Building coalitions for strengthening public health and social measures during health emergencies: meeting report

Cascais, Portugal
14 - 15 June 2023
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Abbreviations

COVID-19  coronavirus disease

PHSM  public health and social measures

WHO  World Health Organization
Executive summary

Public health and social measures (PHSM) are nonpharmaceutical interventions implemented by individuals, communities and governments during health emergencies to reduce the risk and scale of transmission of infectious diseases. PHSM played a critical role in lowering hospitalization rates and deaths during the coronavirus disease (COVID-19) pandemic. However, some can also have unintended negative consequences for individuals, societies and economies, with vulnerable and marginalized communities often bearing a disproportionate burden of the negative impacts of the health emergency and PHSM, thus exacerbating health and social inequities.

In June 2023, the World Health Organization (WHO) convened national public health stakeholders from 21 countries and WHO staff to establish a community of practice among public health stakeholders, with a specific focus on strengthening PHSM research and policies. This report provides an account of the discussions, outcomes and advice put forth during the meeting, highlighting the shared commitment to advancing PHSM research, decision-making and global monitoring of policies.

At the meeting, national public health stakeholders shared case examples describing their experiences with PHSM implementation during health emergencies, including the COVID-19 pandemic. Through case studies presented by representatives from each country, as well as the discussions that followed, several key factors were identified that facilitated successful PHSM responses, namely, the existence of legal mechanisms for emergency responses, multisectoral collaboration, multisectoral governance, surveillance and contact tracing, national research initiatives, international recommendations and evidence in the absence of robust local data and research, community engagement, and social protection measures to mitigate the unintended negative consequences of PHSM. In addition, participants discussed challenges they had experienced relating to PHSM implementation and reflected on the additional resources and capacities that could have supported more effective PHSM.

WHO’s Initiative to Measure the Effectiveness and Impact of PHSM During Health Emergencies focuses on building a robust knowledge base about PHSM, enhancing the comparability and quality of PHSM research and supporting equitable, systematic and evidence-informed decisions about PHSM that can be applied to various health threats. Towards these aims, WHO is developing global guidance on monitoring multihazard PHSM policies and their implementation, a conceptual framework to harmonize language around PHSM, study protocols to measure the effectiveness of PHSM and a Decision Navigator to aid decision-makers in balancing the complexities of making equitable and evidence-informed decisions about establishing, adjusting and lifting PHSM interventions. Participants considered and provided input into the ongoing conceptualization and development of these norms and standard-setting tools and resources.

Drawing on discussions that took place about countries’ experiences and on deliberations about these resources, participants put forth a call to action for PHSM, encouraging all countries to commit to taking the following actions:

1. to position PHSM as an essential countermeasure alongside vaccines and therapeutics for epidemic and pandemic preparedness and response;
2. to prioritize equity as the primary guiding principle for PHSM implementation in communities;
3. to harness the power of PHSM through enabling functions, such as infodemic management, and risk communication and community engagement;

4. to ensure collaboration, coordination and transparency across sectors, disciplines and levels to lead PHSM efforts;

5. to frame the narrative of PHSM as a critical asset for global preparedness for emergencies;

6. to support a World Health Assembly resolution on PHSM to sustain the momentum of focused investment in PHSM research and implementation.

Building on the existing momentum and interest in PHSM expressed by participants during this meeting, as well as the call to action that was put forward, the technical products and resources will be revised and finalized, and a second WHO global technical consultation on PHSM during health emergencies will take place from 21 to 23 November 2023. The consultation will be convened to propel and affirm global commitment to PHSM as an essential countermeasure for epidemic and pandemic preparedness and response and as a critical asset for community protection and global preparedness for health emergencies.
1. Background

The coronavirus disease (COVID-19) pandemic has emphasized the significance of public health and social measures (PHSM) in reducing the risk and scale of infectious disease transmission during health emergencies. Throughout the pandemic, PHSM have played a critical role in contributing to lowering hospitalization rates and deaths, thereby reducing the pressure on health care systems, supporting the continuation of essential services and buying time to develop and implement pharmaceutical interventions such as vaccines, therapeutics and diagnostics. However, PHSM also have unintended negative consequences on individuals, societies and economies, including intensifying loneliness, food insecurity and domestic violence; reducing household incomes; and decreasing economic productivity. Moreover, vulnerable and marginalized communities often bear a disproportionate burden of the negative impacts of the health emergency and PHSM, thus exacerbating health and social inequities. PHSM are increasingly recognized as an indispensable strategy for strengthening the global architecture for health emergency preparedness, response and resilience.1

Given these considerations, it is imperative that policies are informed by the best evidence regarding the effectiveness and impact of PHSM. They should also be continually assessed and adjusted in relation to the epidemiological situation, contextual factors and unintended negative consequences. Furthermore, PHSM should be implemented in conjunction with appropriate and relevant social protection measures to mitigate the potential burdens associated with the interventions. Recognizing these needs, the World Health Organization (WHO) launched an initiative in 2021 aimed at enhancing PHSM research, policy-making and global monitoring.

A meeting, titled Building coalitions for strengthening public health and social measures during health emergencies, took place during 14–15 June 2023. It served as a platform for public health stakeholders to share their expertise about and experiences of PHSM. It provided an opportunity for WHO’s global, regional and national staff working on PHSM to exchange information with and learn from Member State representatives from national public health institutes and ministries of health.

1.1 Objectives

The primary objective of the meeting was to establish a community of practice among public health stakeholders, with a specific focus on strengthening PHSM research and policies. The meeting aimed to achieve the following specific objectives:

- facilitate the exchange of experiences and sharing of good practices regarding the implementation of PHSM;
- identify leadership enablers and priorities for establishing dedicated capacity and resources for PHSM;
- review and refine draft frameworks and tools related to PHSM data, research and decision-making;
- identify joint actions for strengthening PHSM as an integral part of national health emergency management.

This report provides an account of the discussions, outcomes and advice put forth during the meeting, highlighting the shared commitment to advancing PHSM research, policy-making and global monitoring.
2. Countries’ experiences with PHSM

The meeting convened 41 participants who were public health stakeholders from ministries of health and public health institutes in 21 countries, as well as from WHO offices. At the meeting, these stakeholders shared case examples describing their experiences with PHSM implementation during health emergencies, including the COVID-19 pandemic. Through case studies presented by representatives from each country, as well as the discussions that followed, several key factors were identified that facilitated or presented challenges to PHSM implementation and decision-making. In addition, participants reflected on the additional resources and capacities that could have supported more effective PHSM responses.

