JHPM Journal of Health Policy and Management (2021), 06(03): 190-202
Masters Program in Public Health, Universitas Sebelas Maret
Research

Management Analysis of the Implementation of Covid-19 Vaccination in Reducing Positivity Rate in Regency Health Office of Boyolali, Central Java

Tifa Aviandari[1)], Eti Poncorini Pamungkasari[2)], Bhisma Murti[1)]

[1)]Masters Program in Publis Health, Universitas Sebelas Maret
[2)]Faculty of Medicine, Universitas Sebelas Maret

ABSTRACT

Background: The results of a vaccine acceptance survey conducted by the Ministry of Health together with the Indonesian Technical Advisory Group on Immunization (ITAGI) with the support of UNICEF and WHO in September 2020 showed that most people (74%) were aware of the government's plan to carry out COVID-19 vaccination. The government targets 181,500,000 Indonesians to receive the vaccine to achieve herd immunity. Through this vaccination effort, it is hoped that it will reduce the COVID-19 positivity rate. The positivity rate is the ratio between the number of positive cases of Covid-19 and the number of tests carried out. The purpose of this study was to qualitatively examine the management analysis of the implementation of Covid-19 vaccination in reducing positivity rate in Boyolali Regency Health Office.

Subjects and Method: This was a type of descriptive research using a qualitative approach. Determination of informants is done by purposive sampling. Data was collected through in-depth interviews, document review and observation. The data is processed through the stages of data reduction, data presentation and conclusion drawing and triangulation of sources and methods.

Results: The implementation of vaccination in the coverage area of the Boyolali Health Service was able to reduce the positivity rate in Boyolali. The COVID-19 vaccination procedure is carried out based on the requirements for the vaccine recipient community. According to the coordinator of the vaccination implementation at one of the hospitals in Boyolali (informant 1), they screened the patient's condition before starting the vaccination. In addition to screening medical history, vaccine participants must be confirmed to be in a negative condition or not suffering from COVID-19 disease. Data from the Boyolali Health Office shows that since the vaccine began (mid-February), the number of COVID-19 sufferers has decreased.

Conclusion: The management of the Covid-19 vaccination implementation in the Boyolali Health Service coverage area was able to reduce the positivity rate in Boyolali Regency. After giving the vaccine, the number of positive Covid-19 patients is in the range of 10 to 20 cases per day.

Keywords: vaccination, Covid-19, positivity rate

Correspondence:
Tifa Aviandari. Masters Program in Public Health, Universitas Sebelas Maret. Jl. Ir. Sutami 36A, Surakarta 57126, Central Java. Email: aviandaritifa@gmail.com. Mobile: 089-682108211.

Cite this as:
Aviandari T, Pamungkasari EP, Murti B (2021). Management Analysis of the Implementation of Covid-19 Vaccination in Reducing Positivity Rate in Regency Health Office of Boyolali, Central Java. J Health Policy Manage. 06(03): 190-202. https://doi.org/10.26911/thejhpm.2021.06.03.04.

BACKGROUND

The COVID-19 pandemic has had an impact on the health, economy and social aspects of society. Almost all countries in the world are affected by this pandemic. As of mid-December 2020, globally there are more

than 70 million cases of COVID-19 with a death toll of more than 1,500,000 people (source: covid19.who.int, 2020). Since the first case of COVID-19 was announced on March 2, 2020, until mid-December 2020 there have been more than 600,000 confirmed cases with a death toll of more than 16,000,000.

Coronaviruses are a group of viruses that can cause disease in animals or humans. Several types of coronavirus are known to cause respiratory tract infections in humans ranging from coughs and colds to more serious ones such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). A new type of coronavirus that has been found to cause COVID-19 is SARS-CoV-2. Corona Virus Disease 2019 hereinafter referred to as COVID-19 is an infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARSCoV-2) According to research by Malik A, Haldar P, Santosham M, Ray A (2019) with the title Introducing rotavirus vaccine in the Universal Immunization Program India: From evidence to policy to implementation revealed that the introduction of rotavirus vaccine to the Indian community was able to strengthen public perceptions of rota virus prevention, besides that government stewardship with well-defined roles for development partners could enable the introduction of new vaccines to the fullest in the country. the.

