INCREASING ADHERENCE TO COVID-19 GUIDELINES: LESSONS FROM RIGOROUS EVIDENCE

Please note: *This document was prepared by the J-PAL Health Sector in 2020 and updated in 2021 to provide recommendations for responding to the Covid-19 pandemic. It is not an exhaustive review of all the rigorous evidence on the discussed topics.*

Last updated: September 2021

As of September 14, 2021, the novel coronavirus 2019 (Covid-19) has spread to every region of the world, infecting more than 224 million people and killing more than 4.6 million.[i] No cure has yet been fully authorized, and the availability of preventive vaccines varies greatly by geography. As vaccines become available, increasing their uptake will be critical for stemming the pandemic.[1] In the meantime, take-up of other preventive measures remains critical.

The World Health Organization (WHO), national health agencies, and other experts have issued guidance on such preventive measures, which include practicing social distancing, wearing a mask, and handwashing frequently. However, following this guidance is not always feasible for everyone. Individuals living in overcrowded conditions may not be able to practice social distancing, those whose livelihoods depend on frequent and close interactions with others may not be able to afford avoiding these activities, and those without access to clean water and soap would not be able to wash their hands frequently.

Other individuals may not be aware of the guidelines, may not understand the specific steps to follow, or they may not be convinced of the need to practice these behaviors. Misinformation about Covid-19 and its vaccines can also undermine public health guidelines. In instances where lack of clear messaging or inadequate understanding of the need to practice recommended behaviors are the primary barriers to guideline adherence, evidence from rigorous research can help to inform government actions. Such evidence can be similarly helpful in areas where preventive vaccines are more readily available, but lack of information or misinformation are the main constraints to uptake.

This note provides some general lessons on increasing uptake of healthy behaviors and on improving the delivery of health products and services. These lessons draw from the results of recent randomized evaluations on strategies to increase adherence to Covid-19 prevention guidelines, increasing take-up of the Covid-19

[1] This evidence note includes evidence-informed recommendations for strengthening the demand and delivery of vaccines.

vaccines, and from the results of randomized evaluations on increasing take-up of healthy behaviors more generally. For lessons specific to increasing the reach and uptake of vaccines, please see the brief available here.

This note does not tailor recommendations to specific contexts or provide details on implementation. Rather, we encourage policymakers to reach out to Anupama Dathan (adathan@povertyactionlab.org), J-PAL Health Sector Manager, for follow-up conversations on incorporating the evidence into policy decisions.

DESIGNING INFORMATION CAMPAIGNS TO INCREASE UPTAKE OF PREVENTIVE BEHAVIORS

Many governments are advising residents to stay home, practice social distancing, regularly wash hands, and take various other actions to prevent Covid-19. Many individuals will find it impossible to regularly practice the recommended behaviors due to financial insecurity, lack of access to clean water or soap, and other constraints. For those who are physically able to take up these behaviors, what information is shared and through whom may influence adherence, particularly if the information is new or rapidly evolving.

Evidence on behavior change campaigns shows that framing information in a specific and actionable way is important. Carefully considering the messengers who convey the messages and the platforms through which this information is disseminated are also essential for increasing the reach of public health messages and combatting misinformation.

Framing information in an effective manner is essential for changing behaviors.

Implement specific and actionable information campaigns to encourage key preventive behaviors for Covid-19. A large body of evidence[ii] from around the world shows that simply urging people to change behavior usually does not work. Rather, policymakers may find it beneficial to issue specific information on what behaviors to take up and why these actions are important, particularly when introducing new recommendations. For example, when recommending handwashing, policymaker advice to wash hands upon returning from the grocery store or to set an alarm to remember to wash hands every two hours is likely to be more effective than more general exhortation to "wash hands regularly." Likewise, encouragement to replace handshakes with head nods or elbow bumps may be more actionable than simply telling individuals to avoid handshakes.

Covid-19 research

Three studies from the J-PAL network provide evidence that specific and actionable information can indeed also change Covid-19 preventive behaviors.

- In India,[iii] individuals received short, 2.5-minute video clips in 2020, in which a well-known individual provided specific, actionable information on how to identify Covid-19 symptoms and how to report them to frontline health workers. They also received information on Covid-19 preventive behaviors and how and

why to adopt them. These videos led individuals to reduce travel, increase self-reported handwashing, and doubled symptom reporting rates to community health workers.

- In the United States,[iv] people tended to underestimate risk to elderly people. Providing information in 2020 on elderly individuals' actual probability of death led participants to overcome their initial perceptions, watch more videos on protecting others, and, when prompted, were more likely to donate to the US Centers for Disease Control's (CDC) Emergency Fund to fight Covid-19.
- In Bangladesh,[v] a package of interventions included mask promoters in public areas who regularly provided information on the importance of wearing masks. Regularly providing this information also helped to reinforce it, which was an important component of increasing observed correct mask-wearing over a ten-week period.