Decentralized government structures were seen to be both a challenge and an opportunity for effective decision-making and for implementation of PHSM. While they facilitate implementation of local and tailored strategies that address context-specific needs, challenges were also observed regarding limited resources to implement measures in regions or subnational domains. Additionally, depending on national legal and governance structures, the uptake of centrally issued guidance relating to PHSM was not always a given.

Decisions about which PHSM to implement, when and how need to account for contextual factors and equity. Several countries noted that such factors were incorporated into their decision-making processes; for example, the United Kingdom, accounted for the economic consequences and took into consideration evidence of the economic impacts of PHSM. Similarly, the Public Health Agency of Canada took into account sociocultural considerations, equity and other factors when developing masking advice, tailoring recommendations for specific groups.

2.1 Facilitators of decision-making and implementation

Countries’ experiences demonstrated the importance of supportive legal and governance structures, multisectoral coordination and collaboration, the effective use of evidence and data to inform PHSM decision-making and implementation strategies, effective communication and engagement with communities, and considering the context and equity. Key themes that emerged as facilitators of successful PHSM responses are presented below.

2.1.1 Existing legal mechanisms for emergency response

Having in place laws that allow governments to take rapid action during an emergency facilitated agile implementation of PHSM and social protection policies during the COVID-19 pandemic. For example, in Zambia the public health agency invoked the Public Health Act 1995, and in Malaysia, the Prevention and Control of Infectious Diseases Act 1988 became the governing legislation, thus enabling prompt action and streamlined decision-making processes. Similarly, in Malawi provisions from the Public Health Act 1948 facilitated implementation of PHSM during recent health emergencies, including the COVID-19 pandemic, cholera outbreaks and cyclone-induced flooding. Legal measures were also used in Thailand by an emergency committee chaired by the prime minister, which directed actions across the whole government. In Sri Lanka, the Quarantine and Prevention of Diseases Ordinance No. 3 of 1897 enabled new regulations to be introduced to aid in the control and management of COVID-19 by granting the Minister of Health the authority to introduce regulations for the purpose of preventing the introduction and spread of any disease.
2.1.2 Multisectoral collaboration

Whole-of-government approaches that engaged different sectors and departments in decision-making and implementation contributed to coordinated PHSM responses. Multisectoral input was used to inform the committees or stakeholders who made decisions in the pandemic context. For example, in the United Kingdom, decision-makers drew on evidence syntheses, surveillance data, modelling outputs and economic data contributed by experts from various agencies and departments. In France, close collaboration between the national public health agency and the Ministry of Education enabled analysis of data from school-based screening activities, which led to the conclusion that children made only a limited contribution to the epidemic dynamic and, thus, targeted screening and active contact tracing of pupils could be implemented, in certain phases of the epidemic, rather than mass screening or systematic closures of schools or classes. Collaborations with the military or defence sectors were also used to implement and enforce PHSM decisions, for example in the Philippines, Sri Lanka and Zambia.

2.1.3 Multisectoral governance

Multisectoral teams were established as part of national governance structures to develop recommendations and guidance about PHSM. For example, in Saudi Arabia protocols and guidelines were developed by the public health authority and approved by a national committee consisting of stakeholders from multiple government ministries and agencies; in Netherlands (Kingdom of the), PHSM were proposed by an outbreak management team that was composed of experts from different fields and regional health specialists; in Zambia, the National Public Health Institute formed a multisectoral, interdisciplinary team with representatives from different policy levels and platforms to formulate technical guidance; and in the United Kingdom, the Scientific Advisory Group for Emergencies applied a cross-disciplinary consensus view based on the best evidence to provide independent scientific advice. Countries also drew on multisectoral platforms that had been used during previous emergency responses. For example, during the COVID-19 pandemic, Sierra Leone drew on lessons learned from the Ebola virus outbreaks during 2014–2016 and used the One Health platforms for multisectoral coordination of the executive and technical staff of the relevant sectors; the One Health approach was used for both the technical and operational responses at national, district and community levels. In Liberia, One Health platforms were also used, and a new multisectoral Special Presidential Task Force for COVID-19 enabled resource mobilization by bringing together international and financial partners.

2.1.4 Surveillance and contact tracing

Robust surveillance systems and contact tracing efforts have provided data on the sources and spread of infections, allowing for targeted measures. For example, in Netherlands (Kingdom of the) contact tracing data were used to develop and evaluate PHSM strategies and to determine which measures might be most effective; in Norway a national registry linked surveillance data with a wide range of anonymized individual-level data points, allowing for analysis of infection spread in households and workplaces. In Mongolia, despite limited testing, health service monitoring of mortality and health care capacity informed PHSM decisions and allowed for successful suppression of COVID-19. In Sri Lanka, public health field staff, who had been trained by existing community health service staff, were engaged to allow for timely responses comprising rapid contact tracing and implementation of isolation measures.

The importance of using surveillance data to inform PHSM responses to the COVID-19 pandemic inspired improvements in, for example, real-time monitoring of health
indicators in Brazil, the establishment of gene sequencing for COVID-19 in Sri Lanka, and in Panama, the establishment of the National Center for Community Traceability Operations and Control, which promoted active participation across various sectors to enable surveillance.

### 2.1.5 National research initiatives

Research efforts in countries during the COVID-19 pandemic facilitated policy-relevant research studies, modelling predictions and living evidence reviews. For example in Latvia, a national research study analysed the impact of COVID-19 on the country’s health services and identified that the measures in place restricted family involvement during labour and childbirth. The results of this study led to the development of recommendations to ensure continuity of reproductive health services and family support. The Nigeria Centre for Disease Control and Prevention used surveillance data, infodemic insight reports, polls and surveys to identify knowledge gaps, attitudes and concerns in the population. The Robert Koch Institute, the German national public health institute, conducted systematic reviews and statistical modelling to analyse the effectiveness of PHSM in controlling the COVID-19 epidemic internationally, qualitative research on risk communication strategies in an international context, and a series of monitoring reports on PHSM implementation in countries other than Germany, all collectively informing the federal Ministry of Health’s decision-making.

