Scientific Foundation SPIROSKI, Skopje, Republic of Macedonia Open Access Macedonian Journal of Medical Sciences. 2021 Dec 17; 9(E):1528-1533 https://doi.org/10.3889/oamjms.2021.6722 eISSN: 1857-9655

elSSN: 1857-9655 Category: E - Public Health Section: Public Health Legislation





Content Analysis of Policymakers Communication Narrative Addressing Coronavirus Diseases 2019 Pandemic in Indonesia

Hardisman Dasman*, Husna Yetti, Abdiana Abdiana, Firdawati Firdawati

Department of Public Health and Community Medicine, Faculty of Medicine, Andalas University, Padang, Indonesia

Abstract

Edited by: Sasho Stoleski
Citation: Dasman H, Yetti H, Abdiana A, Firdawati F.
Content Analysis of Policymakers Communication
Narrative Addressing Cornavirus Diseases 2019
Pandemic in Indonesia. Open Access Maced J Med Sci.
2021 Dec 17; 9(E):1528-1533.
https://doi.org/10.3889/oamjms.2021.6722
Keywords: Coronavirus Diseases 2019; Communication;
Policy window; Indonesia
*Correspondence: Dr. Hardisman Dasman, Department
of Public Health and Community Medicine, Faculty
of Medicine, Andalas University, Padang, Indonesia
E-mail: hardisman@med.unand.ac.id
Received: 21-Jun-2021
Revised: 12-Oct-2021
Accepted: 07-Dec-2021
Copyright: © 2021 Hardisman Dasman, Husna Yetti,

Accepted: 07-Dec-2021
Copyright: © 2021 Hardisman Dasman, Husna Yetti,
Abdiana Abdiana, Firdawati Firdawati
Funding: This research did not receive any financial
support
Competing Interests: The authors have declared that no

Competing Interests: The authors have declared that no competing interests exist

Open Access: This is an open-access article distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC 4.0)

BACKGROUND: Coronavirus diseases 2019 (COVID-19) pandemic severely affected Indonesia in health and socioeconomic sectors. As a new disease and the challenge became an opportunity for policy creation of the government.

AIM: The study explored how the government as a policymaker responded to the COVID-19 pandemic within the framework of the policy window, as seen in the news media. This study also looked at how the public perceived the policy creation and the implementation.

METHODS: A qualitative case study was conducted to answer the research questions by reviewing three main national news media, namely, Respublika, Media Indonesia, and Kompas, on primary communication from three policies makers (president, ministry of health, and COVID-19 task force). The searching coverage was within 1 year of the pandemic, from March 2019 to February 2020. The articles were analyzed using content and contextual analysis approaches. The articles were coded thematically using open coding in the native language, supported by MS Excel and qualitative software ATLAS.ti version 8. The data discuss with the existing literature using the policy window framework.

RESULTS: We found that 147 articles were eligible for the study, which the majority of them were president communication. The president communicated in all aspects COVID-19 related policy, including integrated policy, health policy, and the economic. Ministry of health mainly focused on health policy and the task force on public education. The study showed that the government has utilized a policy window for policy creation in addressing the COVID-19 pandemic. The policy addressed all related issues that were affected by the pandemic, ranging from healthcare to financing. There were weaknesses in the implementation, such as not adequately informed to the public and some inconsistency among stakeholders.

CONCLUSION: Policy creation without consistent implementation led to public distrust and rejection.

Introduction

Since it was first announced in December 2019 in Wihan China, the new cases of coronavirus diseases 2019 (COVID-19) have spread all over the world. Due to it highly contagious and as well as relatively high case fatality, the World Health Organization (WHO) declared the outbreak a Public Health Emergency of International Concern in January 2020 [1]. Even, some countries were severely affected by the diseases a high number of death cases. Later, on March 11, 2020, the WHO declared the COVID-19 as a global pandemic [1], [2], [3].

In Indonesia, a COVID-19 case was first confirmed on March 2, 2020, which significantly increases over the year [1], [4]. Within a year of the pandemic, daily new case finding in the country increased gradually [4]. The pandemic did not only affect health but also the socio-economic [5], [6], [7]. The economic sectors from industrial, retail, transportation, and transportation suffered significantly from the pandemic [8], [9].

