

Implementation of a Sero Survey For Sars-Cov-2 at The Medan City Health Office in 2023

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Abstract

A sero survey was conducted to see the total population in Indonesia who already have antibodies against the SARS-CoV-2 virus. The sero survey method uses a blood test to check the body's antibodies to the virus. The type of research used is qualitative research with *in-depth interview techniques* and also field observations. The sero survey conducted in the Medan City Region was in 10 Sub-Districts and 4 Community Health Centers with a sample target for the entire Medan City area of 205 samples. The results showed that the implementation of the serosurvey at the Medan City Health Office was going well, but the target respondents had not reached 100%.

Keywords: Sero Survey; Covid-19; Health Office

Introduction

Since it was first discovered in Wuhan on December 30 2020, COVID-19 has become a source of health problems throughout the world until it has become the current pandemic. Coronavirus Disease 2019 or COVID-19 is an infectious disease caused by severe acute respiratory syndrome (SARS-CoV-2). Indonesia reported its first case of COVID-19 on March 2, 2020 in Jakarta with an international tourist destination to Bali, which was followed by the rapid and widespread spread of the COVID-19 virus to all regions in Indonesia. In connection with this prevention, several local governments in Indonesia implemented a lock down system. Entering the conditions of the new era, the government urges the public to adopt a new way of life to prevent wider transmission as well as prevent infection, namely wearing masks, maintaining distance, maintaining cleanliness, especially hands (Siagian, 2020) .

Reported cases of COVID-19 in Indonesia have generally increased throughout 2020 with some similar trend fluctuations being observed in North Sumatra Province. Data published from February 2020 states that the reported cases of COVID-19 in Indonesia occurred due to inadequate surveillance and imperfect reporting related to surveillance information systems that sometimes fail to report detected cases of COVID-19 to provincial authorities. Early in the pandemic, Indonesian epidemiologists noted the need to improve

testing to better track and control the virus (Dewi & Probandari, 2021) .

As of May 2020, testing in Indonesia was limited, with only 225 tests administered per 1 million people, or 5.6% of the tests needed based on projections at the time. The problem of low testing is exacerbated by inadequate tracking of confirmed cases, with data from the North Sumatra Provincial Health Office showing that the average number of traced contacts per case was just nine people in 2020, dropping to less than 5 people per case in October 2021 (Suryana et al., 2021) .

A sero survey was conducted to see the total population in Indonesia who already have antibodies against the SARS-CoV-2 virus. Sero Surveys are useful for monitoring trends, geographic distribution, and directing interventions. The Ministry of Health together with the Ministry of Home Affairs and the UI Faculty of Public Health (FKM) Pandemic Team announced the results of an antibody serological survey of the Indonesian population against the SARS-CoV-2 virus. The result is that 86.6% of Indonesia's population has antibodies against COVID-19 (Sinulingga, 2021) .

The sero survey method uses a blood test to check the body's antibodies to the virus. This method is effective for measuring the exposure of a population to the SARS-CoV-2 viral pathogen. Currently the government is carrying out sero surveys in 34 provinces in Indonesia, covering around 1,000 villages and agglomeration areas (Ariawan et al., 2022) . One of the

provinces that carried out the Sero survey was North Sumatra Province, especially in Medan City. As for the implementation of the sero survey conducted in the Medan City Region, there were 10 Sub-Districts and 4 Community Health Centers.

The target sample for the entire area of Medan City is 205 samples. This sample is divided into each region, namely: Padang Bulan (19); City Glugur (16); Sidomulyo (17); Durians (14); Tegal Sari Mandala III (11); Martub (14); Pulo Brayan I (17); Belawan Bahari (10); Middle White Sei (10); Southeast Medan (14); Mansyur Base (16); Sidorejo I (16); Simalingkar (16); Tegalsari I (15). With a target sample of 205 people, only 194 people were collected. Not collecting 100% of

the population because there were some people who refused, died, moved areas or could not take part in the survey because the condition of the respondents was not possible.

Methods

The type of research used is qualitative research, this study aims to see how the sero survey of the Medan City Health Office is carried out. The samples in this study were Key Informants and Supporting Informants, sample selection was based on *Purposive Sampling*. Research data were collected using *in-depth interview techniques* (in-depth interviews) as well as field observations.

