



# Implementative Model of Antenatal Class Online in the Covid-19 Pandemic

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**Abstract.** The Antenatal Class aims to increase knowledge, change attitudes and behavior of mothers about the health. Antenatal class in normal situations can be carried out routinely, becoming difficult to carry out during the Covid-19 pandemic. Pregnancy consultations and education classes for pregnant women can use the telemedicine application and continuing education through chat [1]. The platform commonly used by the public today is the WhatsApp application. The holding of antenatal class activities using the WhatsApp application is a breakthrough so that the purpose of holding antenatal class can be achieved. This study wanted to find out how the implementation model of antenatal class was online using the WhatsApp application. This study used a quasi-experimental method with a quantitative approach. The design of this study used a pretest posttest one group design. The research was carried out in the working area of the Kahuripan Public Health Center, Tasikmalaya City. The data collection techniques used were: interviews, filling out questionnaires using google form. Data analysis was carried out through the following stages: editing, coding, tabulation, analyzed using a univariable computer program and bivariable using a different test. The results of the study obtained that most of the respondent's data were in the age group of 30–34 years (44%). The education of pregnant women is mostly found in the high school and college education groups (43%). The average value of the initial knowledge of pregnant women is 78.06 with a standard deviation of 9.30. And at the final score, the average knowledge of pregnant women is 88.00 with a standard deviation of 4.66. The results of the statistical test obtained p-value of 0.000, it can be concluded that there is an effect of the implementation of the antenatal class online on the knowledge of pregnant women. Based on the results of the quantitative test, the Implementative Model of the antenatal class online can be used during the Covid-19 pandemic using the WAG or other platforms that are in accordance with the characteristics of pregnant women and the conditions of their respective regions.

**Keywords:** antenatal · public health center · knowledge · pregnant

## 1 Introduction

National development in the field of health has been a lot of success, but the Indonesian nation still has not reached a healthy Indonesia as expected, this is due to health problems

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that are so complex included the still high Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR). Although the source of health sector funds and supported by human resources continues to increase in number, but has not been able to fully solve health problems in the country. Efforts to increase the effectiveness and efficiency of the above resources are carried out integrated activities whose goals are focused on the family. One of the activities carried out is to increase the provision and utilization of KIA books. In terms of increasing the provision and utilization of KIA books, the Directorate of Family Health of the Ministry of Health initiated a mother class program which is divided into classes for pregnant women and classes for toddler mothers [1, 10, 11]. This study will focus on the antenatal class.

Antenatal Class is an activity for pregnant women, discussing and exchanging experiences to increase knowledge and skills about pregnancy, childbirth, postpartum care and newborn care through practice using the KIA Handbook facilitated by Health workers. This activity aims to increase knowledge, change attitudes and behavior of mothers about the health of pregnant women, maternity and postpartum as well as optimal growth and development of toddlers. With the existence of antenatal class, it is hoped that there will be an increase in the number of pregnant women who have and utilize the MCH handbook, so as to reduce the Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR) [15, 16, 18].

The antenatal class activities in normal situations can be carried out routinely become difficult to implement in the current coronavirus outbreak. Disasters caused by the coronavirus (COVID-19) have a very wide impact on the number of victims, property losses, the increasing extent of the area affected by the outbreak, and the implications for aspects extensive socio-economic in Indonesia. The government has designated this non-natural disaster as national disaster through presidential decree of the Republic of Indonesia.

No. 12 of 2020 on the Determination of Non-natural Disasters Spreading Corona Virus Disease-2019 (COVID-19) as a National Disaster [2, 12].

Under normal circumstances, maternal and neonatal deaths in Indonesia are still a major challenge, especially in times of disaster. Maternal and neonatal health services are among the services affected, both access and quality. This situation is feared to cause an increase in morbidity and mortality of mothers and newborns. In this COVID-19 pandemic situation, many restrictions are on almost all routine services including maternal and neonatal health services. As pregnant women become reluctant to go to health centers or other health care facilities for fear of contracting it, the advice to delay pregnancy examinations and antenatal classes, as well as the unpreparedness of services in terms of energy and infrastructure including Personal Protective Equipment.

