GLOBAL INFLUENZA PROGRAMME

Pandemic influenza preparedness in **WHO Member States**

REPORT OF A MEMBER STATES SURVEY

World Health Organization

ISBN 978-92-4-151596-2

Suggested citation. Pandemic influenza preparedness in WHO Member States: report of a Member States survey. Geneva: World Health Organization; 2019. Licence: CC BY-NC-SA 3.0 IGO.

Cataloguing-in-Publication (CIP) data. CIP data are available at http://apps.who.int/iris.
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Acknowledgements

The World Health Organization (WHO) would like to sincerely thank all the participating Member States for their completion of the survey questionnaire on national pandemic influenza preparedness. A list of the participating Member States can be found in Annex 1.

The following WHO staff and consultants are gratefully acknowledged for their contributions to and support of this survey, as well as the completion of this report:

J. Abrahams, A. Abubakar, C. Alfonso, I. Bergeri, S. Briand, C.S. Brown, H. Chugh, P.M. Cox, D. Dixit, E.L. Dueger, A. Elkholy, M. Frost, I. Ghiga, P. Gould, B.L. Herring, M. Hegermann-Lindencrone, A.M. Huvos, M. Kato, Q.Y. Khut, J. Lamichhane, M. Maciejewska, M. Malik, A. Moen, C. Nannini, T. Nguyen, S. Olsen, R. Ostad Ali Dehaghi, R. Palekar, S. Rajatonirina, T. Resnikoff, B. Shrestha, G. Samaan, M. Samaan, O.G. Stucke, H. Utunen, K. Vandemaele, W. Zhang and W. Zhou.

Abbreviations

AFR	WHO African Region
AMR	WHO Region of the Americas
EMR	WHO Eastern Mediterranean Region
EUR	WHO European Region
GIP	Global Influenza Programme
GNI	gross national income
HIC	high-income countries
IEC	information, education and communication
IPC	infection prevention and control
LIC	low-income countries
LMIC	lower-middle income countries
MoH	ministry of health
NDVP	national deployment and vaccination plan
PHEIC	public health emergency of international concern
PIRM	pandemic influenza risk management
PISA	pandemic influenza severity assessment
RCCE	risk communication and community engagement
SEAR	WHO South-East Asia Region
UMIC	upper-middle income countries
UN	United Nations
WHO	World Health Organization
WPR	WHO Western Pacific Region

Executive Summary

Influenza pandemics are unpredictable but reoccurring events that can have serious consequences for human health and socio-economic well-being worldwide. Advanced planning and preparedness are critical to mitigate the risk and impact of an influenza pandemic.

It has been 10 years since the most recent influenza pandemic which occurred in 2009. Many lessons were learned and good practices in pandemic preparedness were identified from the response to the pandemic. Although progress has been made among Member States in pandemic preparedness since then, many countries still lack important preparedness capacities or have not updated their pandemic influenza preparedness plans. In late 2018, the WHO Global Influenza Programme consulted its Member States through a survey to better understand the current level of pandemic preparedness among Member States and to identify the capacity areas in which WHO and its partners should focus their technical assistance in the coming years.

The survey was conducted through a username and password protected secure online WHO platform, where Member States were asked to complete a questionnaire. The questionnaire included 55 questions and structured in two parts with Part 2 divided into five sub-sections each representing a key capacity area in pandemic preparedness and response outlined in WHO pandemic preparedness checklist:

1. **Status of national pandemic influenza preparedness plans**
2. **Key capacities in pandemic preparedness and response**
   a. **Preparing for an emergency (planning, coordination and resources)**
   b. **Surveillance (laboratory, epidemiology or event), investigation and assessment (risk and severity)**
   c. **Health services and clinical management**
   d. **Preventing illness in the community (pharmaceutical and nonpharmaceutical interventions)**
   e. **Maintaining essential services and recovery**

A scoring system was adapted to produce quantifiable points for each capacity area. The outcomes were analysed by WHO region and income status.

Completed survey questionnaires were received from 104 of 194 (54%) WHO Member States of all WHO regions and income status (table 1 and 2). While globally 92 of 104 (88%) countries indicate they have a national pandemic influenza preparedness plan, 44 of those (48%) were developed before the 2009 influenza pandemic and have not been updated since then. More than half of national pandemic influenza preparedness plans (50, 54%) are not publicly available. However, countries are very conscious of the need for updating their plans. Globally, 91 of 104 (88%) countries intend to develop or update an existing pandemic influenza preparedness plan within the next one to two years. Only 42 of 104 (40%) countries tested their national pandemic influenza preparedness plans through simulation exercises in the past five years. More than half of the countries were either not aware or aware but not yet consulted the WHO pandemic influenza preparedness guidance and tools outlining planning strategies, essential capacities, and steps. [1, 2, 3]

[1] World Health Organization. Pandemic Influenza Risk Management, Geneva, World Health Organization, 2017. Available online at https://www.who.int/influenza/preparedness/pandemic/influenza_risk_management_update2017/en/.
[2] World Health Organization. A Checklist for Pandemic Influenza Risk and Impact Management, Geneva, World Health Organization, 2018. Available online at https://www.who.int/influenza/preparedness/pandemic/influenza_risk_management_checklist_2018/en/.
[3] World Health Organization. Essential steps for developing or updating a national pandemic influenza preparedness plan, Geneva, World Health Organization, 2018. Available online at https://www.who.int/influenza/preparedness/pandemic/essential_steps_influenza/en/.

The global average score of all capacity areas in the survey was 29.4 out of 46 total possible points (63.9%). The average scores for High Income Countries, Upper-middle Income Countries, Lower-middle Income Countries, and Low Income Countries are 34.5 (75.0%), 30.6 (66.6%), 27.2 (59.0%), and 17.7 (38.5%), respectively.

The ranking order of global average scores from high to low for the capacity areas are Preparing for an Emergency (5.3 out of 7 points, 75.5%), Surveillance, Investigation and Assessment (7.1 out of 10 points, 71.0%), Health Services and Clinical Management (8.0 out of 12 points, 66.7%), Maintaining Essential Services and Recovery (1.8 out of 3 points, 61.2%), Preventing Illness in the Community (pharmaceutical and nonpharmaceutical interventions) (4.1 out of 8 points, 51.5%), and the Status of National Pandemic Influenza Preparedness Plans (3.1 out of 6 points, 51.0%).

The survey revealed major gaps in pandemic influenza preparedness among Member States. The priorities for strengthening include:

- **Updating pandemic influenza preparedness plans and making them publicly available;**
- **Conducting simulation exercises to test and validate pandemic preparedness plans;**
- **Establishing mechanisms to secure access to pandemic influenza vaccine during a pandemic and defining regulatory pathways for the emergency use of pandemic influenza vaccine;**
- **Including and specifying nonpharmaceutical public health measures for pandemic response in preparedness plans;**
- **Preparing mechanisms to conduct risk communications and community engagement during a pandemic;**
- **Developing plans to manage excess mortality during a pandemic;**
- **Establishing standard operational procedures for conducting systematic influenza risk and severity assessments using surveillance data.**

Majority of countries participated in the survey intended to develop or update their pandemic influenza preparedness plans in the next one to two years. WHO clearly has an important role to play in supporting its Member States in this endeavour and can use the results of this survey to inform strategies or approaches to focus its technical support. WHO also need to make efforts to improve awareness and uptake of its guidance and tools on pandemic influenza preparedness and may need to consider developing a better outreach strategy for knowledge disseminations.

Member States at all income levels have rooms for improvement in pandemic influenza preparedness. The levels of preparedness are far from optimal even in high income and upper-middle income countries. However, low income countries clearly require additional and targeted support to prepare for an influenza pandemic. This is most evident in the African Region – a result that can be linked to the lower overall income status of countries from the Region. WHO and its partners may need to adapt a sustainable and resilient strategy to better address the resources challenges and competing health priorities of many countries in the region.

The global perspective of this survey has been extremely valuable to understand the current levels of pandemic influenza preparedness among WHO Member States, and to identify and validate priorities for future efforts and investments in pandemic preparedness from WHO and partners. Conducting such survey periodically could be beneficial in stimulating and demonstrating progresses of pandemic influenza preparedness over time among Member States.

1. Introduction

1.1. Purpose

Influenza pandemics are unpredictable but reoccurring global events that can have serious consequences for human health and socioeconomic well-being. Advanced planning and preparedness are critical to mitigate the risk and impact of an influenza pandemic.

The most recent influenza pandemic occurred almost 10 years ago, in 2009. Many important lessons were learned and good practices in pandemic preparedness were identified from the response to pandemic (H1N1) 2009; these are reflected in the most recent World Health Organization (WHO) guidance documents on pandemic influenza preparedness planning – *Pandemic influenza risk management*[1] and *A checklist for pandemic influenza risk and impact management*.[2]

Although some Member States have made progress in improving their preparedness for the next influenza pandemic, many countries still lack a national pandemic influenza preparedness plan. Where national pandemic plans do exist, most have not been updated since the 2009 pandemic and many are not publicly available.

In late 2018, the WHO Global Influenza Programme (GIP) surveyed Member States to ascertain the current level of preparedness for pandemic influenza. The outcomes of the survey were intended to be used to identify capacity areas in which to focus technical assistance in the coming years. This report summarizes the findings of the survey and proposes actions for WHO and Member States to focus on, to strengthen pandemic preparedness capacities in the future.

1.2. Scope

This report examines the current status of national pandemic influenza preparedness in WHO Member States and identifies areas for future investment in capacity development. It is based on an analysis of data provided by WHO Member States in response to a 2018 global survey, completed by nominated focal points. Responses to the survey were voluntary and self-assessed; hence, this survey does not qualify as an audit or independent capacity assessment.

1.3. Responses to survey

The survey was made accessible online from 29 June to 9 November 2018, in five languages: Arabic, English, French, Russian and Spanish. Responses were received from 104 of 194 WHO Member States (54%) from all six WHO regions: the African Region (AFR), Region for the Americas (AMR), Eastern Mediterranean Region (EMR), European Region (EUR), South-East Asia Region (SEAR) and Western Pacific Region (WPR). Response rates ranged from 33% (EMR) to 86% (EUR). A breakdown of survey responses by region is shown in Table 1.

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[1] Pandemic influenza risk management, Geneva: World Health Organization; 2017 (https://www.who.int/influenza/preparedness/pandemic/influenza_risk_management_update2017/en/, accessed 22 April 2019).

[2] A checklist for pandemic influenza risk and impact management, Geneva: World Health Organization; 2018 (https://www.who.int/influenza/preparedness/pandemic/influenza_risk_management_checklist_2018/en/, accessed 22 April 2019).

Table 1. Survey response rates by region

	AFR	AMR	EMR	EUR	SEAR	WPR	Global
No. of survey responses	24	16	7	36	7	14	104
No. of WHO Member States	47	35	21	53	11	27	194
Response rate	51%	46%	33%	68%	64%	52%	54%

Responses were also analysed by income group using the World Bank country classifications of high-income countries (HIC), upper-middle income countries (UMIC), lower-middle income countries (LMIC) and low-income countries (LIC). [1] A breakdown of survey responses by income group is shown in Table 2.

Table 2. Survey response rates by income group

	LIC	LMIC	UMIC	HIC	Global
No. of survey responses	14	26	27	37	104
No. of WHO Member States	34	45	57	58	194
Response rate	41%	58%	47%	64%	54%

A list of Member States that responded to the survey and their income group is included in Annex 1.

[1] 2018–2019 World Bank country classifications by income level – based on estimates of 2017 gross national income (GNI) per capita – were used in the analysis. LICs are defined as those with a GNI per capita of US$ 995 or less, LMICs with a GNI per capita of US$ 996–3895, UMICs with a GNI per capita of US$ 3896–12 055 and HICs with a GNI per capita of US$ 12 056 or more. A full list of countries and classifications can be found at https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups.

2. Methods

2.1. Survey

2.1.1. Survey design

The survey was structured in two parts, with Part 2 divided into five subsections, each representing a key capacity in pandemic preparedness and response:

1. Status of national pandemic influenza preparedness plans
2. Key capacities in pandemic preparedness and response
   a. Preparing for an emergency (planning, coordination and resources)
   b. Surveillance (laboratory, epidemiology or event), investigation and assessment (risk and severity)
   c. Health services and clinical management
   d. Preventing illness in the community (pharmaceutical and nonpharmaceutical interventions)
   e. Maintaining essential services and recovery.

Responses were selected from a drop-down menu of options. In several questions, respondents could add free text comments to support their selected answer. At the end of the survey, respondents were asked to provide suggestions regarding WHO's role in strengthening national and global pandemic preparedness. Annex 2 provides details of the survey questionnaire and scoring.

2.1.2. Survey and data administration

The survey was announced to the ministries of health (MoHs) of all WHO Member States through a circular letter that requested the nomination of a focal point to complete the survey. The survey questions were translated from English into Arabic, French, Russian and Spanish, and distributed to the nominated focal points. Each country focal point also received an email message containing an explanatory note, a web-link and a personalized password allowing protected access to the online data entry portal. Country focal points were given access to contact persons in WHO for technical support.

All data from each country have been kept confidential, with access restricted to the Member State concerned and to relevant WHO staff only, on a secure WHO web-based platform, DataForm. In analysis and reporting, descriptions and scores have been aggregated by region or income group, and are not identifiable at country level.

2.1.3. Data analysis

Descriptive analyses were performed for each question, by capacity areas, and cumulatively at global, regional and different income levels. Histograms or pie charts (or both) were used to illustrate the findings for each question in the survey questionnaire.

2.1.4. Scoring of capacities

A scoring system was developed to produce a quantifiable score as an indicator of capacity for each area of pandemic preparedness covered in the survey. Member States were divided into regional and income groupings, and the average score was calculated for the group as a whole.

Of the 55 questions in the survey, 45 were scored. Those that were not scored included questions on which year plans were developed or reviewed, requests for copies of plans, questions on awareness of guidance documents and open-ended comments. Points were awarded for positive responses; that is, where respondents confirmed that the specific pandemic preparedness capacity in question is in place. The survey questionnaire and scoring system can be found in Annex 2.

2.2. Limitations of the survey

The survey had some limitations, which should be kept in mind when considering the results and conclusions. Responses to the survey were self-reported from each Member State, and therefore cannot be interpreted as objective. Also, the survey was completed by a focal point nominated by the MoH, who may or may not have consulted with all relevant government agencies when deciding on each answer.

The survey received 104 responses, constituting 54% of the 194 WHO Member States (regional range 33–68%). Thus, the results of the survey cannot be seen as representative of all Member States, particularly in regions with low response rates. HICs and LMICs had higher response rates (64% and 58%, respectively) than UMICs and LICs (47% and 41%, respectively). Aggregated regional and global findings may therefore be more representative for HICs and LMICs.

3. Results

3.1. Status of national pandemic influenza preparedness plans

3.1.1 Existence of plan

Globally,[1] 92 out of 104 countries responding to the survey (88%; regional[2] range 63–100%) currently have a **national pandemic influenza preparedness plan.**

All responding countries from SEAR and WPR have a plan, while plans are missing from only one responding country each in the AMR, EUR and EMR. The AFR has the lowest proportion of countries with a pandemic plan, with only 15 out of 24 countries in that region having a plan. The proportion of countries with a pandemic plan by region are:

- AFR, 15 out of 24 countries (62%)
- AMR, 15 out of 16 countries (94%)
- EMR, 6 out of 7 countries (86%)
- EUR, 35 out of 36 countries (97%)
- SEAR, 7 out of 7 countries (100%)
- WPR, 14 out of 14 countries (100%).

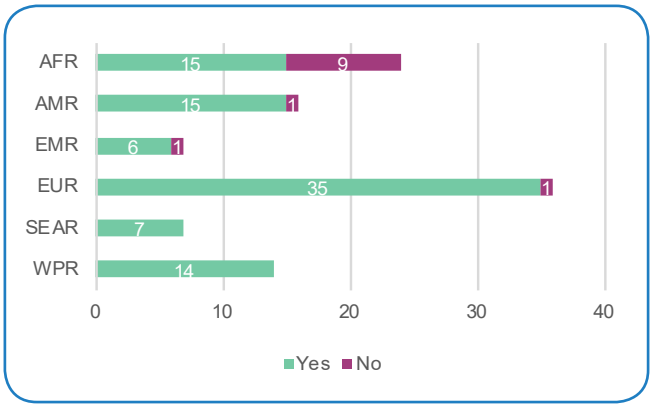

Fig. 1. Number of countries with a national pandemic influenza preparedness plan

3.1.2 Development and update of plans

Among the 92 countries with pandemic influenza preparedness plans, **plans were first developed**:

- in or before 2009: 87 out of 92 countries (95%; regional range 80–100%);
- 2010: 2 out of 92 countries (2%; regional range 0–7%);
- 2011: 2 out of 92 countries (2%; regional range 0–13%); and
- 2013: 1 out of 92 countries (1%; regional range 0–3%).

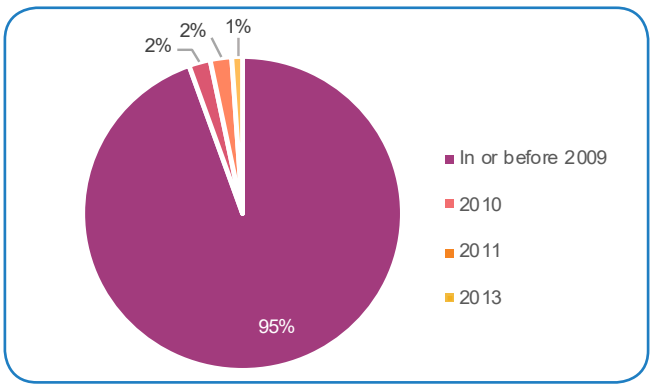

Fig. 2. Year of national pandemic influenza preparedness plan development

[1] The term "globally" in this report refers to the total number of Member States that responded to the survey (n=104).
[2] The terms "region"", "regional" and "regionally" in this report refer to the six WHO regions: AFR, AMR, EMR, EUR, SEAR and WPR.

Globally, 33 out of the 92 countries responding to the survey that had national pandemic influenza plans (36%; regional range 0–60%) have not updated their plan since it was originally developed. In terms of key developments in our understanding of pandemic influenza, 11 countries (12%) have not updated their plans since pandemic (H1N1) 2009 occurred, 30 countries (32%) have not updated their plans since the publication of interim WHO guidance on pandemic planning in 2013, and 50 countries (54%) have not updated their plans since the publication of *Pandemic influenza risk management* in 2017.

