medical sciences forum

MDPI

Proceeding Paper

How Indonesian Primary Health Care Combat the Spread of COVID-19: Implications for Dealing with Future Pandemics †

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† Presented at the the 2nd International Electronic Conference on Healthcare, 17 February–3 March 2022.

Available online: https://iech2022.sciforum.net/.

Abstract: Primary health care (PHC) in Indonesia plays an essential role in combating the spread of COVID-19 in the community. While each PHC deals with different situations at the beginning of COVID-19, the purpose of this study is to investigate the roles of PHC in preventing COVID-19 spread and promoting healthy behavior in the community. We applied a qualitative approach, collected data through focus group discussions, and then analyzed the data using thematic content analysis. PHC health officers from eight Indonesian regions, ranging from western to eastern Indonesia, took part in this study. This study found that PHCs play crucial roles in preventing the spread of COVID-19 and promoting healthy behavior. They collaborated with the community to identify suspected COVID-19 cases, provided isolation facilities, and educated the public about COVID-19 prevention. The community contribution was somehow followed by the stigmatization of COVID-19 patients, complicating PHC efforts to prevent COVID-19 spread. Using the WHO building blocks, we identified lacking in leadership, health workforce, and access to essential medicine as another challenge for PHC to perform their tasks. PHC centers must employ strategies to provide a comprehensive understanding and combat the stigma associated with COVID-19 since the community plays pivotal roles and presents hurdles in preventing the spread of COVID-19.

Keywords: community; COVID-19; primary health care

Citation: Sitohang, MY., et.al. How Indonesian primary health care combat the spread. *Med. Sci. Forum* **2021**, *1*, x. https://doi.org/10.3390/xxxxx

1. Introduction

Pandemics are nothing new, but the recent COVID-19 pandemic shocked the world and affected people from all walks of life in more than 223 countries [1]. The pandemic puts heavy pressure on the health systems of these countries. As the fourth most populated country, Indonesia is also adversely affected by the pandemic. The number of reported cases in Indonesia has surpassed 4.5 million cases, and the number of deaths amounted to more than 140,000 [2].

The COVID-19 pandemic in Indonesia proves that both National and Local Health Systems are struggling in responding to a large-scale and massive health-related disaster. The current pandemic makes us reconsider the existing disaster management (which prioritises natural disasters) in the country. Put differently, we must also be prepared with similar potential future health disasters. Moreover, currently reforming the National Health System is also one of the national development priorities in the Government's Work Plan. Various measures (policies, programs, and activities) have been issued and

implemented in relation to the current situation of the COVID-19 pandemic in Indonesia, including optimising the role of health workers in the community.

Regarding promotive and preventive public health actions, Primary Health Care (PHC) is responsible for facilitating community empowerment. According to the World Health Organization (WHO), community empowerment is "the process of enabling communities to increase control over their lives" [3]. It is also important to recognize that community empowerment should involve people to "work together to make change happen in their communities by having more power and influence over what matters to them"[4]. While in the Indonesian context, Presidential Decree No. 72/2012 about National Health System states that community empowerment is "management of the implementation of various health efforts, both individually, in groups, and in the community, in a planned, integrated and sustainable manner, in order to achieve the highest degree of public health". It aims to improve the community's ability to behave in a healthy life, overcome health problems independently, play an active role in any health development, and be a driving force in realising health-oriented development [5].

PHC has a vital role because it is at the forefront of healthcare facilities that directly interact with the community [6]. In terms of "to prevent, to detect, and to respond" as key efforts during the COVID-19 pandemic. For example, successful efforts in preventing the disease will minimise the impact of the pandemic. PHC, synergizing with various existing non-health sectors, also have an important role in encouraging good public health behaviour (promotive and preventive efforts), which is one of the key factors in breaking the chain of spread and transmission of diseases related to the Covid-19 pandemic. Various program initiatives and activities have also been carried out; however, it is undeniable that PHC also faces various challenges and obstacles to encourage good promotive and preventive health behaviour from the community.

Therefore, this paper aims to investigate the roles of PHC in preventing COVID-19 spread and promoting healthy behaviour in the community. While each PHC deals with different situations at the beginning of COVID-19, it is imperative to acknowledge how PHC adapts to pandemic situations. Based on the WHO Health System Framework, this study also elaborates issues related to the health workforce, information, service delivery, health products and technologies, financing, and leadership/governance faced by PHC in Indonesia [7, 8]. Lessons learned from various PHC with different social and cultural backgrounds in Indonesia can be beneficial to better preparedness for similar pandemic or health-related disasters in the future.