The results of a rapid study of the Ministry of Health with UNICEF in April to May 2020 at 9,195 health facilities, 2,740 health workers from 34 provinces were processed results: 1) the cessation of services at the community level, namely 75% of Posyandu closed, 41% of home visits stopped and primary health facilities (Puskesmas) stopped 7%; 2) at Posyandu level 86% of service facilities reported stopping monitoring growth and development, the cessation of immune services 55%, the cessation of vitamin delivery services 46%, and 46% the cessation of Antenatal Care (ANC) services [11, 12].

Based on the results of the study, the government made a Practical Instruction Protocol for maternal and newborn health services during the Covid-19 Pandemic. This protocol is prepared to support the government and nature to ensure the continuation of maternal and newborn health services can still be implemented as an effort to reduce MMR and IMR during the pandemic Covid-19. Consulting activities maximized by using information technology that is easily accessible to the mother, hotline or telemedicine also need to be socialized. In accordance with the protocol of service implementation in FKTP for pregnancy screening services, pregnancy consultation is carried out in accordance with WHO recommendations. Pregnant women are asked to study KIA books. Consultation and education of pregnant women classes can use telemedicine application and continuous education through chat [1, 12].

In an effort to reduce the impact of decreasing access to maternity services, it is necessary to make efforts to keep classes for pregnant women held online (in the network). The platform that is commonly used by the general public today is the WhatsApp application. The holding of antenatal class activities using the whatsapp application is a breakthrough so that the purpose of holding antenatal class can still be achieved. This study wanted to find out how the implementation model of antenatal class was carried out online using the WhatsApp application. And a problem formulation can be formulated: How is the implementation model for online classes for pregnant women during the covid-19 pandemic? This study aims to determine the implementation model of antenatal class online activities using the WhatsApp application.

## 2 Research Method

The research method used in this study is a quasi-experimental with a quantitative approach. The design of this study used a pretest posttest one group design, namely research conducted twice, namely before the experiment (pre-test) and after the experiment (post-test) with one group of subjects. The research was carried out in the working area of the Kahuripan Public Health Center, Tasikmalaya City. The data collection techniques used were: interviews, filling out questionnaires using google form. Data analysis was carried out through the following stages: editing, coding, tabulation, analyzed using a univariable computer program and bivariable using a different test [5, 7, 17].

## 3 Results and Discussions

Research has been conducted on how the implementation of the antenatal class online during the covid-19 pandemic, with the following results:

From Table 1, can be seen from 16 pregnant women, mostly in the age group of 30–34 years.

From Table 2, can be seen the distribution of education of pregnant women mostly found in the group of high school and college (43%).

**Table 1.** Distribution of Participants of antenatal Class based on age group in the working Area of Kahuripan Health Center of Tasikmalaya City

Age Group (years)	F	%
20–24	4	25
25–29	3	19
30–34	7	44
≥35	2	12
<b>Sum</b>	<b>16</b>	<b>100</b>

**Table 2.** Distribution of Participants of antenatal Class based on education level in the working area of Kahuripan Health Center of Tasikmalaya City

Education	F	%
Elementary School		0
Junior High School	3	19
Senior High School	7	44
College	6	37
<b>Sum</b>	<b>16</b>	<b>100</b>

**Table 3.** The Effect of Implementation of Antenatal Class to Pregnant Women knowledge in the working area of Kahuripan Health Center of Tasikmalaya City

Variable	Mean	SD	ONE	p-value	N
Beginning	78,06	9,30	2,32		
End	88,00	4,66	1,17	0,000	16

The average initial value of knowledge of pregnant women is 78.06 with a standard deviation of 9.30. And at the final value, the average knowledge of pregnant women is 88.00 with a standard deviation of 4.66. Seen the mean difference between the initial value and the final value of 9.94, the statistical test results obtained a value of  $p$  0.000, then it can be concluded that there is an Effect of antenatal class to the knowledge of pregnant women (Table 3).