### 2.1.6 Global evidence and recommendations in the absence of robust local data and research

Ensuring a rapid response to health emergencies requires agile actions to be taken in the absence of local evidence about the effectiveness of potential measures and how they should be implemented. Countries described how they achieved this by tailoring international guidance to their local contexts. For example, in Malawi international guidance and recommendations from organizations such as WHO, the Africa Centres for Disease Control and Prevention and the United States Centers for Disease Control and Prevention, were adapted to the local context, in which there are strong religious and social bonds and an informal economic sector. Similarly, in Zambia guidance that was issued by known agencies, such as the US Centers for Disease Control and Prevention, was adapted and implemented based on surveillance data collected across all districts, using a real-time COVID-19 tracker that allowed for analysis of data from surveillance, laboratory, case management, logistics and other sources. Regional collaborations were also valuable to supporting the use of international evidence for local decision-making. For example, Netherlands (Kingdom of the) drew on international research, including collaboration with other countries through the European Early Warning and Response System, to develop and adjust national guidelines during the pandemic.

### 2.1.7 Community engagement

Countries employed diverse strategies to involve communities in PHSM decision-making and implementation to ensure effective responses. In Malawi, a complete lockdown was initially announced based on modelling projections. However, this plan was adjusted based on inputs from and engagement with community leaders and religious institutions. Religious leaders, traditional leaders and village health community groups were also engaged to promote understanding of and compliance with measures. Similarly, in Nigeria community leaders, traditional rulers and faith-based organizations played roles in disseminating information about PHSM policy. Civil society organizations were also key actors in supporting decision-making and information dissemination. In Panama, the National Center for Community Traceability Operations and Control was established to foster active participation,
leadership and empowerment of local authorities, community leaders and civil society at various levels. In Canada, lessons from the COVID-19 experience prompted its public health agency to establish early communication channels and collaborate with civil society organizations, enhancing community engagement and message dissemination, particularly for emerging threats such as mpox.

2.1.8 Social protection measures to mitigate unintended negative consequences
Countries recognized the importance of addressing the unintended negative consequences of PHSM by implementing social protection policies; ensuring access to essential services, such as education and food supplies; and addressing inequalities, for example in access to technology. Across countries, the need for economic support was frequently noted, as well as for various other resources, depending on the context. For example, in Rwanda, economic support for vulnerable populations was a facilitator of successful uptake of PHSM. Sierra Leone provided diverse social supports during the COVID-19 pandemic, including offering and subsidizing food and essential commodities, and emergency cash transfers, sanitary kits for girls, psychosocial support for those under quarantine, radio and virtual tutorials for pupils, food programmes at schools, and job-creation initiatives, such as the local production and sale of face masks. In the Philippines, a legal framework was established, known as the Bayanihan to Heal as One Act, which ensured that funds were allocated to address the immediate needs of the health sector, to subsidize economic stimulus packages and to pay to meet other social needs. This was achieved through the reallocation of funds from multiple agencies to support the pandemic response. It granted health care benefits and allowances to protect health care workers and their families from the impact of the pandemic and provided health care assistance, social support programmes and emergency family subsidies.

2.2 Challenges to implementation and decision-making
Participants highlighted various challenges in implementing PHSM during recent health emergencies. They emphasized that the key difficulty with PHSM implementation was striking a balance between reducing the disease burden while mitigating the negative social and economic impacts. Although widespread or stringent measures may be needed to reduce morbidity and mortality, they may also pose challenges to sustaining the acceptability and adherence by the public. When making decisions about how to strike this balance, the political context was important. For example, in countries where elections were ongoing, the public acceptability of PHSM was considered especially important by decision-makers who stood to be re-elected.

Some countries have grappled with finding an effective approach to ensure adherence while maintaining public trust. Striking a balance between enforcing legislation and providing guidance and systems that empower people to adhere to PHSM has been challenging.

A lack of infrastructure and support to mitigate the negative consequences of PHSM on vulnerable individuals contributed to challenges in ensuring equitable implementation. Vulnerabilities that needed to be accounted for as part of decision-making and implementation about PHSM included the challenges facing older adults who were isolating or living alone, the existence of a large informal labour sector, the presence of crowded urban areas, limited access to basic amenities, the risks for children who received their main meals in schools, limited health care infrastructure and access to services, and the existence of a digital divide.
Limited coordination between sectors and across geographical areas hindered research efforts and the effective use of various data sources for PHSM decision-making. Challenges were noted in sharing data between institutions or jurisdictions, in synthesizing information from diverse and heterogeneous sources, and in terms of fragmentation and a lack of interoperability across national information systems.

Managing mis- and disinformation during health emergencies and maintaining consistent and clear communication as new information emerged was a challenge in several countries. Rumours, information about false remedies and conspiracy theories led to confusion among the population and hindered public health efforts.

Risk communication efforts have been hindered by difficulties in effectively engaging with the media to communicate about PHSM and address public concerns, ensuring individual understanding of and adherence to changing measures, and communicating across borders about travel-related measures.

Tailoring PHSM policies and implementation to the needs and contexts of affected communities was difficult, partly due to the lack of structures at the community level. However, the potential for leveraging One Health platforms to lay a framework for engaging community-level actors was noted.
2.3 Resources and capacities with potential to contribute to stronger responses

Participants noted that if the additional resources and capacities described below had been available, they could have supported more effective or efficient delivery of PHSM responses during recent health emergencies.

2.3.1 Evidence generation, sharing and use
In terms of evidence, the following needs were noted:

- evidence about the effectiveness of PHSM and their socioeconomic consequences to enable implementation of balanced and equitable policies;
- effective monitoring of PHSM and databases that have detailed raw data about implementation;
- interoperable digital solutions to allow for seamless sharing and analysis of information and data to inform timely decision-making;
- consistent outcome measures across studies and more comprehensive data incorporated into modelling studies.

2.3.2 Formalized coordination mechanisms
Formalized coordination mechanisms are needed to:

- enable collaboration between different sectors and stakeholders for PHSM responses;
- ensure more widespread leveraging and scaling of existing partnerships and platforms (e.g. One Health platforms);
- engage stakeholders from various sectors, including health, non-health and the private sector;
- establish national public health institutes where they do not already exist to strengthen the institutional framework for preparedness for and response to emergencies and to ensure PHSM interventions are integrated and visible at national and community levels.

2.3.3 Guidance and tools
The guidance and tools that would help strengthen responses include:

- standard operating procedures and guidance on engaging with social media during health emergencies to effectively address misinformation and manage risk communication about PHSM;
- guidance regarding when to introduce, adjust and lift specific measures, and training about how to implement guidance.

