

READINESS OF SUB-DISTRICTS IN PALU CITY, CENTRAL SULAWESI PROVINCE, INDONESIA, TO FACE THE COVID-19 PANDEMIC

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Abstract. Indonesia confirmed its first case of COVID-19 on 2 March 2020. Several provinces in Indonesia, including Central Sulawesi, experienced local transmission of the virus. This study aimed to explore the readiness and understanding of the sub-district government in handling COVID-19. This study was conducted from April to June 2020 using a cross-sectional design. Interviews were performed by distributing a closed questionnaire to the heads or secretaries of sub-districts in Palu City. The parameters of this study were the COVID-19 alert village indicators issued by the Ministry of Home Affairs. The results show that all sub-districts in Palu City have formed the COVID-19 Alert Task Force, which socialized clean and healthy living as well as sterilized public and social facilities. Forty-five (97.82%) sub-districts had provided information about the nearest public health centers (Puskesmas) or clinics where residents receive medical treatment when getting sick. Meanwhile, 39 (84.8%) sub-districts had created and activated WhatsApp groups to handle COVID-19. In general, sub-districts in Palu City have been ready to face the COVID-19 pandemic, as they have carried out COVID-19 prevention and handling activities following the guidelines.

Keywords: readiness, sub-districts, pandemic, COVID-19, COVID-19 alert villages

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INTRODUCTION

The World Health Organization announced the corona virus disease (COVID-19) pandemic, which has spread widely to over 200 countries, such as China, Japan, Thailand, South Korea, North Korea, Singapore, the United States, Cambodia, France, Australia, Malaysia, Philippines, Sri Lanka, Canada, Germany, Italy, Russia, and Indonesia (WHO, 2020). Indonesia is one of the countries that confirmed the presence of COVID-19 sufferers on 2 March 2020. Indonesia confirmed its first COVID-19 case on 2 March 2020. As of 29 April 2020, there were 9,771 positive confirmed cases of COVID-19 in 34 provinces (1,398 recovered and 784 died) (Ministry of Health, 2020a). The case of COVID-19 in Central Sulawesi Province was found to be increasing. The Ministry of Health even declared the occurrence of local transmission of COVID-19 in Palu City (Ministry of Health, 2020a). Palu City consists of eight sub-districts, 46 urban villages, and 14 health centers (Palu City Health Office, 2020). According to data from Ministry of Health, on 30 April 2020, 47 confirmed cases of COVID-19 with 8 recovered and 3 dying (Ministry of Health, 2020c).

To accelerate the handling of COVID-19 in the regions, the Ministry of Home Affairs issued circular letter No. 440/2622/Sj regarding the formation of Regional Task Forces for the Acceleration of Handling COVID-19 (Ministry of Home Affairs, 2020). The task forces should be led by regional leaders, governors, regents, and mayors. Then, the Ministry of Villages, Development of Disadvantaged Regions, and Transmigration of the Republic of Indonesia issued its circular letter No. 8 of 2020 concerning Villages' Responses to COVID-19 and Affirmation of Village Cash Intensive Work (PKTD Affirmation) (Ministry of Home Affairs, 2020).

The handling of COVID-19 in Central Sulawesi Province is stated in the circular letter of the Governor of Central Sulawesi Number: 443/141/DISKES/2020 on 16 March 2020, concerning the prevention and anticipation of the spread of COVID-19 in Central Sulawesi (Governor of Central Sulawesi, 2020). The high number of COVID-19 cases in Palu City shows that efforts to prevent the spread of the disease are still needed. The Mayor of Palu City

also issued a regulation on Implementation of Discipline and Law Enforcement Health Protocols as Prevention and Efforts Control of Corona Virus Disease 2019 (Mayor of Palu City, 2021). For this reason, it is necessary to identify the readiness of sub-districts in Palu City for facing the COVID-19 pandemic. The research parameters of readiness were mentioned in the guidelines of the Ministry of Home Affairs, as follows: Formation of a COVID-19 Alert Task Force at the neighborhood level, Socialization of clean and healthy living, Sterilization of public and social facilities, Activation of security systems, Creation of health information systems, Activation of residents' food barns, and Activation of COVID-19-related WhatsApp groups (Ministry of Home Affairs, 2020).