Herd Immunity or herd immunity will be formed if most people are vaccinated. High vaccination coverage requires the participation and cooperation of various parties to overcome public reluctance and hesitancy towards vaccination, increase acceptance by ensuring access to accurate information about COVID-19 vaccination. The implementation of the Test, Tracing, Follow-up (3T) also requires cooperation from various parties to ensure that those who are at risk are tested, traced for the possibility of transmitting to others and if sick are treated until recovered so they can return to productivity (Kemenkes RI, 2019).

Protection from vaccines is an effective way to achieve herd immunity, the government targets 181,500,000 Indonesians to receive vaccines to achieve herd immunity. Meanwhile, regarding the vaccination program in Indonesia, based on data in early April 2021, there were 8,553,422 people who had received the first dose of the corona virus vaccine and 3,951-869 people received the second dose (Kemenkes RI 2020).

Through this vaccination effort, it is hoped that it will reduce the COVID-19 positivity rate. The positivity rate is the ratio between the number of positive cases of Covid-19 and the number of tests carried out. Based on the standards issued by the World Health Organization (WHO), the Covid-19 positivity rate should be less than 5%, but based on the Ministry of Health chart at the beginning of April 2021, the Covid-19 positivity rate in Indonesia for the last 30 days is still above the WHO standard, namely 19.9% (WHO, 2020).

SUBJECTS AND METHOD

1. Study Design

Qualitative study with source triangulation. Determination of informants is done by purposive sampling. Collecting data by in-depth interviews, document review and observation. The data is processed through the stages of data reduction, data presentation and conclusion drawing.

2. Inclusion Criteria

In this study, the inclusion criteria were officers implementing the Covid-19 vaccination in health facilities in the area covered by the Boyolali District Health

Office so that the data collected was relevant.

3. Exclusion Criteria

In this study, the exclusion criteria were implementers outside the Covid-19 vaccination program coverage of the Boyolali District Health Office

4. Instrument

The research instruments in this study were in-depth interview sheets, documents on the implementation of the Covid-19 vaccination, and applications used in the implementation of vaccinations to monitor and evaluate the vaccination program.

5. Data Analysis

The data is processed through the stages of data reduction, data presentation and drawing conclusions drawn through in-depth interview techniques, document review and field observations. The data obtained from the research results in in-depth interviews will be presented in the form of word descriptions and direct quotations from the informants that are adapted to the language and views of the informants. Data analysis in this study include:

The data analysis process begins when the researcher sets the problem and the research location, then when he goes to the field

Researchers collect and present data as an early stage of proving the existence of perspective, data is collected from the results of in-depth interview transcripts, recordings and analyzed.

Test the validity of the data by triangulation, which is a technique of checking data from various sources

Interpreting the informant's statement. Describe the informant's statement in the form of direct sentences. The researcher gives a brief statement about what is actually experienced by the informant and then connects it with the existing theory.

RESULTS

The results showed that the management of the implementation of the Covid-19 vaccination in the coverage area of the Boyolali District Health Office was able to reduce the positivity rate in Boyolali district. In the process of implementing the COVID-19 vaccination, the Boyolali Health Service carried out several procedures. The first step is to determine the conditions for people who want to become Vaccine participants from the Boyolali Health Office in accordance with the statement of informant 1.

"Before the vaccine starts, we first screen the condition of the names of the vaccine participants who enter us / The target of the vaccination who does not have a temperature above 38 degrees, and does not suffer from hypertension, the target who does not have the disease is a patient on routine treatment. last 1 month. The target is not in chemotherapy treatment".

In addition to screening medical history, vaccine participants must be confirmed to be in a negative condition or not suffering from COVID-19 disease. This was revealed by informant 2 as a health worker who served as a vaccine provider from the Health Office in the following interview excerpt:

"We have to make sure that the vaccine participants are in a fit condition. There is no disease that can affect such as hypertension, no lupus, or even a fever that must be anticipated. Maybe the vaccine is postponed until the person concerned is healthy. Vaccine recipients must also not test positive for COVID-19. The participants who take the vaccine, of course, must also be registered in the system prepared by the Health Office" informant 1

In addition to being free from comorbid diseases and having never been infected by COVID-19, one of the require-

ments as a recipient of COVID-19 is to be registered on the list of vaccine recipients from the Health Service. The vaccines given to the Boyolali community themselves are SINOVAC and ASTRAZANECA vaccines. The SINOVAC vaccine is a vaccine that comes from a Taiwanese pharmaceutical company called Sinovac. The Sinovac vaccine was developed by Sinovac Biotech Ltd. This vaccine has passed the third phase of clinical trials conducted in Brazil, Turkey and Indonesia. Meanwhile, the Astrazaneca Vaccine is the result of a collaboration between the University of Oxford and AstraZeneca which was developed since February 2020. The AstraZeneca vaccine for COVID-19 has undergone clinical trials in the UK, Brazil and South Africa. Both vaccines have been declared ready for use after going through clinical testing at the Food and Drug Supervisory Agency (BPOM) of the Republic of Indonesia.

