



# Impact of the COVID-19 Pandemic on the Integrated Health Service Post for the Elderly Services

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**Abstract.** The ongoing global COVID-19 pandemic since March 2020 has increased the risk of morbidity and mortality in elderly people. The Integrated Health Service Post for the Elderly (IHSP-Elderly, *Posyandu lansia*) is a community-based program that provides large-group outdoor activities for the elderly. This study examined the services provided by the IHSP-Elderly during the COVID-19 pandemic. A cross-sectional study was undertaken in a community health center (*puskesmas*) in Bantul district, Yogyakarta, Indonesia. All centers in the IHSP-Elderly ( $n = 34$ ) in the selected *puskesmas* were included. Data regarding the IHSP-Elderly activities from March to December 2020 were gathered from the village cadres, community health workers who voluntarily serve the elderly in the IHSP-Elderly program. Data were analyzed descriptively. Most IHSP-Elderly did not provide any community-based health program from April to September 2020. During the pandemic, the number of people who attended IHSP-Elderly programs was no more than 10 people (range, 6–10 people). Health-care services, including blood pressure measurement, were temporarily discontinued. Few IHSP-Elderly provided home-based blood pressure monitoring performed by the village cadres. Even though most IHSP-Elderly restarted their routine services in October 2020, the number of participants was lower than before the pandemic. To anticipate COVID-19 transmission, all IHSP-Elderly have prepared and implemented protocols for their activities. In conclusion, the pandemic significantly affected IHSP-Elderly programs. A new approach should be considered to maintain the sustainability of health-care services for the elderly.

**Keywords:** *Posyandu lansia* · elderly · COVID-19 · pandemic

## 1 Introduction

Community-based health-care services play an essential role in the health management system. In Indonesia, some existing community-based programs are the Integrated Health Service Post (IHSP, *Posyandu*), IHSP for the elderly (IHSP-E or *Posyandu lansia*), Integrated Service Post (*Posbindu*), Village Drug Post (*Pos obat desa*), Village

Delivery Center (*Pondok bersalin desa, Polindes*), and Village Health Insurance (*Dana sehat*) [1]. IHSP is a community health worker (CHW)-based program that provides convenient access to basic health services at the community level in Indonesia [2].

With the increasing population of elderly people, reasonable efforts are needed to allow the elderly to remain healthy, independent, active, and productive. In 1998, the government developed the IHSP-Elderly as a health service for people aged 45 years old and older. IHSP-Elderly is based on the community's initiatives for the elderly under the supervision of the community health center (*puskesmas*). Services provided by CHWs in IHSP-Elderly programs include blood pressure measuring and monitoring, health check-ups at the *puskesmas*, body weight measurement, guided physical exercise programs, and food supplementation [3]. A report from the Ministry of Health in 2017 noted that there are more than 80,000 IHSP-Elderly in Indonesia. CHWs employed in the IHSP-Elderly, known as cadres, are volunteers selected from their community to help *puskesmas* provide health-care services for the elderly in their village [4].

The COVID-19 pandemic has been ongoing in Indonesia since March 2020 [5]. The elderly are at a higher risk for morbidity and mortality caused by COVID-19, and various health policies to prevent transmission are included in the services in IHSP-Elderly [6]. This research was conducted to describe the IHSP-Elderly services in a *puskesmas* in the Bantul district during the COVID-19 pandemic. In this *puskesmas*, about 250 active CHWs serve people in 34 villages. IHSP-Elderly is usually held once a month and includes an average of 63 elderly participants [7].

