

Research Article

Analysis Of Referral System at Maccini Sombala Health Center Based on Human Resources, Medicine Availability, And Service Needs

Nur Akifa Sartika Putri ^{1*}, Suci Safwa Salsabila²

¹⁻² Affiliation 1 Department of Health Administration, Institut Kesehatan Batari Toja Bone, Indonesia

* Corresponding Author: e-mail: akifa.nur@yahoo.com

Abstract: The implementation of the referral system from First Level Health Facilities (FKTP) to Advanced Referral Health Facilities (FKRTL) occurs when a health facility faces limitations in resources, such as infrastructure, tools, personnel, or budget. Referrals are also made when patients require specialized care, hospitalization, diagnostic tools, or services that the initial health facility cannot provide, including emergency situations. The BPJS Health annual report on referrals at the Layang Health Center indicates a steady increase in the number of referrals year by year. This study aims to analyze the factors supporting and hindering the referral system, focusing on input and process aspects. The research adopts a qualitative case study approach with 17 informants, including health service employees, center heads, doctors, nurses, pharmacists, laboratory staff, JKN officers, and referred patients. The findings show that human resources at the Layang Health Center are adequate, but there are challenges with the availability of medicines, such as shortages and delays in distribution. Referrals are generally made based on medical needs, but some patients request their own referrals. The center's health facilities are insufficient, and some essential tools are missing. Although the referral system is based on BPJS Health regulations, its implementation faces obstacles. Patients are often unaware of referral requirements, highlighting the need for better socialization and improved medicine and facility provision to optimize the system.

Keywords: BPJS Health Patients; FKRTL; FKTP; Public Health Center; Referral System

1. Introduction

Development is formed with the aim of increasing awareness, willingness and ability to live a healthy life for everyone, in order to realize the highest possible degree of health in society, health development is carried out based on humanity, independence and empowerment, fair and equitable. This is also in line with the Healthy Indonesia Program, which is to improve the quality of life for Indonesian people. In the next Indonesian program, it is hoped that it will become the main program in development for health which can then be planned for achievement which can be carried out through Strategic planning at the Ministry of Health for 2015-2019, which is stipulated in the Decree of the Minister of Health of the Republic of Indonesia Number HK.02.02/Menkes/52/2015 (Ministry of Health, 2016).

Based on the initial data obtained at the Maccini Sombala Health Center, in 2019 the number of patient visits to the FKTP was 19670 and while the number of referrals to the hospital for the January-December period was 1100 referrals, and in 2020 from January-December the number of visits reached 18540 and while the number of referrals is 1300. And in 2021 the number of referrals in January-December will be 19320 patient visits while the number of referrals will be 1501.

So from the initial data obtained, it can be concluded that the number of referrals has increased from year to year, namely from 2019-2021. In addition to the increasing number of referrals, the problems that occur with referral services are that there are still many people who are JKN participants who do not know about this referral system and some even go straight to the hospital. Another problem related to the referral of health services in the JKN era is the fact that there is still a high number of disease cases that should be resolved at the

Received: September 15, 2025

Revised: October 21, 2025

Accepted: November 15, 2025

Published: November 17, 2025

Curr. Ver.: November 17, 2025



Copyright: © 2025 by the authors.

Submitted for possible open

access publication under the

terms and conditions of the

Creative Commons Attribution

(CC BY SA) license

(<https://creativecommons.org/licenses/by-sa/4.0/>)

primary service are referred to secondary service facilities and the medicines available at the public health center are also still limited, often experiencing stock shortages. medicines and medical equipment in public health center are still incomplete.

2. Preliminaries or Related Work or Literature Review

The implementation of the referral system is held with the aim of providing quality health services, so that the goals of the service are achieved without having to incur high costs. This is called effective as well as efficient. Efficiency also means that the waiting time in the referral process is reduced and so that unnecessary referrals are reduced because they can actually be handled at the original health service facility, either with the help of the latest technology or appropriate technology or low cost technology, which can still be held accountable (Abdullah and Kandou, 2014).

