The Readiness of the Community Health Center in the Covid-19 Pandemic Control in Indonesia

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Abstract. Community health center (CHC) as a leading health service facility has an important role in handling public health problems, including the COVID-19 pandemic control. This study aimed to determine the readiness of CHC in the COVID-19 pandemic control. This cross-sectional study was conducted during the early period of the COVID-19 pandemic in Indonesia (March–June 2020). The study unit of analysis is the CHC at the sub-district level. Data collection was carried out by sending a questionnaire using google form via SMS gateway blast to 8,954 CHC managers. The samples were spread across 34 provinces and 550 regencies/cities. Determination of readiness elements and instruments refers to the Guidelines for Preparedness for the Novel Corona Virus (2019-nCoV) Infection, namely knowledge readiness, task force team, guidance, prevention facilities, service facilities, ambulance/transportation equipment, communication facilities, health promotion media, personal protective equipment, hand washing facilities, medicines, and guidelines and report forms. Each element is given a score 1–10, and data analysis is carried out using a *t-Test*. The result study shows that the readiness of CHC nationally in the COVID-19 pandemic control is at the 'high readiness' level with a value of 80.10 percent. There is a difference in the value of the readiness of the CHC in dealing with COVID-19 according to the zona of the COVID-19 cases, the accreditation status, and the remoteness of the region. Considering that the COVID-19 pandemic is still ongoing and there is a tendency to increase in cases, the government is optimizing facilities and health workers to face surge capacity, by establishing cooperation and utilizing social capital.

Keywords: COVID-19 · pandemic · readiness · community health center

1 Introduction

Cases of Coronavirus Disease 2019 (COVID-19) began to emerge at the end of 2019 in Wuhan City, Hubei Province, China. This case continued to grow until there were reports of deaths and imports outside China. On January 30, 2020, World Health Organization (WHO) declared COVID-19 a Public Health Emergency of International Concern (PHEIC). On February 12, 2020, WHO officially designated this novel coronavirus

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disease in humans as COVID-19. On March 11, 2020, WHO declared COVID-19 a pandemic. As of April 13, 2020 or 1 month after the discovery of the first COVID-19 case in Indonesia, there were 4,557 infected with COVID-19, 380 recovered and 399 people died [1].

Common signs and symptoms of COVID-19 infection include symptoms of acute respiratory distress such as fever, cough and shortness of breath. The average incubation period is 5–6 days with the longest incubation period being 14 days. In severe cases of COVID-19 it can cause pneumonia, acute respiratory syndrome, kidney failure, diarrhea and even death. The clinical signs and symptoms reported in the majority of cases were fever, with some cases having difficulty breathing, and X-rays showing extensive pneumonia infiltrates in the lungs.

Various efforts have been made to handle the COVID-19 outbreak, among others by urging the public to practice social distancing, physical distancing, washing hands with soap and practicing a clean and healthy lifestyle, sterilizing tools, goods and the environment with disinfectants, using masks, etc. In terms of strengthening health services, the government has increased the provision of medical equipment and personnel in hospitals, fulfilled personal protective equipment for health workers, conducted rapid diagnostic tests (RDT), appealed for self-isolation for people under monitoring. Self-isolation can be done at home for people under monitoring with mild symptoms [2]. In addition, the Health Service through the community health center (CHC) has carried out tracing of people who have been in contact with COVID-19 cases, increased the laboratory's ability to carry out Polymerase Chain Reaction (PCR) examinations, determined COVID-19 referral hospitals, built COVID-19 emergency hospitals, and others.

These various efforts were carried out in order to control the transmission of the COVID-19, with the main points being community empowerment, early detection of the disease, prevention efforts, and responding to outbreaks of COVID-19 cases. This effort is more emphasized on how the community implements a clean and healthy lifestyle and strengthens health services, especially hospitals. One of the important activities in early detection of cases is the need for Epidemiological Investigation efforts where the role of the CHC has not been optimal in handling COVID-19 outbreak.

