

# Society's Perspective on Implementation of Vaccination at the Semarang Vaccination Centers

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**Abstract.** The government is trying to reduce the spread and death from COVID-19 by vaccinating all regions. Implementation of vaccination at the vaccination center is one of the government's innovations to make it easier for people to get vaccines. This study aims to determine the society's perspective regarding the services received when administering the COVID-19 vaccine at the Semarang vaccination center. This research is a qualitative study with a phenomenology approach. A total of 121 people became respondents. Data collection was carried out by conducting interviews with respondents after administering the vaccine at the vaccination center. The results showed that the vaccination services received at the vaccination center is appropriate with the expectations of the respondents. Much information about the implementation of vaccinations can be obtained through social media. In addition, serving officers need to apply a friendly, nimble and in adequate amount. We recommend that the government continue to carry out the vaccination program at vaccination centers with improvements like the need for staff training so that they can provide excellent service when providing vaccination services.

**Keywords:** Covid-19, vaccination, experirnce, qualitative, Indonesia

## 1 Introduction

Coronavirus Disease (COVID-19) was declared by the World Health Organization (WHO) as a pandemic on March 11<sup>st</sup>, 2020. The statement was a pandemic from WHO after 114 countries confirmed that some people in their countries had contracted COVID-19.[1] The various efforts have been made to suppress the spread of the virus, reduce morbidity and mortality according to the characteristics of the virus variant. At the beginning of the pandemic, efforts were made to use a mask that covered the nose and mouth followed by

tracing the patient's activity which confirmed positive. Furthermore, due to the unavailable vaccine, efforts have been made to carry out an independent isolation protocol and provide isolation facilities at the hospital. [2] When the vaccine became available and the spread of the Omicron variant virus increased, the efforts were made to vaccinate in every district/city. [3] The implementation of COVID-19 vaccination in all regions has become the main program of the Indonesian government. Vaccination is the government's effort to reduce the spread, morbidity and mortality as well as achieve the herd immunity. In addition, it is hoped that it can provide protection to the society from COVID-19 so that they remain active socially and economically. [4], [5] At the beginning of the implementation of the policy, people's attitudes varied, some were supportive and some were unsupportive. Some factors inhibiting the implementation of vaccinations include public anxiety about vaccine side effects, vaccine *halal* status, including an attitude of disbelief in the benefits of the COVID-19 vaccine for themselves.[6], [7]

Time goes by, people began to show an attitude of acceptance of vaccines, of course with various promotional efforts, education from health workers and related agencies and by utilizing information technology.[8] An example of such an effort is tracking community activities in public facilities using the care-protected application. The use of this application is expected to reduce the spread of COVID-19 in public places because only people who have received the vaccine are allowed to use these public facilities.[9] This has caused public attention to increase vaccines so that the demand for vaccines also increases. In addition, the government also needs to meet the target of vaccination coverage in order to build herd immunity. It was recorded that at the time this research was conducted, April 2022, the coverage for Indonesia's vaccination at 1<sup>st</sup> dose was 198,288,035 doses (95.21%) of the target of 208,265,720 doses, 2<sup>nd</sup> dose achieved 78.24% while dose 3 reached 15.15%. [10] Due to these reasons, the government is trying to fulfil the demand for vaccinations by establishing vaccination centers in various cities.[4]

The vaccination centers are special temporary places for COVID-19 vaccinations established by the government. The aim of the establishment is to achieve whole-of-population vaccination coverage in large numbers. [11] The vaccination centers are not a substitute for health service facilities providing vaccines, but are supporting and complementary to health facilities serving the people who will be vaccinated. The location of the establishment is also close to the community, such as schools, meeting halls, sports halls and malls.[12] The location chosen to be a vaccination center must have some requirements to be in a strategic location, can be used for a certain period of time (3 months), be on the ground floor, close to a hospital, have access to an ambulance and have a toilet available. [12] The choice of the location was aimed at making it easier for the public to access vaccination services. Drive thru vaccination services are also available as a form of excellent service to the community. The form of service is in the form of vaccination without the need to get off the vehicle, registration is done online, health check screening checks temperature, blood pressure and other questions are carried out in the vehicle. So that crowds do not occur during the vaccination.[13][15]

The vaccination service strategy is said to have been successful, data shows that one city in Central Java, Semarang, received the President's appreciation for its high vaccination rate. The percentage of achievement of the first dose of vaccination was 124.36% and the second dose was 112.30% of the provincial target.[16] The implementation of COVID-19 vaccination

activities in Semarang apart from health centers, hospitals and clinics, there is also the implementation of COVID-19 vaccination at the Vaccine Center. The Semarang Government opened a vaccination center facility with the aim of accelerating vaccination coverage in Semarang and achieving the target of the Indonesian central government, which is 1 million vaccines a day.[17] The another consideration is reducing crowds because registration has been systemized online and aims to increase the convenience of the public when carrying out vaccinations.[18]