2.3.4 Supportive resources and infrastructure
The resources and infrastructure that would be helpful include:

- infrastructure and capacity for testing and surveillance;
- information technology to enable better responses to emergencies;
- better universal health coverage, and health care systems that can provide essential services during a pandemic and when public health measures are introduced.
3. WHO tools and resources for PHSM

The needs for strong coordination of research and policies related to PHSM were recognized during the Seventy-fourth World Health Assembly in 2021, during which Member States requested the Director-General “to develop a global framework to generate, monitor, compare and evaluate research and policies on public health and social interventions and assess their broader impact in order to harness global knowledge and expertise and to translate evidence into effective health emergency and preparedness policies.”

WHO’s Initiative to Measuring the Effectiveness and Impact of PHSM During Health Emergencies focuses on building a robust knowledge base about PHSM, enhancing the comparability and quality of PHSM research, and supporting equitable, systematic and evidence-informed decisions about PHSM when applied to various health threats. The WHO Secretariat is coordinating the development of several norms and standard-setting tools and resources, as outlined below, and the meeting participants steered the ongoing process of conceptualization and development.

3.1 Global monitoring and reviews of data and research

One of the strategic areas of the WHO’s Initiative focuses on increasing access to and the use of multidisciplinary and context-specific knowledge about PHSM to strengthen understanding about implementation strategies and approaches, and PHSM effectiveness, as well as the unintended negative and positive consequences. Towards this, WHO is developing global guidance on monitoring PHSM policies and implementation for multihazard events.

The global monitoring guidance for PHSM during health emergencies is a comprehensive framework designed to facilitate systematic data collection, support decision-making and analysis, and guide reporting about the implementation of policies during emergencies. This guidance will equip governments and stakeholders with a structured approach and practical tools to monitor measures taken to mitigate the spread of diseases and safeguard public health. It will:

- provide guidance on priority categories and indicators for measuring implementation of and reporting on PHSM policies and approaches, including uptake and adherence;
- provide flexible and customizable online tools for setting up a tracking system applicable to various hazards and levels, while allowing for the aggregation of data for global and regional tracking of PHSM;
- facilitate the availability of context-specific and timely PHSM data alongside other emergency-related data sets to enable analysis and interpretation of temporal correlations between various response measures; and
- accelerate the timely and context-specific use of data to allow for continual adjustment of PHSM policies.

The guidance will be complemented by a toolkit that will support countries in implementing the monitoring framework and adapting it to different hazards, actors and geographical levels.

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3.1.1 Reflections on the draft guidance

As part of the meeting, participants were consulted about and had an opportunity to review an outline of the draft guidance on monitoring. They then participated in a scenario-based activity to consider the chapters of the draft guidance and their relevance to the scenario, as well as the strengths, weaknesses, opportunities and threats associated with applying and implementing the guidance. Participants’ input during this session played a crucial role in testing the guidance’s utility with the intended end users, allowing for the development of a refined iteration of the guidance. Key reflections are noted below.

3.1.1.1 Strengths of the guidance

The guidance can be applied to ensure efficient response strategies, sustainability and resource allocation for PHSM across various settings and emergencies. It involves key stakeholders and facilitates consistency across entities by promoting the use of a unified data registry. It allows for a streamlined monitoring process and enables countries to establish the objectives for their data and to dedicate resources accordingly. The inclusion of a database of indicators promotes harmonization and alignment among recommended measures, thereby addressing a main gap observed during past emergencies, such as COVID-19. The guidance serves as a tool not only for monitoring policy but also for evaluating the implementation of PHSM.

However, the guidance should also be flexible and consider different contexts, as what works for one country may not be applicable to another.

3.1.1.2 Revisions to improve clarity and content

Participants highlighted several clarifications that are necessary regarding the scope of the guidance:

- it should more clearly differentiate between national and subnational levels;
- the information it provides is about monitoring measures rather than monitoring their effectiveness; this clarification needs to be made to set realistic expectations for users;
- the mandate needs to be clarified, especially considering the extent to which it should be prescriptive or be adaptable to country-specific needs;
- data ownership should distinguish between disaster risk reduction and epidemiology.

Additional categories and content were also proposed for inclusion in the guidance, for example data on cost-effectiveness and subcategories, such as trade measures. Incorporating descriptions of intervention categories could also help ensure standardization. It is also important for PHSM data to be correlated with epidemiological data, behavioural and infodemic insights, cost–benefit analyses and social listening data.

3.1.1.3 Integration with other tools and platforms

Opportunities exist to ensure better links between the global guidance and existing resources, specifically:

- existing global monitoring tools could be mapped for better navigation;
- a One Health approach should be considered, with efforts made to include integration of stakeholders and consideration of impacts on human and animal health;
- monitoring efforts and funding sources should be integrated into National Action Plans for Health Security.
### 3.2 Research methodology and capacity

The global PHSM initiative also focuses on strengthening the methodology and capacity for PHSM research. The aim is to support countries with the methodological, legal, ethical and political challenges of this research and a harmonized conceptual understanding of PHSM across the diverse actors working in this area. Towards this, WHO is developing the PHSM conceptual framework and study protocols to measure the effectiveness of measures, as described in the following sections.

#### 3.2.1 The conceptual framework

During the COVID-19 pandemic, a stark variability in the categorization of PHSM became apparent, especially when tracking policy implementation. There were limited consistent and comparable data collected for analysis of implementation. To address this fragmentation, the WHO Collaborating Center for Evidence-based Public Health together with the PHSM Secretariat and partners developed a draft conceptual framework, applying COVID-19 as a use case to harmonize the language for PHSM and create a common understanding of the importance of viewing these measures through a complex systems lens to emphasize the contextual factors influencing their implementation as well as their transmission-related outcomes, alongside the unintended consequences on health, social and economic dimensions for individuals and societies. During the meeting, the conceptual framework was presented alongside the assumptions underlying its development.

- PHSM are intended to reduce the risk and scale of the transmission of infectious diseases, and the two basic mechanisms of operation for human-to-human transmission are reducing contact and making contacts safer.
- All measures have both intended (transmission-related) and unintended consequences on health and society.
- All categories within the framework are interconnected and interact with one another.
- Any specific measure is defined by a combination of the measure itself, its stringency and the population or setting targeted, or both.

