

## **ANALYSIS IMPLEMENTATIONS OF MATERNAL AND NEONATAL REFERAL NETWORK INFORMATION AT PUSKESMAS TANAH TINGGI TANGERANG BANTEN**

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### **ABSTRACT**

*One of the efforts to reduce the maternal mortality rate (MMR) is to adopt the EMAS (Expanding Maternal And Neonatal Survival) program SIJARIEMAS (Information System for Maternal and Neonatal Referrals in the prevention of '3 Too Late. This study aims to obtain an overview of the implementation of SIJARIEMAS in terms of sources. Human resources, the availability of facilities and infrastructure, as well as procedures at the Tanah Tinggi Public Health Center. The research was carried out using the Rapid Assessment Procedure (RAP), a technique of collecting data using a quick assessment to obtain in-depth and relatively brief information. These are Doctors on Watch, Midwives, and Nurses. The data were collected with 3 focus group discussions. The data were analyzed descriptively. The results showed that officers still found it difficult to refer patients to the hospital due to the long response of the SIJARIEMAS Call Center in finding a hospital. There are still officers who do not follow the referral soup. Obstacles faced by officers in making emergency referrals resulted in delays in handling that could lead to death. Conclusion: SIJARIEMAS makes referrals easier, but the response of the old SIJARIEMAS call center, Puskesmas officers, still deviates from the SIJARIEMAS procedure. Efforts are needed to improve call center response and services by Puskesmas officers.*

**Keywords:** SIJARIEMAS, referral system, Maternal and infant mortality, Tangerang City

### **INTRODUCTION**

Development in the health sector leads to efforts to improve the optimal health status of the community. *Sustainable Development Goals* (SDGs) are activity programs that continue the *Millennium Development Goals* (MDGs) agenda for the 2016-2030 period. The purpose of the SDGs is to improve the health status of the community. To achieve optimal public health, the government has also made efforts to improve the welfare of mothers and children (Kemenkes RI, 2018). The third aim of the Sustainable Development Goals (SDGs) is to ensure a healthy life and promote wellbeing for all people of all ages, one of which is to lower the Maternal Mortality Rate (MMR) and Infant Mortality Rate. This goal is in line with the government's initiatives (IMR) (SDGs.Bapennas.go.id)

Maternal Mortality Rate and Infant Mortality Rate are indicators and targets of public health programs in the 2020-2024 Medium-Term Development Plan (RPJMN), In the context of accelerating the decline in MMR and IMR in 2024, the achievement of MMR is 183 per 100,000 live births, and IMR is 16 per 1000. live birth. (Kemenkes RI, 2020).

The Maternal Mortality Rate (MMR) in Indonesia is still the third highest in Southeast Asia; Indonesia was recorded at 177 deaths per 100 thousand live births (World Bank, 2017). The provinces with the highest maternal deaths were West Java, which reached 745 at most, and East Java, which reached 565 people. Central Java followed with 530 maternal deaths, then Banten with 242 people (Ministry of Health, 2020). And in Tangerang City, the number of maternal deaths in 2020 is 5 cases and increase in 2021 to 6 people and become the highest. (Tangerang City Health Office, 2022).

The direct cause of maternal death in Indonesia is 80% due to obstetric complications and 20% due to other reasons. At the same time the indirect causes are 3 too late and 4 too late. The three late factors in question are being late in making decisions, getting late in getting to the referral point, and getting services at health facilities. The four toos are too many children, too old to give birth, too young to give birth, and too close to the delivery distance. In order to overcome this, it is vital to give delivery help by health professionals and involve civil society, particularly professional groups, in lowering the MMR (Maternal Mortality Rate) in Indonesia. (DepKesRI, 2010).

In 2011, USAID launched the *Expanding Maternal and Neonatal Survival* (EMAS) program to reduce maternal and infant mortality by improving the quality of health care facilities and strengthening the referral system for efficient and effective referrals from Puskesmas to hospitals. EMAS is a five-year program in six provinces in Indonesia that has the highest maternal and infant mortality rates. EMAS works directly with 150 homes of sick mothers and babies and health centers as well as government and other stakeholders in 30 regions. (Emas, 2016).