The Community Health Center is a health service facility that organizes public health efforts and first-level individual health efforts, by prioritizing promotive and preventive efforts in their working areas. The purpose of implementing health development by CHC is to realize a healthy CHC working area, with people who: a) have healthy behavior which includes awareness, willingness, and ability to live a healthy life; b) able to reach quality Health Services; c) live in a healthy environment; and d) have optimal health degrees, both individuals, families, groups, and communities. The principles of implementing the CHC include a healthy paradigm, regional accountability, community independence, availability of access to health services, appropriate technology, and integration and sustainability [3].

The principle of a healthy paradigm means that CHC encourage all stakeholders to participate in efforts to prevent and reduce health risks faced by individuals, families, groups and communities, including outbreaks of diseases such as COVID-19. The principle of regional responsibility means that the CHC mobilizes and is responsible for health development in its working area. While the principle of availability of access to

health services means that the CHC provides health services in the form of outpatient health visits and sick visits, emergency services, normal delivery services, home care, and/or inpatient care based on considerations of health service needs [3].

As the front line of health services in the community, the CHC carries out health efforts with the largest portion of the Community Health Efforts. This study aimed to determine the readiness of CHC in dealing with the COVID-19 pandemic in the early days of the COVID-19 pandemic in Indonesia, namely the first 4 months since the discovery of COVID-19 cases in Indonesia.

2 Materials and Methods

This study is a quantitative study with a cross sectional study design. The study population is all CHCs in Indonesia. The sample are all CHCs which from the results of the Health Facility Research (Rifaskes) in 2018 have data on the mobile phone number of the CHC manager, which is 8,954 CHC [4]. Data collection was carried out through the distribution of a questionnaire in the form of a google form which was distributed via SMS Gateway blast with masking through the mobile phone numbers of the CHC managers. Data collection was carried out in May-June 2020, namely the third and fourth months of the COVID-19 pandemic in Indonesia [5].

The determination of the instrument and element of readiness assessment is based on the role of CHC in the COVID-19 control in accordance with the Guidelines for Preparedness for the Novel Corona Virus (2019-nCoV) Infection [6]. The task of CHC in conducting COVID-19 is to detect, prevent and respond. To carry out these tasks (to detect, prevent and respond), it takes readiness of knowledge, guidance and facilities aspects such as work teams/task forces, screening equipment, health service facilities, personal protective equipment, health promotion media, communication facilities, service flow instructions, hand washing facilities, medicines, ambulances, etc.

The data collected were the characteristics of the CHC, COVID-19 cases conditions in the CHC working area, and the elements of CHC readiness in dealing with the COVID-19 outbreak. Each element of readiness is scored, adopting the concept of Indonesian Public Health Development Index [7], each element is given a score of 1–10. Processing and analyzing data using SPSS for windows version 22 with univariate and bivariate analysis using the t-Test. The 12 elements of CHC readiness were grouped into 4 categories, namely low readiness (0–2.9), less readiness (3–5.9), sufficient readiness (6–7.9) and high readiness [8–10].

This research has received an ethical exemption from the Health Research Ethics Committee, National Institute for Health Research and Development No. LB.02.01/2/KE.316/2020.

3 Results

3.1 Response Rate

The number of CHC from the Health Facility Research 2018 results that have information on the mobile number of the head of the CHC is 8,954. Of these, 8,500 were delivered.