The platform through which information is spread is an important consideration. Edutainment can be effective, as can different social media platforms.

Where possible, incorporate key public health messages into new or existing entertainment media (or "edutainment") to help improve adherence to recommended behaviors. Media such as television, radio, or other entertainment platforms can be used to change attitudes and behaviors by embedding educational messages in a bigger storyline.[vi] As people around the world are spending more time at home, the ability to identify with characters facing similar changes to their personal life may further underscore edutainment's potential to influence individual behavior.

Relevant research

While J-PAL affiliates have not yet studied edutainment in a Covid-19 context, studies from before the pandemic demonstrate the impact of edutainment on behaviors.[vii] For example, in Nigeria,[viii] the edutainment television series *MTV Shuga* improved knowledge and attitudes towards HIV and risky sexual behavior and increased the likelihood of getting tested for HIV. Effects were stronger for viewers who reported being more involved with the story or identified with the characters.

Social media like Twitter and Facebook can be a powerful delivery platform to share key public health messages and combat misinformation. Such apps have become a vital part of information-sharing in the 21st century, and evidence shows that leveraging them can be an effective means of amplifying messages to shift beliefs and behaviors.[ix] This is particularly true when the messenger is effective and information is framed in a specific and actionable manner. Because they can also be a source of misinformation, monitoring online platforms such as Facebook, Twitter, and WhatsApp, and others for false messages can help identify situations where correcting misconceptions can be particularly important.

Covid-19 research

Three studies from J-PAL affiliates and invited researchers have shown the importance of leveraging social media during Covid-19, both to share information on important preventive behaviors and to combat misinformation.

- In Zimbabwe,[x] a local civil society organization sent WhatsApp messages to their newsletter subscribers to convey truthful information about Covid-19 and to debunk misinformation about fake cures. These messages from a trusted source increased knowledge about Covid-19 and reduced reported harmful behavior such as violating lockdown orders.
- In India,[xi] users received SMS messages containing a link to videos from a trusted, well-known expert advising individuals to report Covid-19 symptoms and follow local guidelines. By leveraging low-cost SMS technology, millions of people were reached with these messages that in turn increased reporting of symptoms and self-reported adherence to guidelines.
- In the United States,[xii] videos of physicians posted on Facebook that encouraged users to stay home for the Thanksgiving and Christmas holidays. These videos, which were viewed by more than 35 million people, were effective in reducing travel for the three days before each holiday.

These messages may have been effective in part because they came from a known and respected source or because they came early in the pandemic, before beliefs and practices became more entrenched.

- Another study in India,[xiii] taking place between mid-August and mid-October 2020, sent SMS messages to households in Bihar. In total, ten different messages were tested, which either encouraged the recipient to adopt social distancing or hand washing. What varied was the framing of the information and when in the day the message was sent. None of these approaches improved knowledge or adoption of distancing and handwashing.

While SMS messages containing information or advice may not always be effective, as found in this study from Bihar, other studies such as the one from West Bengal indicate that they can have an impact. Because SMS-based messaging is low cost, it may be worth implementing it, particularly if implemented alongside other interventions mentioned in this note.

Evidence on information provision demonstrates that receiving messages from those with whom one feels a connection—community members, peers, characters on TV shows and other forms of entertainment, celebrities, etc.—can be important for uptake of recommended behaviors. Messaging this information with specific and actionable steps can be additionally impactful, while leveraging platforms such as social media can help to widely disseminate information.

Choosing effective messengers is critical for changing behavior. Social networks, peers, and celebrities can all be effective at spreading information.

Directly leverage the influence of well-connected community members and peers (while avoiding face-to-face interactions) to help spread accurate information on new recommendations. While top-down messaging that is framed in a specific and actionable way can change behavior, studies from around the world[xiv] have found that leveraging the community is also important for sustained behavior change. Where

guidelines on social distancing may make in-person interactions difficult or inadvisable, online and mobile platforms can be good ways to leverage this influence.

Covid-19 research

Three studies from J-PAL affiliates provide further evidence on the impact of peer and social networks on behavior change for Covid-19 prevention.