## 2 Method

This cross-sectional study was undertaken in a *puskesmas* in Bantul district, Yogyakarta, Indonesia, in February 2021. In the selected *puskesmas*, a total of 34 IHSP-Elderly services are spread across three villages [4]. Data about IHSP-Elderly activities were gathered by CHWs. The *puskesmas* provided the CHWs' names, and each IHSP-Elderly was represented by one CHW. The inclusion criteria for the CHWs included in this study were having provided IHSP-Elderly services for at least 1 year, having a device with an active WhatsApp app, and willing to complete the questionnaire. Detailed information regarding the study was provided before informed consent was obtained. The questionnaire included questions to obtain information about IHSP-Elderly meetings held from March to December 2020, such as the number of participants, types of services, implementation of COVID-19 protocols, and factors affecting the decision to continue or stop the IHSP-Elderly monthly meetings. Data were analyzed descriptively.

### 2.1 Ethics Approval

This study received ethical approval from the Human Research Ethics Committee in the Faculty of Medicine Universitas Islam Indonesia.

3 Results

3.1 Characteristics of IHSP-Elderly and Cadres

All of the 34 CHWs in the IHSP-elderly were women with an average of 15.5 years of providing service (SD, 9.035). The occupations of these CHWs were housewife (58.8%), preschool teacher (14.7%), farmer (8.8%), laborer (5.9%), bamboo craft (5.9%), and entrepreneur (5.9%). Most CHWs had graduated from senior high school (61.7%), followed by junior high school (32.3%), and bachelor’s degree (5.8%).

3.2 Monthly Meetings of the IHSP-Elderly Program

Figure 1 shows the data for the monthly meetings of the IHSP-Elderly during the pandemic (March to December 2020). Of the 34 IHSP-Elderly, 23 (68%) held monthly meetings in March 2020. This number decreased between April and September 2020, during which no more than seven IHSP-Elderly monthly meetings were held (range 4–7 meetings). The number of monthly meetings then increased from October to December 2020, and 88% of IHSP-elderly offered monthly meetings in December 2020.

3.3 Considerations Related to Continuing the IHSP-Elderly During the Pandemic

CHWs have important roles in running and developing the IHSP-Elderly in their village. The decision about whether to continue the monthly meetings during the pandemic depended on consideration of various factors. The following concerns about whether the IHSP-Elderly monthly meetings should continue during the pandemic were noted by the CHWs.

Reasons for stopping the monthly meetings temporarily during the pandemic:

- “lockdown” policy that was applied during the pandemic to prevent activities involving crowds

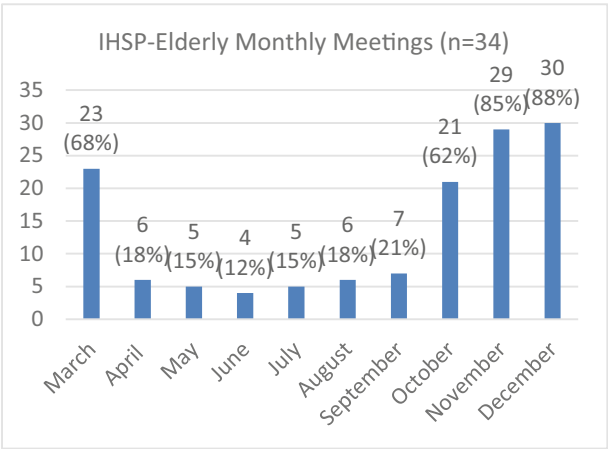


Fig. 1. IHSP-Elderly that held monthly meetings

- advice or warning from *puskesmas* and village leaders to temporarily stop the IHSP-Elderly meetings
- presence of COVID-19 among the villagers.
- higher risk of the elderly for COVID-19.

Reasons for continuing the monthly meetings during the pandemic:

- education of villagers about COVID-19 protocols and new habits
- need for regular health monitoring (e.g., blood pressure examination) by the elderly
- prior planning of a screening program for the year 2020.

At the end of 2020, the *puskesmas* and the district health offices allowed CHWs to restart the monthly meetings because the studied area had been categorized as a green zone.

Of the 34 IHSP-Elderly, one held monthly meetings continuously during the pandemic. The CHWs explained that the elderly members were eager to have their health conditions checked in the IHSP-Elderly. Monthly meetings were held under COVID-19 protocols such as scheduling patient arrival (shift model), physical distancing, mask wearing, handwashing before and after activities, and bringing home the food provided.