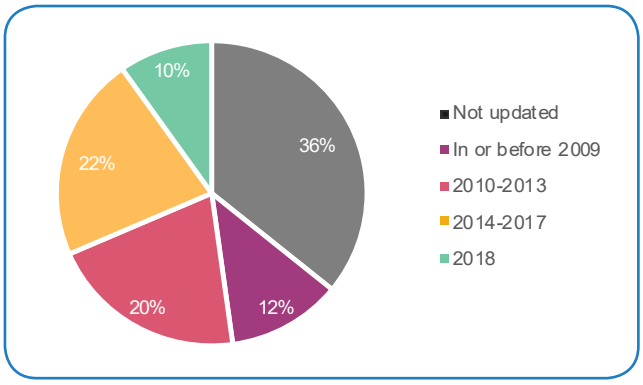

Fig. 3. Year of most recent national pandemic influenza preparedness plan update

On a positive note, countries are now highly conscious of the need for updated planning in this area. Globally, 91 out of 104 countries (88%; regional range 72–100%) intend to **develop or update an existing pandemic influenza preparedness plan** within the next 2 years. Intent to develop or update plans was high (>90%) across all regions, with the exception of the EUR, where only 26 out of 36 countries expressed intent:

- AFR, 23 out of 24 countries (96%)
- AMR, 15 out of 16 countries (94%)
- EMR, 7 out of 7 countries (100%)
- EUR, 26 out of 36 countries (72%)
- SEAR, 7 out of 7 countries (100%)
- WPR, 13 out of 14 countries (93%).

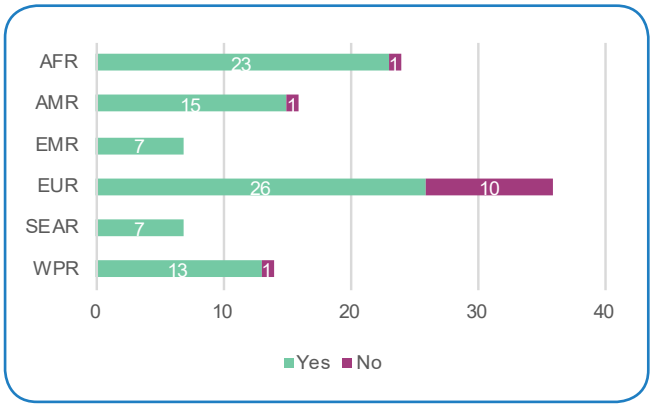

Fig. 4. Number of countries intending to develop or update a pandemic influenza preparedness plan in next 1–2 years

3.1.3 Public availability of plans

Less than half of national pandemic influenza preparedness plans (46%; regional range 7–63%) are **publicly available on a website.** Rates are lowest in the AFR and EMR, where only one out of 15 (7%) and one out of six (17%) plans are publicly available online, respectively.

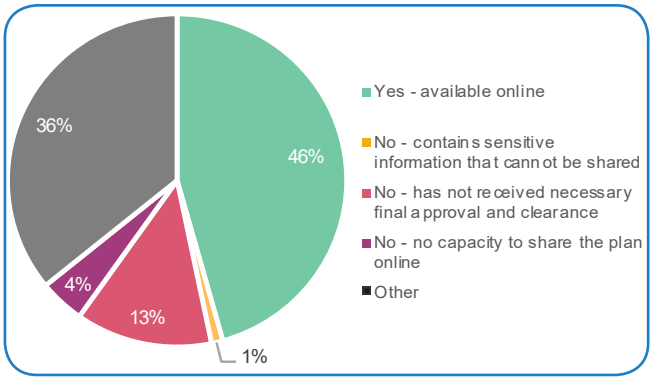

Fig. 5. Proportion of national pandemic influenza preparedness plans publicly available online

Countries responded that their plans were not made available online for several different reasons:

- plan containing sensitive information that cannot be shared: 1 out of 92 countries (1%; regional range 0–7%);
- plan had not received necessary final approval and clearance: 12 out of 92 countries (13%; regional range 0–33%);
- no capacity to share the plan online: 4 out of 92 countries (4%; regional range 0–7%); and
- other: 33 out of 92 countries (36%; regional range 27–67%).

3.1.4 Simulation exercises to test plans

Simulation exercises to test national pandemic influenza preparedness plans have been held in the past 5 years by 42 out of 104 countries (40%; regional range 21–86%).

Countries in the SEAR and WPR were the most likely to have conducted an exercise, with 86% of countries in both regions reporting that they had conducted at least one type of exercise. Regionally, countries reported conducting simulation exercises as follows:

- AFR, 5 out of 24 countries (21%)
- AMR, 5 out of 16 countries (31%)
- EMR, 4 out of 7 countries (57%)
- EUR, 10 out of 36 countries (28%)
- SEAR, 6 out of 7 countries (86%)
- WPR, 12 out of 14 countries (86%).

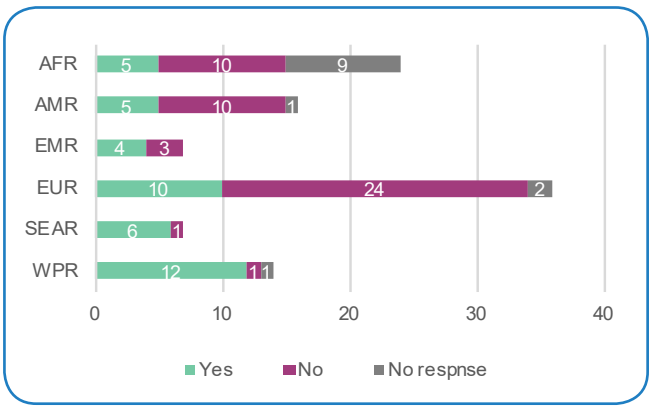

Fig. 6. Number of countries conducting simulation exercises to test national pandemic influenza preparedness plans in the past 5 years

Table top was the most common exercise format. This format was used by 36 out of 42 countries that conducted exercises (86%; regional range 50–100%).

Among the 42 countries that have conducted exercises to test their national pandemic influenza plans in the past 5 years, drills were used by 15 countries (36%; regional range 20–50%), functional exercises by 14 countries (33%; regional range 0–67%) and field exercises by 11 countries (26%; regional range 0–42%).

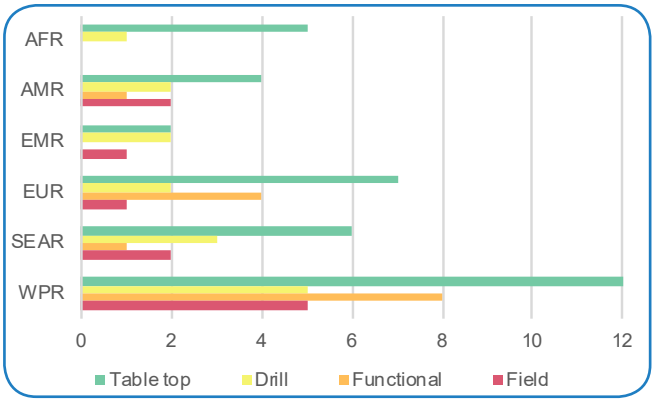

Fig. 7. Number of exercises conducted to test pandemic influenza plans in the past 5 years by type

3.1.5 Awareness and use of WHO guidance documents

Countries were surveyed on their awareness and use of the following four WHO guidance documents related to pandemic influenza planning:

- *Pandemic influenza risk management*, 2017 (PIRM);
- *A checklist for pandemic influenza risk and impact management,* 2018 (PIRM checklist);
- *Essential steps for developing or updating a national pandemic influenza preparedness plan*,[1] 2018 (Essential steps); and
- *Guidance on development and implementation of a national deployment and vaccination plan for pandemic influenza vaccines*,[2] 2012 (NDVP).

[1] Essential steps for developing or updating a national pandemic influenza preparedness plan, Geneva: World Health Organization; 2018 (https://www.who.int/influenza/preparedness/pandemic/essential_steps_influenza/en/, accessed 22 April 2019).

[2] Guidance on development and implementation of a national deployment and vaccination plan for pandemic influenza vaccines, Geneva: World Health Organization; 2012 (https://www.who.int/influenza_vaccines_plan/resources/deployment/en/, accessed 22 April 2019).

Globally, the percentage of countries using the guidance documents to update their preparedness plans ranged from 15% (NDVP) to 27% (PIRM). For each document, the proportion of countries that had read the document (20–32%) was higher than the proportion of countries that were aware of, but had not consulted, the document (18–28%).

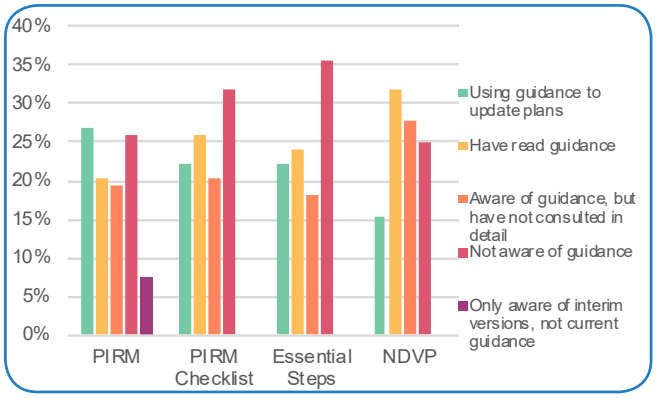

Fig. 8. Proportion of countries aware of and utilising WHO guidance documents

Concerningly, countries that were not aware of the guidance document made up the largest category for both the *PIRM checklist* (32%) and *Essential steps* (36%), indicating that promotion and dissemination strategies for these documents in particular should be reviewed.

Awareness of WHO pandemic influenza planning guidance is lowest in the AFR, which accounted for 50% of "Not aware of guidance" responses overall. Within the region, 10 countries (out of 24 participating in the survey) responded that they were not aware of all four guidance documents. These countries may benefit from specialized dissemination methods or support to access documents.

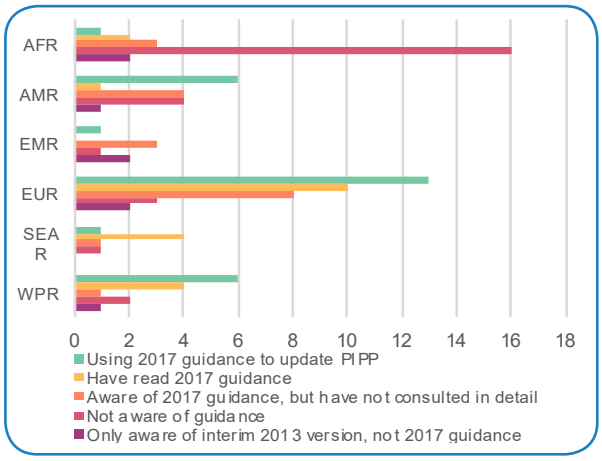

Fig. 9. Number of countries aware of and using Pandemic influenza risk management

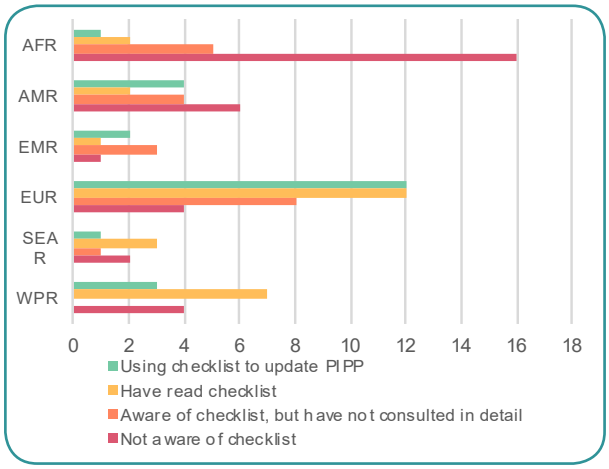

Fig. 10. Number of countries aware of and using A checklist for pandemic influenza risk and impact management

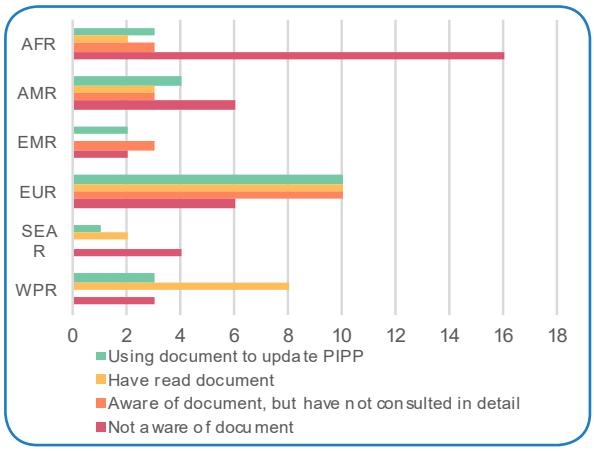

Fig. 11. Number of countries aware of and using Essential steps for developing or updating a national pandemic influenza preparedness plan

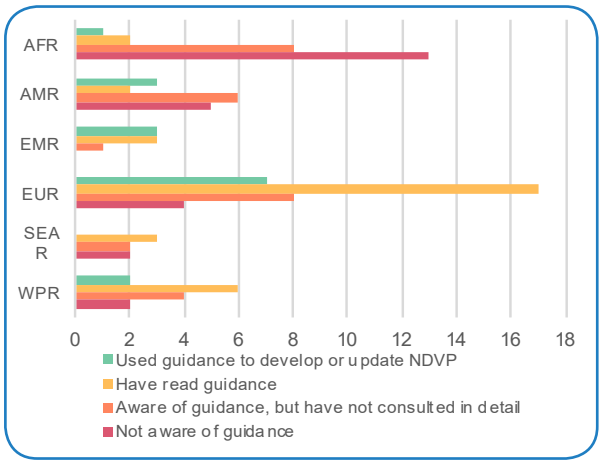

Fig. 12. Number of countries aware of and using Guidance on development and implementation of a national deployment and vaccination plan for pandemic influenza vaccines

3.2. Key capacities in pandemic preparedness and response

3.2.1. Preparing for an emergency (planning, coordination and resources)

Countries reported the following capacities in planning, coordination and resources for pandemic influenza preparedness:

- **multi-hazard public health emergency response plans** are reported to be in place in 71 out of 104 countries (68%; regional range 54–86%);
- **multi-sectoral coordination plans or mechanisms** to engage government, ministries and authorities, nongovernmental organizations, private sector, community leaders, and international partners or organizations during a public health emergency are in place in 97 out of 104 countries (93%; regional range 71–100%);
- **mechanisms to support human and financial resource requirements** during a public health emergency are established in 91 out of 104 countries (88%; regional range 71–100%);
- **legislation or regulatory policies that address the needs for implementing particular public health measures** such as isolation and quarantine, school closures and postponement of mass gatherings are in place in 92 out of 104 countries (88%; regional range 71–100%);
- **a national ethics committee or similar mechanism** to advise on pandemic influenza preparedness and response activities exists in 78 out of 105 countries (79%; regional range 71–79%); and
- **emergency response plans at designated points of entry** (POE) for a public health emergency of international concern (PHEIC) are established in 82 out of 104 countries (79%; regional range 63–100%).

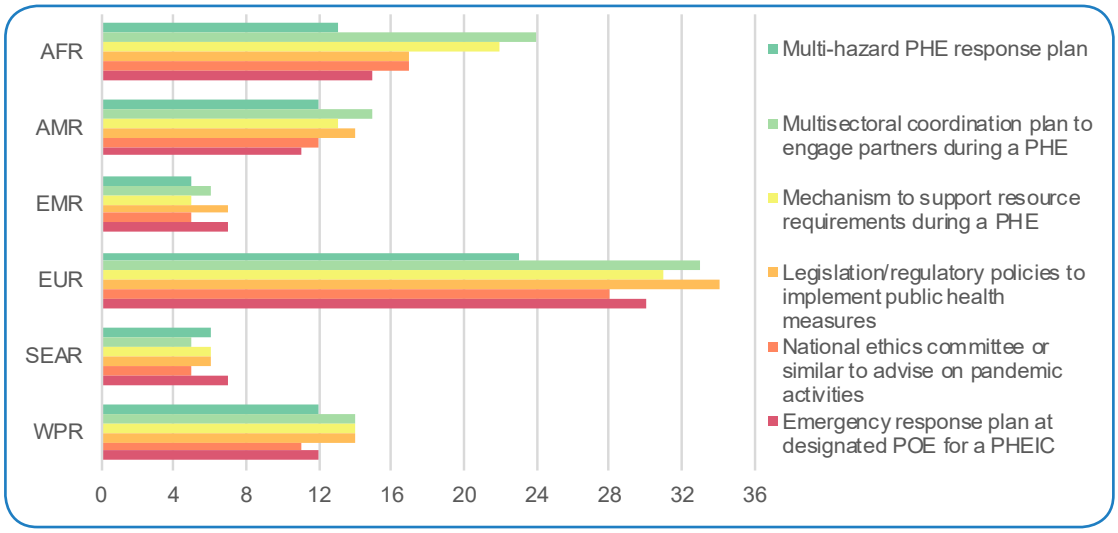

Fig. 13. Number of countries with reported capacities in planning, coordination and resources for pandemic influenza preparedness

In capacities for **risk communication and community engagement (RCCE) in a public health emergency**, countries reported having:

- an agreed, formal organizational structure: 52 out of 104 countries (50%; regional range 36–75%);
- agreed procedures or SOPs: 55 out of 104 countries (53%; regional range 31–86%);
- dedicated financial or other resources that can be released: 31 out of 104 countries (30%; regional range 8–57%);
- a decentralized approach to RCCE in the event of a public health emergency: 41 out of 104 countries (39%; regional range 25–44%);
- other: 13 out of 104 countries (13%; regional range 0–25%); and
- none of the above: 5 out of 104 countries (5%; regional range 0–14%).

