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POLICY BRIEF

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National COVID-19 related research in Indonesia: a scoping review and bibliometric analysis

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Executive summary

The COVID-19 pandemic is a Public Health Emergency of International Concern (PHEIC) that has tremendously impact globally. Over the pandemic period, researchers, including in Indonesia, have been carrying out a large body of research that keeps growing at a higher rate to get a better understanding of the pandemic and provide recommendations for sound policies. However, the landscape of the publications have not been described comprehensively.

Thus we conducted this scoping review and bibliometric analysis aimed to summarise the existing academic and grey health-related literature in Indonesia within the themes of WHO 11 pillars COVID-19 Strategic Preparedness and Response Plan (SPRP) as well as map the existing evidence and current literature gaps.

The scoping review and bibliographic analysis were valuable for harnessing the diverse pool of evidence. As a relatively new methodology, framing research has yet to receive adequate attention in the health policy literature. In the preparation of policies and pandemic projections, this method can be used to map which research areas that need to be strengthened to support the search for relevant evidence for decision making. Besides that, it is helpful for the government in allocating research resources that are on target.

Scoping Review

From the WHO COVID-19 global database and grey literatures searching we have identified 200 articles relevant to the 11 Pillars from the WHO Guideline on COVID-19 Strategic Preparedness and Response plan. The detailed intersection between pillars presented in Figure 1. Based on articles used in the scoping review, multipillar of Pillar 1 and Pillar 3 was the most frequently used followed by other multipillar combination.

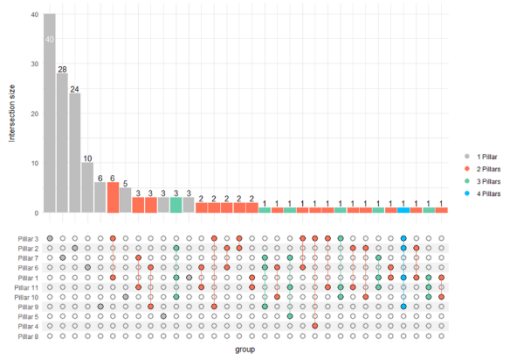


Figure 1. Intersection Plot of Multi Pillars

From the 11 pillars, of WHO Guideline on COVID-19 strategic preparedness and response plan we focus on the four main discussed pillars found on our review, which are pillar 2 (Risk communication, community engagement and infodemic management), pillar 3 (Surveillance, outbreak investigation and calibration of public health and social measures), pillar 6 (Infection prevention and control, and protection of the health workforce) and pillar 7 (Case management, clinical operations, and therapeutics). Further, two additional pillars, pillar 1 (Coordination, planning, financing, and monitoring) and pillar 10 (Vaccination), which are essential and urgent to manage and control pandemics were also covered in the discussion.

Policy makers and health care professionals were the frequent subjects of the published articles (10% and 14%, respectively).Most research was predominantly conducted by academics (79%) with only 5% being conducted by the government. More than half (62%) of the articles did not disclose funding information but 32% were funded by Indonesian funding bodies i.e., Universities or Ministerial grants.

The 11 Pillars of WHO COVID-19 Strategic Preparedness and Response plan	
01	Coordination, planning, financing, & monitoring
02	Risk communication, community engagement and infodemic management
03	Surveillance, outbreak investigation and calibration of public health and social measures
04	Points of entry, international travel and transport, and mass gatherings
05	Laboratories and diagnostics
06	Infection prevention and control, and protection of the health workforce
07	Case management, clinical operations, and therapeutics
08	Operational support and logistics, and supply chains
09	Maintaining essential health services and systems
10	Vaccination
11	Research, innovation, and evidence

Preparedness and response coordination

Pillar 1

- The coordination, planning, financing, and monitoring in Indonesia differs at subnational level due to the context of each province. However, this drives innovative solutions that could be replicated and scaled.
- Building on existing social structure and collaborating with local stakeholders across societal sectors are practices identified in many articles. However, this collaborations have not been systematic and sustainable enough to tackle systemic challenges caused by pandemic.
- Documenting and sharing lessons learned and best practices across provinces, as well as supporting decentralization of coordination at subnational level could be beneficial.

Pillar 2

- Inadequate socialization and inconsistency of the new rules or regulations related to social restriction leading to confusion and poor adherence by community.
- Although social gathering has been carefully planned with health protocol, violations remained.
- There is a need for a valid and reliable source of information (e.g. website) as a communication media from the Government to community

Surveillance, laboratory and public health intelligence

Pillar 3

- There is no study related with the evaluation of existing COVID-19 surveillance systems at the National or District level.
- Evaluation about public health and social measures were rarely studied
- Education related to COVID-19 health protocol still needed to complement the existing public health and social measures.

