



Stakeholder participation in the COVID-19 pandemic preparedness and response plans: A synthesis of findings from 70 countries

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ARTICLE INFO

Keywords:

Priority setting
COVID-19 national plans
Stakeholder participation

ABSTRACT

Stakeholder participation is a key component of a fair and equitable priority-setting in health. The COVID-19 pandemic highlighted the need for fair and equitable priority setting, and hence, stakeholder participation. To date, there is limited literature on stakeholder participation in the development of the pandemic plans (including the priority setting plans) that were rapidly developed during the pandemic.

Drawing on a global study of national COVID-19 preparedness and response plans, we present a secondary analysis of COVID-19 national plans from 70 countries from the six WHO regions, focusing on stakeholder participation.

We found that most plans were prepared by the Ministry of Health and acknowledged WHO guidance, however less than half mentioned that additional stakeholders were involved. Few plans described a strategy for stakeholder participation and/or accounted for public participation in the plan preparation. However, diverse stakeholders (including multiple governmental, non-governmental, and international organizations) were proposed to participate in the implementation of the plans. Overall, there was a lack of transparency about who participated in decision-making and limited evidence of meaningful participation of the community, including marginalized groups.

The critical relevance of stakeholder participation in priority setting requires that governments develop strategies for meaningful participation of diverse stakeholders during pandemics such as COVID-19, and in routine healthcare priority setting.

1. Background

Faced with the COVID-19 public health crisis, national governments were required to make rapid decisions regarding resource allocation and priority setting [1–6]. In early February 2020 the WHO developed an ethics, resource allocation and priority setting guidance document and a

COVID-19 Strategic Preparedness and Response Plan (SPRP) to support a united global response to the COVID-19 pandemic [1,2]. The SPRP document provided guidelines on how countries could quickly adapt existing National Action Plans for Health Security and Pandemic Influenza Preparedness Plans to COVID-19 Country Preparedness and Response Plans, while the priority setting guidance document provided

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<https://doi.org/10.1016/j.healthpol.2024.105013>

Received 23 June 2023; Received in revised form 30 January 2024; Accepted 5 February 2024

Available online 8 February 2024

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ethical principles that should be considered when setting priorities, including the principles of a fair prioritization process. Inclusiveness, and wide stakeholder involvement were identified as key to a fair process. This document specified the importance of ensuring that those affected by the resource allocation decisions are included in the prioritization process. Some countries used these guidelines when developing their national COVID-19 plans- with some identifying taskforces (with varying stakeholder representation) to develop their COVID-19 pandemic plans to guide national responses [1,2].

Priority setting, particularly in health emergencies, is a complex, technical, and inherently political task involving difficult value-laden choices and a broad range of criteria [3,7–10]. Priority setting decisions often reflect the values the people involved in the decision making processes and those who might be affected by them if they are involved [11,12]. Stakeholder¹ participation is thus increasingly recognized as an important aspect of priority setting, both for allowing a broad range of relevant values to be considered and to enhancing the fairness of the priority setting process [13–19]. Furthermore, the WHO guidance identified stakeholders that should be included in the planning and implementation of the pandemic response to ensure a well-coordinated and effective global and national response [1].

As the pandemic continued to evolve, governmental accountability and democratic decision-making were called into question, impacting the public perceptions of the acceptability of priority setting decisions [20]. Experts questioned the inclusiveness and transparency of the decision-making process throughout the COVID-19 pandemic [20,21], especially given the fact that it was a multidimensional crisis with far-reaching implications for various stakeholders. In many regions, disproportionate burden of disease and mortality and subsequent mental health impacts faced by minority and marginalized groups were reported, including women [22,23], migrants, refugees and immigrants [24–26], racialized populations, ethnic, sexual minorities and gender minorities [27–29]. When decision-making does not plan for the inclusion of minority voices, these populations, who are arguably most affected by the consequences of the pandemic, can be further marginalized [14,16,22,30–32].

Therefore, it is critical to understand whether and how national COVID-19 pandemic preparedness and response plans (thereafter, just “COVID-19 pandemic plans”) addressed stakeholder participation (including the participation of minority and marginalized groups) in priority setting. In this paper, we aim to describe which stakeholders were identified to be involved in the preparatory and implementation stages of COVID-19 pandemic plans in a sample of 70 countries around the world. Where documented, we describe the roles stakeholders were assigned in the plan’s preparatory and implementation stages. Finally, we attempt to reveal the main characteristics of stakeholder participation present in COVID-19 pandemic plans and draw lessons that can provide guidance for improved stakeholder participation in future public health emergencies.