The conceptual framework is visualized in Fig. 1. Work is under way to further refine the model and adapt it to ensure applicability to a multihazards approach. With this objective in mind, participants were asked to review the layout, components and terminology of the latest draft in groups that were divided to address one of five types of hazards: respiratory, waterborne and foodborne, zoonotic, arthropod-borne and direct contact. In these groups, participants considered whether the layout and components of the conceptual framework work in the context of the hazard type, and what other visual presentations could facilitate an understanding of the framework. Additionally, participants considered what changes would need to be made to the categories and terminology in the draft concept note to ensure its relevance to each type of hazard.
Fig. 1. Draft conceptual framework for public health and social measures presented during the meeting, 2023

Contextual factors

**WHY** Objectives
- Transmission-related
- Reducing transmission through measures
- Consequences-related
- Addressing consequences of measures

**WHAT** Measures
- Transmission-related
  - Reducing contacts
  - Surveillance
  - Response
  - Services
- Consequences-related
  - Increasing positive consequences

**WHERE** Setting
- Community engagement

**HOW** Stringency
- Transmission-related
  - Enabling uptake
  - Informing choice
  - Guiding choice
- Consequences-related
  - Mandating uptake
  - Restricting choice
  - Eliminating choice

**TO WHOM** Population
- Monitoring and risk assessment

**WHAT FOR** Outcomes
- Transmission-related
  - Cases
  - Hospitalisations
  - Morbidity
  - Deaths
- Consequences-related
  - Intended and unintended consequences

Source: Figure reproduced with permission from Rehfuess EA, Movsisyan A, Pfadenhauer LM, Burns J, Ludolph R, Michie S, Strahwald B. Public health and social measures during health emergencies such as the COVID-19 pandemic: an initial framework to conceptualize and classify measures. Influenza Other Respir Viruses. 202317(3):e13110. doi:10.1111/irv.13110.
3.2.1.1 Feedback about the conceptual framework

Feedback from participants about key themes is summarized below.

Their feedback about the **structure and dynamics** of the framework include the needs to:

- emphasize the important and cross-cutting role of the central hub, for example by separating the hub's components;
- clarify the entry point to the conceptual framework and the sequence for following it, including the links and cyclical and reinforcing dynamics between the areas of setting, populations, context, how and what;
- increase the visibility of key components such as resource needs, timing and duration of interventions (i.e. when and for how long measures should be considered);
- include consideration of different levels of PHSM (e.g. individual, community, global).

Feedback on the **categories and terminology** included advice to:

- streamline the terminology to minimize differing interpretations and improve clarity about what the terms refer to, such as –
  - stringency (scope, intensity and consequences are all factors)
  - choice (which could be replaced with uptake enablers)
  - enabling versus mandating (creates a false dichotomy when these can be connected or are seen as being on a continuum);
- further distinguish among broad categories, such as –
  - monitoring and risk assessment (considering that even monitoring alone can refer to monitoring implementation of an intervention or to disease surveillance)
  - communication (which can refer to communicating about an intervention or communication in its own right)
  - vulnerability (which can refer to clinical vulnerability, vulnerability related to the setting or the vulnerability of the population, and it could be added as its own overarching category);
- clarify overlapping categories, such as population and setting;
- consider changing some of the language as follows –
  - add well-being to the health consequences
  - change individual protection to personal protection;
- improve clarity about measures by
  - including specific examples of measures in the framework
  - explaining the difference between measures (especially social interaction versus movement versus quarantine).

Feedback about the **applicability of intervention categories to a multihazards approach** included the following concerns:

- consider where measures that address nonrespiratory hazards fit –
  - the provision of safe water could be added as a subgroup under physical environment measures
» vector control should be added, such as measures relating to waste management or mosquito removal
» consider other hazards such as radiation and chemicals, hence going beyond threats from infectious diseases
» clarify where interactions with animals fit into the framework;

- use language of reduced exposure instead of reduced contacts to account for a multihazards approach;
- vertical transmission can be in part covered by the category of whom (for example, PHSM that target pregnant women).

The feedback received from the participants led to a revised version of the conceptual framework, which is presented in Annex 3.

3.2.2 Study protocols

The Norwegian Institute of Public Health shared its experiences in assessing the effectiveness of PHSM implemented during the COVID-19 pandemic and acknowledged the significant challenges the Institute faced in implementing randomized controlled trials to test the effectiveness of PHSM. To address this, the WHO PHSM Secretariat, in collaboration with the Norwegian Institute of Public Health and an expert committee, is developing study protocols to generate comparable, high-quality and timely data about PHSM effectiveness.

The objective is to develop adaptable templates for PHSM study protocols that can be tailored to specific disease outbreaks and diverse contexts. These protocols will be preapproved by WHO’s Research Ethics Review Committee, which may support expedited national ethical review processes. The primary aim is to ensure that comparable, timely and high-quality data are collected about the effectiveness of PHSM during health emergencies, thus facilitating informed decision-making. To address ethical, logistical and resource challenges, a facilitation guide will be created alongside the protocols. This guide will assist with the effective implementation of the study protocols.

An initial set of eight protocols will follow a 2 × 4 principle – that is, comparing two interventions in each of four disease groups:

1. respiratory (e.g. COVID-19, influenza, Middle East respiratory syndrome coronavirus)
2. waterborne and foodborne (e.g. cholera, typhoid fever)
3. arthropod-borne (e.g. dengue viruses, Zika virus, malaria)
4. direct contact (e.g. mpox, Ebola virus, Marburg virus).

The hazards-based approach assumes that disease groups with similar modes of transmission would require comparable PHSM to control and limit outbreaks. This is in line with the approach taken by the Preparedness and Resilience for Emerging Threats Initiative. As more data and experience are gathered, the protocols will be iteratively expanded, and their focus will expand to also include observational data.

The development of these protocols is in its initial stages. An expert group has provided input about the format and disease groups that the protocols should cover, as described above. During the meeting, the rationale and plans for developing

these protocols were presented, and participants were asked to help identify settings and PHSM that could be prioritized for developing the first drafts of the protocols. They were asked to consider whether the study protocols would be useful for their pandemic preparedness and response activities, whether preapproval by WHO’s Research Ethics Review Committee would accelerate national approval processes, the challenges that have been faced in conducting effectiveness studies during the COVID-19 pandemic, and the priority interventions, comparators and settings that should be part of the initial protocols. Overall, participants indicated that such protocols would be valuable for evaluating PHSM effectiveness during health emergencies and also as part of epidemic and pandemic preparedness activities, including during the spread of seasonal diseases, such as influenza.

