COVID-19

RESOLVE TO SAVE LIVES | Vital Strategies

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BRIEFING NOTE

Using Public Health and Social Measures to Reduce COVID-19 Transmission

Purpose

This briefing note outlines public health and social measures (PHSMs) used to slow the spread of COVID-19 and recommends five essential considerations for using them effectively: adaptation for local contexts, especially low- and middle-income countries; using evidence-based triggers to start and stop implementation; effective risk communication with affected communities; respect for human rights and dignity; and preparing to safely remove PHSMs by building public health capacity.

Background

COVID-19 is an infectious disease that causes respiratory illness, with symptoms including cough, fever, and in more severe cases, difficulty breathing, pneumonia, and even death. As of April 2020, there were more than 2 million cases worldwide, with confirmed cases in nearly every country. Roughly one in five people infected requires hospitalization, with higher rates of severe illness in people over 60 and those with underlying conditions. Because COVID-19 is transmitted by droplets that require humans to be closer than 1.5 meters, improved hygiene practices and physical distancing measures, known as "public health and social measures (PHSMs)," can slow the spread of disease and save lives. In the absence of effective treatment or a vaccine, PHSMs are the only available tool for governments to reduce deaths from COVID-19. But PHSMs can cause devastating social and economic disruption. They must be managed carefully and adapted for local contexts, and paired with relief measures such as fiscal stimulus to reduce damage to social and economic systems.

COVID-19 is most frequently transmitted from one person to another through respiratory droplets from coughing or sneezing. The virus can also be transmitted by touching surfaces that have been contaminated (e.g., door handles, countertops), where it can survive for several days. Transmission occurs frequently among close contacts, and people who become infected can begin transmitting the virus before they show symptoms. As many as one in four people with COVID-19 never develop symptoms, but can still infect others.

Public Health and Social Measures

Because COVID-19 transmission requires close contact, practices such as improved hygiene and physical distancing measures, known as "public health and social measures," or PHSMs, can slow the spread of disease and save lives. These measures are also known as nonpharmaceutical interventions.

PHSMs include: **personal measures** that individuals can take in their everyday life; **community measures** that governments can put in place to reduce social interaction and use of public spaces; **environmental measures** that organizations and individuals can use to sanitize physical spaces that might otherwise spread the disease; and **disease control measures** that include activities to identify and isolate suspected and confirmed cases. **SEE TABLE 1 FOR A SUMMARY OF PHSMS: STRENGTH OF EVIDENCE, APPROPRIATE TIMING FOR INTRODUCTION, AND POTENTIAL NEGATIVE CONSEQUENCES TO CONSIDER).**