The first process carried out in the implementation of vaccine administration in Boyolali Regency is to collect data on the people who will get the vaccine. Data collection on the names of vaccine recipients begins at the kelurahan level where village officials will collect data on the people who are the target of receiving the vaccine. This was stated in the excerpt of an interview with informant 1 as the coordinator of the implementation of vaccination at a hospital in Boyolali. Here is an excerpt from the interview.

“Data from participants is down to top, so from the lowest level to the top. The target data collection was carried out through the village apparatus and then the data was allocated to the nearest *puskesmas*. After that, the data obtained is immediately verified through the P-Care application, informant 1.

The same thing was also expressed by informant 3 as a Health Worker implementing Vaccines at the Boyolali District Health Office. The Health Office registers the data obtained from the Kelurahan to then get a recommendation to participate in the vaccination process. The following are excerpts from interviews with Informants 3:

The data collection was in accordance with what was suggested by the central government and then followed up by the local government especially Boyolali then to the village head and RW head then RT after the data was collected and then submitted to the Health Office to be recorded and then scheduled to administer the vaccine.” Informant 1

After collecting data on individuals who will receive vaccines from the Boyolali Health Office, the next aspect that must be prepared by the Boyolali Health Office is a health facility as a place for vaccination. Vaccination itself is carried out not only at the Puskesmas in the Boyolali Regency area, but it is said that it is also working with the private sector. This was stated by informant 1 as the Person in Charge of Vaccination at the Hospital in the following interview excerpt:

"Data collection and determination of health facilities for the implementation of vaccines is carried out through the Boyolali district health office, in collaboration with private hospital health facilities, hospitals, and pratama clinics in the Boyolali health office coverage area. Private hospitals were then involved because if they only relied on the Puskesmas, it would obviously take a long time.” Informant 1

Not all health facilities in Boyolali can implement the COVID-19 vaccination for Boyolali residents. The Health Office also verifies the health facilities that will deploy the vaccine. In addition, there are certain conditions that must be met by the health facility that is implementing the vaccine-

tion. This was stated by one of the health workers implementing the vaccine in the following interview excerpt:

"The determination of health facilities to be able to carry out vaccinations must meet the requirements: have health personnel implementing vaccinations (vaccine teams), and meet the requirements set by the Health Office which of course are based on directives from the center." Informant 1

Requirements regarding health facilities that can carry out the vaccination process are regulated in the Decree of the Director General Number HK. In the Decree there are three conditions that must be met, namely:

a) have health personnel implementing COVID-19 vaccination
b) have a cold chain facility in accordance with the type of COVID-19 vaccine used or in accordance with the provisions of the legislation; and
c) has an operational permit for Health Service Facilities or is determined by the Minister in accordance with the provisions of the legislation.

The health office will then distribute and place the vaccination participants based on the area where the vaccine participants live. Vaccination participants will be placed in a health facility whose area is closest to the participant's residence. This can be expressed in excerpts from interviews with informant 3 as health workers implementing vaccines in the following interview excerpts:

"The Health Office lists the existing health facilities in Boyolali, both Hospitals and Community Health Centers (*Puskesmas*) per region, then the Health Office divides the targets per region and the health facilities are adjusted according to the area where the targets are located," informant 3.

Health facilities that carry out vaccination programs must also ensure that there is a place to store vaccines distributed by the Health Office. In the Director General's Decree Number HK.02.02/4/1 /2021 concerning Technical Guidelines for Vaccination Implementation in the Context of Combating the Covid-19 Pandemic, it is explained related to vaccine storage standards, from car temperatures to distribute vaccines to rooms and crates to store the vaccines. Storage space must be protected from direct sunlight. The storage of COVID-19 vaccines is arranged in such a way as to avoid incorrect collection, it needs to be stored separately in different vaccine shelves or baskets so as not to be confused with routine vaccines. If possible, the COVID-19 vaccine is stored in a different freezer or vaccine refrigerator, separated from routine vaccines

Before the vaccination starts, the COVID-19 vaccine officer will re-verify the data of participants who come to visit health facilities to be vaccinated. Registration and verification of participant data will be inputted online through an application called P-Care. This was revealed by informant 1 as the Person in Charge of Vaccination at the Hospital in the following interview excerpt:

"Registration and verification of targets is carried out through the pcare application to the target data verification menu, after that by using the target NIK, registration will be carried out through the PCRAe application for screening, and printing a vaccine card as proof that the target has received the covid-19 vaccination" informant 1

Interviews with verification officers in administering vaccinations from the Boyolali Health Service also stated the same thing. Verification is done online where data from vaccination participants is then

inputted into an application portal called P-Care.