The EMAS program focuses its activities on 3 components: improving clinical services, increasing the effectiveness and efficiency of the referral system, and empowering the community. In the second component, there is an information system called SIJARIEMAS (Maternal and Neonatal Referral Network Information System), which is an effort to strengthen the referral system in Indonesia based on advances in information technology. 3 SIJARIEMAS facilitates two-way communication between the referrer and the referral hospital so that the referral hospital is more ready to receive referrals, the referrer knows the recommended stabilization management, and the referrer goes directly to a referral hospital that is ready to receive. It is hoped that SIJARIEMAS can reduce MMR by preventing delays, primarily late referrals and delays in receiving adequate treatment (Emas, 2014).

As a first step in reducing MMR and IMR in Tangerang City, in 2015, Tangerang City adopted the EMAS (Expanding Maternal And Neonatal Survival) program, which initiated the Maternal and Newborn Rescue Movement in Tangerang City. The reduction in mortality and the improvement in the quality of life of mothers and babies cannot be separated from handling



emergency cases at the FTP. The government issued Mayor Regulation Number 5 of 2016 concerning Guidelines for Maternal and Neonatal Emergency Referral Services. This Mayor Regulation contains the referral flow, procedures, communication and information on the referral system, referral network development, financing, and auditing of maternal and neonatal deaths. In its implementation in FKTP, there are still obstacles to making referrals. It aims to reduce the Maternal Mortality Rate through the EMAS Program by strengthening an effective and efficient referral system between Puskesmas and hospitals through the SIJARIEMAS program. Strengthening referrals in the SIJARIEMAS program facilitates two-way referrals using the built information system. The benefits of the SIJARIEMAS program are that hospitals are more ready to accept referrals, stabilization, and certainty of referrals received by the direct referrer. It is hoped that the SIJARIEMAS program can save mothers and babies (EMAS, 2014).

Puskesmas Tanah Tinggi delivery services began in 2017; throughout 2021, at least 54 cases were referred by the Tanah Tinggi Health Center. The case of preeclampsia became the highest case in the period 2020 to 2021, then asphyxia in infants and low-weight infants. The referral mechanism is carried out with SIJARIEMAS.

However, there are still some challenges in its implementation, including the slow response of referral hospitals and ambulances that are late to pick up patients, which can worsen the situation and increase morbidity and mortality for the mother and baby as well as disputes between the patient's family, community, and officers in 2021, when the mortality rate for mothers could reach 6 cases and infant mortality could reach 40 cases. (Tangerang City Health Office, 2022). This, of course, can also indirectly affect the performance of the Tanah Tinggi Health Center and the image of the Tangerang city government.

This study aims to obtain an overview of the implementation of SIJARIEMAS in the context of reducing MMR and IMR in Tanah Tinggi Health Center.

## **METHOD**

The study used a qualitative method with a Rapid Assessment Procedure (RAP). The informants in this study were 5 people on duty, midwives and nurses. The data was collected through focus group discussions and in-depth interviews by paying attention to health protocols during the Covid-19 pandemic. The characteristics of the informants can be seen in the following table:

**Table 1. Characteristics of Informants at Tanah Tinggi Health Center**

<b>Number</b>	<b>Informants</b>	<b>Age</b>	<b>Education</b>	<b>Position</b>
1	Doctor on duty	27	S1 General	Physician
2	Midwife	35	D3 Midwifery	Midwife



Number	Informants	Age	Education	Position
3	Midwife	29	D3 Midwifery	Midwife
4	Nurses	28	D3 Nursing	Nursing
5	Nurses	27	D3 Nursing	Nursing

## RESULTS AND DISCUSSION

This study resulted in four themes, understanding of doctors, nurses, and midwives on duty about SIJARIEMAS, Ease of using SIJARIEMAS, SIJARIEMAS communication, and facilities and infrastructure.

Respondents understand the purpose of implementing SIJARIEMAS and can explain it. This is because the respondents have studied the SIJARIEMAS guidelines and developed the SOP for Maternal and Neonatal Referrals based on the SIJARIEMAS Implementation Guidelines to be implemented at the Tanah Tinggi Health Center.

Interview with the doctor on duty regarding SIJARIEMAS.

