

Framework of a national program for preventing and controlling diseases caused by respiratory viruses with epidemic and pandemic potential



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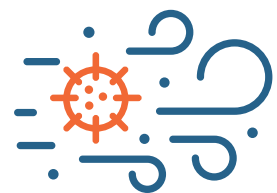
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Introduction

At the global, national, and regional levels, there are several guidelines and guides regarding the preparedness, prevention, surveillance, and control of diseases caused by respiratory viruses; most initiatives focus on specific virus events or cases. During the coronavirus disease 2019 (COVID-19) pandemic, it has been found that even when there are strategies designed and planned for pandemics, it is necessary to strengthen and improve them. Planning for imminent threats, including those posed by respiratory viruses, contributes to strengthening the core capacities of the International Health Regulations (IHR [2005]) (1).

Countries have used as a guide the [Global Influenza Strategy 2019–2030](#) (2) to achieve and maintain the progress of national seasonal influenza programs and to improve response capacity during the current COVID-19 pandemic. Based on the global strategy against seasonal influenza, Pan American Health Organization (PAHO) has developed this framework to jointly prepare a cooperation plan for the countries of the region in order to analyze, improve, and expand existing capacities for more comprehensive preparedness and response to events or situations caused by influenza and other respiratory viruses (ORVs) with epidemic and pandemic potential. Additionally, this framework seeks to generate and optimize bidirectional lines of technical cooperation based on established national strategies.

The framework and analysis of national capacities presented in this publication are a vehicle to guide capacity development for early detection and control of diseases caused by respiratory viruses, through the fulfillment of five objectives: 1) strengthen surveillance; 2) expand prevention and control; 3) strengthen epidemic and pandemic preparedness and response; 4) promote operational research; and 5) strengthen risk communication and community engagement.

For each objective, its essential components (programmatic elements) have been determined, each with three capacity levels: level A is the minimum capacity, level B represents the intermediate capacity, and level C is the highest capacity. The application of this framework is a qualitative diagnostic tool for countries to analyze their degree of compliance with the minimum and more complex capacities of the elements and could be part of a functional national program.

This framework is not an assessment tool to monitor the implementation of the Global Influenza Strategy 2019–2030 (2) or the Pandemic Influenza Preparedness Framework (also known as the “PIP Framework”) (3, 4), nor is it intended to create the expectation that each country will progress beyond level A.

The objective of this framework is to encourage countries to implement and sustain capacities to the highest level possible within what could be a program for respiratory viruses with epidemic and pandemic potential, as well as to help them build, maintain, and strengthen national core capacities under the IHR (2005) and its Annex 1A on the basic capacity necessary for surveillance and response tasks (1).

1. Purpose and scope

The objective of this framework is to promote the management and comprehensive planning of surveillance, the early detection of events with possible risk to public health, as well as the prevention and control of respiratory diseases with epidemic and pandemic potential in the Region of the Americas. It also aims to encourage countries to maintain the highest level of capacity possible based on the analysis of their national capacities for both seasonal influenza and ORVs (see section 4) in order to identify challenges and facilitate synergistic and integrated developments.

This framework established by PAHO facilitates the assimilation of the following recent publications: 1) Strengthening pandemic preparedness planning for respiratory pathogens (5); 2) Preparedness and resilience for emerging threats Module 1: Planning for respiratory pathogen pandemics (6); and 3) “Crafting the Mosaic”: a framework for resilient surveillance for respiratory viruses of epidemic and pandemic potential (7).

2. Methodology

The Infectious Hazard Management (IHM) Unit of PAHO’s Health Emergencies Department (PHE) has developed the first version of the framework using technical contributions from other units and departments of the organization, and experts from the Region.

For the validation of the content of this framework, PAHO invited regional experts in surveillance, laboratory testing, disease prevention and control, pandemic preparedness, and research to participate in an ad hoc expert consultation on influenza and ORVs. A total of 21 experts from 14 countries in the Region participated, reviewed, and agreed on the programmatic elements and the capacity descriptions (minimum or level A, intermediate or level B, and high or level C). A consensus of opinion was obtained using the online Delphi method.