In the process of providing vaccination services, the administrative process, including verification and registration, is carried out online. Online registration is also carried out in terms of submitting needs for health workers and facilities to be able to carry out vaccination activities for the Boyolali community. For filing and recording needs for health workers and facilities, this is done through an application called SMILE. This can be expressed by informant 1 as the Person in Charge of Vaccination in Hospitals in the following interview excerpt:

"The approval of needs and preparation of vaccine distribution plans and logistics are audited through the SMILE application, so that the BHP and logistics that have been used by each health facility can be recorded by the application and make it easier to calculate the use of vaccines and logistical needs in each health facility serving vaccinations. " informant 1

From the results of interviews with vaccine health workers, the submission of the need for the implementation of the tan requirement, which is then vaccinated, is carried out online by the Health Office, which then conducts verification and final determination of the needs of each health facility that administers vaccinations to the application community.

From the results of the documentation study that the researchers conducted on the Director General Number HK.02.02 /4/1/2021 concerning the Technical Instructions for the Implementation of Vaccination in the Context of Combating the Covid-19 Pandemic, it was explained the need for facilities and infrastructure as well as the vaccines to be given to each region. Vaccine allocation and other vaccination logistics (Auto Disable Syringe/ADS, Safety Box and alcohol swab) for each puskesmas and other health care facilities are determined based on verified target data through the COVID-19 Vaccine One Data Information System. Allocations at the Provincial and District City levels are carried out by taking into account the estimated vaccine wastage rate (the multi-dose vaccine wastage rate estimate is 15%) as well as adequate logistical buffer stock (for ADS added 5%) in order to support the implementation of COVID-19 vaccination services.

From the explanation above, it can be seen that the number of vaccines to be given to health facilities as well as to a district as a whole is carried out through an online system which will later be verified and approved by the Provincial Health Office. In the process, the provincial health office also submitted a proposal to the center to be able to get the vaccine in their respective regions. From the submission made by the Provincial Health Office, each district will get the vaccine according to their needs.

As previously explained, there are four tables in the vaccination room. Each has a different task. The first table is a table that is dedicated to registering and verifying data. Then the second table is for conducting anamnesis screening and simple physical examinations to assess the feasibility of the vaccine participants in participating in vaccination activities. As explained in the previous sub-chapter, there are several conditions that must be met by Boyolali residents who will participate in vaccine activities. At the second table, education was also carried out on the implementation of the COVID-19 vaccination, the type of vaccine that will be injected into the body and the side effects that may arise after the vaccination process.

The implementation of new vaccinetions is carried out at the third table. The two vaccines used in the Boyolali community, either the Sinovac vaccine or the Astrazaneca vaccine, are injected into the muscle of the arm. After that, post-vaccinated individuals were allowed to go home after waiting for 30 minutes after being injected. The reason the patient is allowed to wait up to 30 minutes after vaccination is to prevent the occurrence of Adverse Events after Immunization (AEFI) and can provide good first aid when one of the participants experiences these symptoms. Reactions that appear if anyone has AEFIs are usually in the form of dizziness, fever, chills.

The Boyolali Health Office also continues to monitor the implementation of the vaccination program carried out by each health facility in the Boyolali Regency area. Either online or offline. Online, the Boyolali Health Service monitors the number of vaccines released or the number of vaccines that have been used. The following is an excerpt from an interview with the Person in Charge of Vaccination at the Hospital, informant 1

"Monev is carried out by verifying the target data according to the amount of data obtained through the kelurahan, then the target data per kelurahan will be scheduled by each health facility to schedule the implementation of the vaccine. After that, the Boyolali Health Office carried out monitoring and evaluation on the achievement of the target dose 1 and 2 input data through the SIMAS VAN COBOY district application." Informant 1

Simas Van Coboy itself is a portal designed by the Boyolali District Health Office as a data center for the implementation of the COVID-19 Vaccine. All participant data, vaccine distribution, and vaccination schedules are all on the site. The site is specially designed for health workers in the Boyolali Health Service area who are involved in the implementation of vaccinetions. To enter the site, a user id and password are required for each health facility implementing the vaccine.