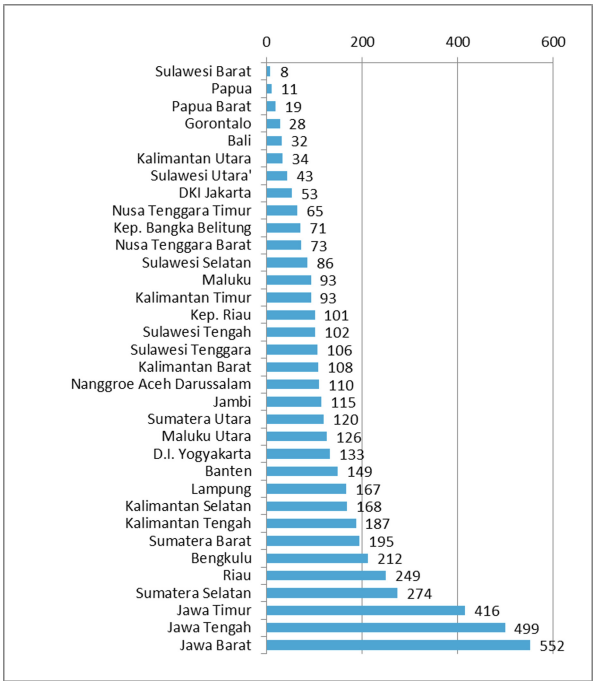

Fig. 1. Distribution of Community Health Center Samples by Province

While those who returned the questionnaire were around 4,798 CHC or around 56.4% of the target.

However, in terms of regional distribution, the sample of 4,798 CHC spread across 34 provinces so that the results of this study can represent the national picture (Fig. 1). From Fig. 1, it can be seen that the 10 provinces with the highest number of samples of CHC are West Java, Central Java, East Java, South Sumatra, Riau, Bengkulu, West Sumatra, Central Kalimantan, South Kalimantan, and Lampung. Meanwhile, the provinces with the smallest number of CHC samples were West Sulawesi, Papua, West Papua, Gorontalo, Bali, North Kalimantan, North Sulawesi, DKI Jakarta, East Nusa Tenggara and the Bangka Belitung Islands.

3.2 Characteristics of Participating CHCs

The characteristics of the CHC sample include the location of the CHC, accreditation status, and zone of COVID-19 cases in the CHC working area. The location of the CHCs refers to Minister of Health Regulation No. 43/2019, but the urban and rural criteria are combined into a non-remote category [3]. The accreditation status of the CHCs refers to the Minister of Health Regulation No. 13/2022 [8], while the zone of the Covid-19 refers to the Technical Guidelines for CHC Services During the COVID-19 Pandemic (2020) [9]. Green zone if there are no cases in the area, yellow zone (1–3 cases), orange zone (4–10 cases), and red zone (>10 cases).

Table 1. Caracteristics of Participating Community Health Center (Location, Accreditation Status, and Zone of COVID-19 Cases)

Characteristics	Amount	
	N = 4798	Percent (%)
Location		
Extremely remote	286	5.96
Remote	932	19.42
Not remote	3,580	74.62
Acreditation Status		
Excellent	138	2.87
Major	848	17.67
Intermediate	2,590	53.98
Basic	990	20.63
No accredited	232	4.84
Zone of COVID-19 cases		
Green	2,972	61.94
Yellow	896	18.67
Orange	448	9.34
Red	482	10.05

Most of the sample CHC (74.6 percent) are in general condition (not remote), only 6.0 percent are extremely remote and 19.4 percent in remote areas. Most of the CHC have been accredited intermediate (54.0 percent), only 4.8 percent are not yet accredited. Most of the CHC are in the green zone (61.9 percent) (Table 1).

3.3 The Readiness of Community Health Center in COVID-19 Pandemic Control

3.3.1 The Readiness of Knowledge

The readiness CHC in the COVID-19 pandemic control in terms of knowledge seen from experience in receiving information about case detection, prevention, mode of transmission, treatment and risk communication about COVID-19 is presented in Table 2. It appears that most of the heads of CHC received clear information about COVID-19 (above 80 percent), except for treatment which is only 67.4 percent and risk communication is 78.7 percent. Very few CHC heads have never received information about COVID-19 (below 2 percent).

3.3.2 The Readiness of Guidance

The readiness in the COVID-19 pandemic control in terms of coordination and guidance of CHC by the district/city level as part of equalizing perceptions and instructions for

Table 2. The Readiness of Community Health Center of Knowledges

No	Information	Community Health Center (4798)		
		Clear	Unclear	Never
1.	COVID-19	4,156 (86.6)	566 (11.8)	75 (1.6)
2.	Case detection	4,109 (85.6)	618 (12.9)	70 (1.5)
3.	Prevention	4,328 (90.2)	402 (8.4)	67 (1.4)
4.	Mode of transmission	4,383 (91.4)	350 (7.3)	64 (1.3)
5.	Treatment	3,234 (67.4)	1,038 (21.6)	525 (10.9)
6.	Risk communication	3,775 (78.7)	795 (16.6)	227 (4.7)