After the expert consensus process, PAHO validated the framework through a pilot test in Chile and Guatemala (8), where the process of planning, execution (technical and high-level meetings) and analysis of results was revised. The use of the framework strengthened each country with the awareness of their existing capacities for each programmatic element. Finally, the main findings, recommendations and specific actions needed to maintain the highest-level capacities possible were presented for incorporation in the National Action Plan (short-, medium-, and long-term actions).

The results of the consensus and pilot test allowed the validation and consolidation of this framework and demonstrated the benefit of discussions to recognize and analyze existing capacities and the challenges to develop or maintain them.



3. Implementation process

Listed below are the suggested steps for country implementation of this initiative. Also included is the process of planning, executing, and analyzing the results of the implementation of the framework.

Suggested steps to advance the implementation of this framework:

1. Communicate to the PAHO country office the Ministry of Health's interest in implementing the respiratory virus framework and request technical cooperation for initiating the implementation process.
2. Define the type of technical cooperation from PAHO that the country requires to implement this framework.
3. Designate a person responsible for surveillance of influenza and ORVs (technical focal point) and designate a high-level official (management focal point) to facilitate bilateral and multisectoral coordination activities among the different cooperation agencies involved.
4. Collaborate with PAHO to plan national workshop(s) using the following themes as a guide:
 - Design and planning: coordination, identification of participants, methodology, and logistics
 - Execution: technical and high-level meetings, decide if in-person or virtual meetings
 - Analysis of results: includes analysis and follow-up of the work plan resulting from this exercise.
5. Conduct the national workshop(s):
 - Analyze the country's capacities for early detection and control of diseases caused by respiratory viruses based on the levels described in the table below.
 - Document and provide findings and recommendations.
 - Create a National Action Plan (short-, medium-, and long-term actions by programmatic elements defined for each objective).
6. Officially submit the final report to the high-level national authorities accompanied by the execution strategy and follow-up activities of the National Action Plan.

4. Analysis of national capacities

The following table presents the five objectives with their respective programmatic elements and describes progressive levels of capacities that could be included in a national program for the prevention and control of diseases caused by respiratory viruses with epidemic and pandemic potential. Additionally, each strategic objective is aligned with the core capacities under the IHR framework (2005) (1) described in the self-assessment instrument for the States Parties Self-Assessment Annual Report (SPAR) (9).

Table of capacity levels, by objective, for early detection and control of diseases caused by respiratory viruses with epidemic and pandemic potential

Objective 1. Surveillance

Programmatic elements	LEVEL A (Minimum capacities)	LEVEL B (Intermediate capacities) Additional to level A	LEVEL C (High capacities) Additional to levels A and B
Surveillance of influenza and ORVs	<ul style="list-style-type: none"> Severe acute respiratory infection (SARI) surveillance performance is in accordance with global and regional standards. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) surveillance is integrated into virological surveillance for influenza and ORVs. 	<ul style="list-style-type: none"> Performance of SARI surveillance (in hospitalized patients, ICU admissions and deaths) and influenza-like illness (ILI) are in accordance with global and regional standards. Surveillance of SARS-CoV-2 is integrated with the virological and epidemiological surveillance of influenza and ORVs. 	<ul style="list-style-type: none"> SARI and ILI surveillance is carried out with full integration of the epidemiology and laboratory components and includes surveillance of unusual respiratory events. There are criteria to increase and reduce the intensity of surveillance actions.
Laboratory capacity for influenza and ORVs	<ul style="list-style-type: none"> Has national capacity to perform immunofluorescence (IF)^a for influenza (small countries/territories) or polymerase chain reaction (PCR) for SARS-CoV-2. Countries or territories that exclusively perform IF testing send positive influenza samples to the subregional reference laboratory for further molecular testing.^b Shares virological surveillance data through FluNet.^c 	<ul style="list-style-type: none"> Has an established NIC (National Influenza Centre) and is recognized by WHO. Participates annually in WHO EQAP. Performs PCR for influenza A/B typing, influenza A sub-typing, and influenza B genotyping. The NIC reports new or unusual influenza viruses to their national authorities according to national and IHR 2005 guidelines:^d submits samples to the WHO CC. 	<ul style="list-style-type: none"> Has sequencing capacity (in-house capacity or samples sent to a reference laboratory) and performs antigenic characterization and/or other <i>additional</i> viral tests,^e such as antiviral resistance. Shares genetic sequences and metadata associated with viruses of public health importance, such as influenza and/or SARS-CoV-2, in a timely manner through publicly accessible database initiatives, such as GISAID.^f