The vaccination program itself is one of the strategies of the Indonesian government to minimize the spread of COVID-19 in Indonesia. The government wants vaccination to be one way to reduce the number of positive patients in Indonesia. One of the measuring tools to see the success is using the positivity rate.

One aspect to measure the positivity rate is the number of specimens examined. The positivity rate is the ratio of the positive number to the number of specimens tested. The Boyolali Health Service stated that this vaccine was intended to reduce the number of COVID-19 sufferers in their area. Moreover, Boyolali Regency had become one of the areas that was quite severely affected by COVID-19. July 2020, Boyolali became a red zone in the spread of COVID-19 even though the recovery rate was high. In October 2020, only one sub-district out of a total of 22 sub-districts in Boyolali was categorized as a red zone. The rest falls into the red zone category. It means that the spread of COVID-19 in the area is quite dangerous.

One of the difficulties experienced by the Boyolali Regency government, in this case the task of the Health Service, is to identify people with COVID-19. According to the Head of the Boyolai District Health Office, the spread of COVID-19 in his area has increasingly spread and is difficult to identify. Moreover, the community's intention to carry out testing in the form of SWAB PCR which can find out whether they have COVID-19 or not is very low so that knowing someone is suffering or not is difficult to identify. At the end of 2020, precisely in

December, COVID-19 sufferers in Boyolali reached 2,788 positive people.

Moreover, in December 2020, Regional Head Elections (Pilkada) will be held. This political event made the number of COVID-19 sufferers quite high. In December 2020, the positivity rate for COVID-19 sufferers in Booyolali was 9.4%. Therefore, the Boyolali Health Office hopes that the vaccine can reduce COVID-19 sufferers in Boyolali.

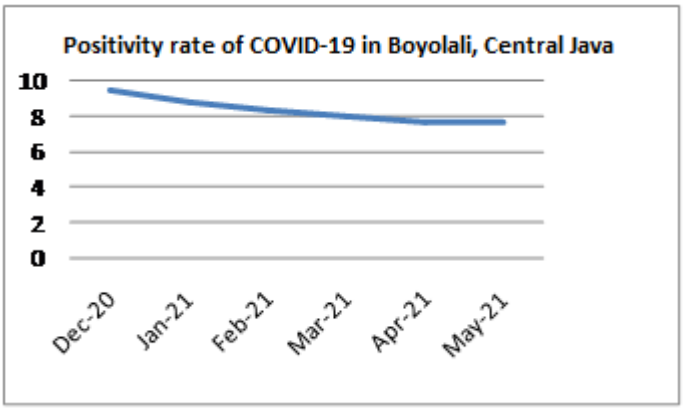

Figure 1. Positivity rate of COVID-19 in Boyolali, Central Java

DISCUSSION

Based on the results of data analysis regarding the management analysis of the Covid-19 vaccination implementation in the coverage area of the Boyolali District Health Office, it follows that:

1. **A well-coordinated and proven effective vaccine management process is needed in distributing vaccines to all regions in Indonesia where all regions are.**

The study by Susyanty et al. (2014) shows the state of the condition of the availability of vaccines and supporting facilities and infrastructure in Indonesia before the COVID-19 Pandemic, where the pandemic faced more critical health conditions and also required special attention. Moreover, the number of COVID-19 sufferers in Indonesia continues to increase every day and it seems that the COVID-19 Task Force Team cannot control it. Therefore, the health management function is a necessity that must be understood and implemented by health workers and also health facilities that administer the COVID-19 vaccine.

The government through the Ministry of Health then released a Decree (SK) of the Director General of Disease Prevention and Control of the Indonesian Ministry of Health No. HK.02.02/4/1/2021. It describes the management process for the implementation of vaccination from planning, implementation, to monitoring and evaluation. This decree was adapted from the Decree of the Minister of Health of the Republic of Indonesia No. 1611/Menkes /SK/XI/2005 concerning Guidelines for the Implementation of Immunization. The Decree indicates that the government wants the vaccination process to be carried out in accordance with the applicable management concept. So far, the health policy process, including the implementation of vaccinations and immunizations, has been left to the implementing districts/cities or health decentralization has been carried out. In the decree, the government through the Ministry of Health outlines the pro-

cesses that must be implemented in the COVID-19 Vaccine program. There is a planning, implementation, and monitoring and evaluation process. Broadly speaking, this concept leads to the concept of Management from George Terry (2014) which explains that there are four main processes in Management, namely the planning or planning process, organizing, implementing or actuating, and also evaluation after the program is completed.