Priority setting processes should reflect the values and perspectives not only of the powerful, but also the public and decidedly vulnerable stakeholders who, as mentioned, will arguably be most impacted by the decisions [16,17,33]. Health-system priority setting has traditionally been dominated by powerful stakeholders such as health management officials, governmental officials, health care providers, and administrators [16,34]. The literature and priority setting experts assert that the public, and especially vulnerable groups, are often absent from the decision-making table when health priorities are set [3,13,35,36]. This is contrary to the priority setting literature which asserts that those most impacted by the decisions, such as the vulnerable groups, are included in the prioritization process [1]. However, it is worth noting that over the

past decade improved stakeholder participation has been reported in formalized priority setting processes [36].

Stakeholders can participate in priority setting processes either directly or indirectly. Direct participation of stakeholder groups can occur through targeted participation mechanisms integrated into priority setting processes [31]. Participation mechanisms can range from being relatively passive – through uni-directional communication such as public hearings or sharing information on internet webpages – to more direct, purposeful, and interactive approaches – for example, through deliberative stakeholder dialogue and consensus building [37–40]. Meanwhile, indirect participation can occur through representation, for example, where the values and interests of less powerful stakeholders are represented by intermediaries such as patient representatives/groups, consumer advocates, community representatives and community-based organizations, NGOs, and civil society representatives [13,16,41–43].

There are several benefits of broad and meaningful stakeholder participation in priority setting. Broad stakeholder participation has been reported to increase the acceptability of decisions and the perception of fairness and legitimacy of the process [14,18,19,44,45]. The legitimacy and sustainability of policy decision-making are impacted by the extent to which it reflects public values [46]. Greater public involvement can reinforce democratic processes and hold policy-makers accountable for their decisions [47]. While the importance of stakeholder involvement in priority setting has been recognized in the theoretical and empirical literature, there is a paucity of evidence regarding the involvement of stakeholders in planning responses to public health emergencies. In this paper we aim to fill this gap by exploring how stakeholder involvement was presented in COVID-19 pandemic response and preparedness plans.

2. Methods

This study is based on secondary analysis of data from a global study that reviewed 86 COVID-19 national preparedness and response plans. Details of the methods used in accessing the 86 plans are reported elsewhere [3–5]. This paper presents findings from a secondary analysis from a sub-sample of 70 national plans. Since the research team conducted the re-extraction and the in-depth analysis of the stakeholder participation aspects within the plans, we only included plans that were written in languages that were accessible to the research team. Based on this criteria, sixteen plans were excluded.

The primary data extraction focused on assessing the degree to which the retrieved pandemic plans adhered to established quality indicators of effective priority setting in Kapiriri & Martin’s framework [48,49]. The framework includes five domains and twenty-six parameters; one of those parameters is stakeholder involvement, the focus of the secondary analysis presented here. In addition to assessing the information that was originally extracted under this parameter, two members of the research team re-extracted information from the plans using an extraction tool that provides more detailed information about the stakeholders described in the plans including: (i) institutions, organizations and any individuals identified as having participated in the development of the plan, (ii) institutions, organizations and individuals identified as having a role in the implementation of the identified priorities, and (iii) the functions or roles of the stakeholders identified. Where possible, the analysis focused on the categories of stakeholders listed by designation or the organization they represent (health and non-health government stakeholders; private health institutions; academies; citizens; NGOs and international agencies), and the proposed nature of their involvement (e.g., plan development, patient care, disease surveillance, communications).

Synthesis and analysis: The extracted information was first synthesized by country according to the above-identified stakeholder categories. Next, we conducted a comparative analysis of stakeholder involvement between countries’ plans based on the WHO regional

¹ For the purposes of this paper, we will understand “stakeholders” broadly as any institution, organization, group or individual whose interests can affect, or can be affected by, what has been written in the pandemic plans.

classification and by the country's income level based on the 2022 income group classification by the World Bank.