Notes: Clear = have knowledge/training and was clear; Unclear = have received knowledge/training but it is not clear; and Never = never get knowledge about it

Table 3. The Readiness of Community Health Center related to Guidance from Health District

No	Guidance and Coordination	Community Health Center (4798)		
		Often	Ever	Never
1.	Participation in coord. meetings		4,701 (98.0)	96 (2.0)
2.	Guidance from health district	692 (14.4)	3,942 (82.2)	163 (3.4)
3.	Guidance from disaster agency	2,070 (43.1)	1,307 (27.2)	1,420 (29.6)
4.	Routine programm guidance	2,027 (42.3)	1,358 (28.3)	1,412 (29.4)

handling COVID-19 is relatively good, except for coaching outside of COVID-19 (Table 3).

Most of the CHC had received guidance and coordination from the District Health Office regarding the handling of COVID-19 (above 95 percent), while the percentage of guidance on COVID-19 control from the Regional Disaster Management Agency (BPBD) was lower (70.3 percent). Likewise, the percentage of CHC guidance on routine programs outside of COVID-19 is still quite good, at 70.6 percent.

3.3.3 The Readiness of Facility

The readiness to COVID-19 control in terms of CHC infrastructure includes the presence of COVID-19. Most of the CHC have a task force team and an IPC team, have provided triage and isolation rooms, have ambulances/transportation facilities, PPE, health promotion media, thermal guns, communication tools, guidelines/SOPs, health service flow instruction, and reporting recording forms (above 80 percent). Meanwhile, low readiness includes the availability of medicines and rapid test kits (below 30 percent) (Table 4).

The various elements of readiness are then grouped into 12 elements of readiness, namely readiness of knowledge (Knowledge), readiness for coaching and coordination (Guidance), the presence of a COVID-19 handling team (Task Force), readiness for

Table 4. Availability of Community Health Center Facilities

Facilities	Community Health Center (percent)			
	Yes	%	No	%
Task force team	4,737	98.7	60	1.3
Infection Prevention and Control team	4,280	89.2	517	10.8
Triage room	3,980	82.9	817	17.0
Isolation room	1,154	24.1	3,643	75.9
Ambulance	4,521	94.2	276	5.8
Personal protective equipment	4,785	99.7	12	0.3
Health promotion media	4,521	94.2	276	5.8
Rapid test tools	2,966	61.8	1,831	38.2
Thermal gun	4,701	98.0	96	2.0
Communication facilities	4,389	91.5	408	8.5
Hand Washing Facilities for patient	4,734	98.7	63	1.3
Hand Washing Facilities for staff	4,690	97.8	107	2.2
Medicines				
a. Cloroquin	911	19.0	3,885	81.0
b. Azithromycin	989	20.6	3,807	79.4
c. Oseltamivir	676	14.1	4,120	85.9
d. Vitamin C (high dosage)	2,095	43.7	2,701	56.3
Standard Operating Procedure	4,292	89.5	505	10.5
Patient flow	3,881	80.9	916	19.1
Reporting and recording forms	4,716	100.0	0	0.0

service facilities (Facility), readiness for guidelines/SOPs (Guideline), preparation of medicines (Medicines), readiness of hand washing facilities (Handwash), readiness of prevention/screening equipment (Screening), readiness of communication equipment (Comm), availability of ambulance/transportation (Ambulance), readiness of personal protective equipment (PPE) and readiness of health promotion media (Prommed). The twelve elements are scored from 1–10 and the results are presented in Fig. 2.