3.2.2.1 Reflections about priority intervention settings
Participants considered the settings that would be priorities for testing the study protocols. A significant part of these discussions focused on the context of schools and the various types of questions that could be researched to understand the impact of various measures. Participants acknowledged the diversity of contexts and availability of resources in different countries and regions, highlighting the importance of considering unique contexts and challenges when planning and conducting trials of PHSM interventions. A need for cost–benefit studies of PHSM interventions was identified, particularly focusing on school closures. Their impacts on children facing inequities and those having limited access to technology were deemed particularly relevant. The value of implementing mass testing in schools compared with testing reactively when cases are reported was also questioned. The legal and ethical challenges of randomizing communities and schools were noted, highlighting the complexities involved in such processes.

Overall, participants indicated that such protocols could be valuable not only in pandemic contexts but also to gather relevant evidence during the spread of seasonal diseases. Interventions were considered for conducting trials outside of a pandemic context; for example, one country proposed an intervention that would have schools assess children for influenza symptoms during the rainy season; in schools where this was implemented and evaluated, it resulted in lower incidence rates.

The limited willingness of people to participate in trials was noted. The need for social sciences expertise to promote acceptance of interventions and, thus, enhance their effectiveness was emphasized by an example in which a public health authority recruited an anthropologist and a psychologist to accomplish these goals.

3.3 PHSM decision-making
Another key priority of the global PHSM Initiative is to support countries in making systematic, context-specific and evidence-informed policies that maximize health benefits while reducing negative consequences for individuals, societies and economies during outbreaks with epidemic and pandemic potential. WHO, in collaboration with the Public Health Agency of Canada is developing a comprehensive decision support tool, the PHSM Decision Navigator, to aid decision-makers in balancing the complexities of making equitable and evidence-informed decisions in establishing, adjusting and lifting PHSM interventions.

The PHSM Decision Navigator is in the initial stages of development, and participants discussed and weighed the relevance, feasibility and value of the tool based on the initial concept and scope presented, as summarized below. Once developed, the tool will be treated as a living document and will be continually updated to reflect the best evidence, key considerations and lessons learned.
3.3.1 Overview of the Decision Navigator
Representatives from the Public Health Agency of Canada gave a presentation about the initial concept and scope of the navigation tool.

3.3.1.1 Objectives
The objectives are:

- to streamline decision-making about the planning, formulation, implementation, adjustment and lifting of PHSM during health emergencies, while enabling flexibility to reflect the needs of local contexts and emerging evidence;
- to outline a decision path for the use of various PHSM, considering their effectiveness and acceptability, and the equity, costs and benefits, and feasibility of these measures.

3.3.1.2 Scope
The Navigator will:

- be a multihazard, pathogen-agnostic resource, applicable to known and unknown pathogens;
- focus on infectious diseases with epidemic and pandemic potential;
- be grounded in the precautionary principle, whereby protective measures are taken in the absence of complete scientific evidence;
- be part of a suite of resources published by WHO and its partners that are intended to complement other tools for emergency preparedness, including disease-specific guidelines and guidance documents; the PHSM Decision Navigator will link and direct users to other relevant tools and resources developed by WHO and partners that can support research and decision-making;
- refer to a combination of PHSM to aid decisions to implement, adjust to scale up or scale down or to lift PHSM, as well as apply social protection policies to reduce unintended negative consequences of measures on health, health systems, communities and economies;
- highlight critical factors, including agility and transparency in decision-making even in times of limited evidence and uncertainties, as well as the availability of resources to support PHSM policy and implementation;
- implement equity as a cross-cutting principle across the decision path. Considerations of vulnerable and marginalized populations are included throughout all stages in terms of policy, implementation strategies and the application of social protection policies.

The target audience includes all stakeholders working on PHSM, including decision-makers across sectors and levels responsible for policy-making and implementation, and partners and other stakeholders that are informing and supporting these activities. Donors, academia, the private sector and other partners may also use the tool to focus technical and financial resources on essential PHSM needs.

3.3.1.3 Content and structure
The PHSM Decision Navigator will be structured to allow users to consider key decision-making inputs and the evidence around them throughout the decision-making cycle, which progresses through and around the stages of formulating, implementing, analysing and adjusting policy.
The Navigator will outline the following key elements:

- a PHSM decision tree that will become activated after initial risk assessments and an analysis of the outbreak have been carried out;
- a menu of PHSM based on WHO’s guidelines, strategies and other guidance documents;
- a range of feasibility considerations (e.g. behavioural, sociocultural factors and costs and benefits) and ethical considerations (i.e. equity and vulnerable populations) that should inform policy and implementation;
- enabling functions and actions related to infodemic management and community engagement, which are essential to increase PHSM uptake and adherence.

3.3.2 Reflections on the Decision Navigator

Participants observed that the Decision Navigator has significant value and practicality. It serves as a timely resource, which can complement ongoing efforts by several WHO Member States that are concurrently developing national decision-making tools for PHSM. The inputs and decision-making cycle outlined in the Navigator align with the processes that several Member States described as occurring after implementing PHSM during the COVID-19 pandemic.

Furthermore, the Navigator can be used to foster understanding of PHSM among stakeholders and to support collaboration among relevant sectors, facilitating their involvement in decision-making.

The Navigator can be particularly valuable if it serves as a centralized repository of information and resources from WHO and its partners and other institutions. In becoming such a repository, the Navigator can support countries to identify and evaluate the multitude of tools and guidance about PHSM and can consolidate the most relevant resources for informed decision-making. Reflections about the Navigator’s content, how to improve clarity and implementation considerations are summarized below.

The proposed content for the Decision Navigator includes:

- a menu of PHSM and links to other resources and relevant evidence;
- information about countries’ experiences with PHSM decision-making, providing examples of effective strategies for setting implementation and adjustment thresholds, and deciding on which PHSM to implement;
- evidence from country success stories, describing how contextual factors were accounted for, how PHSM were implemented and what effects they achieved;
- information on cost–effectiveness and investment cases for implementation;
- resources about social protection policies that can be used to mitigate the socioeconomic impacts of the measures.

