



# Intervention Health Volunteer During the COVID-19 Pandemic: Online Education Practices to Pregnant Women

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## Abstract

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**BACKGROUND:** The COVID-19 pandemic condition limits pregnant women from getting health services, especially continuum care-based health services. Pregnant women need access to antenatal care services to get screening and assistance related to efforts to get good pregnancy outcomes.

**AIM:** The purpose of this study is to identify factors related to information exposure and the role of health volunteers in providing health education to pregnant women.

**METHODS:** This study also applies the preparation of health volunteers in conducting online education practices during the COVID-19 pandemic for pregnant women. Pregnant women who have been given education by the health volunteers are asked to assess their acceptance of the health volunteer's educational practices. Collect data about need assessment online education in pregnant women. Health volunteers who attended debriefing related to online education practices and pregnant women who were given online education by health volunteers. The number of samples of health volunteers and pregnant women in this study was 32 health volunteers and then 32 pregnant women giving assessment about online education practices by health volunteers.

**RESULTS:** The results of the intervention on the application of online education by health volunteers are quite good, according to pregnant women, namely, screening and mentoring, health volunteers have provided information. Submission of information is done through WhatsApp by 76% and pregnant women understand the health information of pregnant women delivered by health volunteers.

**CONCLUSION:** It is necessary to strengthen the role of health volunteers in providing online assistance and education so that it can continue to be carried out optimally.

## Introduction

One indicator that describes the degree of public health in a country is the Maternal Mortality Rate (MMR) and Infant and Toddler Mortality Rate. At present, the access of pregnant, maternity, and postpartum women to health services is quite good, but the MMR is still quite high. This condition may be caused, among others, due to inadequate quality of health services for pregnant and maternity mothers, unhealthy conditions of pregnant women, and other determinant factors. The main causes of maternal death are hypertension in pregnancy and postpartum hemorrhage, besides that other causes are also increasing. This cause can be minimized if the quality of antenatal care is carried out properly, so as to be able to screen for abnormalities in pregnant women as early as possible.

The MMR has increased from 2019 of 38/100,000 live births to 41.55/100,000 live births in 2020. The distribution of causes of maternal death is caused by bleeding (50%), eclampsia (37.5%), and others (1.25%). The infant mortality rate has decreased from 7.41/1000 live births in 2019 to 7.06/1000 live births. The case of under-five mortality also decreased

in 2019 by 9.17/1000 live births to 8.99/1000 live births. Distribution of infant mortality by cause of LBW (33%), sepsis (1%), infection (2%), aspiration (4%), diarrhea (3%), Kelkong (20%), pneumonia (9%), and others 13% (Dinas Kesehatan Kabupaten Banyumas, 2021) [1].

Continuum of care or continuous care is care that is provided comprehensively throughout the life cycle of women and is provided in a sustainable place including homes, communities, health centers, and referral places. Continuum of care is an intervention that is proven to reduce maternal and infant mortality. Continuum of care the strategy to reduce maternal mortality in the National Health Development Medium Term Plan is carried out through the Healthy Paradigm where preventive promotive programs are the main pillars of health by applying a continuum of care-based family approach since pregnancy. Through a family approach, it is hoped that primary health services can handle individual health problems in a life cycle. This means that the handling of health problems is carried out since the phase in the womb, the birth process, growth and development during infancy-toddler, elementary school age, adolescence, and adulthood to old age. Individuals and families, as well as optimizing

self-sufficiency among individuals, families of pregnant women (Kementerian Kesehatan RI, 2016) [2].

A continuum of care-based approach during pregnancy will be able to care for pregnant women, not only in physical condition but also in social and mental conditions but also in caring for the social health of pregnant women. Continuous family assistance (continuum of care) is more emphasized on strengthening preventive promotive functions, wellness providing life coaching for family development, and assisting families in solving problems. Families will be provided with assistance so that they can reach an agreement and turn a difficult situation into a more comfortable one. The continuum of care for maternal, infant, and child health requires access to care provided by families and communities, by outpatient services and clinical services throughout the life cycle, including childhood, adolescence, pregnancy, childbirth, and the postnatal period. (Kerber *et al.*, 2007; Kikuchi K, 2015) [3], [4].