Results

Table. 1. Health personnel in carrying out the Sero survey

Key Informants	Supporting Informants
<i>"... In carrying out the sero survey, the health workers who participated in the activity were quite maximal, both in terms of the number of officers who took part in the activity and the division of their tasks. In each of the puskesmas, there are doctors and midwives, of course, whose job is to take blood samples from respondents in sero survey activities, then there are employees from the field of surveillance at the Medan City Health Office who are tasked with monitoring the continuation of sero survey activities, and several enumerators who take part in the activities as well. waste destroyer whose job is to destroy waste in sero survey activities..."</i>	<i>"... yes, in my opinion the health workers involved in the sero survey are sufficient, because each health center has a doctor and midwife on standby, then other parties who also monitor and coordinate the sero survey activities..."</i>

Table. 2. Provision of facilities and infrastructure in sero survey

Key Informants	Supporting Informants
<i>"...Regarding the facilities and infrastructure in sero survey activities, yes, such as deck tubes, then waste bins that are used as containers for disposing of used syringes, and of course reporting from sero survey activities carried out in accordance with a predetermined time period, then sent to all of the puskesmas also provided good infrastructure, they carried out the sero survey activities in one room and then they provided several tables for the registration area, a sampling area and a place for interviews, now this certainly really helps the sero survey activities, because with them they make arrangements In a room like that, respondents who come can follow the activities regularly."</i>	<i>"... In my opinion the matter of procuring facilities and infrastructure has been thoroughly distributed to each health center without any deficiencies..."</i>

Table 3. Funds provided in the implementation of sero survey

Key Informants	Supporting Informants
<p>"...The deck's own funds are given daily to officers who take part in the implementation of the sero survey. The funds provided during the sero survey itself, namely funds intended for food and transportation expenses for each officer who took part in the sero survey activities, while for surveillance officers who act as PJAL, PJT, PJO are given funds of Rp. 300,000 per day, then for enumerators and waste destroyers are given Rp. 150,000 per day, then for respondents whose blood samples were taken during sero survey activities they are also given Rp. 150,000 per person..."</p>	<p>"... Funds in implementation have been allocated correctly and evenly, then for respondents apart from receiving a certain amount of funds for serosurvey implementation, they are also given light food for consumption..."</p>

Table 4. Target Sample to be Achieved

Key Informants	Supporting Informants
<p>"...The reason for not reaching the target was that there were a number of people who had died, so many of them had moved to other places, they didn't live in Medan anymore. Kek this one, Muhammad Yatno, we don't know if he has moved house, so it turns out that after we surveyed it turned out that he had moved house to Java, right? So we can't take him as a sample, right? In the case of those who refuse, no one rejects the grateful person. At least if you don't die, just move house ..."</p>	<p>'...Yes, there are a lot of them who died, so where can we take them, then some of them have moved house. If nobody refuses, well, at least it's just moving house or he doesn't die ..."</p>

Table 5. Obstacles in the Implementation of Serosurvey

Key Informants	Supporting Informants
<p>..." The problem is that sometimes people are scared, right? Even though it has been explained, but you know how this society is, right? But in the implementation of this survey, we will have money for them, so thankfully, many people, when they hear the word cash, just want to do that, right? Then the problem is again, let's hand over all the officers to the puskesmas, now the puskesmas is sometimes lazy, lazy in the sense that for example there are people who don't want to have their blood drawn or they refuse to do so, well there are no efforts made by the puskesmas, for example persuading him or giving efforts try to get him to have his blood drawn, so the target sample will be reduced at this rate..."</p>	<p>..."The problem is that the Indonesian people tend to be late, so sometimes the puskesmas who have come have to wait a long time, and the puskesmas staff are not enthusiastic about carrying out this sero survey so the result is that there are a lot of people who don't have enough samples..."</p>

Table 6. Conformity With Guidelines from the Center (Ministry of Health) Regarding Serosurvey

Key Informants	Supporting Informants
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...” *We are in accordance with the center, because we are the procedures and data, the sample targets have all been determined by the Ministry of Health so we Medan Health Office just have to carry it out. It is very compatible with the Ministry of Health...*”

. So the procedure is that we all follow them, we don't change anything. They explain the procedure like this, yes, we also follow them, there is nothing that we differentiate...”

Table. 7. How was the achievement of the serosurvey implementation target carried out at the Medan city health office?

Key Informants	Supporting Informants
<p>...” <i>Yes, if the target is not achieved 100%, it's because some of the respondents have died, some have moved, so you can't force yourself if you're dead, what do you do, right? But for the samples that were still in the village, all of their blood could be taken, those that could not be taken were those who had moved and those who had died earlier. But for the implementation of the sero survey everything went well because we have followed the procedures from the center.... Starting from the manpower and the implementation process, everything is in accordance, because the reporting for the center also has a deck, so the implementation has to be the same as the technical guidelines, you can't make it up. But for the respondent's achievement, yes, that was not 100% yet...</i>”</p>	<p>....”<i>It has actually been achieved, because what made it not achieved was the respondent who was declared dead and moved. So we, the implementing team, cannot find a replacement to complete it 100%. Because the names of the respondents, too, have been written down by the central person, the names of the respondents, the central person has managed it. So we can't just look for replacements at random so we can achieve the 100% target....</i>’</p>

Discussion

Health personnel in carrying out the Sero survey

Health workers are everyone who has received both formal and non-formal education who dedicates himself in various efforts aimed at preventing, maintaining and improving health status (Kurniati & Efendi, 2011).