3. Results

Of the 70 national COVID-19 pandemic plans included in the study, 18 were from the WHO African Region (AFRO), nine from the Eastern Mediterranean Region (EMRO), 15 from the European Region (EURO), 15 from the Pan American Region (PAHO), five from the South-East Asian Region (SEARO), and eight from the Western Pacific Region (WPRO). The percentage of the sampled countries per region ranged from 28 % (EURO) to 45 % (SEARO). Of all 70 plans, 67 (96 %) identified at least one stakeholder as the developer of the plan, while all plans identified stakeholders as implementers. The overall results are presented in [Table 1](#).

3.1. Stakeholders involved in the preparation of national COVID-19 pandemic plans

Sixty-one (87 %) plans were prepared by the Ministry of Health (or equivalent institution). In most plans, the Ministry of Health was explicitly listed as the author, while in 11 plans, authorship was rather implicit (e.g., the Ministry of Health logo was on the plan's front page). Similarly, in eight plans authorship was implicitly or explicitly attributed to the State or Government. Therefore, planning efforts were generally led by Central Governments, except from Switzerland which plan was prepared by non-governmental institutions (the Swiss Academy of Medical Sciences and the Swiss Intensive Care Medicine Foundation). See [Fig. 1](#) for a graphic representation of the stakeholders involved in plan preparation.

Among the 61 plans authored by the Ministry of Health, 31 (44 %) mentioned that additional stakeholders were involved in the plan preparation. This was more common in countries from AFRO (50 %), EURO (53 %) and PAHO (47 %) regions ([Table 1](#)). There were no systematic variations according to income level. The extent to which additional stakeholders were mentioned varied across the plans. Of the 31 plans that discussed additional stakeholders, some mentioned, in very general terms, that the Ministry of Health consulted or collaborated with experts, institutions, or "relevant stakeholders" without specifying who they were. In contrast, eleven plans provided a detailed list of partners. These included: other governmental ministries or divisions, national public institutions, national healthcare institutions, national academic institutions, and medical associations, as well as individuals not listed with an affiliation. Several plans also listed international organizations as contributors. Sixty-one (87 %) plans acknowledged collaboration or guidance from WHO; this was more common for countries from the AFRO and PAHO regions and countries with lower income levels ([Table 1](#)). Among the plans that acknowledged WHO guidance, adoption of the eight WHO pillars for public health emergency preparedness and response to COVID-19 was commonplace. Additional international stakeholders, commonly acknowledged in the plans, included the United Nations, the World Bank, the US or European Centers for Disease Prevention and Control, among other internationally recognized institutions.

The way stakeholders were engaged in the plans varied from nearly no participation to detailed descriptions of stakeholder participation. In almost half of the plans, there was virtually no documented participation of institutions beyond the Ministry of Health or the Central Government in the plan preparation. Sometimes this reflected reliance on a previous plan that did include stakeholders; for instance, the Australian plan stated that their pandemic influenza plan "is the key nationally agreed document to guide Australia's response." While the Swedish plan acknowledged the limitation directly, stating that "The document has been produced in a very short time to quickly meet the need for the virus pandemic. The National Board of Health and Welfare has therefore collected views from fewer experts and other stakeholders than usual."

In other cases, plans were described as provisional or "live" documents for which future stakeholder participation could be expected. For example, Portugal and Fiji plans put forward the creation of Taskforces or Committees, with considerable stakeholder participation, responsible for ongoing plan development. While the New Zealand and North Macedonia outlined stakeholder involvement strategies to be carried out in parallel with the pandemic response activities.

Eight plans offered some minimal description of the process by which stakeholders participated in the plan preparation. For instance, the Nepali plan stated that a "draft plan was shared to the panel of experts and institutions. Their feedbacks, as appropriate, were included in the respective sections", while according to the Tongan plan, stakeholders "were consulted and submitted their individual plans which were assimilated and used to compile this plan". In contrast, two plans (Tajikistan and Ireland) offered a more detailed account of stakeholder participation. The Tajik plan described a three-day workshop with participation of "ministries, departments, relevant committees and agencies, international donors and development partners", where a draft was prepared and subsequently underwent several stages of discussion, feedback, alignment, and revisions. Meanwhile, the Irish plan provided a more thorough description of a stakeholder participation process, in the context of a "Stakeholder forum" chaired by the Central Government. The plan provided a description of the forum members consisting in 120 organizations "from a wide variety of sectors (business, education, health, childcare and social services, sport, tourism etc.)". It also stated that the forum had already held three sessions in Government Buildings, which were well attended and "provided an opportunity for Government to respond to concerns and questions and for stakeholders to support the amplification of key messages". Future sessions were going to be convened "as required" and "most likely via teleconference".