- In India,[xv] providing information on Covid-19 prevention and symptom reporting through short videos increased self-reported adherence to Covid-19 preventive behaviors by those receiving links to the videos as well as by their neighbors at roughly the same rate. The messages did not increase conversations about Covid-19. This suggests that behavior change among non-recipients was due to peer effects: neighbors directly observed behavior changes among those who did receive the messages and imitated them.
- In the United States,[xvi] role models impacted donations to the US Center for Disease Control's (CDC) Emergency Fund to fight Covid-19. Participants who read messages and watched videos about the behavior of fellow citizens were more likely to emulate those actions. For instance, learning that other Americans were volunteering or donating to the CDC made participants more likely to learn about volunteering or to donate to the CDC.
- In Mozambique,[xvii] informing people about high local community support for social distancing had different impacts based on local Covid-19 infection rates. Where infection rates were high, providing this information caused individuals to increase social distancing. But where rates were low, the information caused social distancing to drop. Additionally, local leader endorsements of social distancing had no effect on behavior.

Educating celebrities early on in an epidemic and leveraging their voices can help to increase the reach of public health messages and avoid the spread of misinformation. Depending on the content and accuracy of their message, all individuals with a media following can have a positive or negative impact on public opinion and behavior. Celebrity endorsement or information-sharing may be particularly powerful when celebrities speak in their own voice.[xviii]

Covid-19 research

Two studies by J-PAL affiliates supports the recommendation that hearing directly from celebrities can shift behavior around Covid-19.

- In West Bengal, India,[xix] participants received 2.5-minute videos on Covid-19 prevention featuring Abhijit Banerjee, a well-known intellectual from West Bengal. In the videos, Abhijit Banerjee instructed individuals to report any Covid-19 symptoms to health workers and emphasized why adopting preventive behaviors is important. The videos doubled symptom reporting to community health workers and increased self-reported adherence to other preventive behaviors such as mask-wearing, handwashing, and reduced travel.
- In Bangladesh,[xx] mask-wearing was legally required in public areas, but compliance was low. As part of a larger set of interventions designed to increase mask usage, participants viewed short videos on the

importance of mask-wearing from public figures like the Prime Minister, a religious leader, or a national cricket star. This information, combined with interventions including free mask provision and active mask promotion, was effective at increasing correct mask-wearing.

Note that, to date, this recommendation on celebrity endorsement is based on three studies[xxi] rather than a broader body of research.

BUILDING TRUST IN HEALTH SYSTEMS

Programs or policies that increase trust in the health system could improve reporting and cooperation with health guidelines, which in turn could help increase testing, reduce the spread of the disease, and reduce mortality.

Implement interventions that increase trust in health systems. What interventions are effective can vary based on context. Improving perceptions of quality may be effective in some areas, while ensuring patients see doctors whom they trust may be more important in others. Such interventions may be most impactful in areas with low baseline utilization of health care services or amongst populations with low levels of trust in the health system (including marginalized groups that may include migrants, LGBTQ individuals, indigenous communities, or racial minorities depending on the context). Additional trust-building policies, such as ensuring patient confidentiality with regard to immigration status, could also help address wariness of the formal health system. Such measures would likely improve the resiliency of the health systems over time; they may also possibly improve outcomes if implemented during or right before a major health shock, though this has not been studied to date.

Covid-19 research

Establishing trust that is not already present can be difficult. For instance, following an analysis that found that those who trusted the police were more likely to comply with Covid-19 restrictions, a study from Uganda[xxii] tested the impact of a new community policing program that aimed to improve relationships between the police and the community. The program only slightly increased trust in the police, and it had no impact on adherence to health guidelines.

As discussed above, leveraging the voice of messengers who are trusted by the audience is important for increasing adherence to guidelines. However, who these trusted messengers are will likely change across contexts. Three studies by J-PAL affiliates highlight messenger characteristics that may be especially important in the United States to change behavior and increase adherence to preventive guidelines and uptake of vaccines.

- Black and Latino adults received videos from physicians conveying information about Covid-19 and the importance of preventive behaviors. [xxiii] Viewing a message from any physician increased knowledge of Covid-19 symptoms and prevention. Black adults—who have historically faced discrimination in the health system—who viewed a video from a Black physician were also more likely to rate the video as being more

informative and trustworthy and to self-report increased take-up of Covid-19 preventive behaviors relative to those who watched a video of a physician of another race. There was no consistent effect among Latino participants who viewed videos by Latino physicians.

- However, while race concordance may be important, it is not always necessarily a driving factor. Another study in the United States[xxiv] found that messages delivered by physicians increased knowledge about Covid-19 and use of preventative health measures, like mask-wearing and social distancing, regardless of recipients' race or political beliefs.
- Finally, health messengers can also be laypeople, rather than physicians or other experts.[xxv] In particular, those who were least willing to become vaccinated were more likely to report willingness to get the Covid-19 vaccines when they received information from laypeople, rather than from medical experts.

LEVERAGING CASH TRANSFERS TO INCREASE UPTAKE OF PREVENTIVE BEHAVIORS

Since the Covid-19 pandemic is a health crisis accompanied by a severe economic one, cash transfers can provide income support and potentially increase uptake of healthy behaviors.