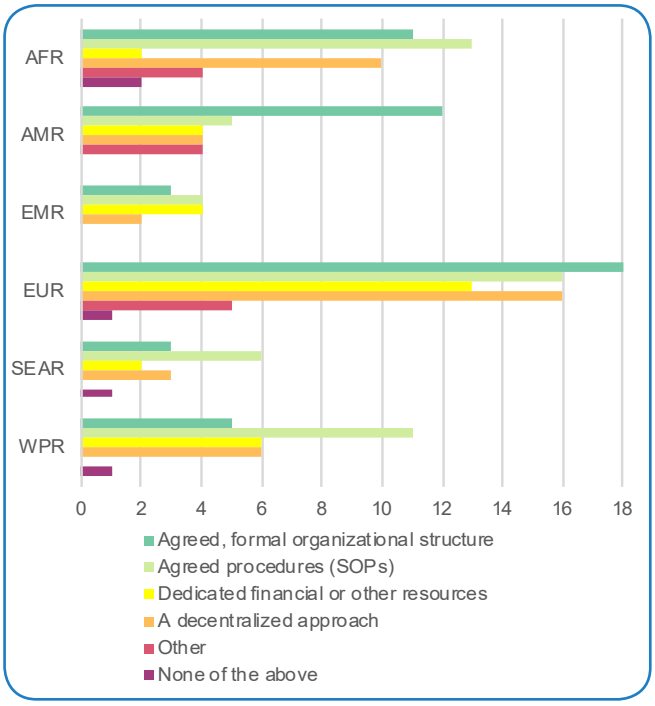

Fig. 14. Number of countries with reported RCCE capacities in a public health emergency

3.2.2. Surveillance (laboratory, epidemiology or event), investigation and assessment (risk and severity)

Globally, countries reported the following laboratory testing capacities:

- **at least one laboratory that can perform routine influenza diagnostics**, typing and subtyping using reverse transcription polymerase chain reaction (RT-PCR): 95 out of 104 countries (91%; regional range 75–100%);
- **an established mechanism to share specimens with WHO collaborating centres for influenza:** 95 out of 104 countries (91%; regional range 79–100%); and
- **laboratory testing strategies for different phases of an influenza pandemic:** 68 out of 104 countries (65%; regional range 38–86%).

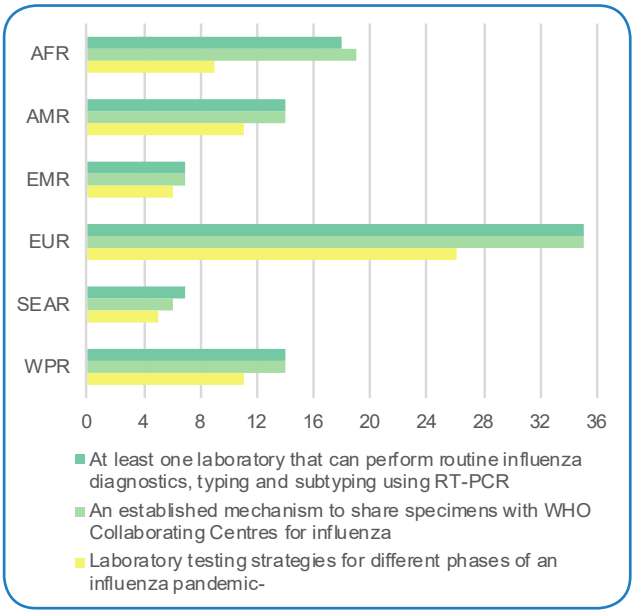

Fig. 15. Number of countries with reported laboratory testing capacities for pandemic influenza

A plan to cope with the need for **laboratory surge capacities** during an influenza pandemic is established in 22 out of 104 countries (21%; regional range 13–43%). A further 39 countries (37%; regional range 13–50%) report that such a plan is part of their national pandemic influenza preparedness plan.

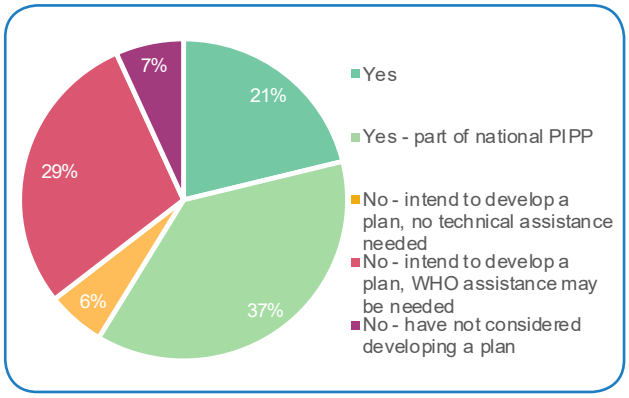

Fig. 16. Proportion of countries with a plan for laboratory surge capacity during an influenza pandemic

Currently, 36 countries (35%) do not have a laboratory surge capacity plan but intend to develop one, with 30 of these countries (29%; regional range 11–67%) potentially requiring WHO support. Of these 30 countries, most are from the AFR (16 countries). Seven countries (7%; regional range 0–14%) do not currently have a plan and have not considered developing one, including five countries from the EUR.

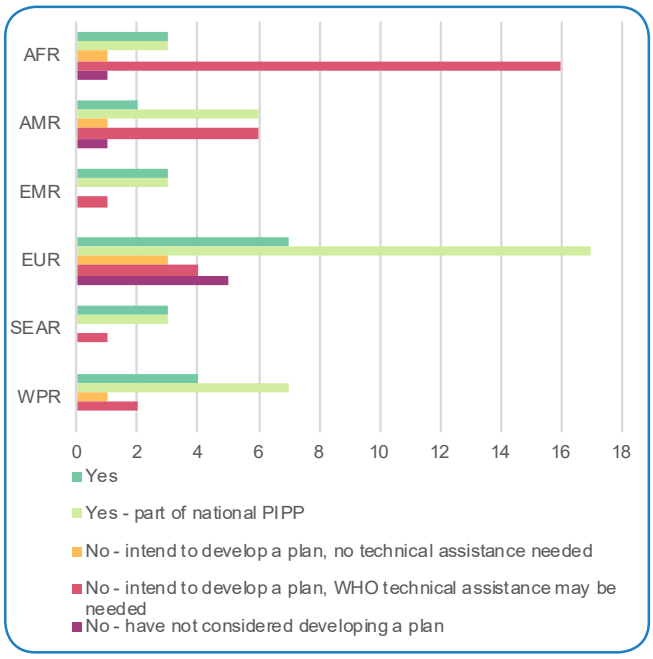

Fig. 17. Number of countries with a plan for laboratory surge capacity during an influenza pandemic

Countries reported having the following surveillance capacities:

- **national influenza surveillance system:** 93 out of 104 countries (89%; regional range 63–100%);
- **event-based surveillance system:** 79 out of 104 countries (76%; regional range 57–100%); and
- **systematic use of information collected through event-based surveillance in risk assessments:** 59 out of 104 countries (57%; regional range 29–71%).

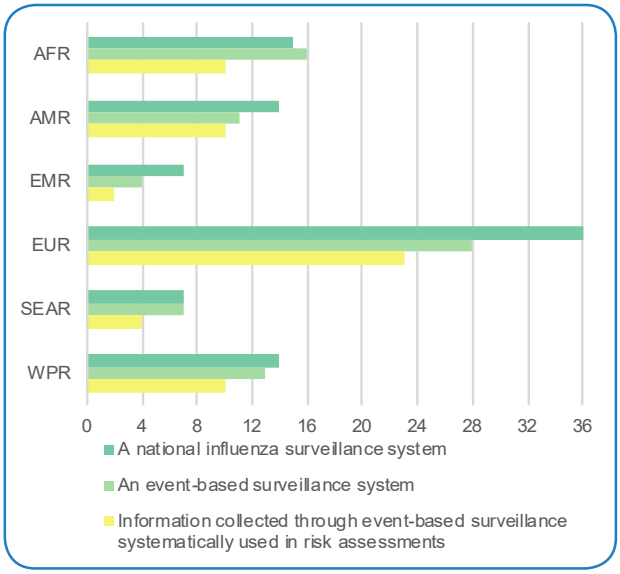

Fig. 18. Number of countries with reported surveillance capacities for pandemic influenza

In relation to the document **WHO guidance for surveillance during an influenza pandemic,** countries responded that they:

- plan to use the guidance: 23 out of 104 countries (22%; regional range 13–29%);
- have read the guidance: 27 out of 104 countries (26%; regional range 4–44%);
- are aware of the guidance, but have not consulted it in detail: 22 out of 104 countries (21%; regional range 0–43%);
- are not aware of the guidance: 29 out of 104 countries (28%; regional range 11–58%); and
- other: 3 out of 104 countries (3%; regional range 0–6%).

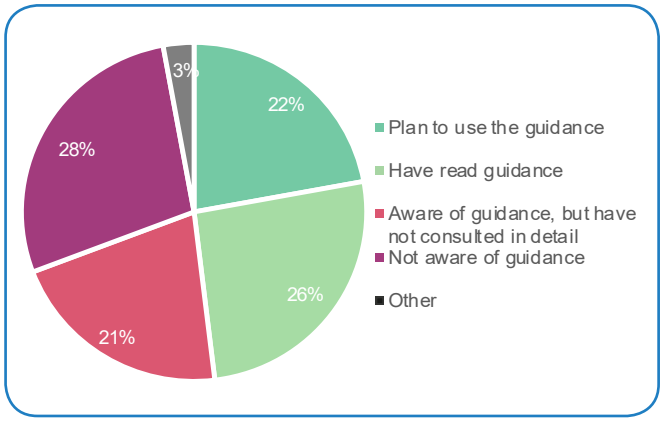

Fig. 19. Proportion of countries aware of and using WHO guidance for surveillance during an influenza pandemic

A stand-alone **plan for surveillance during an influenza pandemic** has been established in 26 out of 104 countries (25%; regional range 7–43%). An additional 55 countries (53%; regional range 29–79%) report that a surveillance plan is part of their national pandemic influenza preparedness plan.

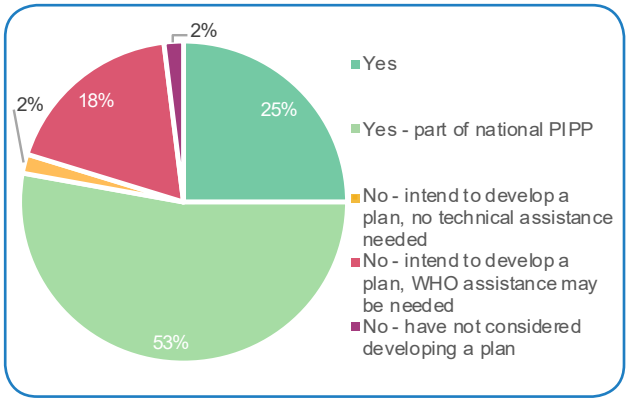

Fig. 20. Proportion of countries with a plan for surveillance during an influenza pandemic

Currently, 21 countries (20%) do not have a surveillance plan but do intend to develop one. Nineteen of these countries (18%; regional range 0–46%) will potentially require WHO support, including 11 countries from the AFR. Two countries (2%; regional range 0–4%) – one each from AFR and EUR – do not currently have a plan and have not considered developing one.

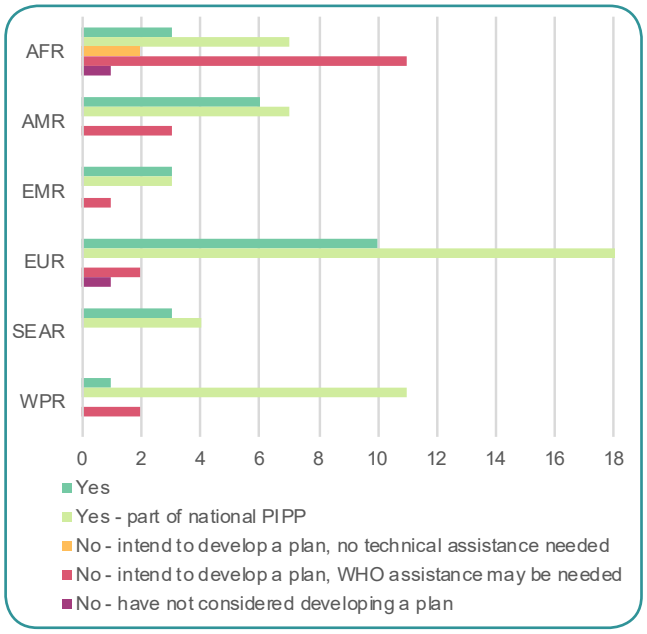

Fig. 21. Number of countries with a plan for surveillance during an influenza pandemic

In relation to the ***pandemic influenza severity assessment (PISA) tool***, countries responded that they:

- are familiar with the tool: 35 out of 104 countries (33.7%; regional range 8–56%);
- are aware of the tool, but have not consulted in detail: 35 out of 104 countries (33.7%; regional range 13–71%);
- are not aware of the tool: 31 out of 104 countries (29.8%; regional range 13–75%); and
- other: 3 out of 104 countries (2.9%; regional range 0–7%).

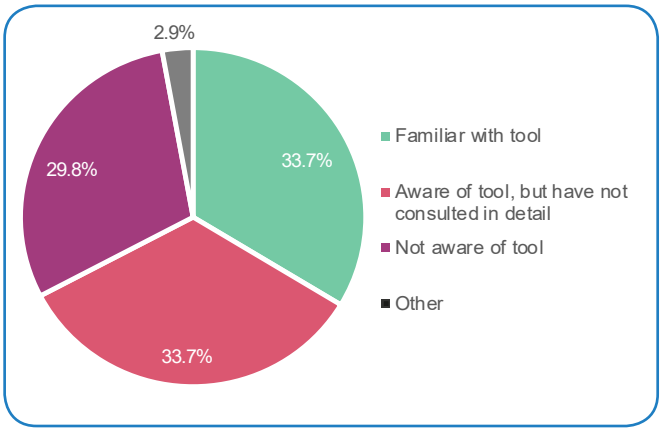

Fig. 22. Proportion of countries aware of and using pandemic influenza severity assessment (PISA) tool

In relation to **severity assessment in influenza surveillance**, countries reported that they:

- have established severity assessment in influenza surveillance: 32 out of 104 countries (31%; regional range 8–44%);
- are in the process of establishing capacity for severity assessment: 34 out of 104 countries (33%: regional range 21–57%);
- undertake influenza surveillance, but severity assessment is not established or planned: 31 out of 104 countries (30%; regional range 14–57%); and
- do not undertake influenza surveillance: 7 out of 104 countries (7%; regional range 0–29%).

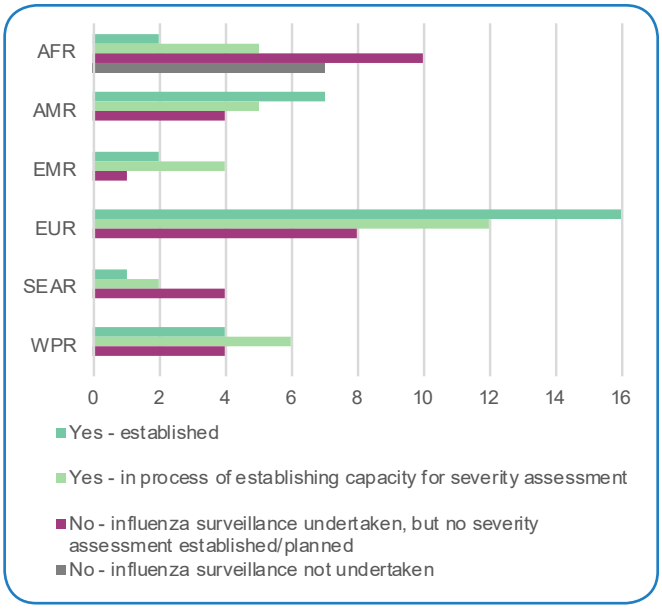

Fig. 23. Number of countries implementing or planning severity assessment in influenza surveillance

Globally, 42 out of 104 countries (40%; regional range 8–71%) have established **SOPs for conducting systematic risk assessment for influenza using surveillance data**, as described in the WHO guidance Rapid risk assessment of acute public health events. Fifty-eight countries (56%; regional range 29–75%) do not have established SOPs, and a further four countries (4%; regional range 0–17%) do not undertake influenza surveillance.

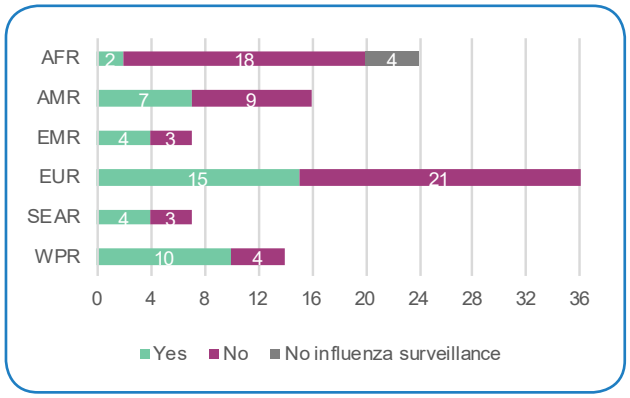

Fig. 24. Number of countries with SOPs for conducting systematic risk assessment for influenza using surveillance data

3.2.3. Health services and clinical management

Globally, 68 out of 104 countries (65%; regional range 50–75%) have a **health care sector business continuity plan** to ensure the continuation of essential health services during an influenza pandemic.

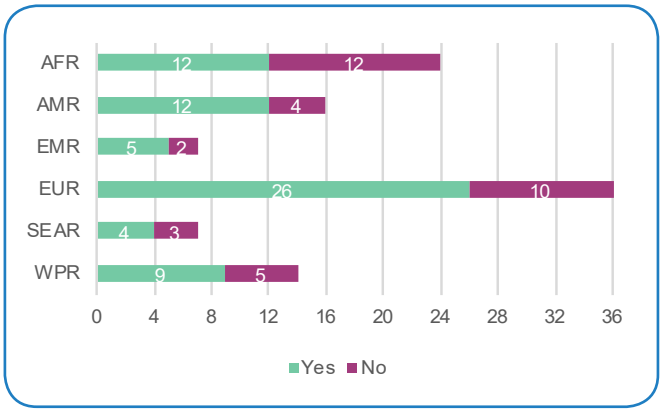

Fig. 25. Number of countries with a health-sector business continuity plan

A total of 71 out of 104 countries (68%) have **ready-to-use materials for information, education and communication** (IEC), advising citizens on best practices in health seeking during an influenza pandemic.

Fifty-two countries (50%; regional range 42–57%) have IEC materials in official languages, whereas 19 countries (18%; regional range 8–43%) have materials in official languages and languages of minority groups. A total of 33 countries (32%; regional range 0–50%) do not have ready-to-use IEC materials.