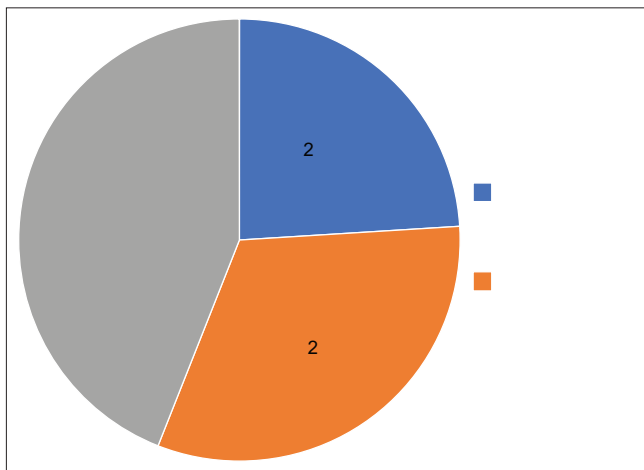


Figure 1: Education level of pregnant women

The principle of continuum of care-based assistance is as follows the occurrence of complications during pregnancy is unpredictable, when and who will experience complications, so that assistance needs to be carried out continuously. Every pregnancy is at risk, so it requires assistance and the availability of continuous services. Empowerment mothers and families are the

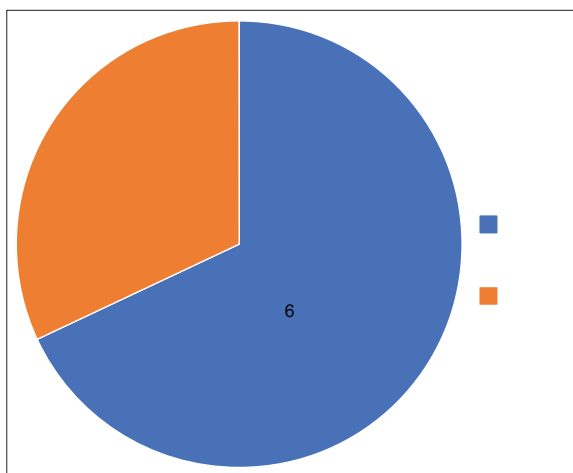


Figure 2: Health volunteer assistance for pregnant women

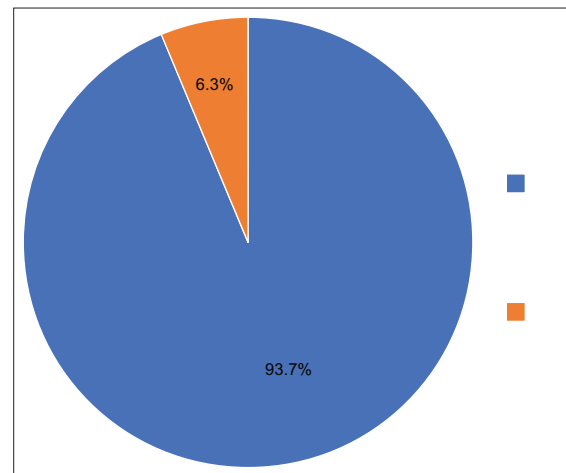


Figure 3: Health volunteers provide health information to pregnant women

main actors in mentoring. Autonomy and decision makers are mothers and families. The dimension of sustainability, pregnant women must be able to be served according to their needs, including referrals if needed, so that in assistance, they must also empower the community, especially health volunteers. Pregnant women and their families must also always have access to the health services needed, because the history of pregnant women's illnesses is fully documented, accurate, and up to date, the referral health services needed by pregnant women can be carried out in a timely manner and at the place of care, so that in assistance also involve local midwives.

Based on (Kotlar *et al.*, 2021) [5], the COVID-19 pandemic had an impact on decreasing antenatal visits for pregnant women, especially health-care facilities focused on handling COVID-19 patients. Pregnant women infected with COVID-19 have a risk of side effects on maternal health, because the mental condition of pregnant women is at risk of being affected by the COVID-19 pandemic. Mental health include anxiety and depression. The nutritional intake of pregnant women is reduced due to economic factors due to the loss of family income, increasing demands for child care because children do activities at home.