The proposals for improving clarity and terminology include:

- developing a glossary to define the terminology used in the Navigator, given the diversity of language used to discuss PHSM;
- providing a visual representation of the tool to make clear that PHSM decision-making follows a nonlinear path, acknowledging the cyclical and iterative processes between decision inputs, evaluations and adjustments;
noting that the supportive elements for PHSM decision-making should emphasize the importance of a mandate, legislation and guidance for implementing PHSM.

When implemented, **the PHSM Decision Navigator** will:

- be applicable to informing decision-making for different types of outbreaks with pandemic or epidemic potential;
- have been tested and piloted at national and subnational levels;
- include step-by-step guidance about when, how and by whom it should be used;
- include guidance about how to consider contextual factors when selecting and implementing PHSM;
- guide decision-making at certain points, but it may not provide comprehensive support from beginning to end; thus, links to other relevant tools, including pathogen-specific guidance, will be especially important.
4. Conclusions and a call to action for PHSM decision-making

Drawing on discussions about countries’ experiences, key resources and tools, and strategic considerations for enhancing PHSM, public health stakeholders from 21 countries deliberated about how the newly established community of practice could advance PHSM research and policy. Their discussions culminated in a call to action for PHSM.

In the final session of the meeting, participants independently reflected on the question, What collective commitment do we need to strengthen PHSM and create a ripple effect in countries?

The WHO PHSM Secretariat consolidated participants’ written reflections into a draft call to action for PHSM, which was presented and discussed in a plenary session. Feedback was incorporated in real time, and a final call to action was agreed among participants.

4.1 A call to action

We are working together to strengthen equitable, balanced and context-specific public health and social measures (PHSM) based on the best evidence to reduce the transmission risk and scale of infectious diseases during health emergencies.

We prioritize community engagement in preparedness and response efforts, and advance PHSM policy and implementation to ensure protection of health, livelihoods and well-being.

As the final proposition of the meeting, Building coalitions for strengthening public health and social measures during health emergencies, and leveraging lessons from previous health emergencies, research and data, we call on all countries to commit to undertaking the following actions:

1. to position PHSM as an essential countermeasure alongside vaccines and therapeutics for epidemic and pandemic preparedness and response;
2. to prioritize equity as the primary guiding principle for PHSM implementation in communities;
3. to harness the power of PHSM through enabling functions, such as infodemic management, risk communication and community engagement;
4. to ensure collaboration, coordination and transparency across sectors, disciplines and levels to lead PHSM efforts;
5. to frame the narrative of PHSM as a critical asset for global preparedness for emergencies;
6. to support a World Health Assembly resolution on PHSM to sustain the momentum of focused investment in PHSM research and implementation.
5. Next steps

As a result of the important reviews received on the four key technical products during the meeting, they will be revised and prepared for a multicountry pilot. The feedback shared during this meeting will be taken on board to inform the future strategic directions and activities of WHO’s efforts to strengthen PHSM for future health emergencies.

Building on the momentum and interest in PHSM, fostered by meeting participants representing the public health sector, a second WHO global technical consultation on PHSM during health emergencies will take place in November 2023, bringing together not only representatives from the public health sector but also partners from non-health sectors, funders, academia and other agencies of the United Nations.

Various outputs from this meeting will be taken forward during the November consultation. One of the primary outputs of this meeting will focus on critical initial actions to be taken by various health and non-health sectors during the initial stage of an outbreak. In addition, the call to action will be revisited with partners holding multisectoral and multilevel views to propel and affirm global commitments to PHSM as an essential countermeasure for epidemic and pandemic preparedness and response and as a critical asset for community protection.
Annex 1. List of participants

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WHO country offices
<table>
<thead>
<tr>
<th>Regional Office for the Americas/Pan American Health Organization</th>
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</thead>
<tbody>
<tr>
<td><strong>Ms Andrea Patricia Villalobos Rodriguez</strong>&lt;br&gt;Technical Officer&lt;br&gt;Influenza Preparedness&lt;br&gt;United States of America</td>
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<th>Regional Office for South-East Asia</th>
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<tr>
<td><strong>Dr Yuka Jinnai</strong>&lt;br&gt;Technical Officer&lt;br&gt;Health Emergency Information and Risk Assessment&lt;br&gt;WHO Health Emergencies Programme&lt;br&gt;India</td>
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<th>Regional Office for Europe</th>
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<tr>
<td><strong>Ms Tanja Schmidt</strong>&lt;br&gt;Team Lead&lt;br&gt;Preparedness, Readiness and Capacity Building&lt;br&gt;Country Health Emergency Preparedness and IHR&lt;br&gt;WHO Health Emergencies Programme&lt;br&gt;Denmark</td>
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<td><strong>Mr Dominic Cocciolone</strong>&lt;br&gt;Consultant&lt;br&gt;Country Health Emergency Preparedness and IHR&lt;br&gt;WHO Health Emergencies Programme&lt;br&gt;Denmark</td>
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<th>Regional Office for the Eastern Mediterranean</th>
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<td><strong>Dr Ahmad Alahmari</strong>&lt;br&gt;Technical Officer&lt;br&gt;Country Health Emergency Preparedness and International Health Regulations 2005 (IHR)&lt;br&gt;WHO Health Emergencies Programme&lt;br&gt;Egypt</td>
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<td><strong>Ms Fatima Arifi</strong>&lt;br&gt;Consultant&lt;br&gt;Country Health Emergency Preparedness and IHR&lt;br&gt;WHO Health Emergencies Programme&lt;br&gt;Egypt</td>
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## Annex 2. Agenda