MATERIALS AND METHODS

Study design

This study employed a cross-sectional design.

Study location

This study was conducted in Palu City, Central Sulawesi Province, Indonesia from April to June 2020.

Study population

The population was all village heads or village secretaries in Palu City.

Sample

The sampling method was the census method, the whole population became samples. The samples were 46 people, consisting of 43 village heads and 3 village secretaries in Palu City.

Inclusion criteria:

1. A village head, lurah secretary at the research site;
2. Willingly interviewed with a structured questionnaire

Exclusion criteria:

There were no exclusion criteria in collecting data by interviewing village officials.

Data collection tool and analysis

Information about the readiness of sub-districts in Palu City for dealing with COVID-19 was obtained from the interviews using a questionnaire. This questionnaire was prepared based on a manual issued by the Ministry of Home Affairs (Ministry of Home Affairs, 2020). Seven of the nine components were researched and translated into a research questionnaire.

1. Formation of a COVID-19 Alert Task Force at the neighborhood level
2. Socialization about clean and healthy living
3. Sterilization of public and social facilities
4. Activation of security systems
5. Creation of health information systems
6. Activation of residents' food barns
7. Activation of COVID-19-related WhatsApp groups

The collected data were then analyzed descriptively.

Ethical consideration

This research was approved by the Health Research Ethics Commission of the Health Research and Development Agency No. LB.02.01/2/KE.362/2020.

RESULTS

This research was conducted in Palu City. Palu Municipality is located in the valley plain of Palu and the Palu Gulf with an altitude of 0-700 meters above sea level. Moreover, Palu City astronomically lies between 0°.36"-0°.56" south latitude and 119°.45"-121°.1" eastern longitude. Sulawesi Tengah Province area is shaped in land by 61,841.29 km². In 2020, Palu is divided into eight subdistricts and 46 villages. These subdistricts are West Palu (8.28 km²), Tatanga (14.95 km²), Ulujadi (40.25 km²), South Palu (27.38 km²), East Palu (7.71 km²), Mantikulore (206.80 km²), North Palu (29.94 km²), and Tawaeli (59.75 km²). Study location is shown in Fig 1.

The respondents in this study were all village heads or village head secretaries throughout Palu City. The characteristics of respondents include position and gender. The characteristic of respondents was shown in Table 1.

1. Parameter formation of a COVID-19 Alert Task Force at the neighborhood level

The research on the parameter of the formation of the COVID-19 Alert Task Forces at the neighborhood level has found that all sub-districts

Table 1

The characteristic of respondents in Palu city, Central Sulawesi Province (N = 46)

Variable	Frequency, <i>n</i> (%)
Position	
Head Village	43 (93.48)
Secretary of Head Village	3 (6.52)
Sex	
Male	44 (95.65)
Female	2 (4.35)



Fig 1 - Study location in Palu City

(Source: <https://www.arcgis.com/apps/mapviewer/index.html?webmap=c6ebf230a35a4f63a6437cfd7361b8ef>)

have formed the COVID-19 Alert Task Forces, but only 63% of them have implemented these forces at the neighborhood level (Fig 2).

2. Parameter socialization about clean and healthy living

Regarding the Kelurahan component of socializing clean and healthy living, the results of the study showed that all urban villages have carried out socialization of clean and healthy living with the contents of socialization including not leaving the house unless it is urgent, diligently washing hands with soap and hand sanitizer (Fig 3).