Integration and management of electronic data	<ul style="list-style-type: none"> • Manages clinical, epidemiological, and laboratory data independently (not integrated). 	<ul style="list-style-type: none"> • Manages clinical, epidemiological, and laboratory data in an organized and structured manner but not in a central electronic platform. 	<ul style="list-style-type: none"> • Manages clinical, epidemiological, laboratory, and vaccination data in an integrated manner with interoperability standards, e.g., an electronic platform such as PAHO Flu.⁹
Reporting and analysis of respiratory virus surveillance data	<ul style="list-style-type: none"> • Shares data at the regional/global level through FluNet.^c 	<ul style="list-style-type: none"> • Shares data at the regional/global level through FluNet^c and FluID,^h and complies with the reporting indicators.ⁱ • Shares at least one PISA^j (Pandemic influenza severity assessment) indicator (regional/global level) to assess risk at the national level. 	<ul style="list-style-type: none"> • Shares data at the regional/global level through FluNet^c and FluID,^h and complies with the reporting and timeliness indicators.^k • In addition to level B, the PISA^j indicator is used to take actions in relation to the escalation or de-escalation of public health measures. • Captures within the SARI dataset nominal mortality data that may be used to assess severity.
Publication and dissemination of information	<ul style="list-style-type: none"> • Publishes reports with respiratory virus surveillance analysis when detected. • Disseminates information to a limited number of parties involved in national and subnational surveillance. • Disseminates information at the regional level. 	<ul style="list-style-type: none"> • Periodically publishes reports with analyses of respiratory virus surveillance. • Disseminates information among different sectors at the national level. 	<ul style="list-style-type: none"> • Publishes weekly reports digitally with integrated analyses of respiratory virus surveillance data. • In addition to level B, shares directly with surveillance participants and disseminates information publicly.



Surveillance of the human–animal interface	<ul style="list-style-type: none"> Performs surveillance independently between humans and animals (not integrated). 	<ul style="list-style-type: none"> Performs integrated surveillance of humans and animals. Has a national strategy for the periodic exchange of information and joint analysis of the epidemiological situation between human and animal health sectors. 	<ul style="list-style-type: none"> Has a developed and evaluated joint national plan for the human–animal interface. Risk analysis is carried out jointly.
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Note: Covers core capacities C4 (laboratory), C5 (surveillance), and C12 (zoonotic diseases). See: World Health Organization. International Health Regulations (2005): States Parties Self-assessment Annual Reporting Tool. Second edition. Geneva: WHO; 2021. Available from: <https://www.who.int/publications/i/item/9789240040120>