2. Materials and Methods

2.1. Data collection

To realise the study objective, we employed a qualitative approach. In May 2020, we performed focus group discussions (FGDs) with PHC staff officials from eight PHC centers spread across several regions in Indonesia. We selected the staff who are responsible for health promotion in the community during the start of the pandemic. As the situation at that time was too risky for field data collection, we conducted the FGDs remotely via Zoom meetings.

We selected the regions based on the differences in the pandemic situation and geographical proximity to the Central Government (Special Capital Region of Jakarta). This consideration would capture the differences in program implementation, capacity, and availability of resources among the PHC offices. It would also help to capture the diversity of the Indonesian people in responding to the spread of COVID-19 in Indonesia. Table 1 presents the selected PHC and their respective regions.

Table 1. Selected Primary Health Care (PHC) Centers.

No.	PHC Center Regency/Municipality	Title 3
1	Jakarta	DKI Jakarta
2	Depok	West Java
3	Banda Aceh	Sumatra
4	Nganjuk	East Java
5	Kediri	East Java
6	Mataram	Nusa Tenggara
7	Banjarmasin	Kalimantan
8	Wakatobi	Sulawesi

2.2. Data analyses

The collected data were transcribed verbatim and then analysed thematically by content analysis. According to Neuman, qualitative data are analysed by organizing data into categories based on themes, concepts, or similar features [9]. The similar topics were clustered together to form categories and sub-categories of description in participants' official PHC in the eight region. Data analysis was carried out concurrently with data collection. In addition, literature studies related to the preventive and promotive functions of PHC in healthy living behaviours and health systems were also carried out to support the analysis.

3. Results

In the early stages of the COVID-19 pandemic, PHC in Indonesia faced many challenges. These difficulties were associated with the rising number of COVID-19 patients and the existing PHC condition. As for the COVID-19 cases, the eight PHCs each had a different number of cases at the start of the pandemic. For example, a PHC center in Jakarta was overburdened with the increase of COVID-19 patients. Jakarta is the first city that covered the very first COVID-19 case in Indonesia. A similar situation was encountered by a PHC center in Depok, as residents of this community typically work in Jakarta. Another PHC center in Mataram is likewise dealing with multiple COVID-19 cases that have been imported from persons who attended a religious event in another city.

However, other PHC centers that are located in Nganjuk, Kediri, Banda Aceh, Wakatobi, and Banjarmasin did not have any COVID-19 cases, but for some reasons they were still susceptible to the spread of COVID-19 cases. The first reason is that some cities already had several COVID-19 cases, although not in the PHCs territory. For example, a PHC officer from Banda Aceh stated that the city had 17 COVID-19 cases at the moment,

but none of them was in the PHC working area. Another reason is that people in some cities had high mobility because they worked in another city; as stated by PHC officers from Kediri and Nganjuk, many people in the cities work in another city like Surabaya or Sidoarjo.

For the PHC condition, the availability of health workers and the PHC's facilities to combat the spread of COVID-19 will be used to analyze the condition of the eight PHC centers. Most of them argued that the number of health workers in the PHC centres were suitable for a usual condition but not in a pandemic situation. As they might lack officers who do surveillance, medical, or laboratory jobs, the PHC centers had to modify the health workers' job descriptions. PHC experienced a lack of health officers in the middle and east parts of Indonesian regions, Banjarmasin and Wakatobi, and PHC with abundant COVID-19 cases in the early pandemic, Jakarta and Depok.

The lack of laboratory and surveillance officers remained unsolved, while some PHC centers tried to tackle the obstacle in certain ways. A PHC officer from Banjarmasin, which faced difficulty because of the lack of surveillance officers, stated that the surveillance works, including tracing and tracking COVID-19 cases, was conducted by every health worker although they were not working as surveillance officers. A PHC officer from Depok, on the other hand, reported that they were struggling to provide medical treatment because of the lack of general practitioners. To solve this problem, they decided to provide an online service as most patients who wanted to meet the general practitioner (GP) in PHC were aiming to get referral letters to hospitals to get treatments. Every PHC center has their way to solve its problems based on the urgency and benefit of solving the problems related to the lack of health officers.