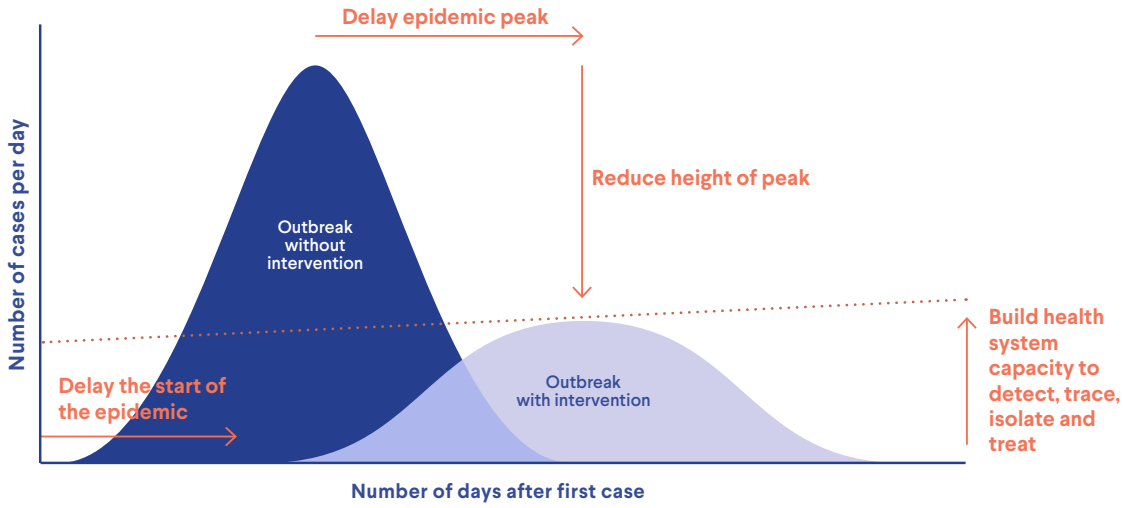
TABLE 1: EXAMPLES OF PHSMs

Personal PHSMs	Community PHSMs	Environmental PHSMs	Disease Control PHSMs
• Washing hands frequently with soap and water • Covering coughs and sneezes • Staying home when sick, or if you know you have been exposed to a family or household member who is sick	• Requiring or encouraging "physical distance" between people in circumstances where there would otherwise be close contact, including in schools, workplaces, and at public events • Temporarily closing public places where people typically gather, including schools, nonessential businesses, places of worship, sporting events, concerts, festivals, conferences • Stay-at-home orders	• Requiring or encouraging frequent, thorough sanitization to reduce the risk of transmission through commonly touched surfaces.	• Rapid testing and identification of cases • Home isolation of cases • Quarantine of contacts of people who have tested positive, or other people who may have come into contact with the virus

How PHSMs Work

FLATTENING THE CURVE

COVID-19 spreads quickly, with each infected person potentially infecting several more. Unchecked, this rate of transmission will cause a surge in patients that will quickly overwhelm even the best-prepared health systems. By slowing transmission of COVID-19, public health and social measures "flatten the curve" of infections, so that the number of people needing care at one time does not outstrip health system capacity. While implementing PHSMs, governments should invest in increasing health system capacity to safely treat COVID-19 patients, including training and protecting health workers, increasing the number of critical care beds, and expanding public health capacity to test all cases and trace their contacts.



Recommendations for Effective Use of Public Health and Social Measures

Stringent application of PHSMs has successfully slowed the spread of COVID-19 in a number of countries, including China and South Korea. But PHSMs can cause devastating social and economic disruption. They must be managed carefully, adapted for local contexts and paired with relief measures such as fiscal stimulus to reduce damage to social and economic systems.

Evidence-based "triggers" determine when to turn on PHSMs, and when to turn them off.
When it's appropriate to apply PHSMs is determined by a changing set of circumstances. Governments should carefully monitor local data on virus transmission, health care preparedness, public health capacity, public acceptability, and economic impact to determine when PHSMs should be implemented, and when they can be gradually relaxed.

The evidence base, implications and legal requirements are different for each of the PHSMs. Policymakers must understand local context to decide when and how to implement each PHSM in order to reduce transmission, while understanding how disruptive the intervention will be. The goal is to reduce the reproductive number below 1 (each infected person transmits the virus to less than one person on average) while still balancing the community's physical and mental health, including access to food, water, wages and communication.

Adapting for local contexts. Governments can increase effectiveness of PHSMs by tailoring them to local conditions, making accommodations to enable behavior change and reduce barriers to adherence, and implementing relief measures to mitigate social and economic impacts, particularly among vulnerable groups .

Engaging affected communities in two-way communication. Effective implementation of PHSMs should include a strong risk communication strategy that reflects changing community perceptions of COVID-19, outlines what the public can expect as the epidemic progresses, counteracts misinformation, and allows governments to manage fear and panic .

Maintaining full respect for human rights and dignity. The right to health should be balanced with other human rights. Implementing PHSMs in a legal and ethical manner improves results and helps to minimize negative impacts.

Building public health capacity. While implementing PHSMs, it is critical to prepare for the next stage: continued suppression of COVID-19 caseloads as PHSMs are relaxed. This requires scaling up capabilities for widespread, accurate, timely testing; immediate isolation of those infected with COVID-19; rapid and extensive contact tracing; and keeping those exposed away from others as well as maintaining essential health serivices including access to vaccination, TB and HIV treatment, antenatal care and others.