- ^a Immunofluorescence can be extended to ORVs according to the capacity of the laboratory.
- ^b The subregional reference laboratory selects and sends a subset of positive representative samples to the WHO collaborating centre.
- ^c FluNet online dashboard: online tool for influenza virological surveillance. See: Pan American Health Organization. FluNet. Washington, D.C.: PAHO; 2023. Available from: https://ais.paho.org/phil/viz/ed_flu.asp.
- ^d World Health Organization. International Health Regulations (2005). Third edition. Available from: <https://www.who.int/publications-detail-redirect/9789241580496>.
- ^e Additional viral tests: hemagglutination inhibition assay, antiviral resistance tests (neuraminidase inhibition assay, sequence antiviral resistance mutations detection).
- ^f Global Initiative on Sharing All Influenza Data: Initiative that provides open access to genomic data of the influenza virus and the coronavirus responsible for the COVID-19 pandemic. See: Global Initiative on Sharing All Influenza Data. GISAID. Munich: GISAID; [undated]. Available from: <https://gisaid.org/>.
- ^g PAHOFlu: Online System for Sentinel Surveillance of Severe Acute Respiratory Infection (SARI) and Influenza-like illness (ILI). Washington, D.C.: PAHO; 2023. Available from: <https://vigilanciaflu.paho.org/Account/Login?ReturnUrl=%2F>.
- ^h fluID (Flu Informed Decisions) online dashboard: online tool that synchronizes influenza epidemiological data across the region. See: Pan American Health Organization. Flu Informed Decisions. Washington, D.C.: PAHO; 2023. Available from: <https://ais.paho.org/phil/viz/flumart2015.asp>.
- ⁱ Reporting indicator: the number of epidemiological weeks for which new and updated data were reported by Friday at 3:00 p.m. (Eastern Standard Time, United States of America).
- ^j World Health Organization. Pandemic Influenza Severity Assessment Tool (PISA): WHO guidance for assessing influenza severity in epidemics and pandemics. Geneva: WHO; 2017. Available from: <https://apps.who.int/iris/handle/10665/259392>.
- ^k Timeliness indicator: the number of epidemiological weeks for which new/updated data for any week were reported by Friday, 3:00 p.m. (Eastern Standard Time).

CC: collaborating centre; EQAP: External Quality Assessment Project; ICU: intensive care unit; IF: immunofluorescence; IHR: International Health Regulations; ILI: influenza-like illness; NIC: National Influenza Centre; ORVs: other respiratory viruses; PCR: polymerase chain reaction; PISA: Pandemic influenza severity assessment; SARI: Severe acute respiratory infection; SARS-CoV-2: Severe acute respiratory syndrome coronavirus 2; WHO: World Health Organization.

Objective 2. Prevention and control

Programmatic elements	LEVEL A (Minimum capacities)	LEVEL B (Intermediate capacities) Additional to level A	LEVEL C (High capacities) Additional to levels A and B
Seasonal influenza vaccination	<ul style="list-style-type: none"> • Has an annual vaccination plan that includes seasonal influenza vaccination. • The seasonal influenza vaccination plan includes at least one target population (health care workers, older adults, pregnant women, people with chronic diseases, and children). • Has the capacity to measure the number of vaccine doses administered. 	<ul style="list-style-type: none"> • Has an annual plan with target populations clearly identified and a vaccination strategy aligned to objectives. • The annual vaccination plan includes at least two target populations (e.g., health workers, older adults, pregnant women, people with chronic diseases, and children). • Has the capacity to measure vaccination coverage at the national level. 	<ul style="list-style-type: none"> • The annual plan includes the target population, strategies and logistics for the distribution and administration of the vaccine. • The annual vaccination plan includes three or more target populations (e.g., health workers, older adults, pregnant women, people with chronic diseases, and children). • Has the capacity to measure vaccination coverage at the national and subnational levels by target groups included in the annual plan.
COVID-19 vaccination	<ul style="list-style-type: none"> • Has an annual plan with target population for COVID-19 vaccination. • The annual vaccination plan for COVID-19 includes at least one target population (health workers, older adults, pregnant women, people with chronic diseases, and children). • Has the capacity to measure the number of doses of COVID-19 vaccines administered. 	<ul style="list-style-type: none"> • Has an annual plan with target populations clearly identified and a vaccination strategy aligned to objectives. • The annual vaccination plan includes two target populations (e.g., health workers, older adults, pregnant women, people with chronic diseases, and children). • Has the capacity to measure vaccination coverage at the national level. 	<ul style="list-style-type: none"> • The annual plan includes objectives, target population, strategy, and logistics. • The annual vaccination plan includes three or more target populations (e.g., health workers, older adults, pregnant women, people with chronic diseases, and children). • Has the capacity to measure vaccination coverage at the national and subnational levels by target groups included in the annual plan.