2. In the planning process

In terms of health workers, there are several health workers that must be prepared such as registration/verification officers, officers to carry out screening (anamnesis), simple physical examinations and providing education COVID-19 vaccination officers are assisted by officers who prepare vaccines, Officers to make post-covid-19 vaccination observations and give signs of completion and COVID-19 vaccination cards, Officers to record the results of COVID-19 vaccinations, Officers to manage medical waste; and/or Officers to regulate the smooth flow of COVID-19 vaccination services. In health services, the preparation of human resources in the implementation process is clearly a vital aspect because they are at the forefront of the process of implementing health services (Putri, 2017).

Health facilities are also considered in the planning process. The vaccine implementation team must pay attention to the availability of rooms and places to store COVID-19 vaccines. Testing where to store vaccines is clearly one of the challenges in the process of implementing COVID-19 in various countries because there are certain standards that must be met in the storage of vaccines that have been distributed. This is done to maintain the quality of the vaccine. Each vaccine clearly has a different character and of course has resistance at different temperatures (Santos et al., 2021).

3. The process of implementing the vaccination

In the process of implementing the vaccination, there are several things that must be considered, starting from the application of health protocols during the vaccination process and also the services provided by health facility workers in giving vaccinations. The things that must be considered by vaccination implementers have been explained in full in the Decree of the Director General of Disease Prevention and Control of the Indonesian Ministry of Health No. HK.02.02/4/1/2021. In the decree, there are four service tables that must be prepared in service to patients who come. The first table is the table used to register and verify data. Then the second table is to carry out anamnesis screening and a simple physical examination to assess the feasibility of the vaccine participants in participating in vaccination activities. The third table is the table where patients receive vaccination injections and the fourth table is recording and also giving vaccination participant cards for those who have completed the vaccination process.

4. Monitoring and evaluation

The success of a program can be seen from what is planned with what is done, whether the results obtained are in accordance with the results of the planning carried out. To be able to obtain the implementation of plans that are in accordance with what is planned, management must prepare a program, namely monitoring, monitoring is aimed at obtaining facts, data and information about program implementation, whether the process of implementing activities is carried out in accordance with what has been planned (Sutisna in Arifin 2012). Overall there are two methods of monitoring and evaluation carried out by the Boyolali Health Service in the vaccination process that has been rolling in the

midst of the community. The researcher saw that the Boyolali Health Service carried out an evaluation by looking at the achievement of the targets of the vaccination process carried out by the Boyolali Regional Government. One of the targets in the first phase of the vaccine is the elderly in Boyolali. From the results of interviews with resource persons in the field, the vaccine process has reached the target set by the Boyolali Health Service where 15,000 more elderly residents in Boyolali must finish getting the vaccine.

Another evaluation carried out by the Health Office is to monitor the use of vaccines that have been distributed by the Ministry of Health to each region in accordance with the needs that have been given to the Provincial Health Office for later approval by the central government.

The two forms of evaluation carried out by the Boyolali Health Service are in accordance with the types of monitoring and evaluation activities proposed by Moerdiyanto (in Arifin et al., 2012). According to Moerdiyanti in his writings, there are three types of evaluation, namelyL 1) The input aspects of the project include: human labor, funds, materials, equipment, working hours, data, policies, management, etc. needed to carry out project activities., 2) Process / activity aspects, namely aspects of the project that reflect a process of activities, such as research, training, production processes, providing assistance and so on. and (3) Output aspects, namely project aspects which includes the results of the process which is mainly related to the quantity (amount).

One of the most easily measured output evaluation variables is the number of COVID-19 sufferers, starting from the absence of a vaccine until a vaccine is found and begins to be circulated in the wider community every day. If you pay attention, the number of people with COVID-19 in Boyolali tends to continue to grow, but the percentage increase from day to day is getting smaller.