The country faced a dilemma between focusing on health and socio-economic goal [8]. The country has to balance between health and economic needs, which was not always in the same direction [3], [9]. On one hand, the healthcare system faced a new burden addressing the pandemic, both preventive and curative issues. Preventive measures, surveillance, and health promotion needed to be done in appropriate manners and scientifically sound that can be accepted by the public. On the other hand, strict health prevention might severely affect the economy. The developing countries such as Indonesia might have more affected due to the low flexibility of budgeting [3], [10], [11].

In this study, we explored how policymakers or the government respond to the COVID-19 pandemic, and dealing with the public needs within "the framework of policy window." As Kingdon suggested, a policy window is a policymaker's opportunity to propose a new solution to a new public problem. A new policy is open when there is uncertainty of a solution and might be multiple alternatives [12]. COVID-19 pandemic as a new health problem became a challenge for the government and opened new strategies as a policy

window [13]. This study looked at how the government responded to COVID-19 as a new problem, and what the government communicated to the public through the media regarding the policy and its implementation. The study also looked at the public response to the government policy creation and the implementation. The ability of the government in addressing the COVID-19 pandemic as a new health problem became a lesson learned for the future strategies in addressing a heath outbreak or a disaster.

Materials and Methods

Study design and research sample

A qualitative case study was conducted to answer the research questions by reviewing national news media in Indonesia. Three main Indonesian news media were selected, namely, *Respublika*, *Media Indonesia*, and *Kompas*. The articles were selected from the online version on those media. The data collection was taken between May and July 2020, with the coverage searched news within 1 year of pandemic, from March 2019 to February 2020. Within 1 year of coverage, we have gathered 147 articles about Indonesian policymakers' communication in the news that included in the study.

Operational terms

Four major terms have been used in the study, namely, policy makers, president communication, ministry of health communication, and task force communication.

- Policymakers were national-level government as stakeholders who responsible for making and implementing policy related to COVID-19 pandemic in Indonesia, namely, president, ministry of health, and COVID-19 task force
- President communication was articles about direct communication, talk, or direction of the president or vice president related to COVID-19
- Ministry of health communication was an article about direct communication, talk, or direction of the minister for health and the deputy related to COVID-19
- Taskforce communication was articles about direct communication, talk, or direction of the chairman of the Indonesian COVID-19 task force or the spokesman on COVID-19
- Public response was public perception and attitude toward the COVID-19 related policies that were seen in the news media.

Data collection technique and analysis

The articles were searched online in the news search engine using keywords president AND COVID-19, ministry of health AND COVID-19, and Indonesian task forced AND COVID-19, in the native language. All articles that have been found were screened for eligibility. In total, from three main news media that have been selected, we found about 956 articles. Out of them, 147 articles were eligible for the study, which were primary communication, talk, or direction from the policymakers. Other articles about them by other people or sources were excluded from the study.

All eligible articles were analyzed thematically using content and contextual analysis and employing triangulation approaches. The articles were coded thematically using open coding in the native language. All the qualitative analysis was supported using MS Excel and qualitative software ATLAS.ti version 8. Later, the data discuss with the existing literature using the policy window framework.

Results

Out of 147 articles, we found 248 thematic codings. The majority of news media articles reported president direction and communication on COVID-19 (69.0%), and the ministry of health was the least (12.1%), as seen in Figure 1. The president communicated in all aspects COVID-19 related policy, including integrated policy (31.7%), health policy (31.0%), and the economic (28.2%). Ministry of health mainly focused on health policy (40%) and the task force focused on public education (53.2%) (Table 1).

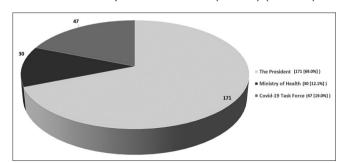


Figure 1: Distribution of policy makers communication

Health policy and planning

In general, president's communication on health policy was about the importance of refocusing health policy and program during the pandemic, COVID-19 financing, budgeting relocation, and health workforce mobilization. Specifically, the president talked about the importance of COVID-19 in all provinces in

E - Public Health Public Health Legislation

the country, especially in the high number of cases. The government targeted to decrease the fatality cases as low as possible.