Public health and social measures	<ul style="list-style-type: none"> • Has national initiatives or protocols regarding the implementation of individual actions (such as hand washing, covering coughs and sneezes, wearing a mask, and maintaining physical distance) and community-level measures. 	<ul style="list-style-type: none"> • Has the capacity to periodically assess events caused by a respiratory pathogen and adjust social and public health measures at the national and intermediate levels. • Has initiatives or protocols at the national and intermediate levels. 	<ul style="list-style-type: none"> • Has a monitoring and evaluation system for the implementation and follow-up of individual actions and collective measures, including lessons learned, that is adjusted, updated, and reviewed according to the results of the risk assessment carried out at different levels (national, intermediate, and local).
Clinical management (prophylaxis and treatment)	<ul style="list-style-type: none"> • Has a national guide (clinical guidelines, protocols) with guidance for comprehensive clinical management of SARI patients, including the use of antivirals. 	<ul style="list-style-type: none"> • The national guideline contains indications on the use of oseltamivir or other antivirals for influenza and ORVs, including respiratory syncytial virus (RSV), and the criteria for discontinuation. • Monoclonal antibodies against RSV are being commercialized in the country (e.g., palivizumab). 	<ul style="list-style-type: none"> • Medicines for treatment/prophylaxis of influenza and ORVs are on the list of essential medicines of the country/member state. • Monoclonal antibodies against RSV are being marketed in the country and there is a national plan, as well as guidelines, for their use in children at high risk of severe symptoms due to RSV.
Organization of health care services	<ul style="list-style-type: none"> • Has local initiatives or protocols for the reorganization of health services during periods of high incidence of respiratory viruses in the hospital or outpatient sector but does not have a national plan. 	<ul style="list-style-type: none"> • Has a national contingency plan for the reorganization of health services during periods of high incidence of respiratory viruses in both hospital and outpatient sectors. 	<ul style="list-style-type: none"> • National plan includes the reorganization of health services with measurement of indicators^a (as criteria to increase and reduce emergency response operations and initiate the recovery of services and normal activities).



Infection prevention and control (IPC)

- At the national level, the country has a team and an infection prevention and control plan.
- Has national guidelines to implement standard precautions in institutions.
- Has a national IPC program and its eight basic components.^b
- Has national isolation guidelines and precautions according to transmission (airborne, droplets, contact).
- Has a national IPC program that includes the reorganization of triage, establishment of patient flow circuits, management of areas for cohorting patients, or other ways of organizing health facilities to guarantee adequate isolation and the reduction of nosocomial transmission during circulation seasons of respiratory viruses.
- The national IPC program works together with other programs (e.g., tuberculosis, respiratory protection program, vaccination).
- Has implemented a national respiratory protection program.



<p>Requirements for supplies, medicines, personal protective equipment (PPE)</p>	<ul style="list-style-type: none"> • Has identified certified suppliers (national or international) with the capacity to accommodate sudden increases in demand for PPE, medications, laboratory equipment and reagents. • Has a national definition of critical stock by type of emergency (or has criteria) to establish an inventory of supplies and medicines with updated and verified information. • Has an updated and verified inventory of PPE supplies needed for emergencies. • Has nationalization procedures, and exceptional emergency procedures to verify quality, accept donations or make emergency purchases of supplies, medicines and equipment related to pandemic or ORV events. 	<ul style="list-style-type: none"> • The criteria for the inventory of supplies and medicines are established for the health services and have known replenishment mechanisms. • Has an annual training plan for the management of PPE that includes a system to identify personnel who require training. • Has procedures in place to expand storage capacity, cold chain, and logistics concerning space, transportation, and personnel. 	<ul style="list-style-type: none"> • The inventory of supplies and medicines includes known acquisition and distribution mechanisms and identified response times. • Has verified quality control procedures to facilitate the purchase of medicines, supplies, and equipment necessary to deal with a pandemic or epidemic situation in an emergency. • Has an activation plan for trained personnel capable of handling the PPE available.
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Notes: Covers core capacities C7 (health emergency management), C8 (health service delivery), C9 (infection prevention and control), and C11 (points of entry and cross-border health). See: World Health Organization. International Health Regulations (2005): States Parties Self-assessment Annual Reporting Tool. Second edition. Geneva: WHO; 2021. Available from: <https://www.who.int/publications/i/item/9789240040120>.