3.2. Stakeholders expected to participate in the implementation of national COVID-19 pandemic plans

All plans mentioned stakeholders that were expected to participate in preparedness and response measures to address the COVID-19 pandemic. In virtually all plans, the Ministry of Health (or equivalent institution) was the most mentioned institution in the plan's implementation, often along with allied health agencies and healthcare institutions ([Fig. 1](#)). Forty-eight (69 %) plans assigned the implementation roles to the private healthcare sector. Sixty-two (89 %) plans mentioned non-health government stakeholders, which included other ministries or departments, national institutions, and laboratories (see [Table 2](#) for a detailed list of public stakeholders mentioned in the context of plan's implementation).

Thirty-two (46 %) of the plans identified inter-sectoral and inter-ministerial coordination strategies, which included ad-hoc COVID-19 committees or task forces. Most of these plans identified the Central Government (mostly the Ministry of Health) as key stakeholders that should champion the implementation of the plans. Additional organizations and their roles were presented with varying levels of detail. Thirty-five (50 %) plans mentioned academic stakeholders, whose roles included research, evaluation of response and decision-making during the implementation of plans, as well as laboratory testing, teaching and risk communication. In most plans, ongoing collaboration with international agencies was expected during the implementation stages, most commonly from the WHO, but also other United Nations agencies (i.e., UNICEF), humanitarian organizations like Médecins Sans Frontières and the Red Cross, the World Bank, and Regional Centres for Disease Control and Prevention. Eleven (16 %) plans also included non-governmental organizations as implementers; this was more common in countries from the AFRO (22 %) and SEARO (40 %) regions and countries classified as lower middle-income economies,

Plans rarely reported participation of the general population. A few exceptions, such as Portugal, Fiji, New Zealand and North Macedonia's plans, articulated plans to meaningfully engage the public, sometimes

Table 1
Stakeholders (SH) mentioned in the context of plan's preparation and implementation.