Based on the results of interviews related to health workers in the implementation of the sero survey, key informants and supporting informants said that the number of health workers in the sero survey was good enough and optimal. This is in line with the research of Ita Latifah & Husnah Maryati (2018), based on the results of interviews in this study, the availability of Human Resources (HR) in prolanis activities is felt to be sufficient and the officers share tasks with each other in prolanis activities.

And in line with Ahla Hulaila's research, et al (2021), the availability of cadres as Human Resources (HR) at the Durrotu Aswaja PosKestren is in accordance with the guidelines for organizing and fostering the PosKestren. The provision for the number of cadres at each poskestren is at least 3% of the total santri or it can be adjusted to the needs of the activities and programs that have been developed. The Durrotu

Aswaja Islamic Boarding School has 25 people who act as cadres at the Poskestren with a total of 500 students.

However, it is inversely proportional to the research of Sarmaulina Sitompul, et al (2016), in his research in terms of the quantity aspect of Human Resources (HR) in the implementation of Prolanis at BPJS Kesehatan, this is due to the fact that assignments are still found when the activity takes place. Where there were only 2 doctors in the *reminder activity (sms gateway)*, as well as *home visit* activities that had not been carried out due to a lack of human resources to make visits to the participants' homes which were quite far away.

From the explanation above, it can be concluded that activities will run systematically when human resources are sufficient and tasks can be divided evenly during activities. The importance of the role of the person in charge of the activity is to better fulfill the quantity of Human Resources (HR) in the activities to be carried out.

Provision of facilities and infrastructure in sero survey

From the results of the interviews that were conducted with the informants, all of their statements said that the facilities and infrastructure in the sero survey activities included waste bins, tubes, and

reporting which had been distributed equally across all health centers in Medan City. This is in line with the research of Ahla Hulaila, et al (2021), the facilities for carrying out promotive and preventive activities are complete where the environment of the Islamic boarding school hall is wide enough to accommodate many students, then the availability of complete medical equipment and medicines that are appropriate for worn.

However, this is not in accordance with Annisa Novita Sary's research (2018), where the results of interviews in this study found that the readiness of the facilities to support the SP2TP program at the Puskesmas was still incomplete. Only the report format is available, not the SP2TP guidebook, then the supporting technological facilities are not yet complete in the working area of the Puskesmas. This of course will hinder officers from inputting report data.

From the explanation above, it can be concluded that facilities and infrastructure play an important role in implementing activities. This is of course a reminder for those in charge of implementing activities to have adequate facilities and infrastructure for the success of the activities to be carried out. This is in accordance with research by Yanuar Ardani (2010) which states that there is a relationship between the completeness of facilities and infrastructure and the successful implementation of the posyandu model.

Funds provided in the implementation of sero survey

From the results of interviews that were conducted with informants, they said that the amount of funding given per day for all officers had been allocated evenly. This is in line with Ahla Hulaila's research, et al (2021), which stated that most administrators of poskestren activities stated that funds were available for implementation.

The results of this study are also in line with the research of Sarmaulina Sitompul (2016), which states that funding for Prolanis activities is in accordance with PMK regulations No.59 of 2014 concerning Standard Health Service Tariffs which include medical education/consultation, reminders (SMS gateway), club activities, health monitoring, medication administration, home visits, and monitoring carried out in Prolanis activities.

And also in accordance with the results of research by Ita Latifah & Husnah Maryati (2018), which stated that the availability of the budget was deemed sufficient to carry out activities but was hampered by delays in returning money from the BPJS. From the explanation above, it can be concluded that the availability of an

adequate and adequate budget greatly supports the implementation of the activities being carried out.

The definition of process in KBBI is a sequence of changes (events), it can also mean a series of actions, management or processing, the educational process is changing something into something else (Zulkarmain, 2021).

Target Sample To Be Achieved

Based on the results of interviews with key informants and supporters regarding the non-fulfillment of the sample target in the implementation of the serosurvey at the Medan City Health Office because several people died or moved to live outside the sample area.

The research results are also in line with the research conducted by (MBBS, 2020) he said that 100% of the population was not collected because there were some people who refused or could not take part in the survey because the conditions related to the respondents made it impossible.

The results of this study are also the same as the research conducted by (Yunita Kemala Dewi, 2021) that the respondents were not collected according to the target to be achieved, namely because there were some respondents who moved areas or no longer settled in the area they started with the sero survey.

According to research (Shervani, 2021) The selected respondents are the same respondents as the previous sero survey studies in July 2022 and December 2021. The selection of the same respondents aims to be able to see changes in antibody levels from December 2021 to January 2023. And those who can be used as respondents are someone who lives in these areas and declared not dead al (Shervani, 2021).