The implementation of a referral system from First Level Health Facilities (FKTP) to Advanced Referral Health Facilities (FKRTL) is carried out if the health service facility concerned experiences limited resources (facilities, infrastructure, tools, personnel, budget/money) and competence and authority to address condition, whether temporary or permanent. In addition, referrals to patients are made because patients need specialist/subspecialty health services, hospitalization, diagnostic and/or therapeutic equipment, additional services or different services that cannot be provided at the individual health care facility concerned, including cases with emergency conditions (Ministry of Health, 2012).

The general objective of this study is to evaluate the implementation of the health referral system at the Maccini Sombala Health Center

Journal of Future Artificial Intelligence and Technologies accepts research paper submissions that contain at least 4000 to 8000 words or around 8 to 20 pages for research articles and a maximum of 30 pages for review articles. The introduction must be written briefly, concisely, and clearly. The introduction must contain an explanation of (1) the Research object, (2) Methods that have been used previously, (3) the Weaknesses and strengths of each method or may briefly allude to related work and/or hypotheses, (4) Research problems (5) Proposed solutions and/or approaches (6) List of Contributions (6) Rest of paper. The introduction section must be scientific and rich in citations. Use "maintext_FAITH" style for this paragraph.

3. Research Methods

In this study using a research design that is descriptive using a qualitative approach. Qualitative research is a research used to investigate, explain and describe the qualities and features of social influence that cannot be explained, measured or described through a qualitative approach. in this study also used triangulation which aims to obtain in-depth information by conducting a review of patient referral documents and interviews with informants as well as direct observation of referral patient services (Ratnasari, 2017).

In this study, researchers used qualitative methods with the aim of knowing in depth about information related to the implementation of the existing referral system at the Maccini Sombala Health Center.

4. Results And Discussion

Sources of Availability of Human Resources

The availability of human resources in this study includes the availability of human resources, the number of health human resources, and educational background. Based on in-depth interviews related to the availability of human resources, the number of human resources, and the educational background available at the Maccini Sombala Health Center is not sufficient, especially human resources in the midwifery department who are still lacking. The results of interviews from health workers are as follows:

"I see that the number of health workers in this public health center is sufficient, such as nurses, including pharmacists. But some are still lacking, like our midwifery staff is still not enough. "(DW, 40 Years)

"In my opinion, the availability of health workers at the Maccini Sombala Health Center is sufficient and the placement of their educational background is also appropriate" (AN, 32 years).

"In my opinion regarding the human resources at the Maccini Sombala Health Center, everything is sufficient, such as the availability, number of staff and educational background, I think everything is sufficient" (AY, 46 years).

The results of interviews with referred patients are as follows:

"The service is quite good, it's just that maybe the service to the community needs to be added" (AR, 27 years).

The following are the results of interviews with Health Office employees:

"As we can see from the data on the number of human resources at the health center, it is enough for the human resources at the Maccini Sombala health center and is in accordance with the applicable regulations regarding the number of human resources at the health center"

Based on the research results, the number of health workers at the Maccini Sombala Health Center has exceeded the specified number. The availability of the number of health workers at the Maccini Sombala Health Center is sufficient. The number of health workers is 26 people with details of the head of the public health center 1 person, 1 dentist, 2 general practitioners, 3 midwives, 6 health nurses, 1 dental nurse, 2 laboratory personnel, 1 pharmacist, 1 pharmacist assistant, sanitarian 2 people, 3 nutritionists, 2 people in medical records, 1 person in administration. Human resources at the Maccini Sombala Health Center are sufficient.

This is in accordance with the results of Mujiati's research (2016) that refers to the RI Minister of Health No. 75 of 2014 the number of human resources in the Bekasi Health Center is 39 health workers of the 22 standard required

Drug Availability

At the Maccini Health Center the pharmacist has the duty of being in charge of the pharmacy as well as the manager of the drug warehouse that handles drug problems at the Maccini Health Center. As for the results of in-depth interviews as follows:

"For the availability of drugs, sometimes it is empty or there are drugs that are not available and there is no procurement from the agency, right? They have the authority to issue drugs. (NA. 30 Years).