Symptoms of COVID-19 that can occur in pregnant women are fever, mild respiratory symptoms, increased C-reactive protein, lymphopenia, and signs of pneumonia. Pregnant women who give birth are at risk of having cesarean delivery, giving birth prematurely, and giving babies with low birth weight. (Ciapponi *et al.*, 2021) [6].

The COVID-19 pandemic has reported an increase in the number of pregnancies, maternal deaths and stillbirths, maternal stress, and ectopic pregnancies. An increase in adverse pregnancy outcomes may be related to reduced access to care. This decline could be driven by concerns about the risk of contracting COVID-19 in health-care settings, government advice to stay at home, or reduced access to public transport and child care during social restrictions due to the COVID-19 pandemic. Technology through online visit facilities on the continuity of antenatal care has been



at 1 time, both risk variables and effect variables. This research conducted in Banyumas Regency, especially in two areas primary healthcare which have the highest maternal mortality data in 2019. The location is Cilongok and East Purwokerto at Banyumas Regency.

This research consisted of three stages, namely, providing debriefing related to online education practices to health volunteers. The next stage is health volunteers practice online education for pregnant women. The assessment of the practice of pregnant women is carried out through an assessment sheet filled out by pregnant women which is filled out online.

Stage 1 was to collect data about need assessment online education in pregnant women. Research collect data to population are all pregnant women in urban areas (East Purwokerto) which amount to 559 people and rural (Cilongok) which amount to 907 pregnant (Figures 1-5). The sample in this study was taken as many as 150 pregnant women, namely, 75 at Cilongok and 75 pregnant women at East Purwokerto. Sampling will be carried out using the Cluster random sampling technique which is the first step by taking data on pregnant women in each village is then taken (Tables 1-5). Stage 2 about the population in this study was healthy volunteers and pregnant women in the Cilongok and Purwokerto Timur sub-districts who attended debriefing related to online education practices and pregnant women who were given online education by health volunteers. The number of samples of health volunteers and pregnant women in this study was 32 health volunteers and then 32 pregnant women giving assessment about online education practices by health volunteers.

The data needed in this study are primary data, namely, data collected and obtained directly by researchers through instruments study. Data collection techniques in this study are interviews with questionnaires and recall of food consumption. Quantitative data analysis methods in this study uses univariate analysis and bivariate analysis (Chi-square analysis).

Research ethics has been submitted and received approval from the Ethics Committee of the Faculty of Health Sciences, Jenderal Soedirman University. Research ethics has been issued on May 25, 2021, no 439/EC/KEPK/V/2021.

## Result and Discussion

### ***Factors related the health of pregnant women***

Based on Tables 1-5 and Figures 1-5, it can be explained that there are differences in antenatal care for pregnant women in rural and urban areas. This difference

can be seen from the data, namely, pregnant women in rural and urban areas. This difference can be seen from the data, namely, pregnant women who do ANC examinations to specialist doctors in urban areas by 66.2%, compared to pregnant women in rural areas which is 22.8%.

**Table 4: Characteristic of health volunteers who practice online education**

Serial number	Variable	n (%)
1	Age	
	20–30	4 (12.5)
	31–40	20 (62.5)
	40–50	8 (25.0)
2	Education level	
	Primary school	3 (9.4)
	Junior school	8 (25.0)
	Senior high school	16 (50.0)
3	University	2 (6.3)
	Training experiences	
4	Yes	19 (59.4)
	No	13 (40.6)
4	Access media information during pandemic COVID-19	
	Yes	30 (93.8)
	No	2 (6.3)
	Total	32 (100.0)

According to research by Lee *et al.* [9], there are differences in health-care provider visits between urban and rural areas but differences are observed based on the type of health-care provider. Rural women have lower rates of obstetrician-gynecological visits than urban women. The lack access of gynecology specialists in rural areas is one aspect related to this condition. (Lee *et al.*, 2020) [9].