Table 1: Thematic narrative communication of policy makers in news media

Thematic and subtheme	President	Ministry of health	Task force
	f (%), n = 171	f (%), n = 30	f (%), n = 47
Health Policy and Planning (HP):	53 (31.0)	12 (40.0)	18 (38.3)
Health budgeting relocation, health			
workforce mobilization, technology			
improvement, and adoption			
Economic Impact and Policy (EP):	48 (28.2)	_	_
The problem, fiscal stimulus, and			
direct support			
Integrated Public Policy and	54 (31.7)	11 (36.6)	4 (8.5)
Collaboration (IP)			
Public Education and	16 (9.4)	7 (23.3)	25 (53.2)
Participation (PE)			

As mentioned in the news:

- "The government pay more attention to the provinces that had a high number of COVID-19 cases" (p1).
- "...I think our target is clear, decrease the fatality cases as low as possible, recovery rate as high as possible, and control new transmission" (p2).

Tracing and testing were also becoming one of the main strategies. As mentioned:

"Government tries to improve 3T; testing, tracing, and treatment, that have to be done aggressively" (p3).

"Tracing and isolation for asymptomatic new cases are important for decreasing the transmission" (p4).

One of the policies that the government was implemented was a rapid test for early diagnosis or COVID-19 testing. Despite the test was not recommended by the medical profession. As mentioned:

- ".The president instructed to do mass rapid test for COVID-19" (p5).
- "...Rapid test with high coverage is important for early detection of COVID-19 should be done" (p6).

The president also stated the importance of improving the availability and capability of related COVID-19 health facilities including molecular PCR diagnostic testing, hospitals, personal protective equipment for health workers, medicines, and ventilators. Moreover, the president also mentioned that the government strongly supports health workers as front liners for combatting the COVID-19 pandemic. As mentioned:

"The government gives insurance and as well as a financial incentive for health workers who take care of COVID-19 patients" (p7).

The minister of health also informed the public about health policy being implemented for COVID-19 prevention, such as innovation and utilization of technology, and improving the capacity of polymerase

chain reaction (PCR) for COVID-19 diagnostic tests. As mentioned in the media:

"Ministry of health carry out the acceleration of development pharmaceutical industry in the country and support PCR reagent production and rapid test for COVID-19 diagnostic" (m1). "The government through the ministry of health gives full support for hospital facilities related to COVID-19 management including laboratories" (m2).

Health policy was the main topic that the task force informed the public through the media. The task force explained what were its roles and responsibilities, and what health approaches should be done in combatting the COVID-19 pandemic. The task force mentioned that the main strategy was improving testing capacity nationally and isolation for infected people. The task force also explained the importance of correct and complete data about COVID-19 cases in the country to have the correct analysis and the right decision.

As mentioned in the media:

- "...Role of the task force is mostly finding the solution for COVID-19 prevention and treatment, despite not ignoring the economic aspect" (t1).
- "...By improving testing capacity, we can isolate and give the best treatment for the patients, and it will decrease the risk of transmission especially to vulnerable groups" (t2).

Economic impact and policy

The only president communicated to the public the importance of economic policy during the pandemic. President talked about how to strengthen the national economy during the pandemic, fiscal stimulus, and other economic support, especially for small and medium enterprises. The president saw that economic security and strength should be more paid attention to. Therefore, the president did not choose the lockdown or regional quarantine. He believed that the option had a more negative impact, especially on the economy. He believed that COVID-19 negatively affected businesses either small or medium enterprises or big companies.

One of the economic policies was the importance of budget-saving and relocation. As mentioned:

"President has declared that the government has to refocus national and provincial budgeting to prioritize for people who affected by COVID-19 pandemic" (p8).

The president also informed that the government gave financial support for small and medium enterprises, and also an incentive for people who lay off from their job. As mentioned:

".The government gives business capital aid for small and medium enterprises owners to strengthening their business during a pandemic" (p9).

"The government gives an incentive for people who lay off from their job through workforce social security board (BPJS Ketenagakerjaan)" (p10).

Integrated public policy and collaboration

The integrated policy was about how other sectors implement health protocol during the pandemic. Other sectors should continue their program without hindering by the pandemic but adopt health principles in their program. By applying this approach, the development in the country will continue. Including in the collaboration for combating the COVID-19 pandemic, the president instructed mobilization of the police workforce, military, non-governmental organization, and universities to campaign and to work on COVID-19 prevention.

President explained to his ministers the importance of collaboration and working together among all sectors and departments for combating COVID-19. The president instruction was mentioned in the media:

"National, provincial, and district government, and ministers have to work together and follow the presidential decree" (p11).