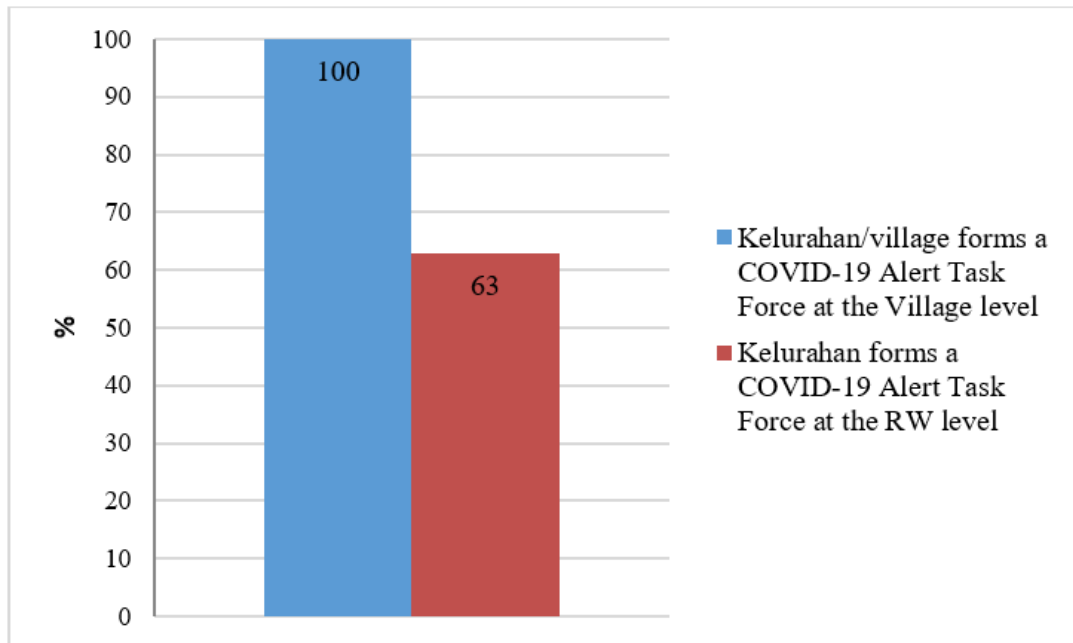


Fig 2 - Percentage of the formation of COVID-19 Alert Task Forces at the neighborhood level in Palu City, 2020

COVID-19: corona virus disease 2019

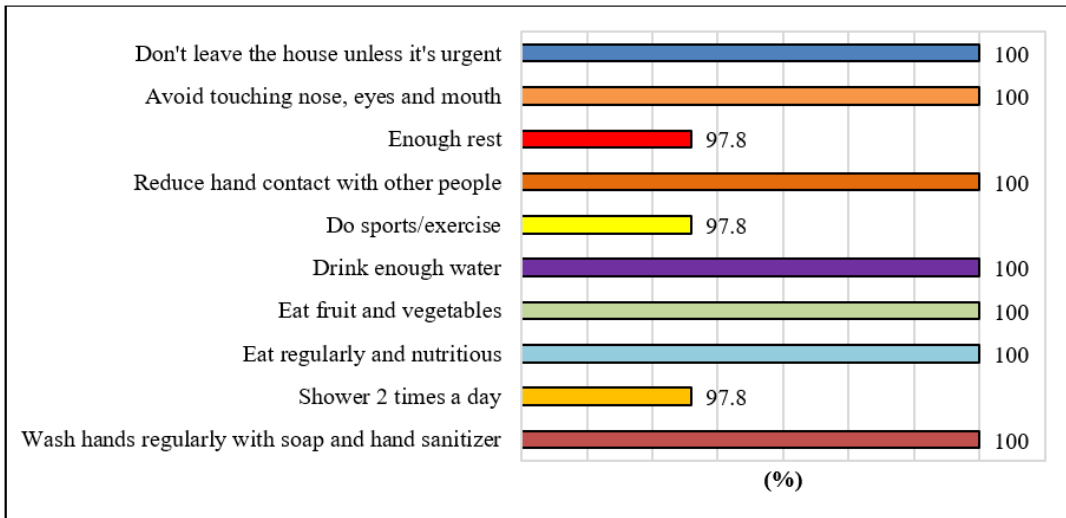


Fig 3 - Percentage of socialization about clean and healthy living in Palu City, 2020

3. Parameter sterilization of public facilities and social facilities

Sub-districts in Palu City sterilized public and social facilities and sprayed disinfectants at worship places, sub-district offices, and schools (Fig 4). Public facilities were cleaned using a labor-intensive method a program of the Palu City Government that empowers the community's environmental cleaning activities. However, not all sub-districts in Palu City provided hand sanitizers in public places; only 56.5% did.