The vaccination service locations available in Semarang consists of 37 public health center (*puskesmas*), 27 hospitals and an additional 14 vaccination centers. [15], [19], [20] The drive thru service all the vaccination centers are available at *Pandanaran* Public Health Center *Semarang* and Semarang Public Hall Parking Yard Drive Thru. [15] From some the vaccination center, there is the interesting thing that the establishment of the only vaccination center in a shopping center or mall, which was established in *Tentrem* Mall, Semarang City. This innovation needs to be researched, how enthusiastic and public perceptions are of vaccination services at mall vaccination centers. In addition, so far, no studies have examined the implementation of vaccination in vaccination centers. Even though the vaccination center is a good and successful policy innovation. Thus, this study aims to examine the perceptions of people who have vaccinated at vaccination centers, especially the *Tentrem* mall vaccination centers. It is hoped that this innovation can be implemented in other places and improvements can be made so that services are better and vaccination coverage is achieved.

## 2 Methods

A qualitative study using a phenomenological approach and indepth semi-structured interviews. This research was conducted at the Vaccination Center of *Tentrem* Mall, Semarang. This location is the only vaccination center held in a shopping center recreation area.[21] Respondents in this study were all people who had completed the COVID-19 vaccination at the vaccine center with the condition that they were 17 years old and over and were willing to become research respondents. The recruitment of respondents was carried out during April 2022 by also taking into account the number of each group in the age range, gender, occupation and level of education so that more real and unbiased results were obtained.

Data collection was carried out by going directly to the field, interviewing people who had finished the vaccine. Before going to the field, the researchers and team conducted checks, training and simulated direct interviews with the respondents. Each research team brought a questionnaire sheet which became a reference for questions to the respondents. The questionnaire was prepared based on the regulations for carrying out vaccinations and was developed according to the conditions in the field. The questionnaire tests have been carried out so that the final questionnaire sheet that was brought during data collection was correct and appropriate. All respondents who took part in this study agreed by filling out informed consent. The study was conducted in accordance with the Declaration of Helsinki, and the protocol was approved by the Health Research Ethics Committee of Universitas Negeri Semarang (HERC number:199/KEPK/EC/2022).

### 3 Results

The amount of respondents obtained in this study were 121 people. 63% of female respondents, half of the respondents belong to the young adults age group (20-29 years old) are 50%. Not yet employed or still having student status and students being the largest group, namely 44 people (36%). The are 56% of respondents are highly educated and 84% of respondents are citizen of Semarang. Details about the characteristics of the respondents can be seen in table 1.

**Table 1.** Characteristics respondents

	Characteristics Respondents	Number (%)
Gender	Male	45 (37%)
	Female	76 (63%)
Age Group	Adolescents	18 (15%)
	Young adults	61 (50%)
	Adults	42 (35%)
Occupation	Unemployed (student)	44 (36%)
	Employee	41 (34%)
	Housewife	14 (12%)
	Entrepreneur	10 (8%)
	Others	12 (10%)
Education Level	Basic Education	5 (4%)
	Secondary Education	47 (39%)
	Higher Education	68 (56%)
Domicile	Semarang	102 (84%)
	Outside Semarang	19 (16%)

This study examines several matters related to the pre-implementation of COVID-19 vaccination, there are sources of information on vaccination implementation, registration mechanisms and methods or methods for registering vaccinations. Then, the data obtained was analysed and produced the information shown in table 2. Most of the respondents (49%) knew that information on the implementation of vaccinations came from social media. Almost all respondents (98%) register for the COVID-19 vaccination collectively, can be with relatives, office mates, society or local village officials. While the method/the way of vaccination registration was carried out by the majority of respondents through the VICTORI website is 68%

**Table 2.** Pre-implementation of COVID-19 vaccination

		Number (%)
Vaccine Information	Cadre/Health worker	15 (12%)
	Village worker	1 (1%)
	School/Office/ Society/Organization	7 (6%)
	Friends/relatives/family	39 (32%)

	Social Media	59	(49%)
The rule of registration	Independent	3	(2%)
	Collective	118	(98%)
How to register	Sign up directly	39	(32%)
	Through the website Victori.semarangkota.go.id	82	(68%)

