

What strategies support people to adopt behaviours in order to follow COVID-19 Public Health and Social Measures?

Summary of findings from a COVID-END Living Evidence Synthesis

McMillan, G., Hussain, J., Abdullah, K., Chan, E., Van Allen, Z., Palumbo, A., Grenier, A.-D., Smith, M., Strain, K., & Presseau, J. COVID-END PHSM LES Working Group. Ottawa Hospital Research Institute, 16 June 2023.

The public health and social measures (PHSMs) we studied were: *quarantine and isolation, masking, physical distancing and reducing contacts, hand hygiene and respiratory etiquette, cleaning and disinfecting, and ventilation.*

Why is this important?

Whether or not people follow public health and social measures (PHSMs) has an impact on controlling the spread of respiratory infections like COVID-19, and ultimately the number of hospitalizations and deaths. Policy makers need to know the best strategies to support people to adopt behaviours in order for people to follow PHSMs.

What did we want to find out?

- What strategies support people to adopt behaviours to follow the six PHSMs?
- How much do a person's ability, opportunity and motivation influence their adoption of behaviours in order to follow PHSMs?
- Did the strategies result in unintended changes in behaviour that were not specifically targeted by the strategy, whether positive or negative (i.e., physical activity, food intake, substance use patterns)?

What did we do?

We searched five databases and found 50 relevant studies published in English from January 1, 2020 to February 3, 2023. We identified studies where there was a comparison between strategies being put in place and where there was no strategy put in place. We only included studies where the strategies took place within a community setting (as opposed to a healthcare setting). We then analyzed the extent to which behaviours were adopted, in order to follow PHSMs, depending on whether strategies were put in place or not.

What did we learn?

- Population-level strategies that applied restrictions (e.g. stay-at-home orders, mask mandates, business closures) supported people to better follow physical distancing and reducing contacts, and masking. There was some evidence that during longer periods of physical distancing and reduction of contacts measures, people followed them less as time went on.

Summary:

Strategies that aimed to change behaviour of whole populations with restrictions (such as stay-at-home orders or mask mandates) were successful in supporting people to follow PHSMs.

Strategies that aimed to change behaviours within Communities (like a grocery store or a workplace) by providing objects in the environment to support people (for example: free masks, reminder signs next to hand sanitizer), or restructuring the environment to support people (such as introducing walking direction to follow) were generally successful in supporting people to follow PHSMs

Messages intended to encourage behaviours supported people to follow PHSMs only when they were communicated within the place or situation that the behaviour would be adopted, from trustworthy sources, when the message was repeated, and when the means to perform the behaviours (e.g. hand sanitizer dispensers) were provided alongside encouraging messages. Messages intended to encourage behaviours were not successful in supporting people to follow PHSMs when communicated outside the place or situation that the behaviour would be adopted.

- Community-level strategies included providing objects in the environment to support adoption of behaviours (such as education plus free masks, buzzers that indicate being <1.5m distance from someone; reminder signs next to hand sanitizer), or restructuring the environment to support adoption of behaviours (e.g. walking directions, floor stickers that demonstrate appropriate distance). These community-level strategies generally supported people to better follow physical distancing and reducing contacts, masking, and hand hygiene and respiratory etiquette PHSMs.
- Messages intended to encourage behaviours sometimes influenced a person's ability, opportunity, and motivation to adopt behaviours.
- Messages intended to encourage behaviours supported people to follow PHSMs only when they were communicated within the place or situation that the behaviour would be adopted, from trustworthy sources, when the message was repeated over a longer timeframe, and when the means to perform the behaviours (e.g. hand sanitizer dispensers) were provided alongside the messages.
- However, messages intended to encourage behaviours generally did not support people to follow PHSMs when they were communicated to individuals outside the place or situation that the behaviour would be adopted.
- Generally, there were no negative unintended effects of strategies on people following other PHSMs. On the other hand, lockdown measures were related to less physical activity, shorter sleep duration, and later bedtime.

What are the limitations of the evidence?

- A limited number of studies were available that tested strategies to support people to follow quarantine and isolation, as well as cleaning and disinfecting. No studies were identified for ventilation.
- Most studies were completed over a short time period (typically between 1-12 weeks). Because of this, it's not possible to know how the strategies support people to follow PHSMs long-term.
- The quality of the study design can influence confidence in the accuracy of the results (such as making the strategy seem to be more or less effective than it really is). Most of the studies were moderate level quality, but a number of them were low quality. There were relatively few high-quality studies of what strategies work best, and for whom. That said, many studies that tested strategies to encourage people to follow PHSMs were conducted in real-world contexts, where higher quality evaluations would not be possible for practical and ethical reasons. Therefore, some moderate or low quality evaluations still provide the best available evidence. Future research is needed to understand the effectiveness of strategies, particularly to support equity-deserving communities, for whom there may be more barriers to following PHSMs.
- Few studies focused on unintended effects of PHSMs.

How up to date is this evidence?

All included studies collected data during 2020 and 2021. This means that the information provided by our review may have different implications in the current pandemic. That is to say, there is a lack of evidence on how successful the strategies included in this review would be with recent variants of COVID-19 (such as Omicron), shifts in public policy in most countries in 2022, and with the introduction of vaccines.