^a Examples of indicators: percentage occupancy of hospital and intensive care unit beds, hospital mortality, and mortality in the intensive care unit.

^b Core components of the national infection prevention and control program: 1) Infection prevention and control programs; 2) Infection prevention and control guidelines at the national level and at the health care facility level; 3) Education and training in infection prevention and control; 4) Surveillance of health care-associated infections; 5) Multimodal strategies for the implementation of infection prevention and control activities; 6) Monitoring, evaluation, and notification of results; 7) Workload, staffing, and bed occupancy at the health care facility level; 8) Built environment, materials, and equipment for infection prevention and control at the health care facility level. See: World Health Organization. Guidelines on core components of infection prevention and control programmes at the national and acute care facility level. Geneva: WHO; 2016. Available from: <https://apps.who.int/iris/handle/10665/251730>.

COVID-19: coronavirus disease 2019; IHR: International Health Regulations; IPC: infection prevention and control; ORV: other respiratory virus; PPE: personal protective equipment; RSV: respiratory syncytial virus.

Objective 3. Pandemic preparedness and response

Programmatic elements	LEVEL A (Minimum capacities)	LEVEL B (Intermediate capacities) Additional to level A	LEVEL C (High capacities) Additional to levels A and B
Preparedness and response plan	<ul style="list-style-type: none"> • Reports the core capacities annually, using the SPAR^a tool in the context of the IHR (2005).^b • Has a multisectoral national committee to support actions for preparedness and response to epidemics and pandemics caused by respiratory pathogens. • Has developed or updated pandemic plan for influenza and ORVs based on lessons learned from influenza A(H1N1) pdm09 and COVID-19 pandemics, and on global and regional recommendations. 	<ul style="list-style-type: none"> • The national pandemic preparedness plan for influenza and ORVs includes the actions included in the checklist for respiratory pathogen pandemic preparedness planning.^c • Simulation exercises are conducted with stakeholders to test and validate the plan, based on the latest global and regional recommendations. 	<ul style="list-style-type: none"> • The country's multisectoral national committee meets annually to track the implementation, monitoring, and continuous improvement of the plan. • It has sustained investments, funding, and monitoring of pandemic preparedness from past pandemics.
National plan for mobilization of vaccines against pandemic influenza and ORVs	<ul style="list-style-type: none"> • Has a national plan for deployment and vaccination against pandemic influenza or ORVs with pandemic potential (e.g., COVID-19). • Has a cold chain inventory (limited capacity). • Has a basic ESAVI^d (events supposedly attributable to vaccination or immunization) notification system. 	<ul style="list-style-type: none"> • Has a national implementation and vaccination plan for mobilizing vaccines against pandemic influenza and potentially pandemic ORVs with the minimum necessary capacities to implement it. • Has adequate cold chain capacity. • It reports and analyzes ESAVI at the national level and has the capacity for causality assessment. 	<ul style="list-style-type: none"> • Has carried out exercises simulating the deployment of vaccines against pandemic influenza and ORVs with pandemic potential. • Cold chain capacity is adequate to respond to emergencies and maintain the regular vaccination program. • ESAVIs are analyzed at the national and subnational levels, along with capacities for causality assessment and event investigation.

Rapid response team (RRT)	<ul style="list-style-type: none"> • Has an RRT with terms of reference defined at the national level. • There is a legislative framework that ensures the allocation of resources in response to emergencies at the national level. 	<ul style="list-style-type: none"> • Has an RRT with terms of reference at the subnational level (provinces/regions) and regular trainings that include simulations such as tabletop exercises. 	<ul style="list-style-type: none"> • Has developed simulations using the principles of the Incident Management System. • Has sustained investments and financing for the response. • Has an operational structure and legal support that allows it to implement actions at all levels, while supporting territories, local governments, or private entities, as appropriate.
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Notes: Covers the C7 core capacities (management of health emergencies). See: World Health Organization. International Health Regulations (2005): States Parties Self-assessment Annual Reporting Tool. Second edition. Geneva: WHO; 2021. Available from: <https://www.who.int/publications/i/item/9789240040120>.