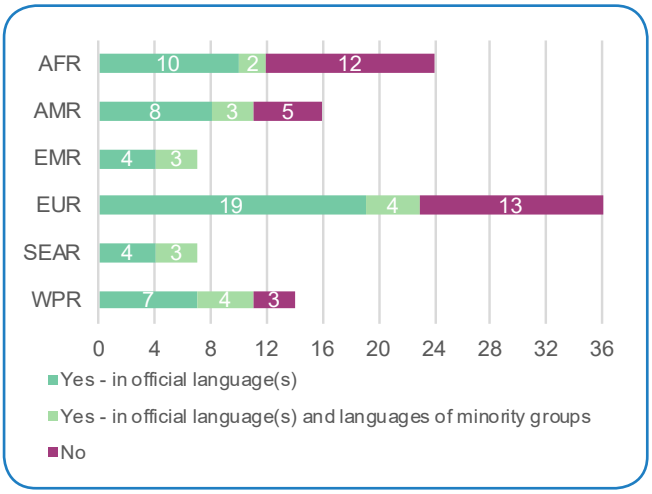

Fig. 26. Number of countries with ready-to-use IEC materials on health seeking practices

Seventy-four out of 104 countries (71%; regional range 50–93%) have an arrangement for a **national telephone helpline** to answer questions and address concerns during an influenza pandemic. Thirty countries (29%; regional range 7–50%) have no such arrangement.

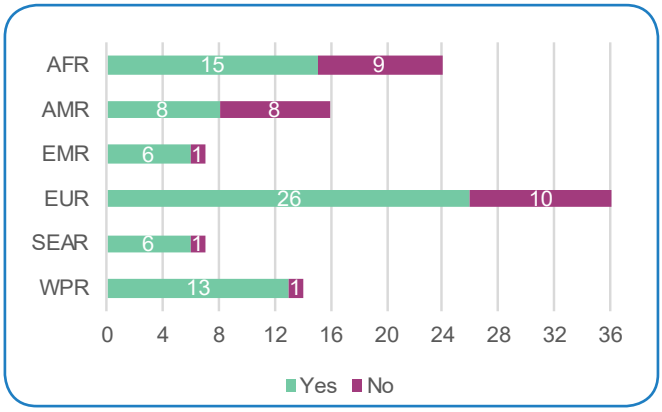

Fig. 27. Number of countries with arrangements for a national telephone helpline

Globally, 64 out of 104 countries (62%; regional range 29–86%) have established **financing mechanisms to support essential health services** during an influenza pandemic. Forty countries (38%; regional range 14–71%) have not established a financing mechanism.

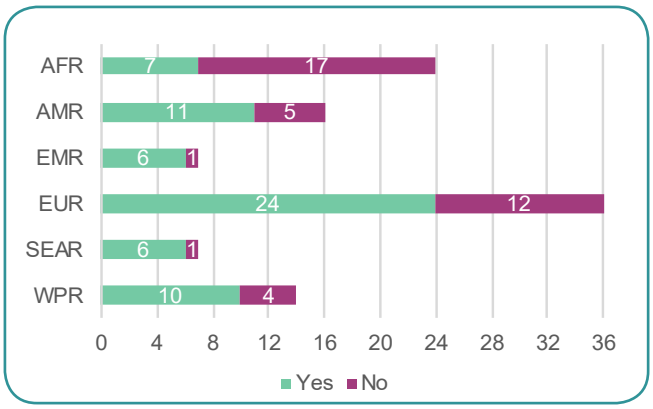

Fig. 28. Number of countries with established financing mechanisms to support essential health services

Seventy out of 104 countries (67%) have a plan to cope with **health care facility and personnel surge capacity needs** during an influenza pandemic. Twenty-one countries (20%; regional range 7–43%) have a stand-alone plan, and a further 49 countries (47%; regional range 17–64%) have surge capacity planning as part of the national pandemic influenza preparedness plan.

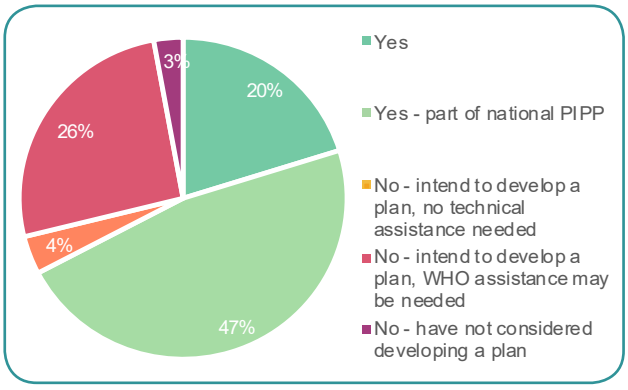

Fig. 29. Proportion of countries with plans to cope with health-care facility and personnel surge capacity needs

Currently, 34 countries (33%) do not have a surge capacity plan for health care facilities and personnel. However, 31 of these countries intend to develop such a plan, with 27 countries (26%; regional range 6–63%) anticipating a need for technical assistance. Of these, most are from the AFR (15 countries). Three countries (3%; regional range 0–6%) – two from the EUR and one from the AFR – do not currently have a plan and have not considered developing one.

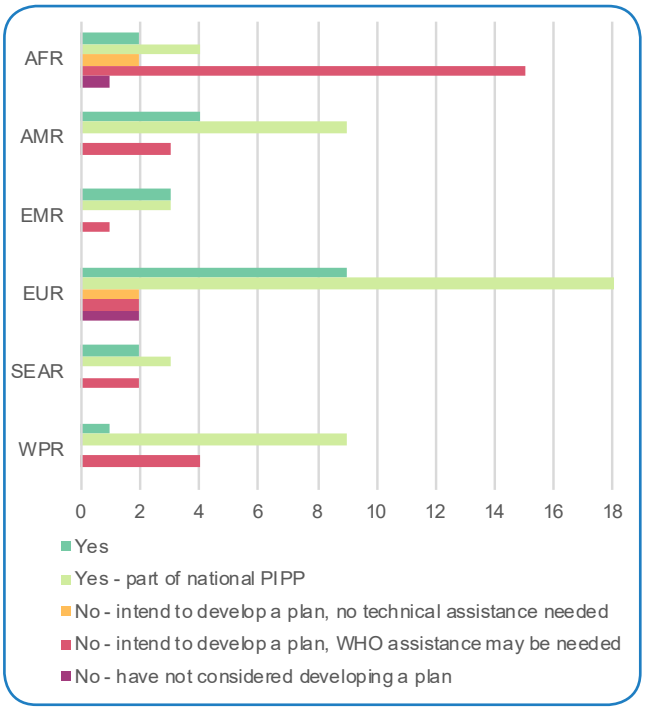

Fig. 30. Number of countries with plans to cope with health-care facility and personnel surge capacity needs

Globally, 83 out of 104 countries (80%; regional range 50–93%) have a plan to **protect health care workers** during an influenza pandemic by identifying these workers as a **priority group for pandemic vaccination.** Twenty-one countries (20%; regional range 7–50%) have no such plan in place.

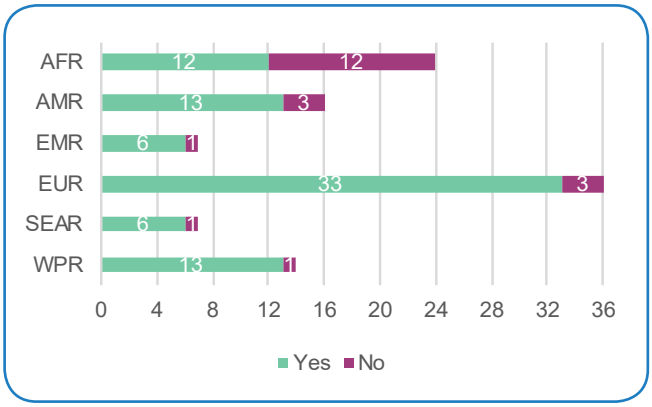

Fig. 31. Number of countries with plans to protect health-care workers through priority pandemic influenza vaccination

A total of 79 out of 104 countries (76%; regional range 67–81%) have an inventory of **existing public and private health care facilities** that can provide health care services during an influenza pandemic. Twenty-five countries (24%; regional range 19–33%) do not have an inventory.

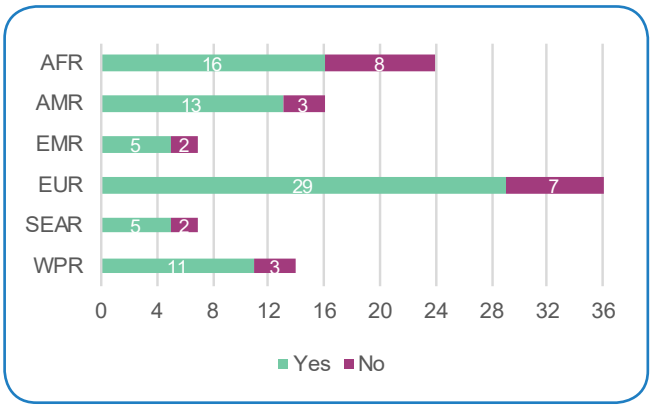

Fig. 32. Number of countries with an inventory of health-care facilities that can provide health services

Forty-one out of 104 countries (39%) have a plan to cope with **excess mortality** during an influenza pandemic (e.g. mortuary facilities and funeral services). Eighteen countries (17%; regional range 13–43%) have a stand-alone plan, and a further 23 countries (22%; regional range 0–33%) have included planning for excess mortality in their national pandemic influenza preparedness plan.

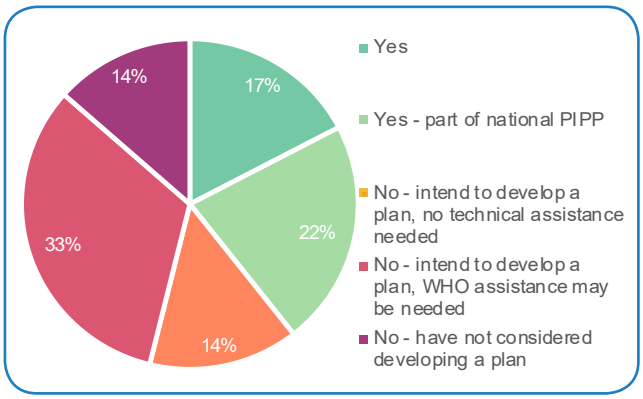

Fig. 33. Proportion of countries with a plan to manage excess mortality

Currently, 63 countries (61%) do not have a plan to manage excess mortality during a pandemic. Forty-nine of these countries intend to develop such a plan, with 34 countries (33%; regional range 6–67%) anticipating a need for technical assistance. Most of these countries are from the AFR (16 countries) and the AMR (7 countries). Fourteen countries (13%; regional range 0–31%) do not currently have a plan and have not considered developing one, including 11 countries from the EUR.

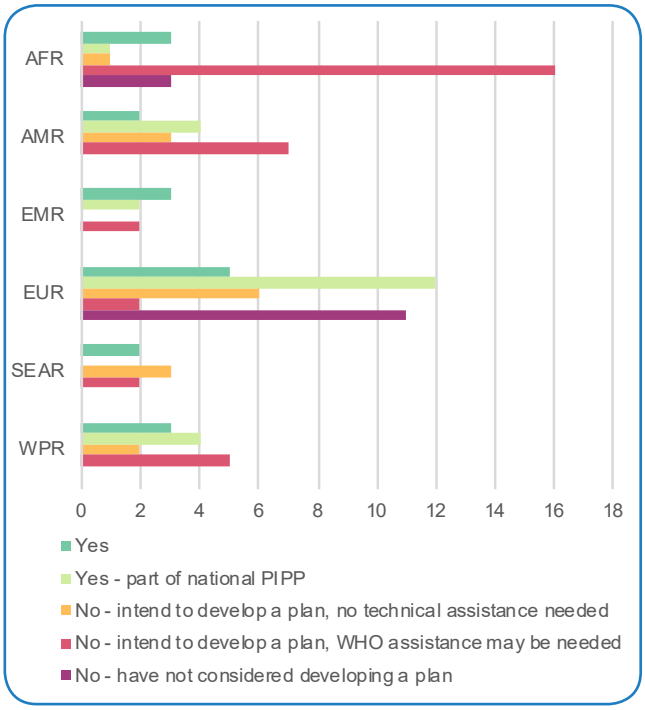

Fig. 34. Number of countries with a plan to manage excess mortality

Globally, 65 out of 104 countries (63%) have a plan to ensure the **availability of essential medicines, medical supplies and devices** during an influenza pandemic. Eighteen countries (17%; regional range 0–43%) have a stand-alone plan, and a further 47 countries (45%; regional range 21–86%) have included securing essential medicines, medical supplies and devices as part of their national pandemic influenza preparedness plan.

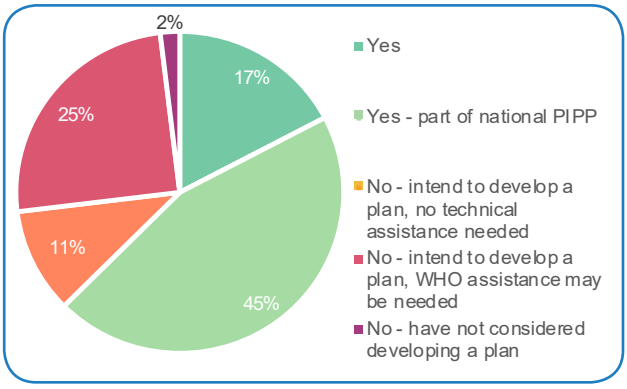

Fig. 35. Proportion of countries with a plan to ensure availability of essential medicines, medical supplies and devices

Currently, 39 countries (38%) do not have a plan to ensure the availability of **essential medicines, medical supplies and devices.** Thirty-seven of these countries intend to develop a plan, of which 26 countries (25%; regional range 0–54%) anticipate a need for technical assistance. Of these countries, half are from the AFR. Two countries – one from the AFR and one from the EUR – do not have a plan and have not considered developing one.

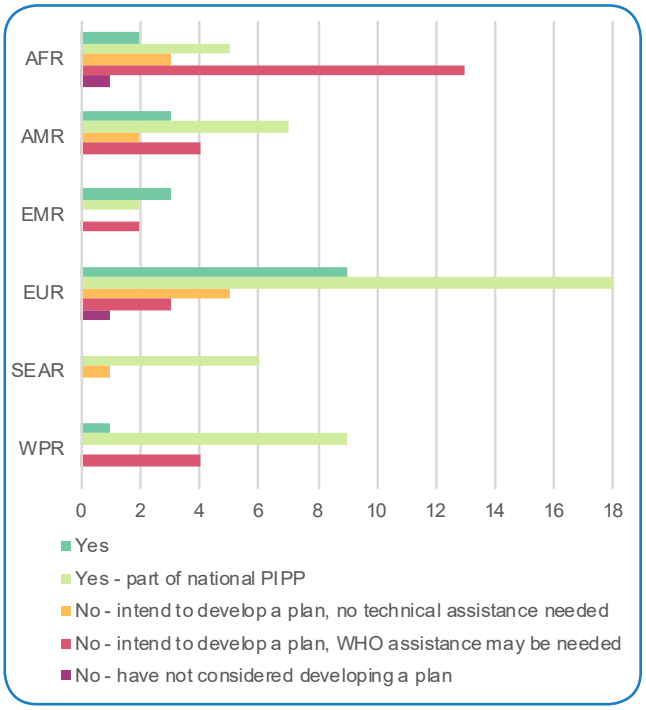

Fig. 36. Number of countries with a plan to ensure availability of essential medicines, medical supplies and devices

Of the 65 countries with a plan to ensure the availability of essential medicines, medical supplies and devices during an influenza pandemic, 55 plans (84%) address the **roles and responsibilities of the national regulatory authority for medicines and health products.**

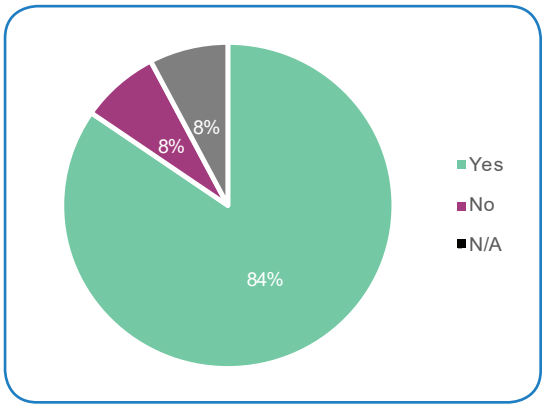

Fig. 37. Proportion of countries with a plan that addresses the role and responsibilities of the national regulatory authority

Seventy-one out of 104 countries (68%; regional range 50–100%) have developed **guidelines for patient management** during an influenza pandemic. A total of 19 countries (18%; regional range 0–33%) have not developed guidelines, and 14 countries (13%; regional range 0–38%) did not provide a response to this question.

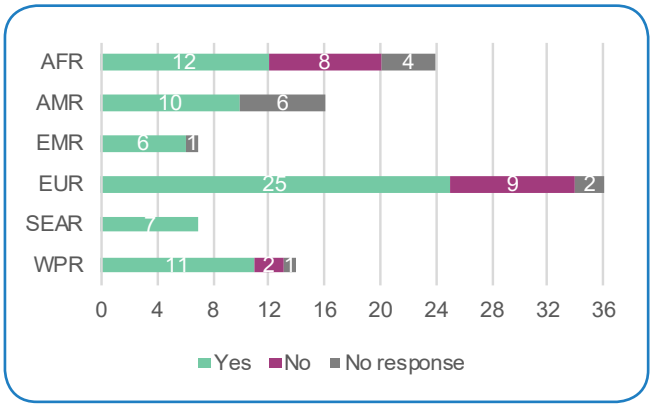

Fig. 38. Number of countries with guidelines for patient management during an influenza pandemic

Globally, 90 out of 104 countries (87%; regional range 67–100%) have clear existing **infection prevention and control (IPC) guidelines and protocols** in their established national IPC programme. Eight countries (8%; regional range 0–17%) do not have existing IPC guidelines and protocols, and a further six countries (6%; regional range 0–17%) do not have an established national IPC programme.

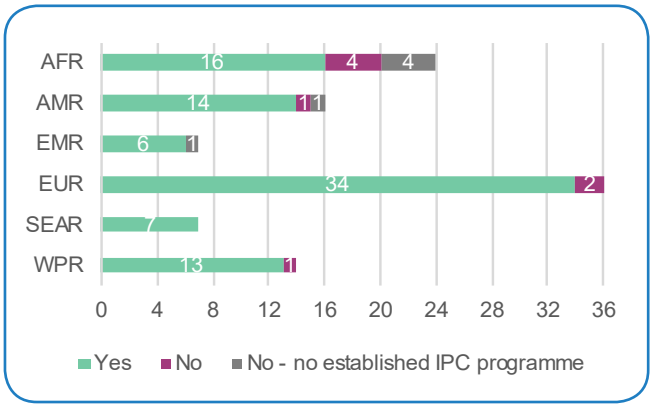

Fig. 39. Proportion of countries with IPC guidelines and protocols in their established national IPC programme

3.2.4. Preventing illness in the community (pharmaceutical and nonpharmaceutical interventions)

Globally, 66 out of 104 countries (63%; regional range 29–89%) implement **routine seasonal influenza vaccination.** Thirty-eight countries (37%; regional range 6–92%) do not implement such vaccination.