Furthermore, the 12 elements of CHC readiness were composited and grouped into 4 categories, namely low readiness (0–2.9), less readiness (3–5.9), sufficient readiness (6–7.9) and high readiness (8–10). Figure 1 shows that of the 12 readiness elements that have high readiness are the availability of guidelines, the availability of hand washing equipment, the presence of a team/task force, the availability of information, the presence of an ambulance/transportation, health promotion media, communication tools, and the availability of screening tools. Elements of moderate readiness are the availability of personal protective equipment, guidance and coordination, and means of prevention. The element of low readiness is the availability of medicines, because most of their

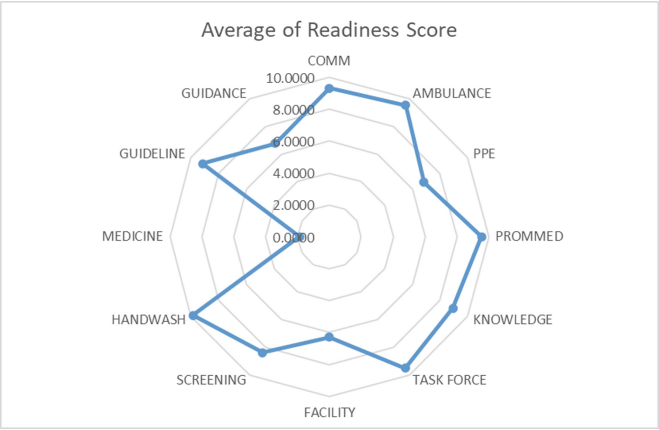

Fig. 2. Average Readiness Score of CHC in COVID-19 Pandemic Control

supplies are at the district/city level. Overall, the readiness of the CHC in the COVID-19 outbreak control has a value of 80.1 percent or "high readiness".

3.3.4 The Readiness for the COVID-19 Pandemic Control by Accreditation Status, Zone of COVID-19 Cases and Remoteness

The readiness of CHC in the COVID-19 pandemic control varies according to the COVOD-19 case zone, accreditation status and the remoteness of the CHC location. Figure 3 it appears that there are differences in the readiness of the CHC in handling the COVID-19 pandemic according to the accreditation status of the CHC. Health centers that are accredited (basic, intermediate, major and excellent) are better prepared to handle the COVID-19 pandemic than those that are not accredited.

Figure 4 shows the opposite, where health centers whose work areas have a high number of COVID-19 cases (red, orange and yellow) are better prepared than health centers whose work areas are green zones. The average value of the readiness of the CHC in the yellow zone is almost the same as the CHC in the orange zone.

Figure 5 shows that there are differences in the readiness of CHC in the COVID-19 pandemic control between CHC located in non-remote, remote and very remote locations. In general, CHC located in non-remote and remote areas had a higher readiness score than CHC in very remote areas.

The statistical test results show that the variation in the readiness of the CHC in the COVID-19 control is determined by the presence of a task force team, the availability of health promotion media, the completeness of service facilities, the availability of guidelines, communication equipment and ambulances, and personal protective equipment (Table 5).