"COVID-19 is a national problem; all government stakeholders have to work together. All ministers in the cabinets have to lead the economic recovery with the priority on the public economy while combating the pandemic..." (p12).

Similar to the president's instruction, the minister of health informed the public through the media that the health protocol needs to be implemented by all sectors. Synergy and collaboration were needed for combatting the COVID-19 pandemic. As mentioned in the media:

"...By working together and implementing health protocol in all sectors, especially public offices and industries will minimize the risk of COVID-19 transmission" (m6).

Public education and participation

The president informed that government responds to the pandemic by issuing regulations for social distancing protocol to limit mass gathering in preventing COVID-19 transmission, which the public should be aware of meanwhile the minister mostly talked about practical things that the public can do for COVID-19 prevention. Due to a lack of coordination with health professional organizations and with the COVID-19 task force, the minister gave information different to others, especially in the early pandemic. In the beginning, the minister informed that people did not need to use a face mask and it was only for the sick person. As mentioned:

".,Healthy people do not have to flock around to but face mask, it is only for the sick person" (m3). ".The minister emphasized that using a face mask is only for the sick person not for the healthy one" (m4).

On the contrary, after 2 months of the pandemic, the minister informed the importance of health protocol in public for COVID-19 prevention. The protocol included using compulsory of using the face mask, frequently washing hands, and physical distancing and avoiding mass gathering. The minister also explained to the public the importance of body strength and immunity. He mentioned that traditional medicines and herbs may be used for people. As mentioned in the news:

".People do not be in doubt to use Indonesia traditional medicine to strengthening immunity" (m5).

The task force also supported that public education was very important to be able to implement related health policy and as well as to gain public participation. Public participation was very important for COVID-19 prevention. As mentioned in the media:

"Policy decision needed to be disseminated and to be understood by the public" (t4).

Public response

Overall, the media informed the dissatisfaction of the public on the government response to the COVID-19 pandemic. The public perceived that the government slowly responded and denial of the early outbreak. Moreover, inconsistency and lack of coordination among the national, province, and local governments were also obviously seen. As mentioned in the media:

"In the beginning, there was a chaos of public communication of the government. The government official denied of the COVID-19 threat" [pp1].

"The government responded to the pandemic repeatedly inconsistent among of them [the officials and the level of governments], and as well as using different term adding more confusing" [pp2].

Discussion

President, ministry of health, and the COVID-19 task force generally informed the public about the same issues but focused the different topics. Despite frequently mentioned the importance of health policy, the president mostly emphasized the importance of maintaining economic security. The president informed that the fiscal stimulus to small and medium enterprises

E - Public Health Public Health Legislation

and direct support to the public was the most crucial policy. The ministry of health emphasized that the importance of policy collaboration, which means combating the pandemic was not solely responsible of the ministry of health. Meanwhile, the task force focused on public education.

COVID-19 pandemic as a new health problem opened a window for policy creation in the country. The government issued series of regulations related to COVID-19, including presidential decree and ministry of health regulation, ministry of internal affairs regulation, ministry of finance regulation, and et cetera [Hukum online]. The new policy covered range from health-care services, health promotion, budgeting and financing, and et cetera [14], [15].

Based on these data, we see that the government utilizes the policy window in addressing the pandemic. However, there were three weaknesses in the implementation. First, the issued regulations were not optimally taken place. The regulations were not adequately informed to the public and not fully understood [16]. Public just be informed about regulation without adequate explanation of boundaries and how it be implemented.

Second. there was some inconsistent information among the three stakeholders, which showed a lack of coordination in the implementation among departments and as well as between national, provincial, and local governments [16], [17]. The policy implementation seemed to be relaxed and influenced by external political voices. For instance, increasing the capacity of testing was one of the main strategies that have been informed but it went slowly due to tugged of interest among the level of governments [9]. Third, the inconsistency was also shown in the implementation on the ground. On one hand, the policy was strongly enforced in public offices and schools. On the other hand, the implementation of health protocol for Covid-19 prevention seemed relaxed and without proper control in limiting mass gathering in shopping centers. This caused public criticism, distrust, and rejection [18].