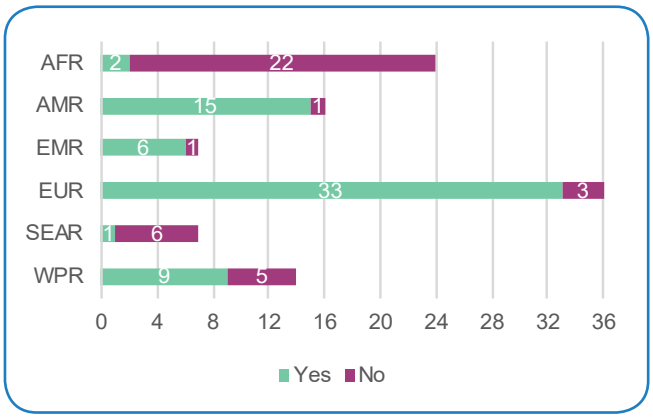

Fig. 40. Number of countries implementing routine seasonal influenza vaccination

Seventy-three out of 104 countries (70%; regional range 29–89%) have established a **policy on priority groups for pandemic influenza vaccination during the early stage of an influenza pandemic,** when the supply of vaccine will be limited. Thirty-one countries (30%; regional range 11–71%) have not established such a policy.

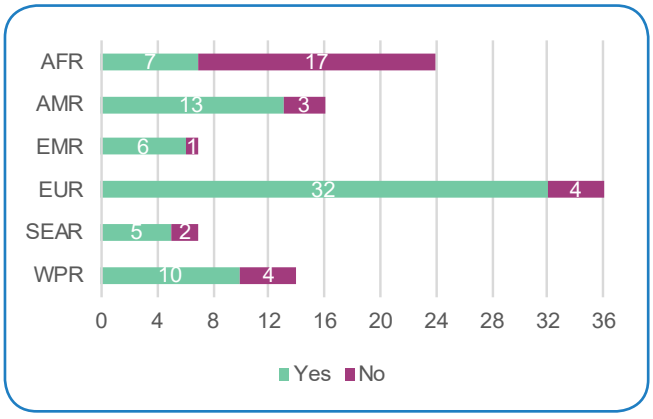

Fig. 41. Number of countries with a policy on priority groups for pandemic influenza vaccination during the early stage of a pandemic

In terms of vaccination, globally, 60 countries out of 104 (58%) have developed a **pandemic influenza national deployment and vaccination plan (NDVP).** Twenty-four countries (23%; regional range 7–57%) have a stand-alone plan, and a further 36 countries (34%; regional range 21–50%) have integrated this into their national pandemic influenza preparedness plan.

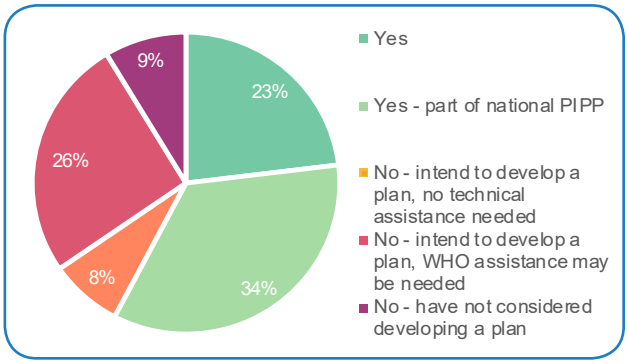

Fig. 42. Proportion of countries with a pandemic influenza national vaccine deployment and vaccination plan

Forty-four countries (42%) have not developed a pandemic influenza NDVP. Of these, 35 countries (34%) intend to develop an NDVP, with 27 countries (26%; regional range 11–54%) anticipating a need for technical assistance, including 13 from the AFR. Globally, nine countries have not considered developing an NDVP, including three each from the AFR and EUR.

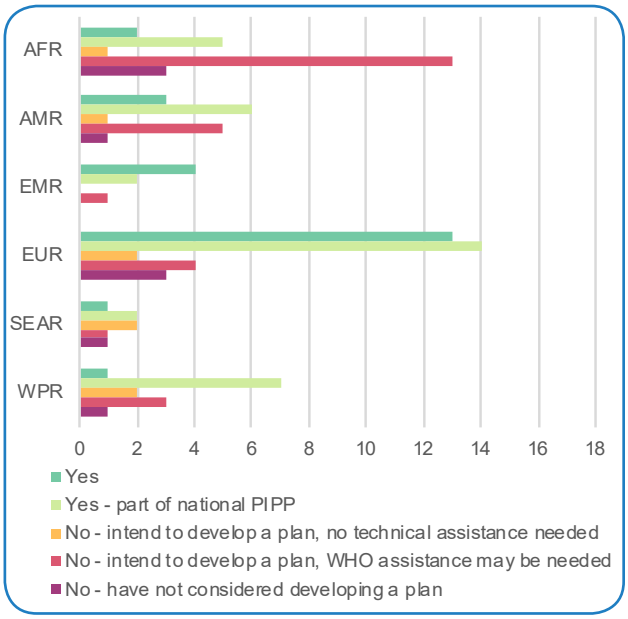

Fig. 43. Number of countries with a pandemic influenza national vaccine deployment and vaccination plan

For the **emergency use of pandemic influenza vaccines**, countries responded that the following **regulatory pathways** will be applied:

- WHO collaborative registration procedure: 19 out of 104 countries (18%; regional range 0–33%);
- accept WHO prequalified vaccines: 51 out of 104 countries (49%; regional range 29–71%);
- generic emergency pathway used for any drug or biological product: 27 out of 104 countries (26%; regional range 6–39%);
- specific emergency pathway devised for pandemic influenza vaccines: 23 out of 104 countries (23%; regional range 14–28%);
- donation pathway: 12 out of 104 countries (12%; regional range 0–21%); and
- no emergency use pathway: 8 out of 104 countries (8%; regional range 0–14%).

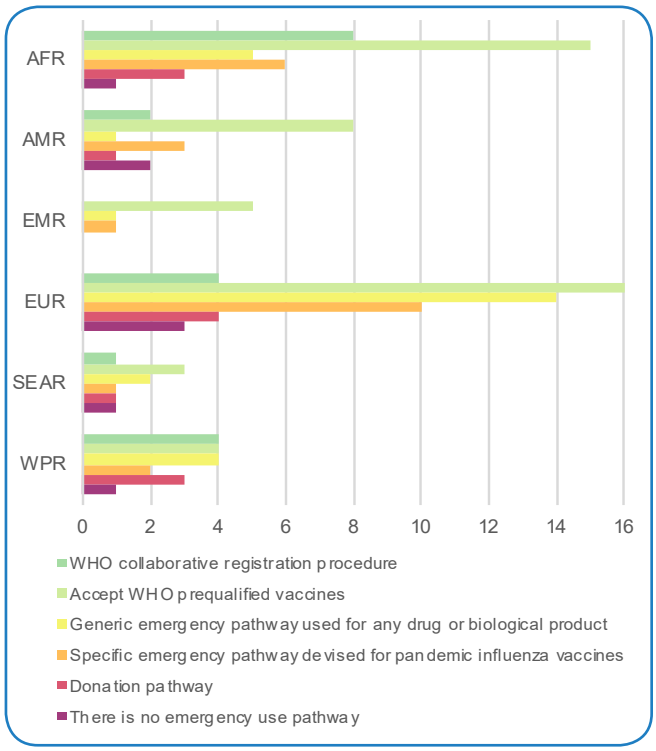

Fig. 44. Number of countries intending to apply regulatory pathways for the emergency use of pandemic influenza vaccines

Globally, 81 out of 104 countries (78%; regional range 46–96%) have a national pandemic influenza preparedness plan that specifies the **use of pandemic influenza vaccine in a response.** Ten countries (10%; regional range 0–25%) do not specify the use of pandemic influenza vaccine in their national plan, and a further 13 countries (13%; regional range 0–42%) do not have a national pandemic influenza preparedness plan.

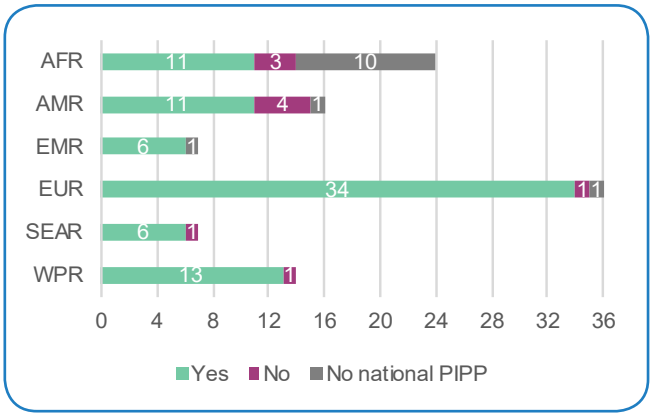

Fig. 45. Number of countries with a national pandemic influenza preparedness plan that specifies the use of pandemic influenza vaccine

Countries responded that they have established the following **mechanisms for securing access to pandemic influenza vaccine** during an influenza pandemic:

- contractual agreements with manufacturers: 31 out of 104 countries (30%; regional range 0–57%);
- commitment from United Nations (UN) agencies: 19 out of 104 countries (18%; regional range 6–33%);
- commitment from donors or partners: 8 out of 104 countries (8%; regional range 0–17%);
- other: 17 out of 104 countries (16%; regional range 0–38%);
- no mechanism established: 34 out of 104 countries (33%; regional range 14–71%); and
- unknown or no response: 2 out of 104 countries (2%; regional range 0–6%).

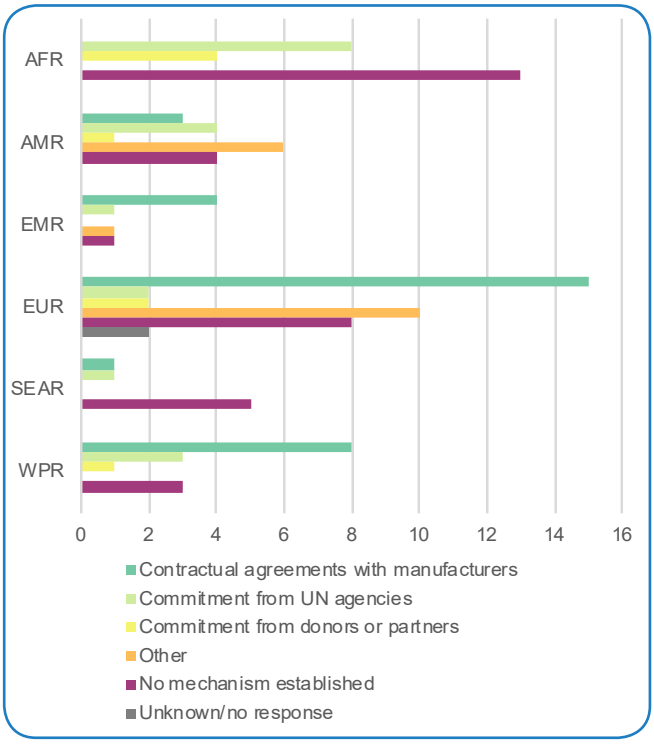

Fig. 46. Number of countries with mechanisms for securing access to pandemic influenza vaccine during a pandemic

Globally, 70 out of 104 countries (67%; regional range 29–88%) have developed a national strategy for the use of antiviral therapy during an influenza pandemic. Thirty-four countries (33%; regional range 13–71%) have not developed a strategy.

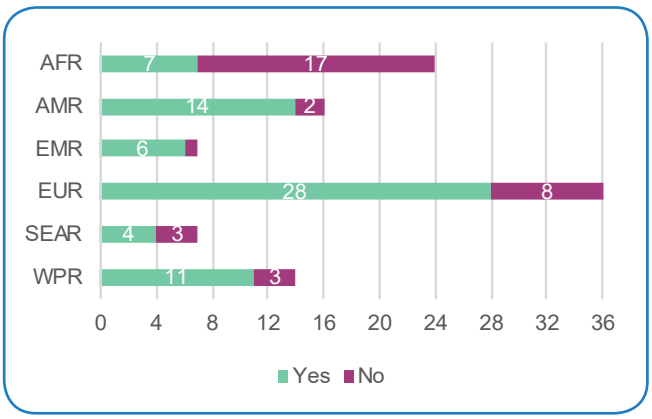

Fig. 47. Number of countries with a national strategy for the use of antiviral therapy during a pandemic

Countries responded that the following nonpharmaceutical public health measures are specified in their national pandemic influenza preparedness plans:

- distribution of IEC materials: 41 out of 104 countries (39%; regional range 14–71%);
- IEC through mass media: 40 out of 104 countries (38%; regional range 14–57%);
- two-way communication between authorities and communities: 85 out of 104 countries (35%; regional range 14–57%);
- distribution of infection control materials: 23 out of 104 countries (22%; regional range 14–43%);
- social distancing measures: 34 out of 104 countries (33%; regional range 14–71%); and
- none: 62 out of 104 countries (60%; regional range 29–86%).

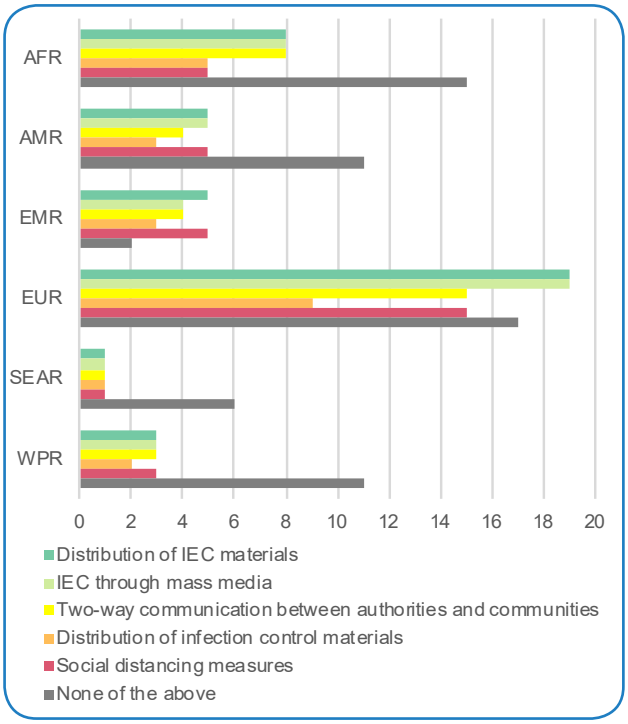

Fig. 48. Number of countries with nonpharmaceutical public health measures specified in their national pandemic influenza preparedness plans

3.2.5. Maintaining essential services and recovery

Globally, 81 out of 104 countries (78%; regional range 63–100%) have **nationally established bodies responsible for ensuring the continuity of essential public sector services** during an influenza pandemic. Twenty-three countries (22%; regional range 0–38%) do not have responsible bodies in place.

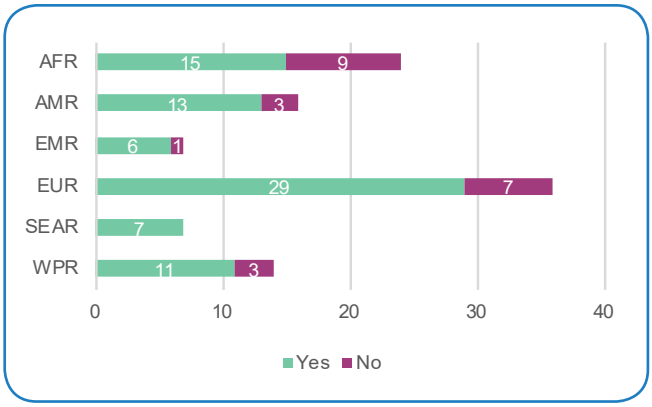

Fig. 49. Number of countries with nationally established bodies to ensure continuity of essential public sector services during a pandemic

Fifty-eight out of 104 countries (56%; regional range 42–86%) have an **established coordination mechanism with private business sectors** to ensure **continuity of essential services** during an influenza pandemic. Forty-six countries (44%; regional range 14–58%) do not have such a mechanism.

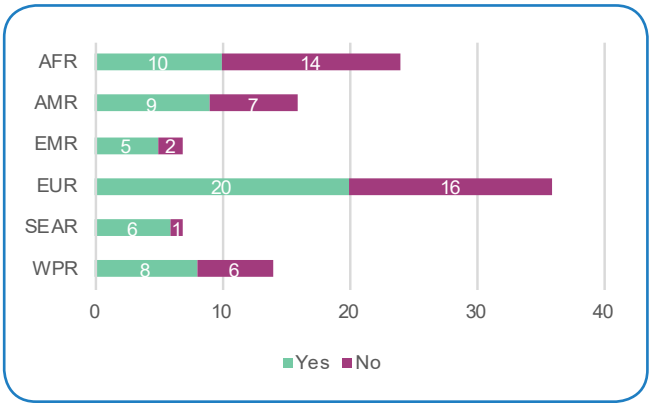

Fig. 50. Number of countries with an established private sector coordination mechanism to ensure continuity of essential services during a pandemic

Fifty-two out of 104 countries (50%; regional range 38–71%) have a recovery plan included as part of their national pandemic influenza preparedness plan. The remaining 52 countries (regional range 29–63%) have not included recovery in their preparedness planning.

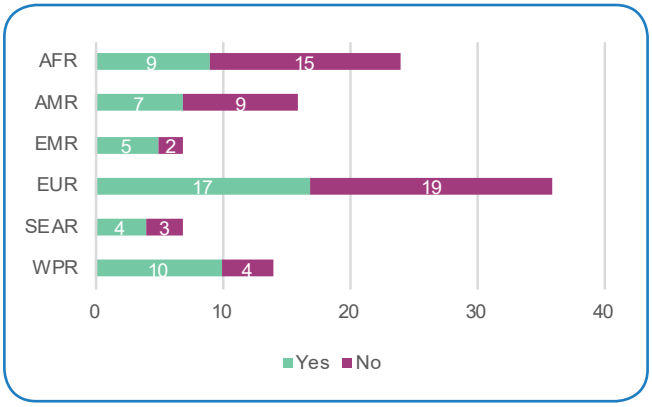

Fig. 51. Number of countries with a recovery plan as part of the national pandemic influenza preparedness plan

3.3. Capacity scores

3.3.1. Overall survey

The global average of points scored for the survey was 29.3 out of 46 points (63.8%). The response rate for each region (see Section 1.3) should be taken into account when interpreting average regional scores, because these are unlikely to be representative of all countries in regions with low response rates. Regionally, countries scored an average of:

- AFR: 20.1 (43.6%)
- AMR: 29.91 (65.1%)
- EMR: 33.4 (72.6%)
- EUR: 32.0 (69.7%)
- SEAR: 32.3 (70.3%)
- WPR: 34.0 (74.0%).