Spraying disinfectants was carried out by 45 sub-districts in Palu City once to six times a week. However, most of them did it once a week (Fig 5). Besides, 35 of 46 sub-districts closed public areas, such as worship places (mosques, prayer rooms, and churches), schools, restaurants, cafes, hotels, entertainment venues (beaches and karaoke venues), and sports venues during the pandemic (Fig 6).

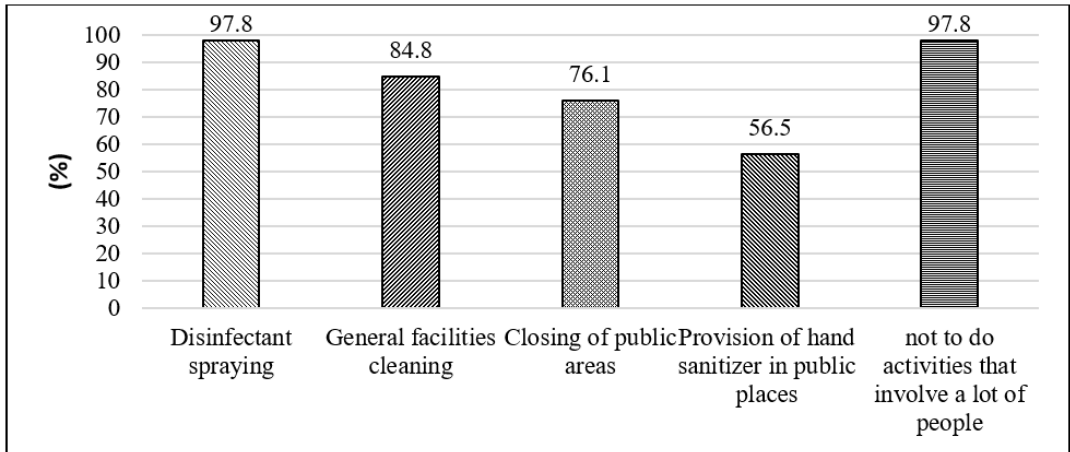


Fig 4 - Percentage of Sterilization in public and social facilities in Palu City in 2020