As a result, the public was reluctant to obey the health protocol especially physical distancing and avoiding mass gathering [18]. Inconsistency in enforcing a policy with relaxing in health protocol had an impact on an escalation of new cases and transmission of COVID-19 in the country [19]. Until March 2021, with has been 2 years of the pandemic, the new cases finding were still fluctuated daily [4]. Even, the study suggested that early relaxation of health protocol significantly increased new cases finding again [20]. Strick, consistent, and rapid response were important approaches in addressing the COVID-19 pandemic, either in decreasing the transmission and minimizing the negative economic impact [21]. A study proved that transparent and strong commitment in implementing policy and the right time responses had strong compliances from the public [22].

As a new disease, no country had the standard procedure in addressing the COVID-19. Every country had implemented new regulations and learned at the same time. Many countries had new policies which might not be suitable with existing knowledge, public demand, and perception that came into criticism [23], [24], [25]. For example, the government had issued series of regulations to limit public contact and stop non-essential public activities that will hinder public rights and freedom. This also came into public rejection. However, the government had to prioritize public needs and safety above individual freedom [24]. Unable to do rapid responses and lack of transparency of policies also leaded to public distrust [23].

The government should consider key economic principles in making and implementing the policy during the COVID-19 pandemic, and at the same time, the government should look at the appropriate investment in the health sector in the right place [26]. Policy creation within the policy window framework should be followed by implementation with strong leadership, high commitment, compassion, and transparency needed in addressing new health challenges and pandemics [27].

Conclusion

The government as the policymaker has utilized a policy window for policy creation in addressing the COVID-19 pandemic as a new health problem. The policy tried to address all related issues that were affected by the pandemic range from health-care services, health promotion, budgeting, and financing. There were weaknesses in the implementation, namely, not adequately informed to the public, some inconsistency among stakeholders, and among the level of governments. The condition led to public distrust and rejection of the policy implementation, which was followed by COVID-19 cases escalation.

Acknowledgments

The authors thank Wiwin Susilawati, BA for proof-read the manuscript.

References

 World Health Organization. Indonesia Situation Report. Geneva: World Health Organization; 2020. https://www. who.int/docs/default-source/searo/indonesia/covid19/

- who-indonesia-situation-report-1.pdf?sfvrsn=6be5b359_0 [Last accessed on 2020 May 20].
- World Health Organization. WHO Director-General'sopening Remarks at the Media Briefing on COVID-19-11 March. Geneva: World Health Organization; 2020. Available from: https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-20202/4 [Last accessed on 2020 May 20].
- Cucinotta D, Vanelli M. WHO declares COVID-19 a pandemic. Acta Biomed. 2020;91(1):157-60. http://doi.org/10.23750/abm. v91i1.9397
 - PMid:32191675
- World Health Organization. WHO Coronavirus (COVID-19)
 Dashboard Indonesia. Geneva: World Health Organization;
 2020. https://covid19.who.int/region/searo/country/id [Last accessed on 2020 May 20].
- Gandasari D, Dwidienawati D. Content analysis of social and economic issues in Indonesia during the COVID-19 pandemic. Heliyon. 2020;6:e05599. http://doi.org/10.1016/j.heliyon.2020. e05599
- Sparrow R, Dartanto T, Hartwig R. Indonesia under the new normal: Challenges and the way ahead. Bull Indones Econ Stud 2020;56:269-99. https://doi.org/10.1080/00074918.2020.1854079
- Ssenyonga M. Imperatives for post COVID-19 recovery of Indonesia's education, labor, and SME sectors. Cogent Econ Finance. 2021;1:1911439. https://doi.org/10.1080/23322039.20 21.1911439
- Setiati S, Azwar MK. Dilemma of prioritising health and the economy during COVID-19 pandemic in Indonesia. Acta Med Indones. 2020;52:196-8.
 - PMid:33020330
- van-Empel G, Mulyanto J, Wiratama BS. Undertesting of COVID-19 in Indonesia: What has gone wrong? J Glob Health 2020;10:020306. http://doi.org/10.7189/jogh.10.020306
 PMid:33110510
- Sarkar A, Liu G, Jin Y, Xie Z, Zheng ZJ. Public health preparedness and responses to the coronavirus disease 2019 (COVID-19) pandemic in South Asia: A situation and policy analysis. Glob Health J. 2020;4(4):121-32. http://doi. org/10.1016/j.glohj.2020.11.003
 - PMid:33200035
- Shaikh BT, Ali N. COVID-19 and fiscal space for health system in Pakistan: It is time for a policy decision. Int J Health Plann Manage. 2020;35(4):813-7. http://doi.org/10.1002/hpm.2986 PMid:32476158
- Figueroa C, Castillo EG, Norquist G, Wells KB, Griffith K, Kadkhoda F, et al. A window of opportunity: Visions and strategies for behavioral health policy innovation. Ethn Dis. 2018;28 Suppl 2:407-6. http://doi.org/10.18865/ed.28.S2.407 PMid:30202194
- Auener S, Kroon D, Wackers E, van Dulmen S, Jeurissen P. COVID-19: A window of opportunity for positive healthcare reforms. Int J Health Policy Manag. 2020;9(10):419-22. http:// doi.org/10.34172/ijhpm.2020.66 PMid:32610730
- Hukum Online. COVID-19 Peraturan Perundang-undangan Pusat [National Level of COVID-19 Regulations]. Available from: https://covid19.hukumonline.com/category/peraturanperundang-undangan/peraturan-pusat [Last accessed on 2021 Apr 17].
- 15. Djalante R, Lassa J, Setiamarga D, Sudjatma A, Indrawan M,