Another evaluation carried out by the Boyolali Health Service was to look at the symptoms of AEFI in post-immunization patients. AEFI can be dangerous because it can trigger the opposite reaction of the vaccine that is injected into the body. Therefore, vaccine organizers must observe participants who have been vaccinated for 30 minutes when they have been vaccinated. Even the worst risk is that participants who have been vaccinated will experience COVID-19 infection again after being vaccinated (Cucunawangsih et al., 2021)

The effect of vaccination management on decreasing the positivity rate One aspect to see the success of a strategy rolled out in order to break the chain of the COVID-19 pandemic is to look at the positivity rate of an area. The positivity rate itself is a comparison between the number of specimens tested and the number of positive patients in the examination process that has been carried out previously (Wu et al., 2020). The right calculation in measuring the positivity rate can help a country or region in dealing with the COVID-19 pandemic and help the team to predict the direction of this pandemic and also estimate the positive victims who fall every day. (Furuse et al., 2021) Research conducted by Furuse also explains that despite predicting the positivity rate associated with the daily increase in COVID-19 positive patients, the COVID-19 pandemic is still difficult to predict with certainty and accuracy.

From the results of the research that the researchers conducted by collecting information from the health office and also the vaccine service officer in charge of monitoring and evaluation, it was noted that the number of cases in Boyolali

Regency is still increasing, but the number of daily increases is slowly starting to decrease. The Public Health Index (IKM) of Boyolali Regency has also increased from a high risk area to a low risk area.

The results of the positivity rate calculated by the Health Office show a sloping balance that has been described in the previous sub-chapter. Information from the Health Office shows that the decline in the positivity rate occurs because more and more specimens are being tested. This was triggered by a requirement from the Boyolali Regency Government through the Health Service which asked residents to carry out an examination first by carrying out the Antingen SWAB before vaccinating. This is done to ensure that the vaccine is given to the right hands in accordance with the priorities of the Ministry of Health. Moreover, individuals who are positive should not be vaccinated against COVID-19, including those who have a history of being infected with COVID-19.

Research conducted by Furuse, et al. (2021) show that the inspection technique carried out by a region affects the positivity rate during the COVID-19 pandemic. Areas that carry out inspections, for example, make it possible to obtain a lower positivity rate compared to areas that only carry out partial inspections or only carry out examinations of several groups that have the most vulnerable risk of contracting COVID-19. Indonesia itself has a positivity rate that is far from the WHO standard. As of February 2021, the positivity rate in Indonesia is at 35.60%. According to the World Health Organization (WHO), the ideal COVID-19 positivity rate is a maximum of 5 percent. This means that as of today, Indonesia's positivity rate is seven times higher than the WHO standard (Detik.com, 2021).

5. **In Boyolali itself, the positivity rate was at 7.8% in May 2020 where out of 10,000 tests carried out for one month, there were 770 positive cases.**

Therefore, the positivity rate from Boyolali is still below the WHO standard. The Boyolali Health Service has also made improvements to accommodate the need for examinations by trying to establish a special laboratory to conduct antingen SWAB examination. The Boyolali Health Service also asked the Boyolali people who got their turn for vaccines to check themselves so that they could be controlled.

A study Yessica et al. (2016) revealed that the mother's perception of the benefits of immunization is not effective in preventing disease in her baby, because the benefits of immunization have not been felt directly by the mother of babies who have had basic immunization.

AUTHOR CONTRIBUTION

Tifa Aviandari is the main researcher who selects topics, searches, collects data and performs data analysis. Eti Poncorini and Bhisma Murti analyzed data and reviewed research documents.

FUNDING AND SPONSORSHIP

This study is self-funded.

CONFLICT OF INTEREST

There is no conflict of interest in this study,

ACKNOWLEDGMENT

The researcher would like to thank all those who have helped in the preparation of this article and we also thank the Mojosongo Health Center for its availability in collecting this research data.

REFERENCE

Arifin S, Rahman F, Wulandari A (2012).

Dasar-Dasar Manajemen Kesehatan. Jakarta: Pustaka Banua.

Cheng V, Wong S, Chuang V (2020). The role of community-wide wearing of face mask for control of coronavirus disease 2019 (COVID-19) epidemic due to SARS-CoV-2. J Infect. 81(1): 107–114. https://doi.org/10.1016/j.jinf.2020.04.024.

Cucunawangsih C, Wijaya R, Lugito N, Suriapranata I (2021). Post-vaccination cases of COVID-19 among healthcare workers at Siloam Teaching Hospital, Indonesia. Int J Infect Dis. 107: 268–270. https://doi.org/10.1016/j.ijid.2021.05.020.