The implementation of antenatal class, which in normal situations is usually done face-to-face by following the guidelines for antenatal class, in this new normal era, must change the method of antenatal class into activities that can be done online. Health service facilities are obliged to ensure the readiness of first-level health facilities in providing maternal and child health services with or without the status of being infected with Covid.19 [2]. According to the health protocol, consultation activities for pregnant women, maternity mothers, breastfeeding mothers and caregivers to comply with the 3 M

(using a mask, washing hands and maintaining distance when visiting health facilities). The implementation of antenatal class activities conducted online, in accordance with protocol of practical instructions for maternal and newborn health services during the Covid-19 Pandemic. Health Services of pregnant women during the Covid-19 pandemic must be eliminated by paying attention to the prevention of corona virus transmission for both mothers, babies and health workers. Restrictions on ANC inspection visits are balanced with telecommunications between health workers and mothers individually and organizing mother's class online. During this pandemic, midwives should still strive to improve the ability of mothers and families to understand KIA books in order to recognize the danger signs and apply care during the pregnancy, and doing healthy ways of life in everyday life [1, 8, 9]. The offline class for pregnant women is postponed during the Covid-19 pandemic or the mother class can still be carried out online, this is to prevent mass crowds which result in the transmission of COVID-19. The online class activity for pregnant women is an E-health breakthrough, namely the use of information and communication technology for health services and information and primarily to improve the quality of health services and improve work processes to remain effective and efficient [6, 13, 14].

In general, e-health consists of health informatics and distance health efforts. This is in accordance with Permenkes 46 of 2017 concerning the national e-health strategy. There is also the term Telemedicine, which can be interpreted as a treatment process that includes diagnosis and therapy from a distance. The process uses a telecommunications network so that it can connect one place to another. Telemedicine can be used to transmit pictures, graphics and medical data from one place to another. In addition, it allows direct consultation like being in the same place. The great potential to improve public health status in areas that are not/less accessible by health service facilities through telemedicine is very promising. No technology is perfect, of course there are shortcomings [6].

From the results of the study, it was found that the average value of the initial knowledge of pregnant women was 78.06 with a standard deviation of 9.30. And at the final score, the average knowledge of pregnant women is 88.00 with a standard deviation of 4.66. Seen the difference in the mean between the initial value and the final value of 9.94, the results of the statistical test obtained a p value of 0.000, it can be concluded that there is an effect of the online pregnant women's class implementation model on the knowledge of pregnant women.

According to Notoatmodjo (2014), one of the factors that influence knowledge is the information obtained. Science and technology that require information but at the same time present information. If knowledge develops very quickly then information develops quickly too. With the development of technology today, more and more new knowledge emerges. Providing information such as ways to achieve a healthy life will increase public knowledge which can increase awareness to behave in accordance with the knowledge they have. During online classes, pregnant women get materials about their health, and can do consultations without any time limit, so that pregnant women can freely seek information about their health. Whatsapp is one of the platforms that is currently widely used because it is easy to use and cheap to finance. Telemedicine is more accessible, cost-effective and modern methods can store medical records [3, 4].

The occurrence of the Covid-19 pandemic should not stop pregnant women's access to quality health services. Health services, including classes for pregnant women, can in fact be modified by using online classes without reducing the quality of the health services themselves. In the implementation of mother class activities in this study, a strategy for implementing online classes for pregnant women (in the network) was obtained which was modified from the implementation of mother classes which were usually carried out offline (outside the network). There are several modifications made, which can be explained as follows:

#### 1. Schedule of meetings/activities

The antenatal class based on the guidelines of the class of pregnant women, in this new normal era, because it is carried out online and does not need to come to the meeting place and be able to access information or material from HP devices through whatsapp platform, then the material posted is made less but with more frequent frequency. Classes of mothers who schedule 3x during pregnancy, with this online method, material is posted every 3 days. With the rhythm of the 1st day of posting the material, after that until the 3rd day gives an opportunity for pregnant women to ask questions/discuss in WAG (Whatsapp Group).