Haryanto B, et al. Review and analysis of current responses to COVID-19 in Indonesia: Period of January to March 2020. Prog Disaster Sci. 2020;6:100091. http://doi.org/10.1016/j.pdisas.2020.100091

PMid:34171011

- 16. Zakaria D, Hira H. Pandemi COVID-19: Flattening the Curve, Kebijakan dan Peraturan. Vol. 3. Vox Populi; 2020. p. 1-21.
- Agustino L. Analysis of covid-19 outbreak handling policy: The experience of Indonesia. J Borneo Adm. 2020;16(2):253-70. http://doi.org/10.24258/jba.v16i2.685
- Aquarini. Effect of political policy on physical distancing compliance preventing the spread of COVID-19. Anterior J. 2020;19(2):86-93. https://doi.org/10.33084/anterior.v18i2.456
- Wibowo D. When can physical distancing be relaxed? A health production function approach for COVID-19 control policy.
 BMC Public Health. 2021;21(1):1037. http://doi.org/10.1186/s12889-021-11088-x
 PMid:34078329
- Singer DR. Health policy and technology challenges in responding to the COVID-19 pandemic. Health Policy Technol. 2020;9(2):123-5. http://doi.org/10.1016/j.hlpt.2020.04.011
 PMid:32355634
- Berardi C, Antonini M, Genie MG, Cotugno G, Lanteri A, Melia A, et al. The COVID-19 pandemic in Italy: Policy and technology impact on health and non-health outcomes. Health Policy Technol. 2020;9(4):454-87. http://doi.org/10.1016/j. hlpt.2020.08.019
 PMid:32895626
- Kennelly B, O'Callaghan M, Coughlan D, Cullinan J, Doherty E, Glynn L, et al. The COVID-19 pandemic in Ireland: An overview of the health service and economic policy response. Health Policy Technol. 2020;9(4):419-29. http://doi.org/10.1016/j. hlpt.2020.08.021
- Atkinson P, Gobat N, Lant S, Mableson H, Pilbeam C, Solomon T, et al. Understanding the policy dynamics of COVID-19 in the UK: Early findings from interviews with policy makers and health care professionals. Soc Sci Med. 2020;266:113423. http://doi.org/10.1016/j.socscimed.2020.113423
- Ferorelli D, Mandarelli G, Solarino B. Ethical challenges in health care policy during COVID-19 pandemic in Italy. Medicina (Kaunas). 2020;56(12):691. http://doi.org/10.3390/ medicina56120691

PMid:33322462

PMid:33069961

PMid:32923355

 Moattia JP. The French response to COVID-19: Intrinsic difficulties at the interface of science, public health, and policy. Lancet Public Health. 2020:5(5):e255. http://doi.org/10.1016/ S2468-2667(20)30087-6

PMid:32275857

- Prinja S, Pandav CS. Economics of COVID-19: challenges and the way forward for health policy during and after the pandemic. Indian J Public Health. 2020;64(Suppl):S231-33. http://doi. org/10.4103/ijph.IJPH_524_20
 - PMid:32496262
- Nicola M, Sohrabi C, Mathew G, Kerwan A, Al-Jabir A, Griffin M, et al. Health policy and leadership models during the COVID-19 pandemic: A review. Int J Surg. 2020;81:122-9. http://doi.org/10.1016/j.ijsu.2020.07.026

PMid:32687873