**Table 5: Analysis of online educational practice needs for health volunteers**

Serial number	Variable	n (%)
1	Online screening and education practice	
	Once	4 (12.5)
	Never	28 (87.5)
2	Social media ownership	
	WhatsApp	32 (81.3)
	Facebook	4 (12.5)
3	Instagram	2 (6.25)
	Barrier of online education practice	
4	Unable to operate	2 (6.25)
	Signal	10 (31.25)
	Kuota	20 (62.5)
4	Online educational practice	
	Yes	28 (87.5)
	No	4 (12.5)
	Total	32 (100)

The use of the internet by pregnant women is due to the need for information, convenience, and speed of access. Fetal development, pregnancy symptoms and complications, prenatal testing and nutrition, activities during pregnancy, and stage of labor were the most frequently mentioned topics. The benefits of using the internet include reducing anxiety, personal support, creating emotional connection, and increasing self-confidence. Most pregnant women do not discuss the information to get from the internet with health workers or assistants. Health-care providers may not be aware of potentially inaccurate information or information or false beliefs about pregnancy. (Sayakhot and Carolan-Olah, 2016; Javanmardi *et al.*, 2018) [10], [11].

The importance of mentoring for pregnant women to provide information, especially for health services so that health workers must have sufficient ability to interpret information obtained from the internet and must allocate time efficiently to discuss how to find information with pregnant women. Furthermore, health

workers can involve the role of health volunteers to try to answer the doubts of pregnant women and provide valid and reliable online education sources. Health volunteers are needed as the spearhead of health workers to reach the target of pregnant women in their working areas.

The implementation of community mobilization with women's groups is recommended to improve maternal and newborn health, particularly in rural settings with low access to health services. Participatory women's groups represent an opportunity for women to discuss their needs during pregnancy, including barriers to reaching care, and to increase support to pregnant women. (World Health Organization, 2016) [12].

Volunteers reported that they share key health messages through convened group meetings of pregnant women. Regular training and access to activities related to the needs of pregnant women. Volunteers use an innovative approach to educate pregnant women. Lack of incentives reported as a major challenge for volunteers but is also associated with a lack of education for health volunteers. Volunteer roles vary according to the context in which they work. Volunteer supported by government health centers with an emphasis on using local approaches, has the potential to provide basic maternity care, and promoting health-seeking behavior so that serious delays in receiving healthcare can be minimized. Need to be provided with educational training to ensure that they can work effectively. (Panday *et al.*, 2017) [13].

Online learning is defined as learning experiences in synchronous or asynchronous environments using different devices (e.g., mobile phones, laptops, etc.) with internet access. In these environments, students can be anywhere (independent) to learn and interact with instructors and other students. (Singh and Thurman, 2019) [14].

### **Assessment of pregnant women about online education practices**

The use of the WhatsApp platform to carry out social interaction and communication is dominated by pregnant women. Elareshi *et al.* research (2020) [15] states that women in Bahrain using WhatsApp to communicate and share information spend 2–3 h every day sending and enjoying entertainment and important news.

Five themes of obstacles in online education are inadequate cadre abilities, lack of motivational factors, and inaccurate beliefs/perceptions, interpersonal aspect among others, the weakness of service providers that are still lacking, inappropriate communication, unrealistic expectations and monitoring and supervision problems, lack of work commitment, and client-related problems), high workload of health cadres, problems related to the organization, among others, with educational resources,

the attitude of managers and officials are lacking, and evaluation and monitoring are not optimal. Barriers in society consist of people's disinterest and lack of motivation in education, cultural problems, problems with the Internet and virtual social networks, and weak cross-sectorial cooperation (Heshmati *et al.*, 2020) [16].

## **Conclusion**

There is a gap related to mothers who check with dr. SpOG, consumption of blood-added tablets, exposure to information, and ways of education in rural and urban areas. The results of the intervention on the application of online education by health volunteers are quite good, according to pregnant women, namely, screening and mentoring, health volunteers have provided information. Submission of information is done through WhatsApp by 76%. 76% of pregnant women understand the health information of pregnant women delivered by health volunteers. It is necessary to strengthen the role of health volunteers in providing online assistance and education so that it can continue to be carried out optimally.

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