Based on the data that has been obtained, that the city of Medan has not reached the target of 100%. It is hoped that in the future the government or health workers can increase public understanding of the Sero Survey, equip the public with correct and correct information to avoid misinformation/hoaxes, increase community and stakeholder participation in the implementation of the Sero Survey.

Obstacles in the Implementation of Serosurvey

Based on the results of interviews with key informants and supporters regarding Obstacles in implementing the serosurvey at the Medan City Health Office, it was found that the puskesmas was lacking in providing education, making efforts so that people wanted to take part in this serosurvey.

The results of this study are also in line with research conducted by (Muthusamy Santhosh Kumar, 2020)him saying that the community needs education from health workers, with education, people's mindset will change for the better. Education is really needed by the community because it can suppress the concerns of the community itself. Public concern is caused by a lack of clear information and accepted facts

Another opinion ie (Shervani, 2021)also said that health workers as a trusted place or media in terms of credible communication to build public trust regarding sero surveys by disseminating news that is timely, consistent, clear, safe, and trustworthy.

The results of this study are also supported by research (Yunita Kemala Dewi, 2021)that in order to foster widespread public acceptance of the Sero survey, the Central Government and Regional Governments must devise and implement a communication strategy by increasing people's understanding, attitudes and behavior so that they are motivated to get a COVID-19 booster vaccination.

It is hoped that in the future the government or health workers can increase public understanding of the Sero Survey, equip the public with correct and correct information to avoid misinformation/hoaxes, increase community and stakeholder participation in the implementation of the Sero Survey.

Conformity With Guidelines from the Center (Ministry of Health) Regarding Serosurvey

Based on the results of interviews with key informants and supporters regarding compliance with the Ministry of Health's guidelines in implementing serosurvey at the Medan City Health Office, it was found that the implementation of the sero survey conducted at the Medan City Health Office was in full accordance with the serosurvey guidelines from the center (Ministry of Health).

This is evidenced by the Medan City Health Office in that the collection was carried out on the same sample as in 2022, so the stages were carried out; 1) dissemination of sero survey activities in 2023 to all stakeholders (city/district health offices and 34 Prov Health Offices), 2) conduct on job training (OJT) for enumerators, community leaders, religious leaders, PJO (person in charge of operations), PJT (person in charge of Technical Responsibility) and PJAL (Logistics Person in Charge) Kab. Deliserdang, Kab, Tanah Karo, Binjai City and Medan City which were carried out in Medan City, 3) Data collection activities in Prov. North Sumatra a number of respondents, the distribution of respondents came from Medan City 277 respondents

(40.7%), Binjai city 100 respondents (14.7%), Kab. Karo with a target of 118 respondents (17.3%), Kab. Deli Serdang 202 respondents (29.7%), in Prov. North Sumatra and 4) data analysis at the BKPK Laboratory, the Ministry of Health and network laboratories in DKI Jakarta.

How was the achievement of the serosurvey implementation target carried out at the Medan city health office?

Based on the interview results it was found that:

1. Medan city with a target of 205 respondents, but 194 people (95%) attended and were able to take blood samples.
2. Binjai City targeted 100 respondents, but 84 people (84%) came and blood samples were taken from 84 people (100%) with a response rate of 84%.
3. Regency. Karo with a target of 118 respondents, with a total of 92 people (77.9%) who came and 91 people (98.9%) blood samples were taken with a response rate of 77.9%.
4. Regency. Deli Serdang with a target of 202 respondents, with a total of 169 people (83.6%) who came and blood samples were taken from 168 people (99.4%) respondents with a response rate of 83.7%.

Challenges and Solutions

During data collection, the main challenge was inviting respondents to be willing to come to the data collection site according to; place, date and time that has been determined, so that thanks to the help of local health workers, the enum team, PJO, PJT, PJAL District/City Health Office and the big role of the guides who come from the Village/Kelurahan where data is collected, various Respondent collection solutions, such as:

1. Completing the administration of data collection to the village head and related health centers.
2. Two days before the implementation of the Puldat guideline, the potential respondents had been identified from the list provided, via telephone or visiting potential respondents.
3. Good preparation and coordination at the location where the data collection was carried out.
4. Convey to prospective respondents the purpose and benefits of sero survey for the local community in particular, and nationally in general.

Conclusion

The serosurvey at the Medan City Health Office efficiently utilized resources and followed Ministry of Health procedures for fund disbursement. However, challenges in achieving the target sample arose due to some respondents being deceased or relocating, impacting the survey's overall completion. Despite efforts to substitute respondents, adherence to the Ministry of Health's guidelines hindered achieving a 100% target.

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Author Contribution and Competing Interest

All authors contributed to article writing.

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