### 3.4 Numbers of Participants at Monthly Meetings

Based on the questionnaire data, an average of 58 participants attended the monthly meetings. At the start of the pandemic (March 2020), the average number of participants decreased to 33, and this number continued to decrease from April to September 2020, when no more than 10 participants attended the monthly meetings (range, 6–10 participants). The numbers increased slightly from October to December 2020. At the end of the year, the average number of participants was 35, which remained lower than the average number before the pandemic. However, in the IHSP-Elderly that continued to hold

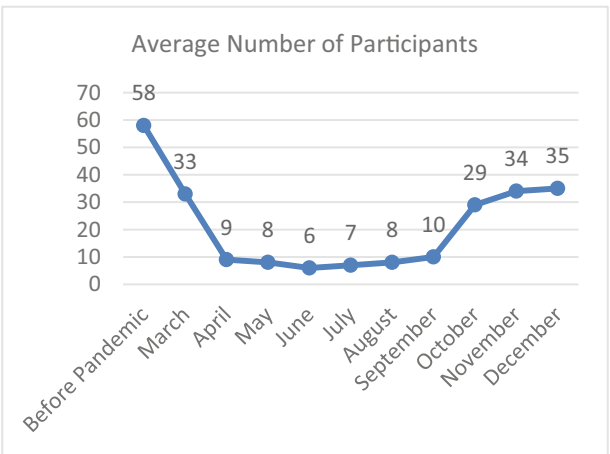


Fig. 2. Average number of IHSP-Elderly participants

its monthly meetings throughout the pandemic, 60–65 people continued to participate (Fig. 2).

### 3.5 Services Provided by the IHSP-Elderly During the Pandemic

Table 1 shows the frequency of IHSP-Elderly services during the pandemic. June and July 2020 had the lowest frequency of blood pressure measurement, bodyweight checks, and food supplementation because only four and five IHSP-elderly held monthly meetings in June and July, respectively. Physical exercise programs for the elderly were not routinely held before the pandemic and were rarely offered during the pandemic.

Table 2 shows the frequency and percentage of pandemic-related activities in the IHSP-Elderly. Health protocols to minimize the transmission of COVID-19, such as mask wearing, physical distancing, and handwashing were performed in more than 94% of IHSP-Elderly. All IHSP-Elderly provided accessible handwashing facilities permanently, including tap water and soap. All CHWs stated that routine CHW monthly meetings were coordinated with the *puskesmas*. The WhatsApp app was often used to communicate among the CHWs, and the WhatsApp group involved all CWSs in the *puskesmas*.

## 4 Discussion

This research examined how the COVID-19 pandemic affected services provided by the IHSP-Elderly. During the pandemic, especially from April to September 2020, the number of IHSP-Elderly monthly meetings decreased. Concern about the potential for transmission of COVID-19 was the main reason for temporarily discontinuing the monthly meetings. As a community health center, the *puskesmas* is responsible for supervising the IHSP-Elderly program and providing advice to CHWs in the villages [8]. In 2020, the Ministry of Health launched guidance to provide health-care services in the *puskesmas* in the pandemic era. The *puskesmas* has the authority to monitor, evaluate, and advise whether community health-based services such as IHSP-Elderly would be held as usual, offered using different approaches, postponed, or discontinued during the pandemic [9]. This study revealed the effective communication between the *puskesmas* and CHWs in the IHSP-Elderly. Coordination, which involved planning, running, monitoring, and evaluating, was key to the efficient management of the IHSP-Elderly during the pandemic [10].