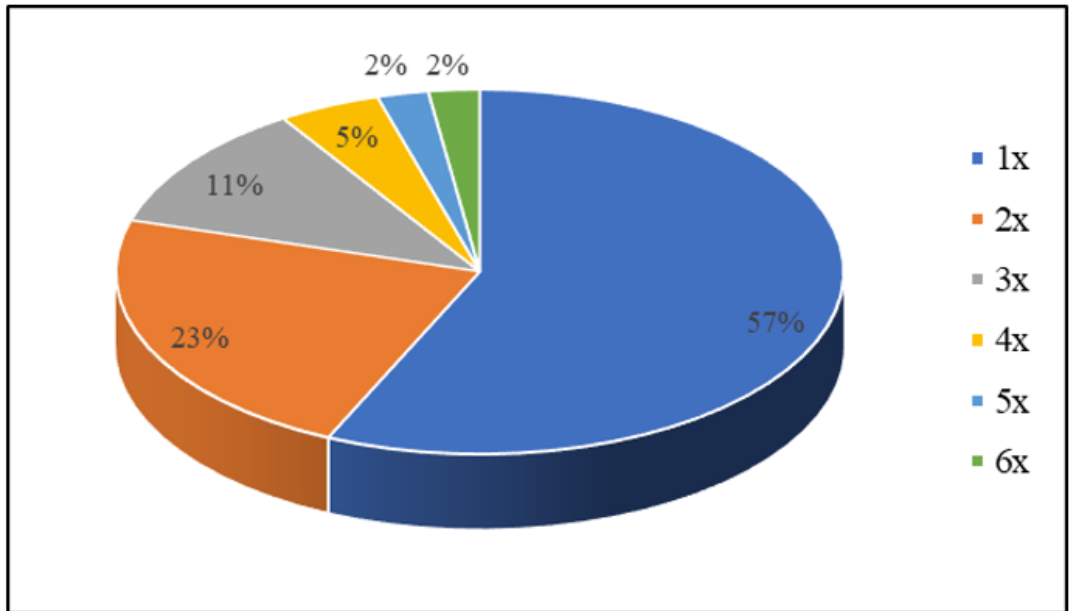


Fig 5 - Frequency of disinfectant spraying in a week in Palu City in 2020

1x: once a week; 2x: twice a week; 3x: three times a week; 4x: four times a week; 5x: five times a week; 6x: six times a week

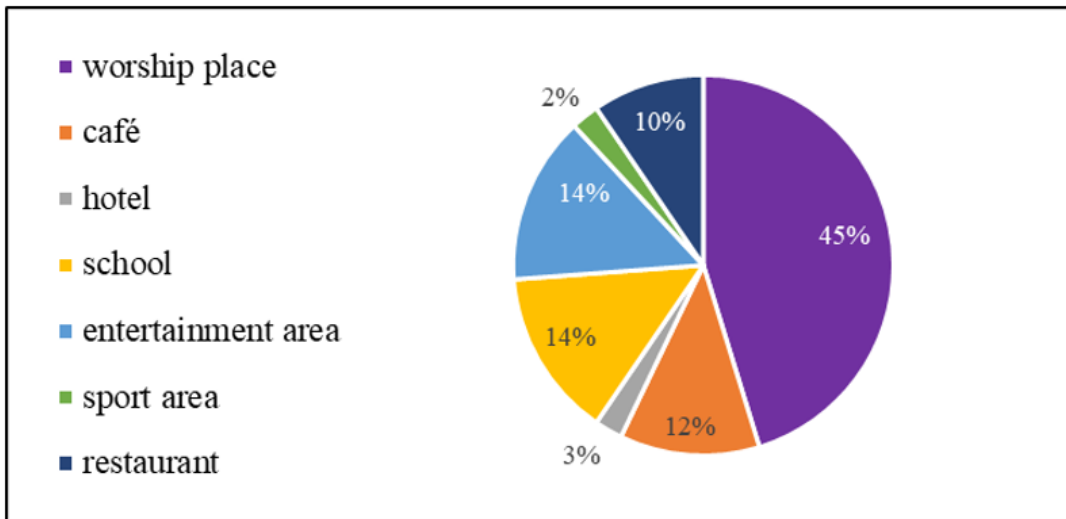


Fig 6 - Public areas closed in Palu City during the COVID-19 pandemic

4. Parameter activate the citizen security system

Regarding the citizen security system, all sub-districts in Palu City had formed a security unit and coordinated with the local security forces to deal with the COVID-19 pandemic. They also implemented several precautionary measures for residents, guests, and food vendors to handle the COVID-19 pandemic (Fig 7).

Regarding guests entering and leaving the sub-district areas, almost all sub-districts (45 of 46) required their guests to report within 24 hours. Moreover, 40 sub-districts collected data on residents who enter and leave their territory. However, only 28 sub-districts checked the health of the guests entering their areas. All sub-districts appealed to their residents to temporarily not let guests come in. Regarding the residents' eating behavior, 26 sub-districts urged their residents to use eating utensils from home if they had to do outside activities. In addition, 40 sub-districts also appealed to mobile food vendors regarding COVID-19 prevention.