^a World Health Organization. International Health Regulations (2005): States Parties Self-assessment Annual Reporting Tool. Second edition. Geneva: WHO; 2021. Available from: <https://www.who.int/publications/i/item/9789240040120>.

^b World Health Organization. International Health Regulations (2005). Third edition. Geneva: WHO; 2016. Available from: <https://www.who.int/publications/i/item/9789241580496>.

^c World Health Organization. A checklist for respiratory pathogen pandemic preparedness planning. Geneva: WHO; 2023. Available from: <https://www.who.int/publications/i/item/9789240084513>.

^d Pan American Health Organization. ESAVI events supposedly attributable to vaccination or immunization. Washington, D.C.: PAHO; 2022. Available from: https://iris.paho.org/bitstream/handle/10665.2/55945/9789275123867_eng.pdf?sequence=1&isAllowed=y.

A(H1N1)pdm09: influenza A virus subtype H1N1 causing the 2009 pandemic; COVID-19: coronavirus disease 2019; ESAVI: event supposedly attributable to vaccination or immunization; IHR: International Health Regulations; ORVs: other respiratory viruses; RRT: rapid response team; SPAR: State Party Annual Report.

Objective 4. Operational research

Programmatic elements	LEVEL A (Minimum capacities)	LEVEL B (Intermediate capacities) Additional to level A	LEVEL C (High capacities) Additional to levels A and B
Epidemiological studies of respiratory virus circulation and disease burden	<p>Has conducted at least one of the following studies:</p> <ul style="list-style-type: none"> • Circulation patterns of respiratory viruses (seasonal study). • Descriptive study of the circulation of influenza types and subtypes, including influenza B lineages. 	<ul style="list-style-type: none"> • Has conducted at least one study of the medical burden of disease (morbidity/mortality) of a respiratory virus. 	<p>Has conducted at least one of the following studies:</p> <ul style="list-style-type: none"> • Periodic study of the burden of disease due to influenza and ORVs (morbidity/mortality). • Studies of the economic burden of the disease (cost of the disease) that allow the evaluation of interventions or programs. • Molecular epidemiology or genomic surveillance study related to respiratory viruses of public health importance.
Effectiveness and impact of vaccination	<ul style="list-style-type: none"> • Has conducted or participated in at least one vaccination effectiveness or impact study. 	<ul style="list-style-type: none"> • Has participated in a study on the impact of vaccination. • Periodically conducts studies on the effectiveness of influenza and COVID-19 vaccination. 	<ul style="list-style-type: none"> • Has used and/or adjusted the national vaccination policy based on the studies of vaccination effectiveness or impact conducted by the country.
Communication and dissemination of operational research results	<ul style="list-style-type: none"> • Communicates the findings of operational research and analysis of respiratory virus surveillance to stakeholders on an ad hoc basis. 	<ul style="list-style-type: none"> • Regularly publishes, according to a preset schedule, reports with analyses of respiratory virus surveillance. • Disseminates information from respiratory virus surveillance to all participants in the surveillance system. 	<ul style="list-style-type: none"> • Publishes weekly reports of respiratory virus surveillance analyses. • Regularly shares information directly with surveillance system participants and disseminates information publicly.

Note: COVID-19: coronavirus disease 2019; ORVs: other respiratory viruses.