	Country	Plan Preparation			Plan Implementation						
		Ministry of Health alone (implicit or explicit)	Ministry of Health + Others ^a	Other institutions / organizations ^b	Ministry of Health	Non-Health Government SH	WHO	NGO's	Academy	Private health institutions	Citizens
African Region (AFRO)	Algeria	Yes			Yes	Yes	Yes				Yes
	Angola	Yes			Yes	Yes	Yes			Yes	Yes
	Burkina Faso		Yes		Yes	Yes	Yes	Yes		Yes	Yes
	Cameroun		Yes		Yes	Yes	Yes				Yes
	Cape Verde		Yes		Yes	Yes	Yes			Yes	
	Chad		Yes		Yes	Yes	Yes				
	RD Congo	Yes			Yes	Yes	Yes		Yes	Yes	Yes
	Ethiopia		Yes		Yes	Yes	Yes		Yes	Yes	Yes
	Ghana		Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Kenya		Yes		Yes	Yes	Yes		Yes		
	Mali	Yes			Yes	Yes	Yes			Yes	
	Mozambique	Yes			Yes	Yes	Yes				
	Niger	Yes			Yes	Yes	Yes			Yes	
	Nigeria		Yes		Yes	Yes	Yes		Yes	Yes	
	Rwanda		Yes		Yes	Yes	Yes		Yes	Yes	
	South Africa	Yes			Yes	Yes	Yes			Yes	
	Uganda		Yes		Yes	Yes	Yes		Yes	Yes	Yes
Zambia			Yes	Yes	Yes	Yes			Yes		
Eastern Mediterranean Region (EMRO)	Afghanistan	Yes			Yes	Yes	Yes			Yes	
	Lebanon	Yes			Yes	Yes	Yes	Yes	Yes	Yes	
	Morocco		Yes		Yes	Yes		Yes			Yes
	Pakistan	Yes			Yes	Yes	Yes		Yes	Yes	
	Palestine		Yes		Yes	Yes	Yes				
	Qatar		Yes		Yes	Yes	Yes		Yes	Yes	Yes
	Saudi Arabia	Yes			Yes	Yes	Yes		Yes	Yes	Yes
	Somalia		Yes		Yes	Yes	Yes				
	Yemen			Yes	Yes	Yes	Yes			Yes	
	France		Yes		Yes	Yes		Yes	Yes	Yes	
European Region (EURO)	Georgia			Yes	Yes	Yes	Yes				
	Ireland		Yes		Yes	Yes	Yes		Yes	Yes	Yes
	Italy		Yes		Yes	Yes	Yes		Yes	Yes	
	Kazakhstan		Yes		Yes	Yes	Yes	Yes			
	Luxembourg	Yes			Yes	Yes				Yes	
	North Macedonia		Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Norway		Yes		Yes	Yes			Yes	Yes	Yes
	Portugal	Yes			Yes	Yes	Yes		Yes	Yes	Yes
	Slovenia		Yes		Yes	Yes	Yes	Yes	Yes		
	Spain		Yes		Yes	Yes	Yes			Yes	Yes
	Sweden		Yes		Yes	Yes			Yes		
	Switzerland			Yes	Yes	Yes		Yes	Yes	Yes	
	Tajikistan	Yes			Yes	Yes	Yes			Yes	
Pan American Region (PAHO)	United Kingdom			Yes	Yes	Yes	Yes		Yes		Yes
	Argentina	Yes			Yes	Yes	Yes		Yes	Yes	
	The Bahamas	Yes			Yes	Yes	Yes		Yes	Yes	Yes
	Bolivia		Yes		Yes	Yes	Yes	Yes	Yes	Yes	
	Brazil		Yes		Yes	Yes	Yes		Yes	Yes	
	Canada		Yes		Yes	Yes	Yes		Yes		Yes
	Chile		Yes		Yes	Yes	Yes			Yes	Yes
	Colombia	Yes			Yes	Yes	Yes			Yes	
	Dominican Republic		Yes		Yes	Yes	Yes			Yes	
	El Salvador	Yes			Yes	Yes	Yes		Yes	Yes	Yes
	Haiti	Yes			Yes	Yes	Yes				Yes
	Honduras	Yes			Yes	Yes	Yes		Yes	Yes	Yes
	Mexico		Yes		Yes	Yes	Yes		Yes	Yes	Yes
	Panama		Yes		Yes	Yes	Yes			Yes	
	Paraguay	Yes			Yes	Yes	Yes			Yes	Yes
South-East Asian Region (SEARO)	Peru	Yes			Yes	Yes	Yes	Yes		Yes	
	Bangladesh	Yes			Yes	Yes	Yes		Yes	Yes	Yes
	Nepal		Yes		Yes	Yes	Yes		Yes	Yes	Yes
	Sri Lanka		Yes		Yes	Yes	Yes		Yes	Yes	Yes
	Bhutan	Yes			Yes	Yes	Yes				Yes
	India	Yes			Yes	Yes			Yes		Yes
Western Pacific Region (WPRO)	Fiji		Yes		Yes	Yes	Yes				Yes
	China	Yes			Yes						Yes
	New Zealand	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes

(continued on next page)

Table 1 (continued)

Country	Plan Preparation			Plan Implementation						
	Ministry of Health alone (implicit or explicit)	Ministry of Health + Others ^a	Other institutions / organizations ^b	Ministry of Health	Non-Health Government SH	WHO	NGO's	Academy	Private health institutions	Citizens
Papua New Guinea	Yes			Yes	Yes	Yes			Yes	
Philippines	Yes			Yes	Yes	Yes		Yes	Yes	Yes
Tonga		Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Japan			Yes	Yes	Yes					Yes
Australia	Yes			Yes	Yes	Yes		Yes	Yes	Yes

^a Others included a variety of partners, for instance, different technical, financial, and surveillance government departments (e.g., Burkina Faso, Kenya, Cape Verde, Ghana, Rwanda, Uganda, Morocco, Qatar, Somalia, France, Ireland, Bolivia, Brazil); universities and medical associations (e.g., Ethiopia, Kenya, Uganda, Italy, Bolivia), international aid agencies (e.g., Somalia, Kenya).

^b Others included Non- government organizations such as the Swiss Academy of Medical Sciences and the Swiss Intensive Care Medicine Foundation (for Switzerland).