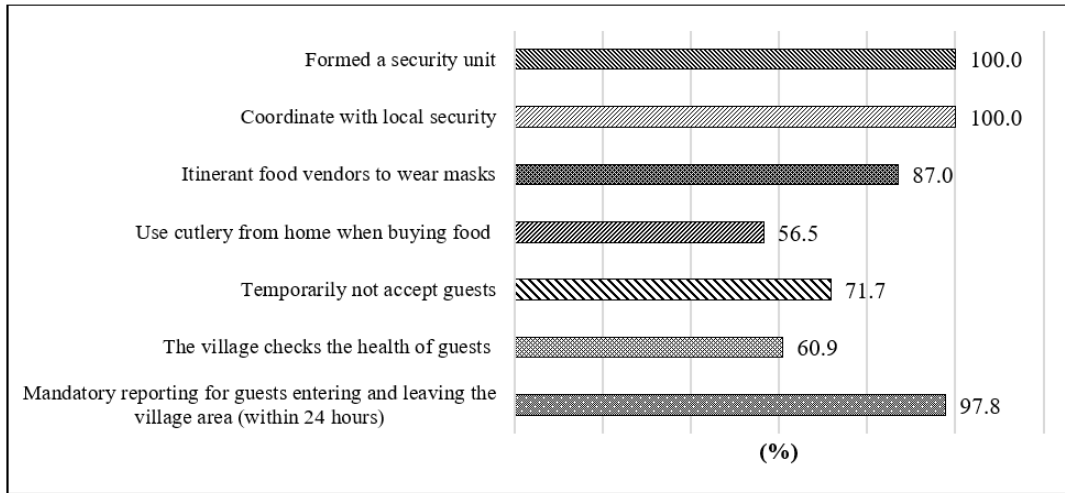


Fig 7 - Percentage of citizen security systems activated in Palu City

5. Parameter creating a citizen health information system

This study has revealed that all sub-districts implemented the citizen health information system (Fig 8), and 67.4% of sub-districts already had unique phone numbers to report sick people.

Almost all sub-districts in Palu City (45 of 46) provided information about the nearest Puskesmas or clinic for sick residents. This study has found that 43 sub-districts provided information about phone numbers for emergency health contacts, ambulances, doctors, and hospitals. Moreover, these sub-districts informed residents about referral hospitals for COVID-19. Then, almost all sub-districts urged their citizens to report their family members who are sick to deal with the COVID-19 pandemic. All sub-districts in Palu City appealed to residents to minimize interaction with sick people.

6. Parameter activation of the residents' food barns

Based on the results of research on the components of Activation of

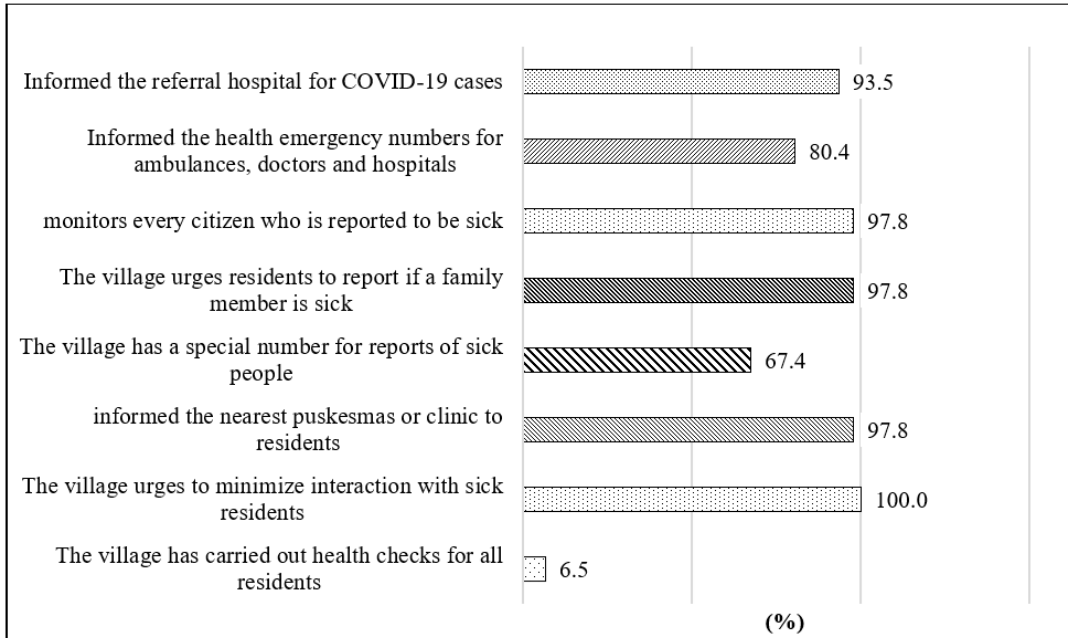


Fig 8 - Percentage of achievement of activating the citizen health information system in Palu city
 COVID-19: corona virus disease 2019