**Day 1: Wednesday 14 June 2023**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>8:30–9:00</td>
<td>Registration</td>
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<tr>
<td>9:00–9:30</td>
<td><strong>Session 1.1</strong>&lt;br&gt;Welcome remarks</td>
</tr>
<tr>
<td>9:30–10:50</td>
<td><strong>Session 1.2</strong>&lt;br&gt;Introduction&lt;br&gt;Brief country stories about PHSM</td>
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<tr>
<td>10:50–11:10</td>
<td><strong>Session 1.3</strong>&lt;br&gt;Setting the scene: WHO’s current efforts in strengthening epidemic and pandemic preparedness and prevention</td>
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<tr>
<td>11:10–11:30</td>
<td>Networking break and group photo</td>
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<tr>
<td>11:30–12:30</td>
<td><strong>Session 1.4</strong>&lt;br&gt;Peer-to-peer exchange: country insights, experiences and paths for progress</td>
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<tr>
<td>12:30–13:30</td>
<td>Lunch break</td>
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<tr>
<td>13:30–14:00</td>
<td><strong>Session 1.4 (continued)</strong></td>
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<tr>
<td>14:00–14:50</td>
<td><strong>Session 1.5</strong>&lt;br&gt;Lightning talks on WHO efforts and technical guidance at global and regional levels</td>
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<tr>
<td>14:50–15:10</td>
<td>Networking break</td>
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<tr>
<td>15:10–16:55</td>
<td><strong>Session 1.6</strong>&lt;br&gt;Review PHSM conceptual framework</td>
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<tr>
<td>16:55–17:00</td>
<td>Adjourn</td>
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<tr>
<td>18:15</td>
<td>Networking reception</td>
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### Day 2: Thursday 15 June 2023

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<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>9:00–9:15</td>
<td><strong>Session 2.1</strong></td>
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<td></td>
<td>Reflect on and recap Day 1</td>
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<tr>
<td>9:15–10:55</td>
<td><strong>Session 2.2a</strong></td>
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<td></td>
<td>Review global guidance on monitoring PHSM policies</td>
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<td>9:15–10:55</td>
<td><strong>Session 2.2b</strong></td>
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<td></td>
<td>Review study protocols on PHSM effectiveness</td>
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<tr>
<td>10:55–11:10</td>
<td>Break</td>
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<tr>
<td>11:10–12:30</td>
<td><strong>Session 2.3</strong></td>
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<td>Scenario exercise: charting PHSM policy questions</td>
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<tr>
<td>12:30–13:30</td>
<td>Lunch break</td>
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<tr>
<td>13:30–15:10</td>
<td><strong>Session 2.4</strong></td>
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<td></td>
<td>Introduction to the PHSM Decision Navigator</td>
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<tr>
<td>15:10–15:30</td>
<td>Networking break</td>
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<tr>
<td>15:30–16:10</td>
<td><strong>Session 2.5</strong></td>
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<td></td>
<td>Charting a way forward</td>
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<tr>
<td>16:10–16:30</td>
<td><strong>Next steps and adjourn</strong></td>
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Annex 3. Updated version of the conceptual framework for public health and social measures in the context of infectious disease transmission

Based on the feedback received during the meeting and in consultation with the WHO internal Public Health and Social Measures (PHSM) Steering Group, the initial conceptual framework was revised as illustrated in Fig. A3.1. The framework continues to be a living document, allowing for adjustments and revisions as WHO's work on PHSM progresses.

Fig. A3.1. Updated conceptual framework for public health and social measures – first level
Fig. A3.2. Updated conceptual framework for public health and social measures – second level

**PHSM according to high-level categories**

- Active case finding and contact identification measures
- Personal protection measures
- Environmental measures
- Social measures
- International travel and trade measures

**Operating mechanisms**

- Measures which reduce exposure
- Measures which make exposure safer

**Contextual factors:**
- Outbreak-related epidemiological data
- Stage of the outbreak
- Availability of medical countermeasures
- Health system capacity
- Response capacity
- Socio-economic context
- Cultural context
- Concurrent emergencies and conflicts
- Context-specific epidemiological data like age structure, prevalence of NCDs etc.

**Principles guiding the decision and implementation stages:**
- Equity focus
- Multisectoral coordination
- Community involvement

**Enabling functions**

- Risk Communication and Community Engagement
- Infodemic Management

**Bundle of context-specific PHSM**

- Combination of measures and stringency
  - Mode of enactment: inform, guide, restrict or eliminate behavioral options
  - Target populations: e.g. general population, children, older people, confirmed cases, contacts, high-risk groups
  - Settings: Businesses and services, Educational settings, Healthcare settings (for general public), Home, Informal settlements and slums, Leisure/social/cultural/faith-based settings, Non specified, Nursing and care homes
  - Point-of-entry / transportation – air, Point-of-entry / transportation – land, Point-of-entry / transportation – water, Prisons, Camps and settlements for refugees or internally displaced persons

**Mitigation measures**

- Social protection policies and programmes
- Community-led initiatives

**PHSM implementation package**

**Uptake and adherence**

- Transmission-related outcomes
- Health, social and economic consequences

→ Monitoring and evaluation of PHSM implementation
→ Situation analysis using epidemiological data, behavioural and infodemic insights
Table A3.1. Categories of public health and social measures

<table>
<thead>
<tr>
<th>First-level PHSM category</th>
<th>Definition</th>
<th>Examples</th>
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| Active case-finding and contact identification measures | Systems and actions implemented to identify, track and manage potential and confirmed cases of disease; these may include case-finding, testing and contact tracing, as well as isolation (i.e. to separate individuals with a confirmed or suspected infection) and quarantine (i.e. to separate individuals at high risk of infection from those who are likely to already be infected) | • Testing  
• Screening  
• Isolation  
• Quarantine |
| Personal protection measures                   | Measures comprising the use of personal protective equipment as well as specific behaviours that reduce the risk of individuals transmitting the disease or becoming infected with a pathogen with epidemic or pandemic potential | • Hand hygiene  
• Respiratory etiquette  
• Condom use  
• Safe food handling  
• Bednet use |
| Environmental measures                         | Measures targeting the physical infrastructure/environment including the human-animal interface through modifications, re-purposing and/or appropriately maintaining existing or newly set up structures to limit transmission of a pathogen with epidemic or pandemic potential | • Ventilation  
• Surface cleaning  
• Water and sanitation measures  
• Solid waste management  
• Window and door screens |
| Social measures                                | Measures at national and subnational levels comprising (i) modifications to social interactions between individuals and groups of people; (ii) adaptation, cancellation or modifications to the timing of services or activities; and (iii) adaptations or restrictions to movement within and between specific settings and within or across national borders | • Physical distancing  
• Modification of mass gatherings  
• School measures  
• Business measures  
• Domestic movement restrictions |
| International travel and trade measures        | Measures that use a risk-based approach to reduce the travel- and trade-associated exportation, importation and onward transmission of a pathogen with epidemic or pandemic potential across borders<sup>a</sup> | • Travel advice  
• Entry and exit screening  
• Quarantine upon arrival  
• Travel bans  
• Testing before departure and upon arrival |

PHSM: public health and social measures.