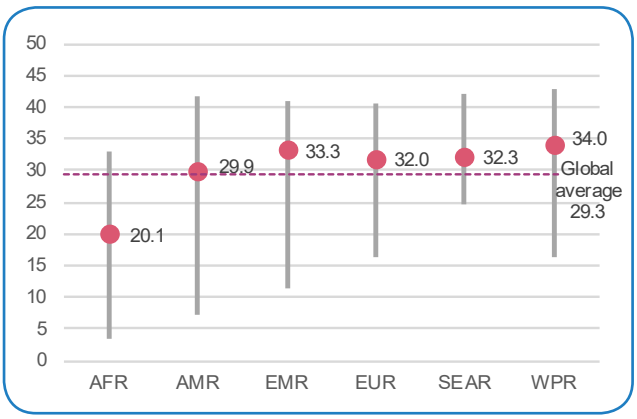

Fig. 52. Average and range of survey scores by region

An analysis by income group shows a clear and unsurprising positive correlation between increased income and improved score. HICs (37 countries) scored the most points on average, followed by UMICs (27 countries), LMICs (26 countries), then LICs (14 countries).

- HIC: 34.3 (74.6%)
- UMIC: 30.6 (66.4%)
- LMIC: 27.2 (59.2%)
- LIC: 17.7 (38.5%).

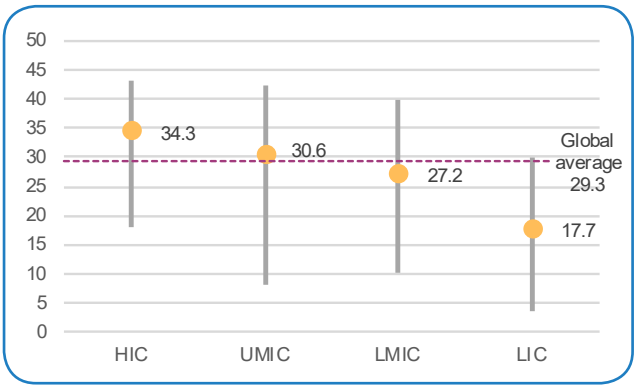

Fig. 53. Average and range of survey scores by income group

HICs and UMICs scored above the global average (10.9% and 2.7%, respectively), whereas LMICs scored slightly lower than average (–4.6%). LICs lagged significantly behind the other income groups, scoring 25.3% below the global average. If the scores produced by this survey can be acceptably interpreted as an indicator of pandemic preparedness, then LICs clearly require additional support to improve the relevant capacities.

The relationship between a low income and a low survey score (as a proxy for pandemic preparedness) is particularly significant in the AFR. Countries in this region consistently score lower on average than countries in other regions, and also have the lowest income levels. Of the 24 AFR countries that participated in the survey, 12 are classified as LIC, 10 as LMIC and two as UMIC. African countries made up 38% of the LMICs participating in this survey (10 out of 26 countries) and 86% of the LICs (12 out of 14 countries).

The pattern of the lowest regional score coming from the AFR and the clear correlation between income and score were consistently demonstrated in each section of the survey (see Figs. 48–59). The AFR therefore clearly warrants targeted support from WHO to boost existing capacities of pandemic preparedness in all capacity areas, with the support adapted to and addressing the resource challenges facing many countries in the region.

Tables with the survey scores aggregated by region and income can be found in Annex 4.

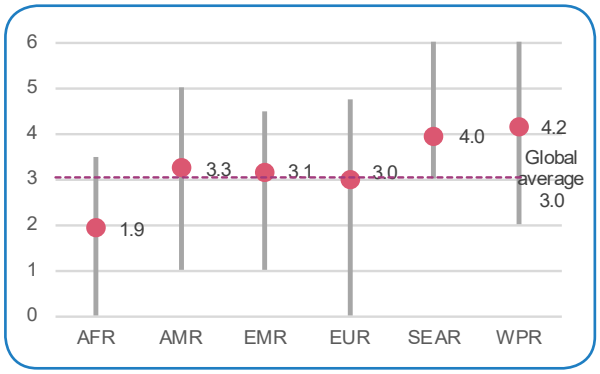

Fig. 54. Average and range of scores for Part 1:
Status of national pandemic influenza preparedness plans by region

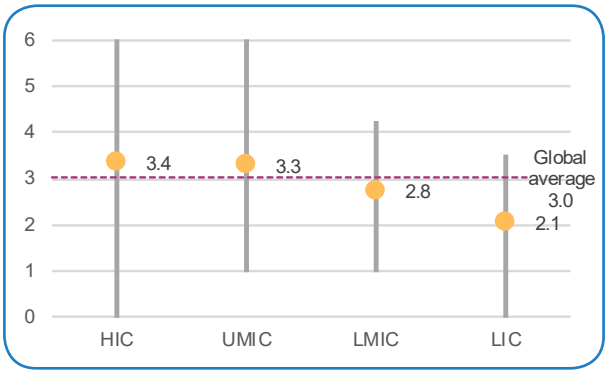

Fig. 55. Average and range of scores for Part 1:
Status of national pandemic influenza preparedness plans by income group

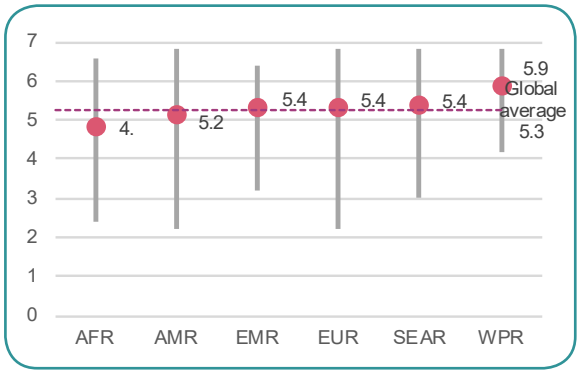

Fig. 56. Average and range of scores for Part 2A:
Preparing for an emergency by region

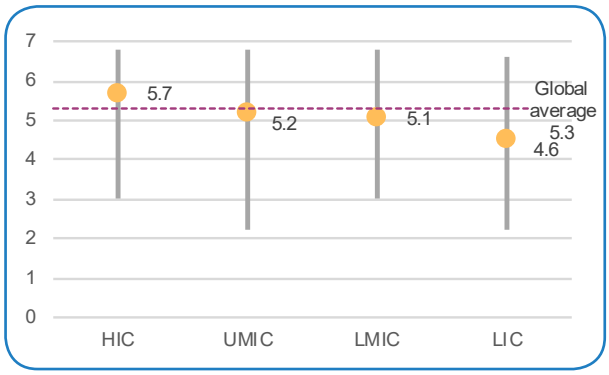

Fig. 57. Average and range of scores for Part 2A:
Preparing for an emergency by income group

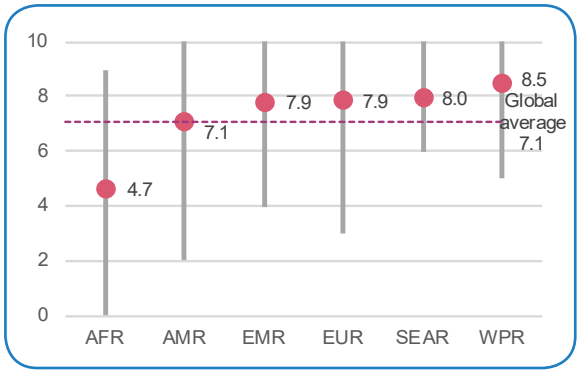

Fig. 58. Average and range of scores for Part 2B:
Surveillance, investigation and assessment by region

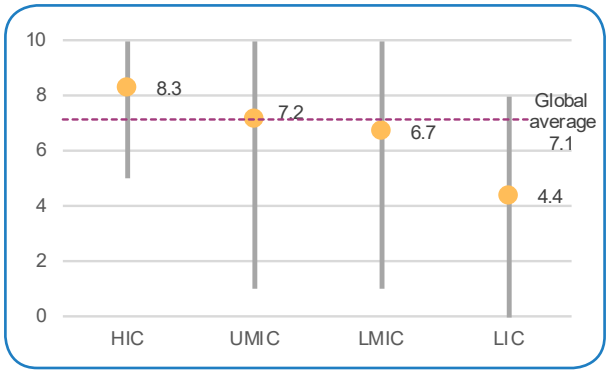

Fig. 59. Average and range of scores for Part 2B:
Surveillance, investigation and assessment by income group

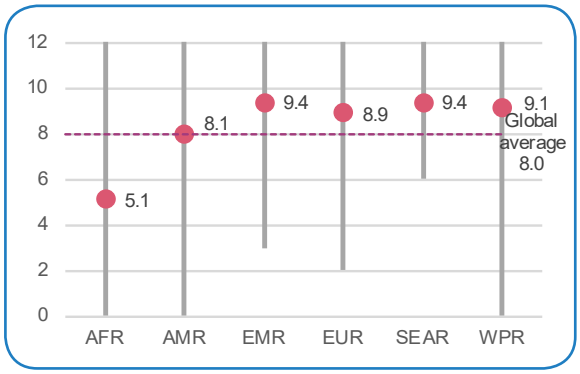

Fig. 60. Average and range of scores for Part 2C:
Health services and clinical management by region

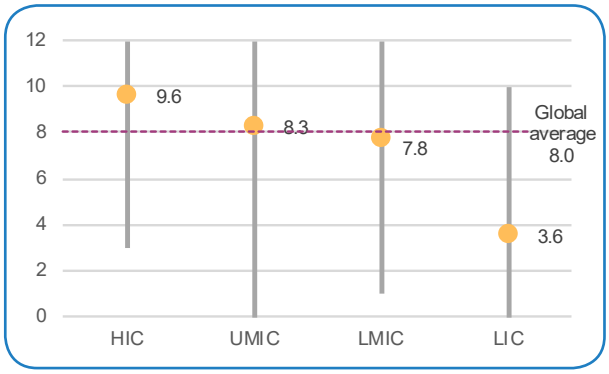

Fig. 61. Average and range of scores for Part 2C:
Health services and clinical management by income group

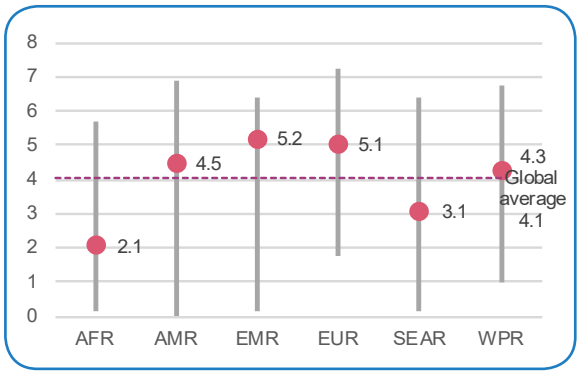

Fig. 62. Average and range of scores for Part 2D:
Preventing illness in the community by region

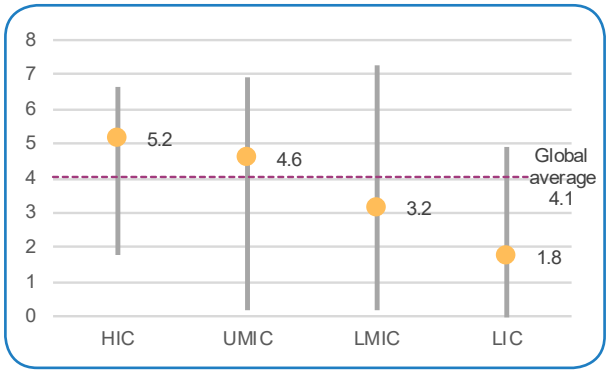

Fig. 63. Average and range of scores for Part 2D:
Preventing illness in the community by income

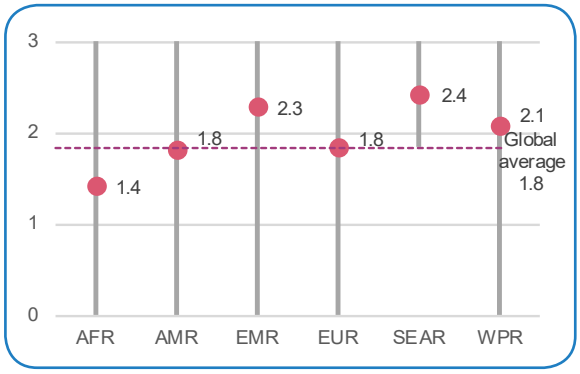

Fig. 64. Average and range of scores for Part 2E:
Maintaining essential services and recovery by region

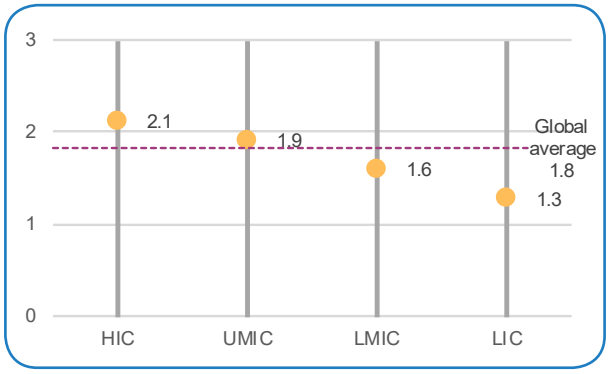

Fig. 65. Average and range of scores for Part 2E:
Maintaining essential services and recovery by income group

3.3.2. Scores by capacity area

As shown in Table 3, on average, countries scored highest in the capacity areas of *Preparing for an emergency* (75.5%) and *Surveillance, investigation and assessment* (71.1%). The weakest area was *Status of national pandemic influenza preparedness plans*, where countries scored on average 50.4%.

A list of survey capacity areas and questions ranked by score can be found in Annex 5.

Table 3. Ranking of capacity areas by global average of survey scores

RANK	Capacity area	Points scored	% of total points
1	Preparing for an emergency (planning, coordination and resources) (*Part 2A*)	5.3 out of 7 points	75.5%
2	Surveillance (laboratory, epidemiology or event), investigation and assessment (risk and severity) (*Part 2B*)	7.1 out of 10 points	71.1%
3	Health services and clinical management (*Part 2C*)	8.0 out of 12 points	66.7%
4	Maintaining essential services and recovery (*Part 2E*)	1.8 out of 3 points	61.2%
5	Preventing illness in the community (pharmaceutical and nonpharmaceutical interventions) (*Part 2D*)	4.1 out of 8 points	50.9%
6	Status of national pandemic influenza preparedness plans (*Part 1*)	3.0 out of 6 points	50.4%

1. ***Preparing for an emergency*** addressed the existence of emergency response plans, coordination and resourcing mechanisms, a national ethics committee, regulatory policies to implement public health measures, and risk communication and community engagement mechanisms. Countries scored strongly (≥87.5%) for having multisectoral coordination plans or mechanisms during a public health emergency, regulatory policies to implement public health measures, and mechanisms to support human and financial resource requirements during a public health emergency. Countries were weakest in mechanisms for risk communication and community engagement, scoring an average of 36.9% in this area.

2. ***Surveillance, investigation and assessment*** focused on laboratory capacities, the existence of influenza and event-based surveillance systems, and the use of severity and risk assessment for influenza. Globally, countries scored strongly (≥89.4%) for having at least one laboratory capable of performing routine influenza diagnostics using RT-PCR, having established mechanisms to share specimens with WHO collaborating centres for influenza and having influenza surveillance systems. In this area, countries were weakest in having established procedures to conduct systematic influenza risk assessment using surveillance data (40.4%).

3. ***Health services and clinical management*** addressed health care sector business continuity during an influenza pandemic, health care service financing, surge capacity, human resources, medicines and supplies, patient management, IPC protocols, mechanisms to support the public in accessing health information, and plans to manage excess mortality. Countries scored strongly (86.5%) for reporting clear existing IPC guidelines and protocols in established national IPC programmes. Countries were weakest in having plans to cope with excess mortality during an influenza pandemic (39.4%).

4. ***Maintaining essential services and recovery*** focused on the existence of established responsible bodies to ensure essential service continuity, mechanisms to coordinate with the private sector and the inclusion of recovery in national preparedness plans. Globally, countries scored reasonably well (50.0–77.9%) for all questions, with the inclusion of recovery in national preparedness plans requiring the most support (50.0%).

5. ***Preventing illness in the community*** addressed seasonal and pandemic influenza vaccination, antiviral therapy and nonpharmaceutical public health measures. The strongest response in this section concerned the specification in national pandemic influenza preparedness plans for the use of pandemic influenza vaccine to respond to a pandemic, scoring 77.9%. The weakest responses in this section – and three of the four lowest scoring responses overall – addressed mechanisms for securing access to pandemic influenza vaccine during a pandemic (15.9%), regulatory pathways for the emergency use of pandemic influenza vaccines (21.2%) and the specification of nonpharmaceutical public health measures in a pandemic response in national plans (33.3%). These issues warrant more attention from WHO and Member States.

6. ***Status of national pandemic influenza preparedness plans*** addressed the existence, development, update, public availability and exercise of national pandemic influenza preparedness plans. This section also surveyed countries on their awareness of a number of WHO guidance documents; however, these questions were not scored. Countries scored strongly (≥87.5%) for having a national pandemic influenza preparedness plan, and for intending to develop or update existing plans in the next 1–2 years. The weakest area identified in this section and in the entire survey overall was the conduct of simulation exercises to test plan within the past 5 years (14.8%), with field, drill and functional exercises poorly represented in particular.

3.4. Suggestions from Member States

The final question in the survey provided a space for respondents to offer open-ended comments regarding WHO's role in strengthening national and global pandemic preparedness. Sixty-seven countries provided responses, of which 56 contained specific requests or suggestions for WHO. Comments mentioned support in the areas outlined below in Table 4 (responses often mentioned support in several different areas).