Detik.com. (2021). Tes makin drop, positivity rate COVID-19 Indonesia kian jauh dari standar WHO. https://health.detik.com/berita-detikhealth/d-5376121/tes-makin-drop-positivity-rate-covid-19-indonesia-kian-jauh-dari-standar-who

Francois M, Obisike E (2016). Accelerating the national implementation of electronic health records in Canada. Europ Sci J. 12(15): 65. https://doi.org/10.19044/esj.2016.v12n15p65.

Furuse Y, Ko Y, Ninomiya K, Suzuki M, Oshitani H (2021). Relationship of test positivity rates with covid-19 epidemic dynamics. Int J Environ Res Public Health. 18(9). https://doi.org/10.3390/ijerph18094655.

Malik A, Haldar P, Santosham M, Ray A (2019). Introducing rotavirus vaccine in the Universal Immunization Programme in India: From evidence to policy to implementation. Elsevier. 37(19): 5817-5824. https://doi.org/10/1016/j.vaccine.2019.07.104

Mubarak N (2009). Ilmu kesehatan masyarakat teori dan aplikasi (Public health science theory and application). Jakarta: Salemba Medika.

Putri A (2017). Kesiapan sumber daya manusia kesehatan dalam menghadapi masyarakat ekonomi Asean (MEA) (Readiness of health human resources in facing the Asean economic community (AEC)). Jurnal Medicoeticolegal Dan Manajemen Rumah Sakit. 6(1): 55–60. https://doi.org/10.18196/jmmr.6127.

Rengganis I (2017). Vaksinasi pada lansia (Vaccination in the elderly). Jurnal Penyakit Dalam Indonesia. 4(4): 167. https://doi.org/10.7454/jpdi.v4i4.-164.

Santos A, Gaspar P, de Souza H (2021). Refrigeration of COVID-19 vaccines: Ideal storage characteristics, energy efficiency and environmental impacts of various vaccine options. Energies. 14(7): 1849. https://doi.org/10.3390/en14071849.

Suara.com. (2021). Pakar Imunologi Jelaskan Pentingnya Skrining Sebelum Vaksinasi Virus Corona (Immunology Expert Explains the Importance of Screening Before Corona Virus Vaccination). Suara.Com. https://www.suara.com/health/2021/01/19/162647/pakar-imunologi-jelaskan-pentingnya-skrining-sebelum-vaksinasi-virus-corona?page=all

Susyanty A, Sasanti R, Syaripuddin M, Yuniar Y (2014). Sistem manajemen dan persediaan vaksin di dua Provinsi Indonesia (Vaccine supply and management systems in two Indonesian provinces). Buletin Penelitian Kesehatan. 42(2): 108–121.

Terry G (2014). Dasar-Dasar Manajemen (14th ed.). Jakarta: Bumi aksara.

Trisnantoro L (2008). Skenario pelaksanaan kebijakan desentralisasi: Apakah menuju desentralisasi setengah hati di sektor kesehatan? (Decentralization policy implementation scenarios: Is

there a half-hearted decentralization in the health sector). Jurnal Manajemen Pelayanan Kesehatan. 11(02): 2008.

Viani K (2017). Pentingnya Perencanaan dalam Program Imunisasi di Dinas Kesehatan Kota Surabaya (The Importance of Planning in the Immunization Program at the Surabaya City Health Office). JAKI; 5(2): 105–110.

Wu Y, Chen C, Chan Y (2020). The outbreak of COVID-19. J Chinese Med Assoc. 83(3): 217–220. https://doi.org/10.1097/JCMA.0000000000000270>Wu.

Yani A (2018). Utilization of technology in the health of community health. Promotif: Jurnal Kesehatan Masyarakat; 8(1): 97. https://doi.org/10.31934/promotif.v8i1.235.

Yessica E, Bhisma M, Argyo D (2016). Analysis of the effect of maternal perception on completeness of child immunization status with health belief model. J Health Promot Behav. 1(3): 212-223. https://doi.org/10.26911/thejhpb.2016.01.03.08

Yudhastuti R (2020). The use of cloth face maskduring the pandemic period inindonesian people. Kesmas. 15(2): 32–36. https://doi.org/10.21109/KESMAS.V15I2.3945

Yunita J (2012). Proses perencanaan tahunan Dinas Kesehatan Kabupaten Padang Pariaman (The annual planning process of the Padang Pariaman District Health Office). Jurnal Kesehatan Komunitas. 1(4): 210–215. https://doi.org/10.25311/jkk.vol1.iss4.31.

.