Resolve to Save Lives' COVID-19 PHSMs program

Resolve to Save Lives has partnered with the Africa Centres for Disease Control and Prevention, World Economic Forum, and leading market research firm Ipsos to support decision-makers in countries in Africa to implement PHSMs effectively by providing real-time data and guidance about PHSMs impact on social and economic indicators. A team of researchers will collate and analyze big data from several sources, including social and traditional media, country-based polls, mobile phone movement, and indicators of economic and social unrest. Resolve to Save Lives will produce specific guidance and distribute its recommendations through a variety of channels to stakeholders including civil society, policy- and decision-makers, and business leaders. As the pandemic progresses, more detailed support and guidance will be provided to high-risk countries or countries with a high prevalence of disease.

TABLE 1. SUMMARY OF PUBLIC HEALTH AND SOCIAL MEASURES (STRENGTH OF EVIDENCE, APPROPRIATE PHASE FOR INTRODUCTION, AND POTENTIAL NEGATIVE IMPACTS TO MANAGE)

Intervention	Evidence	Early epidemic/ pandemic	Moderate epidemic/ pandemic	Severe epidemic/ pandemic	Resource intensity	Potential negative impact in low-resource county	Legal or ethical considerations
DISEASE CONTROL							
Contact tracing	+	Y	Y	Y	++++	+++[1]	++[2]
Isolation of sick people	+	Y	Y	Y	++++	+++	++
Quarantine of exposed people	+	N	N	N	++++	+++	++[3]
PERSONAL PHSMs							
Hand hygiene	+++	Y	Y	Y	+	+	-
Respiratory etiquette	+[4]	Y	Y	Y	+	+	-
Face masks for symptomatic people at all times when around others	+++	Y	Y	Y	+++	+	+
Face masks for asymptomatic people in community	+++	N	N	C	++++	+++	+
ENVIRONMENTAL PHSMs							
Surface/object cleaning	++	Y	Y	Y	++++	+	-

1 If risk communication not done effectively, this can cause negative community engagement that is hard to overcome.
2 Patient privacy should be protected, except where strictly necessary for tracing.
3 Voluntary quarantine should be promoted, with mandatory orders and enforcement used only as a last resort.
4 Some measures have low evidence due to lack of research.

- none
+ very low
++ low
+++ moderate
++++ high

N—No
C—Conditionally
Y—Yes

UV light in crowded places	-	N	N	N	+++	+	-
Increased ventilation	+	Y	Y	Y	+	+	-
Modifying humidity	-	N	N	N	+++	+	-
COMMUNITY PHSMs							
School measures and closures	+	Measures[5]	Measures[5]	Closures[6]	++++	++++	++
Workplace measures and closures	+	Measures[7]	Measures[7]	Closures	++++	++++	+++[8]
Avoiding crowding	+	N	Y	Y	+++	++++	+++
Cancellation of sporting and entertainment events	+	N	Y	Y	++	++++	+
Shielding the vulnerable	-	Y	Y	Y	+++	++	++
Travel advice	-	Y	N	N	+++	++++	+
Entry and exit screening	+	N	N	N	++++	++++	++
Internal travel restrictions	+	Y[9]	N	N	++++	++++	++++
Border closure	+	N	N	N	++++	++++	++++

Adapted from WHO Non-pharmaceutical public health measures for mitigating the risk and impact of epidemic and pandemic influenza

5 Stricter exclusion policies for ill children, increasing desk spacing, reducing mixing between classes, and staggering recesses and lunch breaks.

6 Coordinated proactive school closures or class dismissals are suggested during a severe epidemic or pandemic. In such cases, the adverse effects on the community should be fully considered (e.g. family burden and economic considerations), and the timing and duration should be limited to a period that is judged to be optimal.

7 Encouraging teleworking from home, staggering shifts, and providing for fully paid sick leave and extended paid leave.

8 Care should be taken to exempt essential services, and to provide labor and financial protections for workers who cannot work from home.

9 Internal travel restrictions are conditionally recommended during an early stage of a localized and extraordinarily severe pandemic for a limited period of time. Before implementation, it is important to consider cost-effectiveness, acceptability and feasibility, as well as ethical and legal considerations.

- none
+ very low
++ low
+++ moderate
++++ high

N—No
C—Conditionally
Y—Yes