*"Yes, we understand that SIJARIEMAS aims to reduce maternal and newborn mortality and improve the quality of referrals."*

However, at the interview with the officer, there were still those who did not follow the SIJARIEMAS referral soup. The officer explained that they would call the hospital directly to refer the patient because, as before, the response from the SIJARIEMAS call center in finding a referral hospital was very long. Meanwhile, the patient cannot wait too long in an emergency and it will be fatal. Then action is needed by the officer to refer directly to the hospital. If the referral hospital has received it, it will call Sijariemas to report the referral patient to the receiving hospital.

Interview with the midwife

*"In making referrals, we are given the convenience of getting access to be accepted at the hospital, but sometimes we have to wait for a response from the call center first."*

There are still officers who find it difficult to refer patients to the hospital. This is due to the extended response of the SIJARIEMAS Call Center in finding a referral hospital that will accept patients. Based on this, it was discovered that there were discrepancies in the recording of the number of referrals from puskesmas and sijariemas; this was based on a significant number of direct referrals to hospitals without sijariemas.

Constraints Officers face in making emergency referrals will result in delays in handling that can cause death. Late in getting treatment or commonly known as 3 late (late detection and decision making, late referring, and late getting help by professionals).

Interview with the midwife

*"In making referrals, we are given the convenience of getting access to be accepted at the hospital, but sometimes we have to wait for a response from the call center first."*

Although there is no phone network, the personnel can interact using a tablet. In order to keep the lines of communication open. The officer's room has access to the internet, although there are still issues, like sporadic inaccessibility. The officer communicates via a tablet that must be charged, and occasionally, while calling SIJARIEMAS or the referral hospital, it must be terminated owing to running out of credit.

The results of this study indicate that health workers still face obstacles in carrying out SIJARIEMAS referrals. Evaluation and monitoring are necessary to make sure that problems may be followed up with plans for follow-up and improvement. The slow response of the SIJARIEMAS admin in looking for a referral hospital caused the birth attendant to take action outside the SOP. The patient is indeed not in *Hospital Touring*. Still, the delivery officer calls the only hospital that can accept the condition of the delivery patient who will be referred because not all hospitals are ready to take referral patients, such as the absence of an HCU room, ICU, or full treatment room (Tangerang City Health Office, 2022).

In addition to running outside the procedure by Tanah Tinggi Health Center officers, this can also happen in hospitals. The implementation of SIJARIEMAS in terms of procedures at the hospital has been running. It's just that SIJARIEMAS users still do not fully carry out the procedure correctly (Karina et al., 2016)

The referral procedure is additionally hampered by the absence of an ambulance at the Puskesmas. In the midst of a heavily populated residential neighborhood is the Tanah Tinggi Health Center. For childbirth, the Tanah Tinggi Health Center sees a lot of patients from beyond the neighborhood. Patients who come are not always in good general condition; sometimes, some come in not good condition, such as bleeding or opening but with high blood pressure. Or other complicating conditions so that the referral process must be carried out immediately after stabilization of the patient. The officer must call the *ambulance call center* and wait for the pick-up to be carried out, which sometimes the *ambulance* can experience obstacles on the way.

## CONCLUSIONS AND SUGGESTIONS

The following conclusions can be made in light of the analysis and discussion: SIJARIEMAS can facilitate referrals, but the SIJARIEMAS call center response is very long, and Puskesmas officers still deviate from the SIJARIEMAS procedure because it requires a fast reaction for patients if you have to follow the procedure by waiting for directions from the call center, then the condition

of the patient will get worse. Then the facilities and infrastructure still need to be improved, either from the internet network or the installation of telephone and telephone lines to communicate.

Based on the analysis and discussion, The suggestions below can be made:

There is a need for monitoring and evaluating SIJARIEMAS by the Health Service, Increasing the response of the SIJARIEMAS Call center in seeking certainty in finding a referral hospital. Improving facilities and infrastructure to support referral services must begin to be updated and inventoried. Their use is controlled, so there are no problems when making referrals using SIJARIEMAS to the hospital.

### **ACKNOWLEDGMENT**

I want to thank the Tanah Tinggi Public Health Center staff and those who have assisted in this research.

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