Fig. 1. Treemap of overall stakeholders' involvement in the preparation stage of the COVID-19 national plans.

Table 2

Lists of public stakeholders mentioned in the context of plan's implementation.

Ministries/Secretaries	Public Universities/ Institutes	Other Public Stakeholders
Agriculture, Commerce, Communications, Defense, Economy-Finance, Education, Energy, Environment, Foreign Affairs, Health, Housing, Information, Interior, Labor, Media, Migration, Public Infrastructure, Religious Affairs, Research, Science-Research, Tourism, Trade, Transport, Women.	National Universities, Institutes and Centers (e.g., for Disabilities, Disasters, Disease Prevention and Control, Employment, Human Rights, Immigration, Natural resources, Youth, etc.).	Armed Forces, childcare centers, courts, customs and border offices, laboratories, nursing homes, pharmacies, police, prisons, public healthcare institutions, public media (radio, TV, etc.), public transport (airports, ports, etc.), regional and local governments, schools, sport centers.

specifically mentioning priority populations, at the implementation stage. Even though we found virtually no evidence of public consultation during the preparation of the plans, civil society and civil organizations were implicitly or explicitly considered relevant for successful implementation. Thirty-eight (54 %) plans involved a more active role of the public (including indigenous populations and other contextually relevant vulnerable groups), especially through risk communication, with community engagement and feedback mechanisms figuring prominently in many of these plans. Two prominent cases were the plans from Canada and New Zealand. The Canadian plan, in its "risk communications and outreach" section, stated that "It has been and continues to be especially important to engage community leaders from Indigenous communities, racialized communities/communities of color, and faith-based organizations to help deliver critical information." The New Zealand plan explicitly emphasized supporting priority populations, in which context it set out to "Conduct research to understand target audiences, perception concerns, influencers and preferred communication channels."

4. Discussion

This paper presents findings from seventy national COVID-19 pandemic plans from the six WHO-regions, focusing on stakeholders' participation in plan development and the proposed stakeholders' participation in the plans' implementation. Information about stakeholder participation in the preparation of the plans was often scant or even absent. Plans that did report who was involved in the preparatory stages typically did so briefly (e.g., providing a list of people and/or institutions). With a few notable exceptions, there was even less information about how stakeholders participated. One plan (Sweden) acknowledged this limitation, appealing to the need for rapid response, while some plans appealed to previous epidemic preparedness and response plans or regulations, which may have had more stakeholder participation. Overall, there was a lack of transparency in the reviewed national COVID-19 pandemic plans about who was involved in decision-making (Fig. 2).

The global literature on health planning and priority setting identifies similar stakeholders who are often engaged in decision making. These include governmental stakeholders (e.g., politicians, bureaucrats), technical experts, health professionals and care providers, health administrators and health managers, donors, patients and the public [34,50,51]. These stakeholders were also reflected in the WHO's COVID-19 Strategic Planning and Response Plan Operational Planning Guidelines which specifically stated that national-level planning, preparedness, and response should include national authorities and technical experts, as well as community engagement, specifically naming CSOs, women, and other marginalized groups [1,2]. However, our study found not only that traditionally excluded stakeholders (publics/patients and marginalized groups) were missing, but also that commonly engaged stakeholders such as those discussed above, were often not identified in the COVID-19 pandemic plans.

More stakeholders were mentioned as having a role in the implementation stages of the plans, which may come as no surprise given the urgent need to assign tasks to deal with the pandemic. For example, governmental agencies were expected to engage in disease prevention, while hospitals and health professionals were expected to provide health care. However, again, the details reported varied between the plans. Furthermore, the stakeholders that were identified as having a role in implementation were much more diverse than in plan preparation. While the development of the plans was dominated by governmental stakeholders (particularly Ministries of Health), multiple governmental and non-governmental actors were expected to participate in the

implementation stages. For example, NGOs and international aid organizations were identified as important actors for implementation, particularly in low- and middle-income country contexts. There was also more expectation of public participation at this stage, however mainly as recipients of and implementers of COVID-related public health information, for example through news media.