Leverage cash transfers, especially those conditioned on uptake of Covid-19 preventive behaviors, to improve prevention. Unconditional transfers can provide income support. While both conditional and unconditional transfers have costs associated with determining eligibility, targeting the transfer to intended households, and delivering the cash, a review of the literature[xxvi] shows that cash transfers conditioned on certain behaviors increase take-up of those behaviors. Cash transfers with no conditions increase spending on overall household priorities and improves general well-being. Policymakers may consider the outcome(s) they are hoping to achieve, as well as the relative costs and benefits of each type of transfer across all target outcomes, when determining which transfer to implement.

Covid-19 research

One study by J-PAL affiliates found that cash transfers improved several indicators of household well-being, including in health, during the Covid-19 pandemic.

- In Kenya,[xxvii] households received universal basic income during Covid-19. These cash transfers effectively reduced hunger, sickness and depression in spite of the pandemic. They also reduced hospital visits and decreased reported social interactions.

IMPROVING THE DELIVERY OF HEALTH PRODUCTS AND SERVICES

The practices described above can help motivate individuals and households to take up healthy behaviors. As governments and other actors think through distribution of essential commodities once they are developed, research yields insights on how to deliver them to maximize uptake.

When feasible, subsidizing recommended preventive health products and eliminating user fees can increase uptake. Uptake of preventive health products, such as vaccines, is highly sensitive to price. A review of more than 15 studies from around the world[xxviii] shows that take-up reduces dramatically even with small price increases, and especially so for products with large social externalities. Making protective masks, Covid-19 tests, soap, and other preventive commodities free of charge can help to ensure increased uptake. This is also important for ensuring take-up of Covid-19 vaccines.

Covid-19 research

One study by J-PAL affiliates shows the importance of free distribution on increasing uptake during the Covid-19 pandemic.

- In Bangladesh,[xxix] individuals who received preventive masks for free as a part of a package of demand-generating interventions that also included regular reminders were more likely to use them—and to do so correctly--than those not receiving this package. Adding other financial interventions such as cash incentives to wear masks had no additional impact.

This note highlights some general lessons on how policymakers may be able to increase adherence to Covid-19 guidelines and improve the delivery of key health products. It does not intend to provide details on implementation. Policymakers interested in learning more about the evidence presented here are encouraged to reach out to Anupama Dathan (adathan@povertyactionlab.org), J-PAL Health Sector Manager, for follow-up conversations on incorporating the evidence into policy decisions.

ABOUT J-PAL

The Abdul Latif Jameel Poverty Action Lab (J-PAL) is a network of 227 affiliated professors from universities around the world. Our mission is to reduce poverty by ensuring that policy is informed by scientific evidence. We engage with hundreds of partners around the world to conduct rigorous research, build capacity, share policy lessons, and scale up effective programs. J-PAL was launched at the Massachusetts Institute of Technology (MIT), and now has regional offices in Africa, Europe, Latin America & the Caribbean, the Middle East and North Africa, North America, South Asia, and Southeast Asia. For more information visit povertyactionlab.org.

Sources

[i] World Health Organization. 2021. "Weekly Operational Update on Covid-19 14 September 2021."
[ii] See J-PAL Policy Insight here.
[iii] Banerjee et al, 2020
[iv] Abel et al 2021
[v] Abaluck et al 2021
[vi] J-PAL's Policy Insight containing evidence on edutainment is available here.
[vii] J-PAL's Policy Insight containing evidence on edutainment is available here.
[viii] Banerjee et al. 2019
[ix] Alatas et al. 2021; Banerjee et al, 2020; Bowles et al. 2020
[x] Bowles et al. 2020
[xi] Banerjee et al, 2020

[xii] Breza et al. 2021
[xiii] Bahety et al. 2021
[xiv] J-PAL's Policy Insight containing evidence on leveraging peer effects and social networks for health is here.
[xv] Banerjee et al, 2020
[xvi] Abel and Brown 2020
[xvii] Allen et al. 2021
[xviii] Alatas et al. 2021; Banerjee et al, 2020
[xix] Banerjee et al, 2020
[xx] Abaluck et al. 2021
[xxi] Alatas et al. 2020; Banerjee et al, 2020; Abaluck et al. 2021
[xxii] Blair et al. 2021
[xxiii] Alsan et al. 2021
[xxiv] Torres et al. 2021
[xxv] Alsan and Eichmeyer 2021
[xxvi] J-PAL's policy insight on the topic is available here.
[xxvii] Banerjee et al. 2020
[xxviii] J-PAL's policy insight on the topic is available here.
[xxix] Abaluck et al. 2021