the residents’ food barns, only 13 % did kelurahan/villages activated the food barns facing COVID-19 in the early pandemic.

7. Parameter activation of COVID-19-related WhatsApp group

The study showed 84,8% of Kelurahan/villages activated the WhatsApp group of COVID-19. This was because not all kelurahan areas in Palu City are urban areas, so it is not possible for all residents to always use WhatsApp group media.

DISCUSSION

Sub-districts should implement some parameters based on the guidelines issued by the Ministry of Home Affairs in 2020 to handle COVID-19. The parameters of this study were the formation of the COVID-19 Alert Task Forces at the neighborhood level, socialization of clean and healthy living, sterilization of public and social facilities, activation of citizen security systems, creation of health information systems, activation of residents' food barns, and activation of the WA groups (Ministry of Home Affairs, 2020). The spread of COVID-19 is increasing, so it is necessary to accelerate the prevention and handling of COVID-19. Therefore, the Minister of Home Affairs asked the Governor to encourage Regency/City Governments to facilitate and encourage Village Governments to refocus Village Budgets by using budgets sourced from village income, especially Village Funds for handling pandemics (Ministry of Home Affairs Working Team for COVID-19 Task Force Support, 2020)

The guidelines for neighborhoods handling COVID-19 were issued by the Ministry of Health. The guidelines suggest that the roles of neighborhoods are assisting the contact tracing conducted by Puskesmas, supporting self-quarantine, and monitoring social distancing (Ministry of Health, 2020b). Public participation in handling COVID-19 is needed to prevent the COVID-19 pandemic. With help from the community, it is hoped that the spread of COVID-19 can be prevented by following the COVID-19 prevention protocol as made by the government (Ertiana et al, 2020)

All sub-districts have received information about COVID-19 from various sources, such as television, print media, social media, the Ministry of Health, health services, and health workers. Most of the sub-districts in Palu City have protocols for handling COVID-19. However, only 27 of them issued circulars about COVID-19 handling.

One form of coordination and support for sub-districts to deal with COVID-19 is to form a COVID-19 Alert Task Force at the neighborhood level. Majority of sub-districts in Palu City have conducted these activities, which require improvement. A neighborhood is a community institution

at the sub-district level whose roles include carrying out community empowerment, taking part in development planning and implementation, and improving community services. At the sub-district level, various organizations, such as Karang Taruna (youth organization) and community organizations, have combatted COVID-19. Efforts to prevent the spread of COVID-19 through rapid and mass tests and contact tracing will not succeed if the government does not involve various elements of society (Tambun et al, 2020).

The neighborhood level has a very strategic role in controlling COVID-19 because it is directly in the community through various activities, such as supervising physical distancing, monitoring sick residents, reporting data on people without symptoms to the village office, conducting self-quarantine, and supporting stay-at-home calls for vulnerable residents. The neighborhood could also provide needs for vulnerable residents, such as the elderly and people with comorbid diseases, who are quarantined at home (Tambun et al, 2020). Since COVID-19 spreads from human to human, the search-find-isolate efforts set by World Health Organization could only be practical if it is carried out at the local level, starting from the individual, family, neighborhood, and sub-district levels. Therefore, special efforts are necessary to strengthen the role of the community and society at the local level, especially at sub-district levels, to handle the COVID-19 pandemic disaster (Hadi, 2020).

Furthermore, neighborhoods have a significant role in supervising social distancing. Regulating social distancing in the community is not enough because not all people implement this regulation due to their different levels of education. For this reason, social distancing will more significantly be accomplished if it is accompanied by policies and controlled by the regional government from the province to village levels. The data on residents' mobilization (come in and out) should be collected at the sub-district or neighborhood levels (Tambun et al, 2020).