Day	Material	Tools
1	- General Explanation - Initial Evaluation - Material about the meaning of pregnancy	Google form
2–3	Ask answer/discussion	
4	- Changes in the body during pregnancy - Complaints that commonly occur during pregnancy	KIA Book Flyer
5–6	Ask answer/discussion	
7	- Tips for pregnant women - Nutrition during pregnancy	Flyer
8–9	Ask answer/discussion	
10	- Psychological readiness for pregnancy - Marital relations during pregnancy	KIA Book Flyer
11–12	Ask answer/discussion	
13	- Signs of danger during pregnancy - Childbirth Planning and Prevention of Complications	KIA Book Flyer
14–15	Ask answer/discussion	
16	- Pregnant gymnastics - Evaluation of session 1	Video Google form
17–18	Rest	
19	- Signs of Labor - Danger signs of Labor	KIA Book Flyer

(continued)

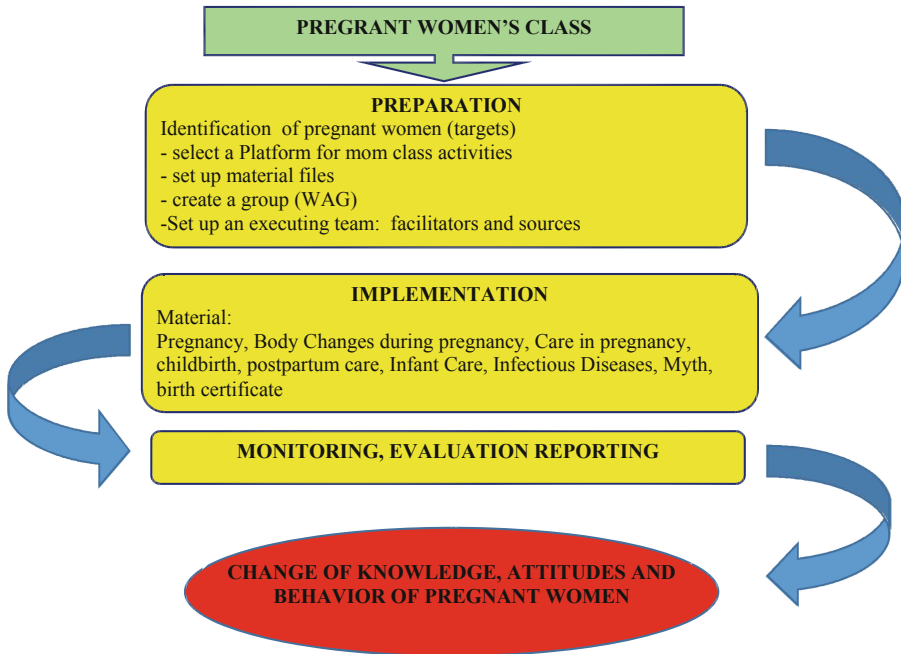
*(continued)*

Day	Material	Tools
21–22	Ask answer/discussion	
23	- Labor Process - Early Breastfeeding Initiation	KIA Book Flyer
24–25	Ask answer/discussion	
26	- Success in exclusively breastfeeding - tips for maintaining the health of postpartum mothers	KIA Book Flyer
27–28	Ask answer/discussion	
29	- Signs of danger of puerperium - Family planning after postpartum	KIA Book Flyer
30–31	Ask answer/discussion	
32	- Evaluation of session 2 - pregnant gymnastics	Google form Video
33–34	Rest	
35	- BBL treatment - Danger signs in the BBL	KIA Book Flyer
36–37	Ask answer/discussion	
38	- Monitoring the growth and development of the baby - Immunization on BBL	KIA Book Flyer
39–40	Ask answer/discussion	
41	- Myths related to maternal and child health - Infectious diseases (HIV/AIDS, malaria) - Importance of birth certificate	KIA Book Flyer
42–43	Ask answer/discussion	
44	Final evaluation	Google form

## 2. Learning and evaluation media

The learning media used in offline pregnant women's classes is modified so that the material is created in a form that is easily posted in the Whatsapp platform. Likewise with evaluations that usually fill out directly on the questionnaire paper, modified by filling out google form. One example of media posted, made interesting to be downloaded and read/studied by pregnant women. The posted material is made simple and is expected to motivate pregnant women to ask questions and discuss.

From this research can also be made an implementative model of antenatal class online in the covid-19 pandemic by using whatsapp application. The implementative model is as follow (Fig. 1).



**Fig. 1.** Implementive Model Of Antenatal Class Online

## 4 Conclusion

Based on the research that has been done, the author concluded that there is an Effect of the Implementative model antenatal Class to the knowledge of pregnant women.

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