Information regarding the implementation of vaccinations in the middle era like this, is already better than at the beginning of the COVID-19 pandemic. Many sources share information with both online and offline media. This study found that most of the respondents received information on vaccination through social media. Some of the respondents stated that,

*“My info is from government-owned social media (R33)”, “It just appears on the social media homepage (R110)”, “various social media accounts share this info (R76), “group chat broadcast (R67)”.*

Next, we asked the respondent how the vaccination services received were compared to what was expected. If the expectations and reality received equal or even exceed these expectations, it will lead to satisfaction with the services received. Most of the respondents (33%) stated that the service was good, as stated by the following respondents

*“Overall is like expectations (R81)”*

Broadly, we asked respondents to detail the parts of the vaccination service that they felt were satisfactory and also those that were not as expected. We present the results of interviews with respondents into several themes. The first theme is the respondent's perspective on the re-registration process at the location of the vaccination center. Then, it continues with themes related to queues, serving human resources and finally the observation stage of side effects.

### 3.1 The registration process at the Vaccination Center Location

The first process that everyone who will be vaccinated will go through is re-registration. The staff will check whether the respondent has registered for vaccination on the VICTORI website. If already registered respondents will be invited to go to the next stage. This registration process determines the respondent's first impression of the overall service received. As the respondent (R6) stated *“overall is good, from the registration procedure stage it is already good”*. A different opinion was put forward by the respondent (R35) *“need clarity of the flow, the registration section is not clear, the other parts are the same”*

### 3.2 Queue

The implementation of vaccination at vaccination centers is limited in time, in a week it is usually carried out once or twice on weekends, there are Saturday or Sunday. This time limitation is one of the factors causing people to queue up for vaccines. What's more, in shopping centers, usually on weekends there is a surge in visitors which also increases interest in getting vaccinated as well. We asked respondents about this queuing process, and found several problems,

*“The queue is long and the seats are few (R1)”, “The queue is irregular and makes groups (not keeping their distance) (R4)”, “The queue is not regular, there is a random queue (R2)”.*

### 3.3 The Human Resources Serviced

We found that officers who provide services are the key to make comfort and satisfaction of respondents who receive these services. The several respondents, such as respondent (R43) stated *“the friendliness of the staff is needed, it is clear who will be vaccinating. “The staffs’ vicious attitude made him uncomfortable”* (R119). Apart from friendliness, dexterity is also another indicator of the respondent (R42) *“Dexterity of staff determines the length of waiting in line, the more dexterous is better”*. Achieving a friendly and dexterous attitude requires training of staff before providing services. This was also mentioned by the respondent *“It is needed to be training for staffs, and see how it is implemented (R52)”*. The number of staffs who provide services is adjusted to the goals and process of the service. Several respondents stated,

*“The amount of staff is small, causing crowd problems (R40)”, “there are no staffs managing the queue lines (R120)”*

### 3.4 The Observation of Side Effect

The last service before the respondent leaves the vaccination center is observation of side effects. This observation was carried out to assess whether the body of the person who had received the vaccine had a response or side effects. To assess this, the respondent was asked to wait 10-15 minutes before leaving the vaccination area. The fact that we got, the observation process is often missed, there are staffs who do not remind about this process, so people who have been vaccinated just leave the vaccination center area.

*“The staffs should have asked us to wait after being vaccinated (R26)”, “There were no staffs guarding the exit after the vaccine, so people did not carry out the observation stage (R3)”*

### 3.5 The Other Findings

Semarang Health Office has innovations related to information technology handling COVID-19 including vaccination services by creating the VICTORI website. The website contains information on vaccination services related to implementation locations, registration to get vaccine quotas, vaccine stock, implementation time and etc. Everyone who is going to be vaccinated, first registers himself at VICTORI to get a quota. This innovation makes it easier for people to choose a time and place that is near and according to them. *“It’s easy to register, you can choose the time (R46)”, “even though registering is a chance to get a quota, I think it’s good (R55)”*. In practice, when accessing the website, the public, especially respondents, complained that it was difficult to access VICTORI

*“Links on VICTORI are sometimes down (R14)”, “links on VICTORI are sometimes difficult to open (R13)”*.

Another thing we found that respondents hoped that vaccination services would continue to be carried out and followed by improvements such as

*“Vaccine education is expanded, so that everyone wants to be vaccinated (R97)”, “socialization is increased, especially about the benefits of vaccines (R115)”, “more availability of booster vaccines (R105)”, “reach of vaccine centers is even wider to sub-districts which are far from the city center (R82)”, “Conformity of available vaccine stock info with what is listed in VICTORI” (R51)”*.