In our prior study of COVID-19 pandemic plans we found virtually no explicit mention that public values had been considered in the development or implementation of plans [3–6]. Consistent with these findings, the current analysis showed scarce reporting of participation of the general population in the preparation stage of pandemic plans. As noted, we found more mentions of expected public participation in the implementation stage. These findings, however, are at odds with the literature on participatory planning. This literature emphasizes the importance of including the public from the planning stages and throughout the implementation, to ensure that the priority setting decisions are relevant to the context, and publicly acceptable. This would foster perceptions of fairness and legitimacy of the decision-making process [13,14,18,45, 46].

The limited participation of the public in COVID-19 pandemic planning could be explained, in part, by the urgent nature of the pandemic. The COVID-19 public health emergency required unprecedented, rapid decision-making from governments and may have prevented them from including all relevant stakeholders in developing the plans [7,9]. There is a wealth of literature that identifies the challenges of stakeholder participation (particularly public participation), in health system decision-making and priority setting including the financial costs, time commitment and difficulties identifying and mobilizing all relevant stakeholders [16,35,45,52,53]. It is possible that these challenges were magnified in the context of the pandemic. Still, this lack of stakeholder participation or reporting on stakeholder participation should be questioned. Several governments, particularly in high-income countries, have invested in strengthening research and implementation expertise in patient, public and stakeholder participation [54,55]. It was hence surprising that even such contexts often failed to include these stakeholders, especially those who are often excluded, from their planning processes. This had negative adverse consequences [56].

This study focused on the stakeholders who were identified in the COVID-19 pandemic plans. It is possible that although not included in the plans, stakeholder participation did in fact occur in practice. If we focus on the end result, actual implementation even without prior documentation is a welcome practice. However, it is important that stakeholder participation is systematically thought through and planned

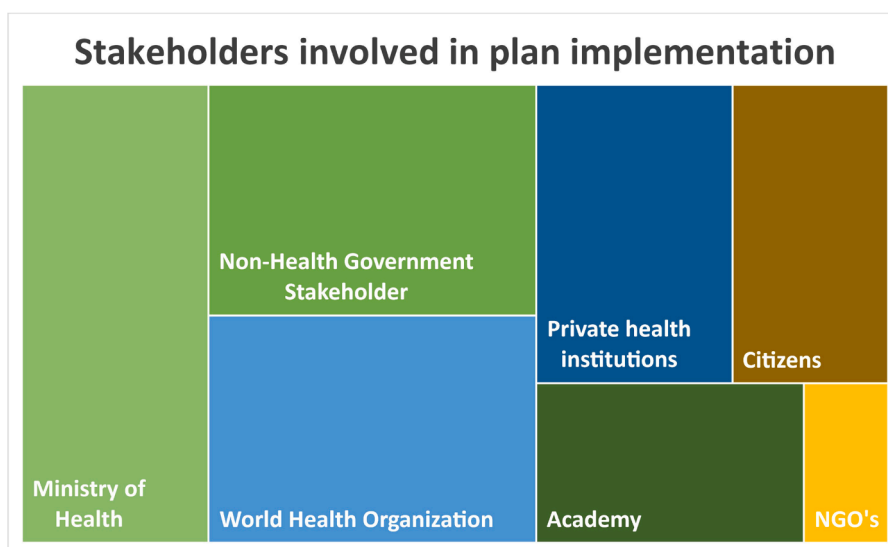


Fig. 2. Treemap of stakeholders expected to be involved in the implementation stage of the COVID-19 national plans.

for- if it is to be meaningful and rewarding for all involved. Planning for stakeholder participation would include activities such as stakeholder mapping – identifying all the stakeholders who are relevant to the decision, designing appropriate participation mechanisms and explicit planning for and reporting on participation. It would be difficult to implement these activities and to ensure systematic and meaningful participation – avoiding haphazard involvement – if stakeholder participation is not articulated in the plans [11,14,41].

Health policy-makers should consider incorporating planning for stakeholder participation throughout the four phases of the WHO emergency preparedness framework – preparedness, alert, control, and evaluation [9]. This would avoid stakeholder participation coming mainly at the latter stages as was the case during the COVID-19 pandemic, where the public was principally involved when eliciting their perspectives on lifting COVID restrictions (e.g., Scotland) [57], and on COVID-19 vaccinations (e.g., France) [58].

