-19 and help prevent future pandemics.

RECOMMENDATIONS

GOVERNMENTS SHOULD:

- **Make mask-wearing mandatory in public.** Every national, state, regional, and local government should require everyone to wear a mask in public.
- **Enforce mask-wearing.** Governments can use a variety of existing enforcement mechanisms in addition to new methods, such as anonymous phone hotlines, to identify non-compliant individuals and businesses and impose fines or other disciplinary measures.
- **Consistently and repeatedly communicate to the public the behaviours that will save lives.** Handwashing, social distancing, and mask-wearing can save lives. Governments must do more to communicate why masks matter and why all these actions need to be taken by everyone.
- **Ensure sufficient supplies of medical and surgical masks for health care workers while also promoting the use of cloth face coverings for the public.** Governments should ensure a steady supply of masks for the public which are affordable for all and free for those that cannot afford them. Governments should also promote the use of homemade cloth face coverings as a vital alternative to medical and surgical masks, particularly when the latter are in short supply and need to be prioritised for health care and frontline workers.⁴⁸
- **Lead by example.** Require all elected representatives, government employees, and public sector workers to wear a mask in public.

BUSINESSES SHOULD:

- **Require and enforce mask-wearing.** Management should always require and actively encourage all patrons to use a face covering in their place of business during the pandemic.
- **Provide clear messaging** that those who are non-compliant will not be permitted on the premises – the equivalent of “no shirt, no shoes, no service” – and seek support from local authorities to help enforce the rules and keep their employees and patrons safe.⁴⁹
- **Coordinate with local authorities.** Public health officials should provide businesses with consistent and easily accessible health resources to answer patrons’ questions. Coordination is key to enforce mask-wearing regulations and will be more effective if it is backed by local and national policy.
- **Lead by example.** Require all employees to wear masks in their place of business.

INDIVIDUALS SHOULD:

- **Wear a mask in public.** My mask protects you, and your mask protects me.
- **Practice handwashing and social distancing together with mask-wearing.** Mask-wearing is a vital part of the solution to combat COVID-19 but must be practiced in conjunction with handwashing and social distancing.
- **Keep it up.** Sustained mask-wearing in public by a majority of the population will save lives – to slow the spread of COVID-19 and help prevent future pandemics. Everyone should do their part by consistently wearing a mask in public and should positively encourage their family members, neighbours, and fellow citizens to do the same.

For more information, visit pandemicactionnetwork.org

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