Objective 5. Risk communication and community participation

Programmatic elements	LEVEL A (Minimum capacities)	LEVEL B (Intermediate capacities) Additional to level A	LEVEL C (High capacities) Additional to levels A and B
<p>System for risk communication and community engagement (RCCE) for unusual events and emergencies</p>	<ul style="list-style-type: none"> • Has designated a risk communication lead or team to work on two-way communication with the public. This individual or team has clearly outlined responsibilities and is dedicated to communication tasks during a public health event at the national level. • Has assessed existing capacities and needs within government ministries and key partner agencies and established an official channel to discuss RCCE priorities and define a supporting workplan. 	<ul style="list-style-type: none"> • Has established a dedicated risk communication unit or team to work with a national all-hazard, multisectoral emergency RCCE plan. • Has developed and implemented training plans for building effective communication skills in Ministry of Health staff at the national and subnational levels. 	<ul style="list-style-type: none"> • Has developed a mechanism to conduct baseline surveys on knowledge, attitudes, and practices of its population on priority health threats and on health seeking practices. • Has established a mechanism to ensure regular collaboration among staff responsible for surveillance, risk assessment, and RCCE.



<p>RCCE for effective external communication</p>	<ul style="list-style-type: none"> • Has established objectives, communication flow charts, and ways of working between units and agencies/organizations, for RCCE. • Has developed a platform or mechanism for regular information sharing with relevant sectors including ministries, partners, and other stakeholders within government. 	<ul style="list-style-type: none"> • Has developed appropriate action plans that identify priority interventions, languages, and preferred communication channels to reach key populations at risk (e.g., undocumented migrants). • Has expanded information sharing mechanisms to include nongovernment sectors including media, civil society, and the private sector. • Has a team (dedicated personnel) and a national mechanism to monitor and manage an infodemic. 	<ul style="list-style-type: none"> • Has implemented regular risk communication coordination activities among relevant key stakeholders at national and subnational levels. • Routinely and regularly assesses performance of the coordination mechanism through simulation exercises or after-action reviews and regularly shares the results of these exercises with partners. • Has updated its action plans with relevant stakeholders aware of their clearly defined roles and with resources accessible and known to stakeholders. • The national infodemic management mechanism is regularly evaluated and adapted according to emerging needs.
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<p>Strengthen community engagement</p>	<ul style="list-style-type: none"> • Has a list of key stakeholders – civil society groups, key nongovernmental organizations, key religious and traditional leaders – at the national level. • Has conducted a needs analysis for effectively engaging with civil society groups and key nongovernmental organizations (including female-oriented organizations), and religious and traditional leaders at the national level. 	<ul style="list-style-type: none"> • Has developed a training program and conducted training on community engagement at the subnational level. • Has identified and trained community outreach groups, including volunteer and community leaders. 	<ul style="list-style-type: none"> • Has developed tools, procedures, and methods for community engagement to obtain community feedback through surveys, hotlines, community dialogue, or other means. • Has determined a mechanism for systematically receiving community feedback through the channels that are already available in the national authorities, including social media, and other sources. • Implements strategies for the translation of the science of health emergencies and to facilitate the adoption of public health measures by the population.
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Notes: Covers the C10 core capacities (Risk Communication and Community Engagement). See: World Health Organization. International Health Regulations (2005): States Parties Self-assessment Annual Reporting Tool. Second edition. Geneva: WHO; 2021. Available from: <https://www.who.int/publications/i/item/9789240040120>.

RCCE: risk communication and community engagement.



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Future pandemics caused by influenza or other respiratory viruses with epidemic and pandemic potential are highly likely. Given this threat, it is a priority for the Region of the Americas to define and strengthen a framework for the prevention and control of influenza, severe acute respiratory syndrome coronavirus type 2 (SARS-CoV-2), and other respiratory viruses in the context of the pandemic transition.

This publication reflects the Pan American Health Organization's permanent support to its Member States in the analysis of national response capacities for both seasonal influenza and other respiratory viruses with epidemic and pandemic potential. These capacities are achieved through the fulfillment of five objectives: 1) strengthen surveillance; 2) expand infection prevention and control policies; 3) strengthen epidemic and pandemic preparedness and response capacity; 4) promote operational research; and 5) improve risk communication and community engagement.

It is essential to maintain the highest possible level of core national capacities for the early detection and control of diseases caused by respiratory viruses. This is crucial for managing future epidemics and pandemics since it directly contributes to the implementation of the core capacities of the International Health Regulations, as well as improvement of management, coordination, and planning, for the benefit of all the countries of the Region.



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