## 4 Discussion

In this increasingly sophisticated information technology era, information is quickly circulated widely. In a matter of seconds, news from one place is easily broadcast in another. What is more, with the presence of various social media that are easily accessible and most people have them. Likewise, information related to vaccination services is spread quickly and widely. We found that the public knows information about COVID-19 including vaccination services through social media. This finding is in line with the research on the elaboration likelihood model (ELM) framework, in which social media significantly influences one's informative and persuasive perceptions about attitudes and intentions to do vaccines. [22] In addition, social media has an important role in sharing information about COVID-19, however, the accuracy and credibility of the information published needs to be questioned. [23]

The society who received COVID-19 vaccination services at the Semarang vaccination center, both men and women, were satisfied because the services received were appropriate with what was expected. Similar studies regarding satisfaction with vaccination services in Indonesia show different things, there is no relationship between society's characteristics (age, gender, education and employment) and vaccine service satisfaction. They concluded that this might happen because the vaccination program is a mandatory government program that must be implemented by the society.[24] In theory, the expectations of a person, in this case the patient, are a reference point for comparing and assessing the services and products received. Someone's satisfaction is a feeling subjectivity, which describes the extent to which a person hopes to be satisfied with the purchase of certain commodities (services or products purchased). [25] Thus, understanding society's expectations regarding the vaccination services they will receive is very important to improve services and increase the coverage of COVID-19 vaccinations.

This study found that waiting time or long queue time was a factor that was highly considered by respondents. Long or short queues, regular or irregular queues are sensitive things that affect respondents' satisfaction with vaccination services. Research in Fiji also found that age, gender, educational level and waiting time significantly affect patient satisfaction.[26] Likewise, a study in Nigeria found that patient satisfaction was significantly influenced by waiting time. Factors that affect the length of waiting time include the large number of patients and staff who are inadequate in terms of quantity and quality.[27] In contrast to this study, in China found that waiting time was not related to patient satisfaction. They estimate that a negative relationship occurs because respondents feel the long waiting time is commensurate with the service received.[28] Other studies support these findings which show that waiting time is inversely related to patient satisfaction while examination time is directly related to satisfaction.[29] Hence, if the respondent receives quality and satisfactory service, the amount of time wasted is not a significant problem.

Staff who provide services are also the key to the comfort and satisfaction of respondents. Likewise, research in China found that there were three important factors influencing patient satisfaction, there are the attitude of staff when providing services, followed by the technology used and the convenience of the service area.[25] In line with this, the level of satisfaction of respondents in Spain related to the vaccination program also shows satisfaction with the vaccination service because it received the attention of officers at all service points during

vaccination [29]. The attention that respondents got was related to stimulation, control, memory, and awareness during the service. In connection with these findings, providers should provide excellent service or maximum service from the initial stage of service to the final stage of service received by customers. The form of excellent service that is expected by respondents in this study is the friendly attitude of officers at every stage of service and dexterity in providing services. In theory, excellent service by service providers needs to apply good attitudes, attention and actions at every stage of service.[30] Thus, this research adds to the evidence that customers expect to get excellent service in the service sector which is shown by the friendly attitude and deft actions of staffs at all stages of service.

The procedure for observing (monitoring) side effects shows the attitude of the vaccinator's responsibility towards the respondent so that the respondent feels safe in getting the vaccine he is receiving. This study found that there were respondents who were not asked by officers to carry out observation procedures. Hence, the respondent was not satisfied with the service received. Research in India also found the same thing that the satisfaction of respondents who underwent the procedure for observing vaccine side effects was higher than those who did not receive the procedure.[31]

The another innovation made by the Semarang government regarding the handling of COVID-19 is the website *Victori.semarangkota.go.id*. One of the uses of this website is for online registration of people who will get vaccines. [21], [32] We found that respondents were helped by having VICTORI but there were problems accessing it when it was crowded. The use of information technology for handling COVID-19, especially after the vaccine was not only carried out by Semarang, the Centers for Disease Control and Prevention (CDC) utilized information technology to monitor people's health and feelings after receiving the COVID-19 vaccine [33][34].

## 5 Conclusion

The presence of vaccination centers makes it easier for people to get vaccines, besides that the vaccination coverage rate can be increased and fulfilled. Our findings add to the evidence that the staff's friendliness and efficient service makes respondents feel comfortable and satisfied with the service. The services that comply with procedures make people feel safe receiving vaccinations. We recommend that the government continue to carry out the vaccination program at vaccination centers with the improvements such as the need for staff training so that they can provide excellent service when providing vaccination services.

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