Moreover, some PHC centers also lacked specific tools, including rapid tests and hazmat suits that were rare at the beginning of the COVID-19 pandemic. A PHC in Kediri stated that they used raincoats as their hazmat suits because they were still uncommon, and there was no recommendation or provision of a standard hazmat suit. However, as for the COVID-19 testing kits, they had to wait for distribution, as experienced by PHC in the east region of Indonesia, Mataram and Wakatobi. A health officer from PHC in Wakatobi said that the isolated location of the PHC and the reduction of flight numbers during the pandemic caused the delay of rapid tests arrival in the region.

3.1. Preventive and promotive efforts

Efforts to prevent the spread of COVID-19 in PHC centers were conducted in various ways. Some PHC centers that had numerous COVID-19 cases started the efforts by the initiatives from the PHC centers. Other PHC centers started the efforts after getting instructions from a higher level, a health office or local government. Both started from the PHC initiatives or health office command, PHC efforts to prevent the spread of the COVID-19 pandemic were alike. The efforts were divided into import and local cases prevention.

Prevention of imported cases

Most PHCs in this study were aware that the source of COVID-19 transmission did not come from the region but another place. A health officer from PHC in Banda Aceh mentioned that instead of local transmission, import COVID-19 cases, which are from

outside the region, contributed more to the COVID-19 case spike. It made most PHC centers regularly collect people's mobility history, including the places and times, and made them a priority to be tested on COVID-19, as PHC health officers in Nganjuk and Mataram PHC centers said. Moreover, some PHC centers, including Wakatobi and Kediri, implemented strict procedures for people who want to travel to or come from another city. A health officer from PHC center in Wakatobi stated that they obligated every person who wanted to go to another city to deal with some administrative procedures to travel. The Kediri health officer, on the other hand, encouraged people who work in another city to decrease their frequency of travelling to Kediri to meet their families. Although it was pretty impolite to forbid people from meeting their spouses or children, the health officials tried to educate the people about the risk of COVID-19 transmission.

Prevention of local cases

Several efforts from PHC centers to prevent the local transmission were implementing health protocol in public facilities, tracing cases and testing the suspected COVID-19 cases, providing isolation facilities, and educating the public about COVID-19 prevention. Some health officers stated that many people in their region, particularly Muslim people, still prayed together in Masjid, although they have been encouraged to pray in their homes. The PHC health officers ended up providing hand wash facilitation, putting signs to keep the distance, and prohibiting people who did not wear face masks to come to the Masjid. Another effort to prevent the local transmission is tracing people contacted with COVID-19 cases and testing them with rapid test kits. PHC centers in this study were also providing isolation facilities for people who tested positive. Lastly, educating the community about COVID-19 prevention was conducted in several ways, including socialisation around the neighbourhood, inviting key persons in the community to participate in educational activities, and using video or leaflets to spread the information.

3.2. Community engagement

In conducting the efforts to prevent the transmission of COVID-19 and promote healthy behaviour, several PHC centers mentioned several community participation. Most PHCs in this study said that they formed a team to tackle the transmission of COVID-19 that consists of health officers, security officers, key persons in the community, and the community itself. At the beginning of the COVID-19 pandemic, the community had contributed to reporting COVID-19 cases through *WhatsApp* groups or to the health officers, tracing people who had contacted with the COVID-19 cases, and educating the neighbourhood about the prevention of COVID-19. Moreover, the Wakatobi health officer stated that the community was willing to give the village funding to provide specific facilitation, including face masks, hand wash, disinfectant, and help people in economic needs in the early stage COVID-19. The Depok health officer also mentioned that the community was eager to help their neighbour who tested positive by delivering foods and vitamins to their home.

3.3. Barriers

Although the community contributed significantly to preventing COVID-19 transmission, PHC health officers in this study mentioned that sometimes the community could become a barrier because of the stigma toward people with COVID-19. A health officer from PHC center in Jakarta said that sometimes the community wants even the COVID-19 cases without symptoms to be brought to the hospital, which will burden the hospital that already struggled with many patients at the beginning of the COVID-19 pandemic. Some health officers also reported that stigma toward COVID-19 cases made people hesitate to get COVID-19 tested when they felt the symptoms. Some people in the community, on the other hand, did not implement the health protocol to prevent COVID-19 transmission. They still gathered in a crowd and did not use face masks. Another barrier that some PHC centers acknowledged was the lack of leadership. Health officers from

Kediri, Nganjuk, and Wakatobi stated the significant role of leaders in producing consistent regulation and coordinating with other sectors at the beginning of the COVID-19 pandemic. The rapid changes of regulation and procedures confused many parties, including the PHC officers and the community, and hindered the effort to prevent the COVId-19 transmission.