Case management and health system resilience

Pillar 7

- The characteristics of COVID-19 diseases and diagnostic methods discussed vary extensively from clinical findings, radiological findings, and lab-based findings .
- The most common COVID-19 prognostic factors studied in Indonesia are hematologic and coagulation parameters
- Studies regarding treatment focus on both pharmacological and nonpharmacological. More than a quarter of the treatment-related studies explore plasma convalescents. This study also notes the emergent research regarding herbal medicine and its potential.

Research development and access to preventive measures

Pillar 6
• Discipline for prevention efforts (proper hand washing, social distancing and social restriction) is still low, community discipline should be improved • Safety for health worker, especially who deal with COVID-19 patients, from infections and social stigma should be maintained
Pillar 10
• The overall vaccine acceptability rate is high, refusal usually due to lack of information received prior to vaccination • The government has the responsibility to provide free vaccines that meet the quality standard

Bibliometric analysis

A total of 2,684 scientific articles were included in the bibliometric analysis. The number of publications related to COVID-19 in Indonesia has increased more than two-fold from 2020 (801 articles) to 2021 (1,883 articles).

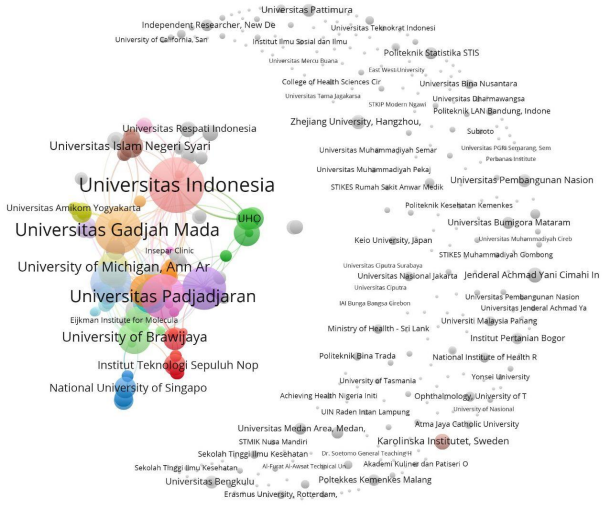


Figure 2. Network analysis of institutions

Conclusion

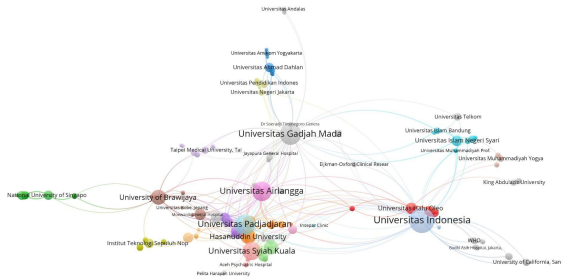


Figure 3. The detailed network analysis of institutions collaboration.

A further network analysis of institutions' collaboration (Figure 2) showed frequent collaborations between top public universities in Indonesia. On the other hand, other universities found to be independently conducted research or publications. In the detailed network analysis of collaboration, we remove institutions without collaboration activities. The network (Figure 3) showed that top universities frequently conducted collaboration with other universities in their region (same province or same island).

Bibliometria analysis-Key recommendations

- The highest volume of publications was dominated by top universities which are UI, UNPAD, UGM, and UNAIR.
- There is a need to engage other universities, especially those outside Java island, to conduct research related to COVID-19 in Indonesia.
- The distribution of research was predominant in provinces in the Java island, and needed to be expanded to other provinces to capture a wider pandemic situation.
- Lack of national international funding to support national COVID-19 research, most research was funded by internal funding from universities.
- Future investment for research in pillar 4,5, 8 should be prioritized

This scoping review and bibliographic analysis demonstrate the potential of framing research to understand the influence of COVID-19 research topics in the pandemic policy process in Indonesia. Despite a relative paucity of data for many metadata articles and open access issues, demonstrable research struggles occur in various contexts for a few pandemic matters topics such as human behaviour, health system and clinical study. By framing ideas from scoping review and bibliographic analysis, stakeholders evoke deeply held values implying a set of solutions, forming coalitions of interest and mobilising specific policy responses for handling COVID-19 more effectively. The scoping review and bibliographic analysis were valuable for harnessing the diverse pool of evidence. As a relatively new methodology, framing research has yet to receive adequate attention in the health policy literature. In the preparation of policies and pandemic projections, this method can be used to map which research areas that need to be strengthened to support the search for relevant evidence for decision making. Besides that, it is helpful for the government in allocating research resources that are on target.Please scan this QRcode to access the online version of this policy brief.

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