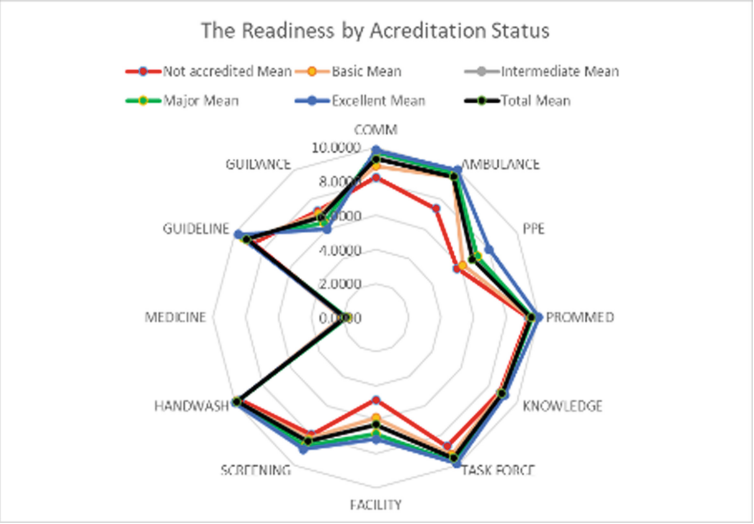

Fig. 3. Average Readiness Score by Accreditation Status

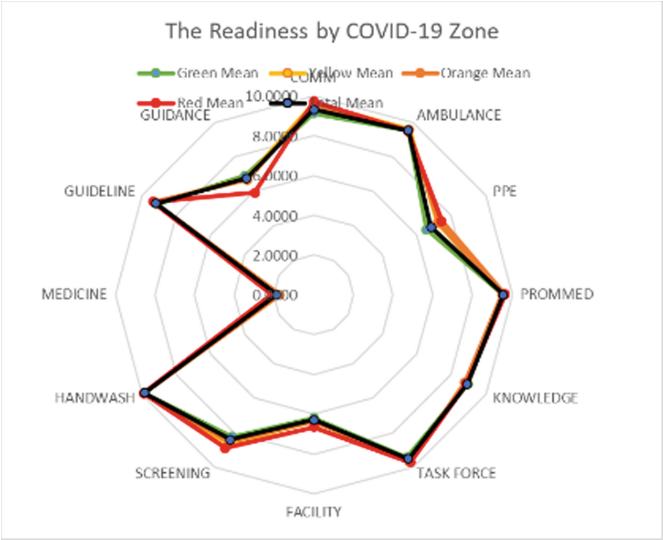

Fig. 4. Average Readiness Score by COVID-19 Zone

Table 5. P Value of t-Test Results on Average Readiness by Accreditation Status, Remoteness and Zone of COVID-19 Cases

	KNOW LEDGE	GUI DANCE	TASK FORCE	SCREENING	PROM MED	FACILITY	HAND WASH	MEDI-CINES	GUIDE-LINES	COMM	AMBUL-LANCE	PPE
ACCRED.												
basic vs NA	>0.05	>0.05	**<0,05**	>0.05	**<0.05**	>0.05	**<0.05**	>0.05	**<0.05**	**<0.05**	**<0.05**	>0.05
inter vs NA	**<0.05**	>0.05	**<0,05**	>0.05	**<0.05**	**<0.05**	**<0.05**	>0.05	**<0.05**	**<0.05**	**<0.05**	**<0.05**
major vs NA	**<0.05**	>0.05	**<0.05**	>0.05	**<0.05**	**<0.05**	**<0.05**	>0.05	**<0.05**	**<0.05**	**<0.05**	**<0.05**
excel vs NA	>0.05	**<0.05**	**<0.05**	**<0.05**	**<0.05**	**<0.05**	**<0.05**	>0.05	**<0.05**	**<0.05**	**<0.05**	**<0.05**
ZONE												
yell vs green	**<0.05**	>0.05	**<0.05**	>0.05	**<0.05**	**<0.05**	>0.05	>0.05	**<0.05**	**<0.05**	**<0.05**	**<0.05**
org vs green	**<0.05**	>0.05	**<0.05**	>0.05	**<0.05**	**<0.05**	>0.05	>0.05	**<0.05**	**<0.05**	>0.05	**<0.05**
red vs green	>0.05	>0.05	**<0.05**	>0.05	**<0.05**	**<0.05**	**<0.05**	>0.05	**<0.05**	**<0.05**	>0.05	**<0.05**
REMOTE												
NR vs VR	>0.05	>0.05	**<0.05**	**<0.05**	**<0.05**	**<0.05**	**<0.05**	**<0.05**	**<0.05**	**<0.05**	**<0.05**	**<0.05**
R vs VR	>0.05	>0.05	**<0.05**	**<0.05**	>0.05	**<0.05**	>0.05	>0.05	>0.05	**<0.05**	**<0.05**	>0.05