4. Discussions

This study explores how PHC centers in some regions in Indonesia has faced the COVID-19 pandemic by preventing COVID-19 spread and promoting healthy behaviour in the community. Findings were analysed using WHO Health System Blocks which aims to strengthen the health system [7]. The study reveals that in the early phase of pandemic COVID-19, there were some crucial issues in tackling COVID-19 transmission. The stuttering of the government facing the pandemic COVID-19 showed that the National Health System had not been prepared. PHC, as a crucial front line among society, has a significant role in spreading credible health information concerning COVID-19 and preventing COVID-19 transmission. However, the reality is far from the ideal objectives, and the situation led to the massive negative impacts of pandemic COVID-19. In the beginning, there were no clear procedures or different protocols between one PHC and the others, so the information given was different and confused the health services. This situation is also evident in Brazil, where the PHCs were not perceived as a crucial component of the health system and potentially led to the rapid collapse of the health system [10].

According to the building blocks, in the aspect of health delivery service, particularly the comprehensiveness and the accessibility, those aspects need to be improved in combating the pandemic COVID-19. The early phase of the COVID-19 pandemic emerged in Indonesia due to the drawbacks in health service delivery. PHC centers was overburdened with the rise of COVID-19 patients, the limitation of basic personal protective equipment (PPE) and testing kits, and had limited capacity to support surveillance and contact tracing. This situation also happened in Cameroon, where it has struggled combating the pandemic without many preventive actions [11]. The limitation of crucial equipment, such as PPE and testing kits to combat the virus, was a significant problem since those are a basic need to prevent the health workers from exposure to the virus. If the government could not provide the basic initial prevention stuff for the health workers, it can be seen that the government has not been concerned yet with the safety of health workers.

Another crucial issue in combating the pandemic COVID-19 in the early pandemic was the barriers faced by society to access health care services. According to the WHO, at least four barriers for disabled people to access health care services [12]. Even though the context is in the disability topic, it is still related to the evidence in the early phase of the COVID-19 pandemic. One of the barriers that usually happens during a pandemic is attitudinal barrier, for example, stigmatisation toward the people who are positive COVID-19. This study asserts that the COVID-19 patient got stigmatisation from other people due to being exposed to the virus. The effect of the stigmatisation was that the patients who are tested positive for COVID-19 had difficulty reaching the health care

service to get the curative actions. Sometimes, they were rejected and excluded from society. The inappropriate information perceived by society harms the people who are COVID-19 positive and potentially leads to other harmful cases, such as increased mortality. A study by Islam and colleagues in India confirms this study. The stigmatization and misconception about COVID-19 potentially disadvantage some Indian groups [13].

Another barrier is related to the communication between society and the authorities. Several communities have participated in preventing the COVID-19 transmission and helping others who were economically impacted by the COVID-19 pandemic [14]. However, people are unique and different since some people also did not wear masks to prevent the virus from spreading and did not keep their distance in the public areas. There are some perspectives to view this situation. The people who did not wear masks have not ample information in preventing COVID-19, and this is because of limited information given by authorities. Another view is ignorance. They already know the importance of wearing masks but they do not want to wear them for unclear reasons. To respond to this situation needs collaboration from all the stakeholders since the health issue is the collective responsibility. The more people are aware, the faster the problems are solved. These issues underscore the importance of risk communication and community engagement (RCCE) in the early stages of pandemic as argued by Abdalla and colleagues [15].

5. Conclusion

Using qualitative approach this study explored the roles of PCH centres in various regions in responding to the early stage of COVID-19 transmission in Indonesia. This study reported various hindrances such as limited resources and the growing stigmatization of COVID-19 in the community. Despite these hindrances and the uncertanties and complexities of the situation, the PHC centres did their best possible. The results of this study can be used as an input for strengthening the basic public health response in dealing with future possible infectious disease outbreaks.

Author Contributions: All authors contributed equally in preparing this manuscript.

Funding: This research is part of a larger study titled "Rapid Assessment of the Social and Economic Impact of COVID-19 in Indonesia" that was funded by the Deputyship of Social Sciences and Humanities of the Indonesian Institute of Sciences in 2020, grant number "B-2942/IPSK/HK.01.03/III/2020".

Institutional Review Board Statement: Not applicable as the study was a rapid assessment.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Conflicts of Interest: The authors declare no conflict of interest. The views expressed in the paper are of the authors and do not necessarily expressed that of the institutions affiliated with them.

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