Table 4. Comments by area

AREA	Number of comments referenced in
Technical or financial support	17
Review or complete plans	14
Capacity strengthening	11
Surveillance/laboratory	8
PI advocacy	7
Meetings or knowledge sharing	6
Vaccine	6
Guidance	5
International coordination or information sharing	5
Simulation exercises	5
Antiviral therapies	3
Seasonal influenza vaccine	2
Global messaging and communication	1
Public health interventions	1
Research	1
Risk communication	1

Technical or financial support (or both) was the most common request, mentioned in comments by 17 countries. Most requests concerned pandemic planning and preparedness in general, such as:

- *provide continuous support and guidance;*
- *provide necessary technical assistance and guidance on request from country focal points; and*
- *provide countries with national experts to support the focal points in order to prioritize preparation.*

A need for continuing support to **review or complete plans** was clearly expressed by respondents in 14 comments, including:

- *provide technical support in finalizing the national pandemic influenza preparedness plan;*
- *ensure that every country has a standard national influenza pandemic preparedness plan; and*
- *update the different national plans available.*

WHO's role to support **capacity strengthening** was mentioned in comments from 11 respondents, including:

- *WHO could ensure that countries have the requisite capabilities (including surveillance and response capabilities) in place to combat a pandemic; and*
- *capacity-building is of critical importance in the management of pandemic influenza, and the role of WHO is very important on this aspect.*

Specific requests to support capacity strengthening in **surveillance and laboratory** (an area in which respondents performed relatively well in the survey) were made in eight comments; for example:

- *WHO has a role to help strengthen countries surveillance systems and also to promote the all-hazard approach in the development of pandemic preparedness plans; and*
- *technically and materially support national laboratories and services for epidemiological surveillance.*

WHO's role to support **national influenza programmes and pandemic influenza advocacy efforts** was commented on by seven respondents, including comments that focused on a need to influence decision-makers to support pandemic planning efforts; for example:

- *to encourage decision-makers to endorse development and implementation of pandemic plans; and*
- *contact…at the minister of health level, to reinforce the need for updated plans and to insist on the need to allocate resources in countries to do so.*

Six respondents commented on WHO's role in convening **meetings** and facilitating **knowledge sharing** (in particular, experiences and lessons learned) among countries and experts. Countries also requested WHO to support Member States in accessing **pandemic influenza vaccine** and advising on vaccine needs.

Five countries commented on WHO **guidance**, suggesting more support to promote, disseminate and translate guidance into local languages, and to develop short and simple documents. WHO's role in **international coordination and information sharing** was noted by respondents, with suggestions that WHO communicate early findings on significant changes in influenza viruses. Requests were also made for existing WHO documents (e.g. global influenza situation reports, information on declaring a pandemic and PHEIC), indicating that these information products should be made more visible and easier to access. Respondents also highlighted the benefits of conducting **simulation exercises**, including several requests for WHO support in this area.

Other comments were made in the areas of support for antiviral therapy access and policy, seasonal influenza vaccination, global messaging and communications, public health interventions, research and risk communication.

4. Discussion & Conclusions

4.1 Priorities for strengthening

The survey highlighted two capacity areas that warrant targeted support – Preventing illness in the community (pharmaceutical and nonpharmaceutical interventions) and Status of national pandemic influenza preparedness plans. Member States on average scored about 51% for these sections, indicating that almost half of the preparedness capacities identified as being necessary in these areas are not established in countries.

Specific priorities that were identified by the survey[1] for improvement are:

- conducting simulation exercises to test pandemic plans;
- establishing mechanisms to secure access to pandemic influenza vaccine during a pandemic;
- defining regulatory pathways for the emergency use of pandemic influenza vaccine;
- including and specifying nonpharmaceutical public health measures for pandemic response in preparedness plans;
- preparing mechanisms to conduct risk communications and community engagement during a pandemic;
- developing plans to manage excess mortality during a pandemic;
- establishing SOPs to conduct systematic influenza risk assessments using surveillance data; and
- making pandemic influenza preparedness plans publicly available on the Internet.

The survey also highlighted the need for countries to update existing pandemic preparedness plans, and the intention of 88% of countries to do so within the next 2 years. WHO clearly has a role to play in helping countries in this process, and can use the results of this survey to inform strategies to provide technical support.

Countries at all income levels have room for improvement in pandemic preparedness.
The level of pandemic preparedness is far from optimal, even in HICs. However, LICs clearly require additional and targeted support to prepare for an influenza pandemic. This is most evident in the AFR, which scored consistently lower than other regions in the survey – a result that can be linked to the lower overall income status of countries in this region. Some 74% of low-income WHO Member States are from the AFR, with 25 out of 46 countries in the region having low-income status.

This survey has identified many gaps in pandemic preparedness capacities in the AFR, but also a strong desire to strengthen these capacities with the support of WHO. Six questions in the survey related to the existence of different types of pandemic preparedness plans [2] and the intention to develop a plan if the country does not already have one. For each type of plan, the highest proportion of countries responding with the intention to develop a plan with WHO support came from the AFR (range: 47–58%). The WHO Regional Office for Africa and WHO headquarters should continue to offer targeted support to countries in the AFR, and may need to consider global strategies to better address the resources challenges and competing health priorities of many countries in the region.

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[1] Questions related to these capacities all scored 50% or lower in the survey.

[2] Plans for laboratory surge capacities (Qu. 23); surveillance (Qu .28); health care facility and personnel surge capacity (Qu. 36); availability of essential medicines, medical supplies and devices (Qu. 4); and a national pandemic influenza vaccine deployment and vaccination plan (Qu. 46).

4.2 Awareness and application of WHO guidance documents

More work can be done to improve awareness and uptake of WHO guidance documents on pandemic preparedness. Globally, one third of countries were not aware of three or more of the six guidance documents included in this survey. This issue is particularly pronounced in the AFR, which accounted for half of these countries, and contributed nine of the 13 countries (69%) that were unaware of all six guidance documents (including countries from upper-middle, lower-middle and low-income groups). WHO may consider developing a knowledge dissemination strategy for pandemic preparedness guidance that addresses issues such as how users seek and access information, and preferred formats and channels for receiving technical guidance.[1]

Even countries that are aware of WHO guidance are not necessarily using the documents. Of the six guidance documents included in the survey, the maximum number reported as being used by any one country was four, and this was reported by only six of the 104 countries participating in the survey. Although it can be expected that countries with strong capacities in pandemic preparedness may not need technical guidance from WHO, or that some countries may have read the guidance but not yet found an opportunity to implement the recommendations, it is still concerning to see such low uptake levels – particularly given that every country has room for improvement. WHO may consider reviewing how it supports countries to use pandemic planning guidance documents; for example, by offering support to countries that wish to update their plans using WHO guidance, but face resource or capacity challenges to do so. WHO may also consider reviewing how it develops guidance documents for pandemic preparedness, including how topics for guidance are proposed, how content is developed and contextualized for countries, and how recommendations are communicated and made actionable.

Table 5. Awareness and use of WHO guidance documents

No. of documents	AFR	AMR	EMR	EUR	SEAR	WPR	Global
Unaware of 6	9	2	0	1	1	0	13
Unaware of 5+	13	2	0	1	1	1	18
Unaware of 4+	16	5	0	2	1	3	27
Unaware of 3+	17	6	1	4	3	3	34
Using 4	1	1	1	2	0	1	6
Using 3+	1	3	2	6	1	2	15
Using 2+	1	4	2	12	1	4	24

4.3 Value of conducting the survey

This survey has been extremely valuable in identifying (and quantifying) specific gaps in pandemic influenza preparedness. Responses from Member States on the existence or lack of key elements of preparedness (e.g. simulation exercises, pandemic vaccine regulatory pathways, nonpharmaceutical public health measures and systematic risk assessment) are concrete action items that can be addressed with the support of country and regional offices. Country level data, while not published in this report, will be extremely useful to WHO to tailor the support the organization offers to countries and to validate or develop future workplans.

Surveys such as this are valuable snap-shots, and when implemented regularly they can become especially useful in building up a picture of trends over time. The global perspective of this survey in particular has been extremely valuable for understanding the relative capacities of regions and country income groups, and for identifying and validating clear priorities for future investments in preparedness by WHO and partners. Thus, conducting this survey periodically would be a valuable approach in demonstrating progress of pandemic influenza preparedness over time in Member States. However, surveys demand a great deal of time and effort, particularly from staff in Member States, who may be the focal point for numerous assessments and programmes of work.

[1] Of the six guidance documents included in the survey, four are available online in all six UN languages, one is available in five UN languages and one is available in English only.

Annexes

Annex 1. List of participating WHO Member States

WHO REGION	Country and income group[1]	
African Region (n=24)	Angola (LMIC) Benin (LIC) Burundi (LIC) Cabo Verde (LMIC) Cameroon (LMIC) Comoros (LIC) Congo (LMIC) Côte d'Ivoire (LMIC) Eswatini (LMIC) Ghana (LMIC) Lesotho (LMIC) Madagascar (LIC)	Mauritania (LMIC) Mauritius (UMIC) Mozambique (LIC) Namibia (UMIC) Niger (LIC) Nigeria (LMIC) Senegal (LIC) Sierra Leone (LIC) South Sudan (LIC) Togo (LIC) United Republic of Tanzania (LIC) Zimbabwe (LIC)
Region of the Americas (n=16)	Barbados (HIC) Brazil (UMIC) Chile (HIC) Colombia (UMIC) Costa Rica (UMIC) Cuba (UMIC) Dominica (UMIC) Guatemala (UMIC)	Haiti (LIC) Honduras (LMIC) Jamaica (UMIC) Mexico (UMIC) Peru (UMIC) Saint Lucia (UMIC) Suriname (UMIC) United States of America (HIC)
Eastern Mediterranean Region (n=7)	Bahrain (HIC) Iraq (UMIC) Jordan (UMIC) Kuwait (HIC)	Morocco (LMIC) Pakistan (LMIC) Qatar (HIC)
European Region (n=36)	Armenia (UMIC) Austria (HIC) Belarus (UMIC) Belgium (HIC) Bosnia and Herzegovina (UMIC) Bulgaria (UMIC) Croatia (HIC) Cyprus (HIC) Czech Republic (HIC) Denmark (HIC) Estonia (HIC) Finland (HIC) France (HIC) Georgia (LMIC) Greece (HIC) Hungary (HIC) Iceland (HIC) Israel (HIC)	Italy (HIC) Latvia (HIC) Luxembourg (HIC) Malta (HIC) Montenegro (UMIC) Norway (HIC) Poland (HIC) Portugal (HIC) Republic of Moldova (LMIC) Romania (UMIC) San Marino (HIC) Serbia (UMIC) Slovakia (HIC) Slovenia (HIC) Spain (HIC) Sweden (HIC) Tajikistan (LIC) United Kingdom (HIC)

Annex 1. List of participating WHO Member States

WHO REGION	Country and income group[1]	
South-East Asia Region (n=7)	Bhutan (LMIC) India (LMIC) Maldives (LMIC) Myanmar (LMIC)	Sri Lanka (LMIC) Thailand (UMIC) Timor-Leste (LMIC)
Western Pacific Region (n=14)	Australia (HIC) Cambodia (LMIC) China (UMIC) Fiji (UMIC) Japan (HIC) Lao People's Democratic Republic (LMIC) Malaysia (UMIC)	Mongolia (LMIC) New Zealand (HIC) Papua New Guinea (LMIC) Philippines (LMIC) Republic of Korea (HIC) Singapore (HIC) Viet Nam (LMIC)

HIC: high-income country; LIC: low-income country; LMIC: lower-middle income country; UMIC: upper-middle income country.

Annex 2. Survey questionnaire and scoring system

PART 1 STATUS OF NATIONAL PANDEMIC INFLUENZA PREPAREDNESS PLANS – 6 POINTS		
QUESTION	**RESPONSE**	**SCORE**
1. Does your country currently have a national pandemic influenza preparedness plan?	Yes No	1 –
2. When was the plan first developed?	In or before 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018	Not scored
3. Has the plan been updated since it was first developed?	Yes No	1 –
4. When was the most recent update?	In or before 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018	Not scored

QUESTION	RESPONSE	SCORE
5. Is the plan publicly available on a website?	Yes	1
	No	–
	No, it contains sensitive information that cannot be shared	
	No, it has not received the necessary final approval and clearance	
	No, there is no capacity to share the plan online	
	Do not know	
	Other	
6. If the plan is not publicly available, could you share it with WHO?	Yes, please attach here	Not scored
	No, could you explain your concerns about sharing the plan?	
7. Did your country conduct simulation exercises in the past 5 years to test your pandemic influenza preparedness plan?	Yes, table top exercises	0.25
	Yes, drill	0.25
	Yes, functional exercises	0.5
	Yes, field exercises	1
	No	–
8. If your country does not have an officially approved pandemic influenza preparedness plan or the original plan has not been updated, do you intend to develop a plan or update an existing plan in the next 1–2 years?	Yes	1
	No, please explain why you will not be developing or updating a plan	–
9. In relation to the latest WHO guidance on pandemic influenza preparedness – *Pandemic influenza risk management* (PIRM), finalized and published in 2017 – which statement best summarizes your familiarity with this document?	We were not aware that this guidance existed before taking this questionnaire	Not scored
	We were only aware of the interim version published in 2013 but not the finalized one published in 2017	
	We had heard of the 2017 guidance, but have not consulted it in detail	
	We have only read the 2017 guidance	
	We are familiar with the details of the 2017 guidance and using it to update the pandemic influenza preparedness plan	
10. In relation to the latest WHO checklist for pandemic influenza preparedness planning – A checklist for pandemic influenza risk and impact management, published in 2018 – which statement best summarizes your familiarity with this document?	We were not aware that this checklist existed before taking this questionnaire	Not scored
	We had heard of the checklist, but have not consulted it in detail	
	We have read the checklist	
	We are using the checklist to update the pandemic influenza preparedness plan	

QUESTION	RESPONSE	SCORE
11. In relation to the latest WHO document outlining the steps for developing or updating a plan – Essential steps for developing or updating a national pandemic influenza preparedness plan, published in 2018 – which statement best summarizes your familiarity with this document?	We were not aware that this document existed before taking this questionnaire	Not scored
	We had heard of the document, but have not consulted it in detail	
	We have read the document	
	We are using the document to update the pandemic influenza preparedness plan	
12. In relation to the 2012 WHO guidance on deployment and national vaccination planning – Guidance on development and implementation of a national deployment and vaccination plan for pandemic influenza vaccines – which statement best summarizes your familiarity with this document?	We were not aware that this guidance existed before taking this questionnaire	Not scored
	We had heard of the guidance, but have not consulted it in detail	
	We have read the guidance	
	We have used the guidance to develop or update the national pandemic influenza vaccine deployment and vaccination plans	

PART 2. KEY CAPACITIES IN PANDEMIC PREPAREDNESS AND RESPONSE

2A. PREPARING FOR AN EMERGENCY (PLANNING, COORDINATION AND RESOURCES) – 7 POINTS

QUESTION	RESPONSE	SCORE
13. Does your country have a multi-hazard public health emergency response plan?	Yes	1
	No	–
14. Does your country have a multisectoral coordination plan or mechanism to engage government, ministries and authorities, nongovernmental organizations (NGOs), private sector, community leaders, and international partners or organizations during a public health emergency?	Yes	1
	No	–
15. Does your country have a mechanism to support the human and financial resource requirements during a public health emergency?	Yes	1
	No	–

QUESTION	RESPONSE	SCORE
16. Does your country have existing legislation or regulatory policies that address the needs for implementing particular public health measures such as isolation and quarantine, school closures, postponement of mass gatherings?	Yes	1
	No	–
17. Does your country have a national ethics committee (or similar mechanism) that can readily advise on pandemic influenza preparedness and response activities?	Yes	1
	No	–
18. Regarding risk communication and community engagement (RCCE), in the event of a public health emergency, which of the following statements best reflect the reality in your country (multiple answers possible). In our country, we have:	An agreed, formal organizational structure for RCCE in the event of a public health emergency (please provide some detail)	0.2
	Agreed procedures (standard operating procedures, SOPs) for RCCE in the event of a public health emergency	0.2
	Dedicated financial or other resources that can be released for RCCE in the event of a public health emergency	0.2
	A decentralized approach to RCCE in the event of a public health emergency (e.g. communities, municipalities, regions or states are expected to lead on RCCE)	0.2
	Other	0.2
	None of the above	–
19. Does your country have an emergency response plan at designated points of entry for a public health emergency of international concern (PHEIC)?	Yes	1
	No	–

PART 2. KEY CAPACITIES IN PANDEMIC PREPAREDNESS AND RESPONSE

2B. SURVEILLANCE (LABORATORY, EPIDEMIOLOGY OR EVENT), INVESTIGATION AND ASSESSMENT (RISK AND SEVERITY) – 10 POINTS

QUESTION	RESPONSE	SCORE
20. Is there at least one laboratory in your country that can perform routine influenza diagnostics, typing and subtyping using reverse transcription polymerase chain reaction (RT-PCR)?	Yes	1
	No	–
21. Is there an established mechanism in your country to share specimens with WHO Collaborating Centres (CCs) for influenza?	Yes	1
	No	–
22. Has your country developed laboratory testing strategies for different phases of an influenza pandemic?	Yes	1
	No	–
23. Does your country have a plan to cope with the need for laboratory surge capacities during an influenza pandemic?	Yes	1
	No	–
24. Does your country have a national influenza surveillance system?	Yes	1
	No	–
25. Has your country established an event-based surveillance system? (*If yes, proceed to Question 26. If no, proceed to Question 27.*)	Yes	1
	No	0
26. Is information that is collected through event-based surveillance systematically used in risk assessments?	Yes	1
	No	–
27. In relation to the document *WHO guidance for surveillance during an influenza pandemic: 2017 update*, which statement best describes your familiarity with this document?	We were not aware that this guidance existed before taking this questionnaire	Not scored
	We had heard of the guidance, but have not consulted it in detail	
	We have read the guidance	
	We plan to use the guidance	

QUESTION	RESPONSE	SCORE
28. Does your country have a plan for surveillance during an influenza pandemic?	Yes	1
	Yes, it is part of our national pandemic influenza preparedness plan	
	No, but we intend to develop such a plan and no technical assistance is needed	–
	No, but we intend to develop such a plan and WHO's technical assistance may be needed	
	No, we have not considered developing such a plan	
29. In relation to the WHO guidance on assessing the severity of pandemic influenza – *Pandemic influenza severity assessment (PISA)* – which statement best describes your familiarity with this tool?	We were not aware that this tool existed before taking this questionnaire	Not scored
	We had heard of the tool before, but have not consulted it in detail	
	We are familiar with the tool	
30. Has your country established or does it plan to establish severity assessment in its influenza surveillance?	Yes, my country has established severity assessment capacity	1
	Yes, my country is in the process of establishing capacity for severity assessment	
	No, my country undertakes influenza surveillance, but no severity assessment is established or planned	–
	My country does not undertake influenza surveillance	
31. Has your country established SOPs for conducting systematic risk assessment, as described in the WHO guidance Rapid risk assessment of acute public health events, for influenza using surveillance data?	Yes	1
	No	–
	My country does not undertake influenza surveillance	