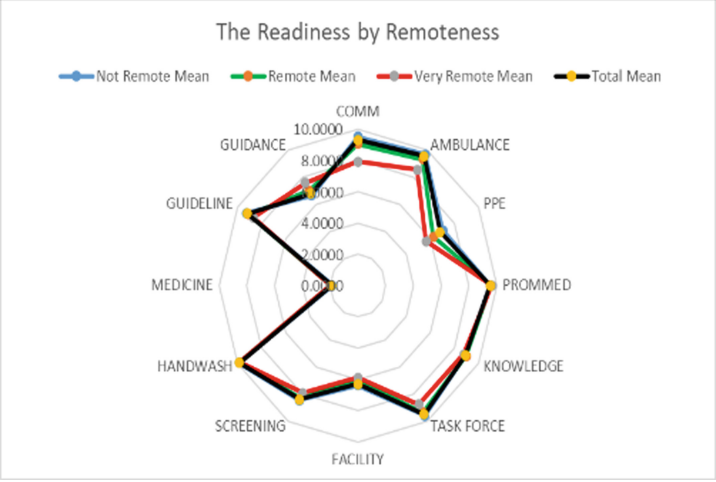

Fig. 5. Average Readiness Score by Remoteness

4 Discussion

The Indonesian government's policy regarding the role of CHC in handling the COVID-19 outbreak is contained in the "Guidelines for Preparedness to Face Novel Corona Virus Infections (2019-nCoV)" [6]. The role in responding to the COVID-19 outbreak, the CHC carries out treatment according to the patient's condition and refers to the hospital according to the SOP and pays attention to the IPC principles, carries out strict surveillance of probable and confirmed cases, reports cases within 1 × 24 hours to the District Health Office. Cities, conduct epidemiological investigations, communicate risks to the community, increase networking with authorities, cross-sectoral and local community leaders [6]. Primary service in CHC is an important foundation for a global response to COVID-19. CHC plays an important role in screening cases, distinguishing patients with symptoms of spouting from those suffering from COVID-19, making early diagnoses, helping vulnerable groups overcome anxiety, and reduce hospital service requests [6].

Based on this role, CHC should have high readiness, not only related to handling the COVID-19 outbreak, but also providing basic health services to the community, which is the main task of CHC as the person in charge of the health sector [3]. To carry out all this, knowledge readiness, management readiness and infrastructure readiness are required. The Astana Declaration in 2018 states that the function of the CHC is to carry out basic health services (essential health care) that are comprehensive (promotive, preventive, curative, and rehabilitative), community empowerment in the health sector (community involvement and empowerment), and multi-stakeholder involvement in the framework of joint action [10, 11].

Health centers bear a heavy burden to control COVID-19 and other urgent public health problems in their working areas, while minimizing risks to health workers and the community [2, 10]. This study shows that CHC in Indonesia have high readiness in handling the COVID-19 outbreak with a score of 80.10 percent. Judging from

the 12 elements of CHC readiness, the highest elements of readiness include elements of guidelines, availability of hand washing facilities, presence of a team/task force, ambulance/transportation equipment, health promotion media, communication tools, knowledge/information on COVID-19, and availability of screening tools. Elements of sufficient readiness are the availability of personal protective equipment, guidance and coordination, and prevention facilities, while those with low readiness are the availability of medicines. The readiness of medicines element is low because at the beginning of the pandemic the CHC did not serve COVID-19 treatment and the stock of COVID-19 medicines was at the district level.

High readiness in terms of knowledge related to handling the COVID-19 pandemic, the existence of a COVID-19 Team or task force, health promotion media, communication tools, ambulances, prevention facilities such as screening tools, hand washing facilities and thermal guns at the beginning of the pandemic shows the government's commitment and seriousness regions in dealing with the COVID-19 pandemic. Community health center as the front line of health services, have been involved and given a role since the beginning of the pandemic in handling the COVID-19 pandemic. From this description, the heads of the CHC already have sufficient information and knowledge to deal with COVID-19 besides they have received guidelines on handling COVID-19, either in hardware or software.

The development of communication media, especially through social media, has helped CHC officers to fulfill their information needs, although in its development there is also a lot of hoax information circulating, so that health workers need to be equipped with risk communication skills. From the results of this study, quite a number of CHC officers had received information about risk communication (78.7 percent).