All sub-districts in Palu City have ordered the community to wash hands with soap and hand sanitizer, have a bath twice a day, consume nutritious food regularly, eat fruits and vegetables, drink enough water, avoid touching hands with other people, avoid touching nose, eyes, and mouth,

stay at home, do exercises, and get adequate rest. Accurate, reliable scientific knowledge and comprehensive understanding will help the community implement the government's advice and directives to suppress the spread of COVID-19.

The results show that almost all sub-districts have sprayed disinfectants and cleaned public facilities once a week. However, the sub-districts still need to improve the provision of hand sanitizers in public places to prevent the transmission of COVID-19.

Each COVID-19 Alert Village Force should sterilize public and social facilities at the neighborhood level in various ways as the earliest form of preventive action to maintain the health of residents from the potential COVID-19 transmission (Mantalean, 2020). Almost all sub-districts appealed to residents not to engage in activities with a massive number of people, such as parties, exhibitions, and formal events. Society must implement social distancing.

Furthermore, during the COVID-19 pandemic, sub-districts in Palu City closed public areas, such as places of worship (mosques, prayer rooms, and churches), schools, restaurants (including cafes), hotels, sports venues, massage parlors, and karaoke saloons. This government policy is based on considerations and optimal analysis (Yunus and Rezki, 2020).

Sub-districts in Palu City implemented a citizen health information system, especially reports on residents and guests who entered and left their areas. Moreover, 45 sub-districts required guests to report within 24 hours. Most sub-districts also urged mobile food vendors to wear masks and collected data on residents who entered and left their areas.

However, the sub-districts in Palu City should improve several elements, such as encouraging their residents to use their eating utensils from home when they eat outside the home. Moreover, all of the sub-districts in Palu city had not checked guests' health because some of them considered that health checking was the authority of the Puskesmas as well as they had limited human resources and budget. Moreover, not all sub-districts appealed to their residents to temporarily not receive guests.

All sub-districts in Palu City have formed a security unit and coordinated with the local security forces, namely the Indonesian Army (TNI) and the local police. To prevent the spread of COVID-19, sub-districts were instructed to form COVID-19 volunteers, comprising all elements of village officials, community leaders, Babinkamtibmas (Bhayangkara Trustees of Community Security and Order), Babinsa (Village Advisory Officer), village assistants, and sub-district assistants. The tasks of these volunteers are preventing the COVID-19 spread, handling residents who contract the virus, and coordinating with local governments. Community-based security is essential and could assist the police to secure citizens (Gumilang, 2020).

Almost all sub-districts in Palu City have urged residents to report the sickness of family members and monitored the reported people. Almost all sub-districts have informed their residents about the nearest Puskesmas or clinic where sick residents could get medical treatment. Most of the sub-districts have also implemented social distancing. However, several elements should be improved, such as the assistance of Puskesmas to conduct contact tracing, the activation of phone numbers for sick people's complaints, provision of health emergency numbers (ambulances, doctors, and hospitals), and support for self-quarantine.

Furthermore, most sub-districts have activated WhatsApp groups to disseminate information about COVID-19 to fortify citizens from unclear or hoax information and potentially deceive residents into the COVID-19 pandemic (Mantalean, 2020). Meanwhile, the sub-districts that are far from Palu City have not activated WhatsApp groups to disseminate COVID-19 information due to internet accessibility.

The implementation of the COVID-19 alert village in Palu City at the beginning of the pandemic, was quite good, although several things need to be improved, namely the provision of hand sanitizers in public facilities and activation of food security for residents/community barns to face of COVID-19. In general, sub-districts in Palu City have performed COVID-19 prevention and handling activities following the COVID-19 handling guidelines issued by the Ministry of Home Affairs.

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CONFLICT OF INTEREST DISCLOSURE

The authors, at this moment, declare that there is no potential conflict of interest in writing this article.

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