2C. HEALTH SERVICES AND CLINICAL MANAGEMENT – 12 POINTS		
QUESTION	**RESPONSE**	**SCORE**
32. Does your country have a health-care sector business continuity plan, to ensure continuation of essential health services during an influenza pandemic?	Yes	1
	No	–
33. Does your country have ready-to-use materials for information, education and communication (IEC) advising citizens on best practices in health seeking during an influenza pandemic?	Yes, in official language(s)	1
	Yes, in official language(s) and languages of minority groups	
	No	–
34. Does your country have an arrangement for a national telephone helpline to answer questions and address concerns during an influenza pandemic?	Yes	1
	No	–
35. Has your country established financing mechanisms to support essential health services during an influenza pandemic?	Yes	1
	No	–
36. Does your country have a plan to cope with the need for surge capacities of health-care facilities and personnel during an influenza pandemic?	Yes	1
	Yes, it is part of our national pandemic influenza preparedness plan	
	No, but we intend to develop such a plan and no technical assistance is needed	–
	No, but we intend to develop such a plan and WHO's technical assistance may be needed	
	No, we have not considered developing such a plan	
37. Does your country have a plan to protect health-care workers during an influenza pandemic, through including these workers in the priority groups for pandemic vaccination?	Yes	1
	No	–

QUESTION	RESPONSE	SCORE
38. Does your country have an inventory of existing public and private health-care facilities that can provide health-care services during an influenza pandemic?	Yes	1
	No	–
39. Does your country have a plan to cope with the excess mortality during an influenza pandemic (e.g. mortuary facilities and funeral services)?	Yes	1
	Yes, it is part of our national pandemic influenza preparedness plan	
	No, but we intend to develop such a plan and no technical assistance is needed	–
	No, but we intend to develop such a plan and WHO's technical assistance may be needed	
	No, we have not considered developing such a plan	
40. Has your country developed a plan to ensure the availability of essential medicines, medical supplies and devices during an influenza pandemic?	Yes	1
	Yes, it is part of our national pandemic influenza preparedness plan	
	No, but we intend to develop such a plan and no technical assistance is needed	–
	No, but we intend to develop such a plan and WHO's technical assistance may be needed	
	No, we have not considered developing such a plan	
41. Does this plan address the roles and responsibilities of the national regulatory authority for medicines and health products?	Yes	1
	No	–
42. Has your country developed guidelines for patient management during an influenza pandemic?	Yes	1
	No	–
43. In your country's national established infection prevention and control (IPC) programmes, are there clear existing IPC guidelines and protocols?	Yes	1
	No	–
	My country does not have established IPC programmes	

2D. PREVENTING ILLNESS IN THE COMMUNITY (PHARMACEUTICAL AND NONPHARMACEUTICAL INTERVENTIONS) – 8 POINTS		
QUESTION	**RESPONSE**	**SCORE**
44. Does your country have an implemented routine seasonal influenza vaccination programme?	Yes	1
	No	–
45. Has your country established a policy on priority groups for pandemic influenza vaccination during the early stage of an influenza pandemic when the vaccine supply is limited?	Yes	1
	No	–
46. Has your country developed a national pandemic influenza vaccine deployment and vaccination plan?	Yes	1
	Yes, it is part of our national pandemic influenza preparedness plan	
	No, but we intend to develop such a plan and no technical assistance is needed	–
	No, but we intend to develop such a plan and WHO's technical assistance may be needed	
	No, we have not considered developing such a plan	
47. For emergency use of pandemic influenza vaccines, which regulatory pathway will apply in your country?	WHO collaborative registration procedure	0.17
	Accept WHO prequalified vaccines	0.17
	Generic emergency pathway used for any drug or biological product	0.17
	Specific emergency pathway devised for pandemic influenza vaccines	0.17
	Donation pathway	0.17
	Other	0.17
	There is no emergency use pathway	–
48. Does the national pandemic influenza preparedness plan specify the use of pandemic influenza vaccines in pandemic response?	Yes	1
	No	–
	My country does not have a national pandemic influenza preparedness plan	
49. Has your country established a mechanism for securing access to pandemic influenza vaccine during an influenza pandemic?	Yes, via contractual agreements with manufacturers	0.25
	Yes, via commitment from United Nations agencies	0.25
	Yes, via commitment from donors or partners	0.25
	Other	0.25
	No	–

QUESTION	RESPONSE	SCORE
50. Has your country developed a national strategy for the use of antiviral therapy during an influenza pandemic?	Yes	1
	No	–
51. Does your national pandemic influenza preparedness plan specify the use of any of the following nonpharmaceutical public health measures in the pandemic response? (please choose all that apply)	Distribution of IEC materials (e.g. posters and leaflets)	0.2
	IEC through mass media	0.2
	Two-way communication between authorities and communities (e.g. print, broadcast, social media and electronic)	0.2
	Distribution of infection control materials (e.g. face masks and hand sanitizers)	0.2
	Social distancing measures (e.g. school closures, postponement of mass gatherings, and voluntary and mandatory quarantine)	0.2
	None of above	–

2E. MAINTAINING ESSENTIAL SERVICES AND RECOVERY – 3 POINTS

QUESTION	RESPONSE	SCORE
52. Does your country have nationally established bodies that are responsible for ensuring continuity of essential services in the public sectors during an influenza pandemic?	Yes	1
	No	–
53. Does your country have an established mechanism to coordinate with private business sectors for ensuring continuity of essential services during an influenza pandemic?	Yes	1
	No	–
54. Is a recovery plan part of your national pandemic influenza preparedness plan?	Yes	1
	No	–

GENERAL

QUESTION	RESPONSE	SCORE
55. Please provide any suggestion you may have regarding WHO's role in strengthening national and global pandemic preparedness in the space provided below		Not scored

Annex 3. WHO Circular Letter C.L.22.2018

World Health Organization

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Ref.: C.L.22.2018

The World Health Organization (WHO) presents its compliments to Member States and has the honour to inform them that WHO is consulting with its Member States to have a better understanding of the current level of national pandemic influenza preparedness.

An influenza pandemic is an unpredictable but reoccurring event that can have serious consequences for human health and socioeconomic well-being worldwide. Advanced planning and preparedness are critical to mitigate the risk and impact of an influenza pandemic.

It has been nearly 10 years since the most recent influenza pandemic, which occurred in 2009. Many important lessons were learned and good practices in pandemic preparedness were identified from the response to the 2009 influenza pandemic, and these were reflected in the most recent WHO guiding documents on pandemic influenza preparedness – the *Pandemic influenza risk management* (PIRM) and *A checklist for pandemic influenza risk and impact management*. Although Member States have made progress in pandemic influenza preparedness, many countries still lack a national pandemic influenza preparedness plan, or have a plan that is either not publicly available or has not been updated since it was first developed, before the 2009 influenza pandemic.

This consultation will allow WHO to have a better understanding of the current level of preparedness for pandemic influenza among Member States. WHO aims to use the outcomes of the consultation to identify the capacity areas in which it should focus technical assistance in the coming years.

This consultation will be conducted through a secure online WHO platform, where Member States will be asked to complete a questionnaire on pandemic influenza preparedness. All country-specific information will be kept confidential, and only aggregated data will be used in the survey report.

To receive the necessary details for completing the online survey, Member States are invited to designate a focal point responsible for pandemic preparedness. The focal point is expected to complete the questionnaire on behalf of her/his country. For timely completion, the **designation of the focal point, together with contact details including an email address and a phone number, should be sent to WHOGIP@who.int as soon as possible, but no later than 27 July 2018.**

Following the nomination of a focal point, the WHO Global Influenza Programme (GIP) will contact the designated focal point directly and provide a unique username and password for secure access to the questionnaire, and all the necessary information and assistance.

WHO takes this opportunity to renew to Member States the assurance of its highest consideration.

GENEVA, 29 June 2018

منظمة الصحة العالمية • 世界卫生组织

Organisation mondiale de la Santé • Всемирная организация здравоохранения • Organización Mundial de la Salud

	African Region (AFR)	Americas Region (AMR)	Eastern Mediterran-ean Region (EMR)	European Region (EUR)	South-East Asia Region (SEAR)	Western Pacific Region (WPR)	High-income countries (HIC)	Upper-middle income countries (UMIC)	Lower-middle income countries (LMIC)	Low-income countries (LIC)	Global average
Response rate	51%	46%	33%	68%	64%	52%	64%	47%	58%	41%	54%
1: Status of national pandemic influenza preparedness plans	1.9 (0.0 – 3.5)	3.3 (1.0 – 5.0)	3.1 (1.0 – 4.5)	3.0 (0.0 – 4.8)	4.0 (3.3 – 6.0)	4.2 (2.0 – 6.0)	3.4 (0.0 – 6.0)	3.3 (1.0 – 6.0)	2.8 (1.0 – 4.3)	2.1 (0.0 – 3.5)	3.0
2A: Preparing for an emergency	4.8 (2.4 – 6.6)	5.2 (2.2 – 6.8)	5.4 (3.2 – 6.4)	5.4 (2.2 – 6.8)	5.4 (3.0 – 6.8)	5.9 (4.2 – 6.8)	5.7 (3.0 – 6.8)	5.2 (2.2 – 6.8)	5.1 (3.0 – 6.8)	4.6 (2.2 – 6.6)	5.3
2B: Surveillance, investigation and assessment	4.7 (0.0 – 9.0)	7.1 (2.0 – 10.0)	7.9 (4.0 – 10.0)	7.9 (3.0 – 10.0)	8.0 (6.0 – 10.0)	8.5 (5.0 – 10.0)	8.3 (5.0 – 10.0)	7.2 (1.0 – 10.0)	6.7 (1.0 – 10.0)	4.4 (0.0 – 8.0)	7.1
2C: Health services and clinical management	5.1 (0.0 – 12.0)	8.1 (0.0 – 12.0)	9.4 (3.0 – 12.0)	8.9 (2.0 – 12.0)	9.4 (6.0 – 12.0)	9.1 (0.0 – 12.0)	9.6 (3.0 – 12.0)	8.3 (0.0 – 12.0)	7.8 (1.0 – 12.0)	3.6 (0.0 – 10.0)	8.0
2D: Preventing illness in the community	2.1 (0.2 – 5.7)	4.5 (0.0 – 6.9)	5.2 (0.2 – 6.4)	5.1 (1.8 – 7.3)	3.1 (0.2 – 6.4)	4.3 (1.0 – 6.8)	5.2 (1.8 – 6.7)	4.6 (0.2 – 6.9)	3.2 (0.2 – 7.3)	1.8 (0.0 – 4.9)	4.1
2E: Maintaining essential services and recovery	1.4 (0.0 – 3.0)	1.8 (0.0 – 3.0)	2.3 (0.0 – 3.0)	1.8 (0.0 – 3.0)	2.4 (2.0 – 3.0)	2.1 (0.0 – 3.0)	2.1 (0.0 – 3.0)	1.9 (0.0 – 3.0)	1.6 (0.0 – 3.0)	1.3 (0.0 – 3.0)	1.8
Total	20.1 (3.6 – 33.0)	29.9 (7.2 – 41.6)	33.3 (11.4 – 40.9)	32.0 (16.4 – 40.7)	32.3 (24.6 – 42.2)	34.0 (16.3 – 43.0)	34.3 (18.0 – 43.0)	30.6 (8.4 – 42.2)	27.2 (10.2 – 39.9)	17.7 (3.6 – 30.0)	29.3

Annex 4. Aggregated scores

	African Region (AFR)	Americas Region (AMR)	Eastern Mediterranean Region (EMR)	European Region (EUR)	South-East Asia Region (SEAR)	Western Pacific Region (WPR)	High-income countries (HIC)	Upper-middle income countries (UMIC)	Lower-middle income countries (LMIC)	Low-income countries (LIC)	Global average
Response rate	51%	46%	33%	68%	64%	52%	64%	47%	58%	41%	54%
1: Status of national pandemic influenza preparedness plans	32.3%	54.2%	52.4%	50.1%	66.1%	69.3%	56.1%	55.1%	46.2%	34.5%	50.4%
2A: Preparing for an emergency	69.0%	73.9%	76.7%	76.4%	77.1%	84.3%	81.7%	74.7%	72.9%	65.3%	75.5%
2B: Surveillance, investigation and assessment	46.7%	71.3%	78.6%	78.6%	80.0%	85.0%	83.2%	71.9%	67.3%	44.3%	71.1%
2C: Health services and clinical management	42.7%	67.2%	78.6%	74.3%	78.6%	76.2%	80.2%	69.1%	65.1%	29.8%	66.7%
2D: Preventing illness in the community	26.2%	56.4%	65.4%	63.4%	39.0%	53.2%	64.5%	57.6%	39.8%	22.1%	50.9%
2E: Maintaining essential services and recovery	47.2%	60.4%	76.2%	61.1%	81.0%	69.0%	71.2%	64.2%	53.8%	42.9%	61.2%
Total	43.6%	65.1%	72.4%	69.7%	70.3%	74.0%	74.6%	66.4%	59.2%	38.5%	63.8%

Annex 5. Ranking of question scores by capacity area

Section	Question	% total points scored
Part 1	1. Does your country currently have a national pandemic influenza preparedness plan?	88.5%
	8. If your country does not have an officially approved pandemic influenza preparedness plan or the original plan has not been updated, do you intend to develop a plan or update an existing plan in the next 1–2 years?	87.5%
	3. Has the plan been updated since it was first developed?	56.7%
	5. Is the plan publicly available on a website?	40.4%
	7. Did your country conduct simulation exercises in the past 5 years to test your pandemic influenza preparedness plan?	14.8%
Part 2A	14. Does your country have a multisectoral coordination plan or mechanism to engage government, ministries and authorities, nongovernmental organizations (NGOs), private sector, community leaders, and international partners or organizations during a public health emergency?	93.3%
	16. Does your country have existing legislation or regulatory policies that address the needs for implementing particular public health measures such as isolation and quarantine, school closures, postponement of mass gatherings?	88.5%
	15. Does your country have a mechanism to support the human and financial resource requirements during a public health emergency?	87.5%
	19. Does your country have an emergency response plan at designated points of entry for a public health emergency of international concern (PHEIC)?	78.8%
	17. Does your country have a national ethics committee (or similar mechanism) that can readily advise on pandemic influenza preparedness and response activities?	75.0%
	13. Does your country have a multi-hazard public health emergency response plan?	68.3%
	18. Regarding risk communication and community engagement (RCCE), in the event of a public health emergency, which of the following statements best reflect the reality in your country?	36.9%
Part 2B	20. Is there at least one laboratory in your country that can perform routine influenza diagnostics, typing and subtyping using reverse transcription polymerase chain reaction (RT-PCR)?	91.3%
	21. Is there an established mechanism in your country to share specimens with WHO Collaborating Centres (CCs) for influenza?	91.3%
	24. Does your country have a national influenza surveillance system?	89.4%
	28. Does your country have a plan for surveillance during an influenza pandemic?	77.9%
	25. Has your country established an event-based surveillance system?	76.0%
	22. Has your country developed laboratory testing strategies for different phases of an influenza pandemic?	65.4%
	30. Has your country established or does it plan to establish severity assessment in its influenza surveillance?	63.5%
	23. Does your country have a plan to cope with the need for laboratory surge capacities during an influenza pandemic?	58.7%
	26. Is information that is collected through event-based surveillance systematically used in risk assessments?	56.7%
	31. Has your country established SOPs for conducting systematic risk assessment, as described in the WHO guidance *Rapid risk assessment of acute public health events* for influenza using surveillance data?	40.4%
Part 2C	43. In your country's national established infection prevention and control (IPC) programmes, are there clear existing IPC guidelines and protocols?	86.5%
	37. Does your country have a plan to protect health-care workers during an influenza pandemic, through including these workers in the priority groups for pandemic vaccination?	79.8%

Annex 5. Ranking of question scores by capacity area

	38. Does your country have an inventory of existing public and private health-care facilities that can provide health-care services during an influenza pandemic?	76.0%
	34. Does your country have an arrangement for a national telephone helpline to answer questions and address concerns during an influenza pandemic?	71.2%
	33. Does your country have ready-to-use materials for information, education and communication (IEC) advising citizens on best practices in health seeking during an influenza pandemic?	68.3%
	42. Has your country developed guidelines for patient management during an influenza pandemic?	68.3%
	36. Does your country have a plan to cope with the need for surge capacities of health-care facilities and personnel during an influenza pandemic?	67.3%
	32. Does your country have a health-care sector business continuity plan, to ensure continuation of essential health services during an influenza pandemic?	65.4%
	40. Has your country developed a plan to ensure the availability of essential medicines, medical supplies and devices during an influenza pandemic?	62.5%
	35. Has your country established financing mechanisms to support essential health services during an influenza pandemic?	61.5%
	41. Does this plan address the roles and responsibilities of the national regulatory authority for medicines and health products?	54.8%
	39. Does your country have a plan to cope with the excess mortality during an influenza pandemic (e.g. mortuary facilities and funeral services)?	39.4%
Part 2D	48. Does the national pandemic influenza preparedness plan specify the use of pandemic influenza vaccines in pandemic response?	77.9%
	45. Has your country established a policy on priority groups for pandemic influenza vaccination during the early stage of an influenza pandemic when the vaccine supply is limited?	70.2%
	50. Has your country developed a national strategy for the use of antiviral therapy during an influenza pandemic?	67.3%
	44. Does your country have an implemented routine seasonal influenza vaccination programme?	63.5%
	46. Has your country developed a national pandemic influenza vaccine deployment and vaccination plan?	57.7%
	51. Does your national pandemic influenza preparedness plan specify the use of any of the following nonpharmaceutical public health measures in the pandemic response?	33.3%
	47. For emergency use of pandemic influenza vaccines, which regulatory pathway will apply in your country?	21.2%
	49. Has your country established a mechanism for securing access to pandemic influenza vaccine during an influenza pandemic?	15.9%
Part 2E	52. Does your country have nationally established bodies that are responsible for ensuring continuity of essential services in the public sectors during an influenza pandemic?	77.9%
	53. Does your country have an established mechanism to coordinate with private business sectors for ensuring continuity of essential services during an influenza pandemic?	55.8%
	54. Is a recovery plan part of your national pandemic influenza preparedness plan?	50.0%