This is in accordance with the results of Hendarwan's study that conducted at 682 CHC spread over 9 provinces, where the CHC that already have protocols and guidelines for handling COVID-19 reached 98.4 percent, although most CHC have never received COVID-19 training, the low availability and adequacy of manpower, as well as the lack of personal protective equipment [12]. At the beginning of the pandemic, not much training was carried out, especially face-to-face and the availability and distribution of personal protective equipment was still problematic. Damian et al. (2020), highlighted five key themes relevant to foundational aspects of readiness in CHC: leadership, communication, formal policies and procedures, resources, and workforce capacity [13].

The high level of readiness of CHC in the COVID-19 pandemic control shows the high commitment of the government from the central to the regional levels. The CHC as the front line in health services has had a fairly high readiness, even at the beginning of the pandemic. This readiness is especially in the health centers that have been accredited. The higher the accreditation status, the higher the readiness of the CHC in the COVID-19 pandemic control. Community health center accreditation is not just a label for fulfilling service requirements in collaboration with health insurance, but has increased the readiness of CHC to handle public health emergencies, including the COVID-19 pandemic. Accreditation status is important and is the key to the health center's readiness in the COVID-19 pandemic control.

The variation in the readiness of the CHC in the COVID-19 pandemic control according to the COVID-19 case zone and the location of the CHC provides interesting information. The high number of COVID-19 cases in an area actually increases the preparedness of the CHC to handle it, as a form of quick response to the threat of danger. Health centers have a role to detect, prevent and respond to pandemic risks. That is why health centers in their working areas have a high level of readiness for COVID-19 cases compared to areas with low (yellow) or no cases (green). Likewise, the remoteness of the location of the CHC, in this study showed that the more remote the location of the CHC, the lower the readiness score. This could be related to the presence of COVID-19 cases where in remote or very remote areas the cases are low. It can also be in remote and very remote areas, the availability of personnel, infrastructure and equipment is limited. This condition causes the readiness of CHC in handling the COVID-19 pandemic to be low. Aspects of readiness that play a significant role in the COVID-19 pandemic control include the presence of a task force team, availability of health promotion media, completeness of service facilities, availability of guidelines, communication, ambulances, and personal protective equipment.

The readiness of the CHC in COVID-19 control at the beginning of this pandemic became a strong provision in handling further COVID-19 cases, even in the future if there was a spike in cases. The COVID-19 pandemic has further exposed the weaknesses of the patient referral system and the limited capacity of the healthcare system to provide essential health services in protracted emergencies [14]. However, considering that the COVID-19 pandemic has not ended and there is a tendency for COVID-19 cases to continue to increase, the Government still needs to optimize the readiness of CHC in the COVID-19 pandemic control. Healthcare systems need to pay attention to their internal capacities, managerial interventions, and health centers to overcome the current pandemic [15].

5 Conclusion

The role of CHC in Indonesia in handling COVID-19 at the beginning of the pandemic period had high readiness with a readiness value of 80.10 percent. Judging from the 12 elements of CHC readiness, the highest readiness elements include the availability of guidelines, the availability of hand washing facilities, the presence of the COVID-19 team/task force, the presence of an ambulance/transportation, health promotion media, communication tools, knowledge of COVID-19, and the availability of screening tools. Elements of moderate readiness are the availability of personal protective equipment, guidance and coordination, and prevention facilities, while those with low readiness are the availability of medicines. The readiness of the CHC is the foundation and the frontline in handling the COVID-19 pandemic. The influence of CHC accreditation on readiness to handle the COVID-19 pandemic is important to continue to be encouraged. From the results of the study on the readiness of the CHC in the COVID-19 pandemic control, the following are suggested: 1) The Ministry of Health and Regional Governments continue to improve their readiness to immediately issue technical guidelines for the readiness of CHC in handling public health emergencies including COVID-19, and facilitate the availability of personal protective equipment and COVID-19 prevention facilities at

CHC; 2) The Ministry of Health increases the coverage of accredited or CHC standard; 3) CHC are given a clear role in the provision and use of medicines and vitamins related to COVID-19, especially to serve cases that are self-isolating; 4) District Health Offices intensify coaching and supervision to CHC, and establish good communication and cooperation with various stakeholders and utilize existing social capital in increasing the readiness of health facilities to face the pandemic.

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