The number of elderly participants attending the programs decreased sharply during the pandemic. Although the numbers of participants had increased at the end of 2020, these remained lower than those before the pandemic. The elderly is a vulnerable group in terms of COVID-19 transmission, morbidity, and mortality [9]. The findings of this study are consistent with those of a previous study in another province showing that anxiety about COVID-19 transmission was associated with low attendance in IHSP-Elderly meetings [11]. A lack of understanding about how COVID-19 spreads and how to prevent the transmission has also been reported [11]. Another study confirmed a significant relationship between anxiety and knowledge about COVID-19 [12].

**Table 1.** IHSP-Elderly Services Frequency during Pandemic

Month	Monthly meetings (n)	Blood pressure measurement (n)	Health checkups by <i>puskesmas</i> (n)	Anthropometry (n)	Physical exercise (n)	Food supplementation (n)	Physical distancing during meetings (n)
March	23	17	19	21	2	21	19
April	6	5	1	6	0	6	4
May	5	5	2	5	0	5	4
June	4	4	3	4	1	4	3
July	5	4	2	4	0	4	3
August	6	5	5	5	2	5	5
September	7	6	6	6	1	6	5
October	21	16	18	21	2	21	20
November	29	24	21	29	4	29	27
December	30	24	26	28	3	29	28

n = number of IHSP-Elderly

The discontinuation of monthly meetings led to underperformance of the IHSP-Elderly services. Regular blood pressure checks are an important service for monitoring blood pressure as a form of screening for hypertension in the community and especially for the elderly. One study found a significant relationship between attendance at the IHSP-Elderly and recurrence of hypertension among the elderly [13].

Although self-monitoring can be done independently at home, most villagers do not know how to use or own a sphygmomanometer [14]. IHSP-Elderly services also provide antihypertensive medications free of charge [13]. A previous study reported that 26% of patients with hypertension living in villages obtained their medication only through the IHSP-Elderly [15].

At the end of the year, most IHSP-Elderly had held monthly meetings, which confirmed that they had adapted to the changes caused by the pandemic. Evidence of this adaptation was apparent in the implementation of COVID-19 protocols, such as scheduling the arrival of participants, physical distancing, and providing accessible handwashing facilities with tap water and soap. Based on the recent regulation for conducting health-care services during the pandemic, the IHSP-Elderly will need to take the following steps before a meeting is held: CHWs must coordinate with the local government regarding the scheduling of meetings; CHWs must ensure that all CHWs are in a good health; and attendance must be scheduled to avoid crowds [6]. In addition, venues used for IHSP-Elderly services must be clean, have a spacious room with good air circulation, and were previously disinfected. COVID-19 protocols such as mask wearing, physical distancing (1 m), avoiding crowds, and handwashing using soap or hand sanitizers should be implemented as part of these services [16].

**Table 2.** Implementation of COVID-19 protocols in IHSP-Elderly meetings

Months	Total IHSP-Elderly	Protocol socialization		Provision of handwashing facilities		Coordination with <i>puskesmas</i>	
	a	b	(b/a)%	c	(c/a)%	d	(d/a)%
March	34	33	97%	34	100%	34	100%
April	34	33	97%	34	100%	34	100%
May	34	33	97%	34	100%	34	100%
June	34	33	97%	34	100%	34	100%
July	34	33	97%	34	100%	34	100%
August	34	32	94%	34	100%	34	100%
September	34	32	94%	34	100%	34	100%
October	34	32	94%	34	100%	34	100%
November	34	33	97%	34	100%	34	100%
December	34	34	100%	34	100%	34	100%

\* Protocols to minimize transmission'

Note: the data in columns a, b, c, and d are expressed as the number of IHSP-Elderly

## 5 Conclusions

The COVID-19 pandemic has affected IHSP-Elderly activities. The numbers of monthly meetings and participants decreased, especially from April to September 2020. Screening, blood pressure monitoring, and remote health-care services were mostly discontinued for more than 6 months. COVID-19 protocols were implemented when the IHSP-Elderly services restarted late in 2020.

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**Authors' Contribution.** RR designed the concept of the study. MYPC collected the data. Both authors contributed to the data analysis and manuscript writing.

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