Although stakeholder participation is increasingly being recognized as critical to any successful health program, like the literature on stakeholder participation, our study findings point to limited stakeholder participation in the development of the COVID-19 pandemic plans. The global pandemic was characterized by a cascade of value-laden decisions where the exclusion of relevant stakeholders – especially the public and vulnerable populations – had implications for health equity [59]. Their exclusion from the decision-making process meant that their unique perspectives, values, lived experiences and expertise were missing when priority decisions were made [13,30,59]. Therefore, there is a need to devise strategies to address this persisting challenge, despite the fact that in many countries, there is infrastructure for engaging citizens, patients, and communities [60–63].

For example, leveraging technology in support participation strategies, such as the use of online forms of deliberation, can facilitate participation during public health emergencies [64,65]. Online platforms not only allow for deliberative participation while conforming to public health restrictions but can also help overcoming some of the commonly cited challenges of public participation including the costly nature of their participation and difficulties associated with mobilizing all relevant stakeholders to physically gather for a deliberative process. For example, as the Scottish government aimed to transition out of lockdown, they used a digital participation strategy to seek out public concerns about lockdown and get feedback for a governmental framework for such transition [56,57]. It should be noted that while digital participation strategies are promising, opportunities for the use of digital participation strategies may be limited in low- and middle-income country contexts and in rural and remote regions due to infrastructure limitations [66]. Nonetheless, creative mechanisms for meaningful public participation could facilitate inclusivity in routine healthcare priority setting and responsible health systems response when faced with future public health emergencies.

5. Conclusions

While several stakeholders' and more specifically public participation was largely missing from the reviewed COVID-19 national preparedness and response plans, governments need to take stock and use this experience as an opportunity to enhance strategic participation of stakeholders during emergencies. This could involve learning from those contexts that were successful in implementing meaningful stakeholder participation in the pandemic planning. Another option would be either to (i) modify and pilot test the robustness the existing mechanisms for stakeholder participation which have been found to be appropriate for the various contexts and populations for use during an emergency or (ii) develop new mechanisms for stakeholder participation that can balance the need for a rapid response (to meet the needs of policy- and decision-makers) with meaningful participation within the context of public health emergencies, such as the use of online platforms.

Lesson learned from examining stakeholder participation in COVID-

19 planning and response highlight the ongoing relevance of stakeholder participation in health sector priority setting and in decision-making during new and emerging crisis. Now is the time for countries to evaluate stakeholder participation during COVID and put in place participation structures and mechanisms that can be piloted in non-emergency times in preparation for the next epidemic or pandemic. More research is needed regarding priority setting during public emergencies and the extent to which stakeholder participation strategies adopted in routine times could be modified or adapted for emergencies.

6. Limitations

The findings in this paper should be interpreted with caution. First, the plans included in the study were published during the early stages of the pandemic. It is possible that stakeholders were included but not documented, or they may have been included in documents that were published after the initial plans were published. Second, the review included only the national pandemic plans. It is possible that participation strategies were developed at sub-national levels- which was beyond the scope of the study [13,67,68]. Lastly, although documenting stakeholder participation is an indication of a commitment to implementation, it is not uncommon to find well documented policies that are never implemented; hence our study is limited in that we cannot speak to which stakeholders actually participated and how they participated. This would require interviews which were beyond the scope of this study.

CRedit authorship contribution statement

Bernardo Aguilera: Conceptualization, Data curation, Formal analysis, Methodology, Writing – original draft, Writing – review & editing. **Razavi s. Donya:** Conceptualization, Data curation, Formal analysis, Methodology, Writing – original draft, Writing – review & editing. **Claudia-Marcela Vélez:** Conceptualization, Data curation, Formal analysis, Methodology, Writing – original draft, Writing – review & editing. **Lydia Kapiriri:** Funding acquisition, Conceptualization, Data curation, Formal analysis, Methodology, Writing – original draft, Writing – review & editing. **Julia Abelson:** Conceptualization, Formal analysis, Writing – review & editing. **Elysee Nouvet:** Conceptualization, Data curation, Writing – review & editing. **Marion Danis:** Conceptualization, Writing – review & editing. **Susan Goold:** Conceptualization, Writing – review & editing. **Ieystn Williams:** Conceptualization, Writing – review & editing. **Mariam Noorhuda:** Conceptualization.

Declaration of competing interest

We declare no conflict.

Acknowledgement

This work was funded by the [McMaster University](#) COVID-19 research fund. We would like to thank the research assistants that supported the data extraction.

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