"In my opinion, it was not enough because it was the day I needed medicine, so I was told to go to another pharmacy to buy prescription drugs at the public health center" (AR, 27 years)

"Yes, the drug stock is usually empty, but we replace it with the same drug that is available, especially after the pandemic, many people have gone to the public health center for treatment, so we usually experience drug shortages (DW, 40 years old)

As for the results of in-depth interviews with Health Service Employees as follows:

"Procurement of drugs at the health office, we do the e-catalog and then the e-catalog does not provide direct services at the same time, for example, today 2 come out tomorrow 2 and so on, for example, if we want paracetamol, we cannot give the drug directly and the problem is that we are procuring medicine i.e. our budget is limited" (NL, 52 Years).

In general, the availability of medicines at the Maccini Health Center is still inadequate because there are still some medicines that are empty and also out of stock due to the large number of needs for these drugs such as medicines for diabetes, cholesterol, shortness of breath, and eye medicine. the lack of budget and delays in the distribution of drugs is due to the fact that ordering drugs cannot be done all at once but in stages

Medical Service Needs

What is meant by advanced medical needs are specialist/subspecialistic services, hospitalization, diagnostic or therapeutic equipment, and emergency services that are not available at the public health center. The following are the results of in-depth interviews regarding referrals made due to advanced medical needs:

"Usually the diseases that are often referred to are serious illnesses, such as eye disease, heart disease, pinched nerves, because we here don't have the tools for these diseases. It's like the eye definitely needs a special tool to do the examination" (NA, 30 years).

"The patient who was referred really couldn't be handled here, so he was given a referral to the hospital" (AN, 54 years)

"I was referred because there was a tool that was not available at the Maccini Sombala Health Center while my illness was quite severe with a lump on my forehead or a tumor and I was given a referral to the hospital for minor surgery" (AR, 27 years).

The in-depth interviews from the health office are:

"For the availability of medical devices at the public health center, we checked whether the medical devices were damaged, and each public health center updated the data regarding the medical devices in what condition, for example, if the telescope was badly damaged, the data would appear as a need. There is an aspak team here, they do the validation and go straight to the public health center to see the conditions that are input in the data with the conditions in the field, is it true that the condition of the telescope is seriously damaged and if it is appropriate, we will validate it, and then make a RAB and procure the problem, namely

our limitations budget, and we also have to distribute medical devices in other cities.” (WR, 37 Years)

Based on the interview results, the health facilities available at the Maccini Sombala Health Center are inadequate because there are still medical devices that are not available and there are also many complaints from patients regarding this, such as patients who have heart, eye, DM, tumors, and for medical equipment in the department. dental clinic is also not complete. some of these diseases require equipment such as an EKG, X-ray, and also tools for eye examination. thus causing the diagnosis of 155 diseases not to be reached and impacting on patient referrals

Understanding of health workers regarding the referral system

Based on the results of interviews with referral patients who have been referred from the Maccini Sombala Health Center, they have never received socialization regarding the flow of referral implementation. all patient informants did not know the vertical referral system, the horizontal referral system and also the 155 disease diagnoses that had to be handled at the public health center. The results of in-depth interviews are as follows:

"Yes, we have received socialization. I don't know about the type of referral, I don't know about 155 diseases" (NA, 30 years old)

"Yes, we have received socialization regarding referrals, for the types of referrals I don't know, 155 diagnoses of disease don't know" (AN, 54 years)

"ever from BPJS, vertical, horizontal, referral referrals, 155 diseases including DM, Malaria, and many more" (AY, 46 years).

For health center staff, there are still some who do not know the types of referrals and 155 diagnoses of diseases that must be handled at the health center. In the results of the study, the health workers at the Maccini Sombala Health Center already understood the flow of referral implementation obtained in socialization and also training that had been attended late. In-depth interviews with informants, there were several health workers who did not know about the types of referrals such as vertical referrals, horizontal referrals and also back referrals. Based on the results of in-depth interviews regarding 155 diagnoses of diseases that must be treated at the public health center, there were several health workers who did not know what diseases were meant in the 155 diseases. This of course will have an impact on referral services because of the impact on referral services, because services are provided by all components of the health workforce at the public health center so that all officers should know about what diseases are handled by the public health center.

Based on the results of interviews with referral patients who have been referred from the Maccini Sombala Health Center, they have never received socialization regarding the flow of referral implementation. all patient informants did not know the vertical referral system, the horizontal referral system and also the 155 disease diagnoses that had to be handled at the public health center. The results of in-depth interviews are as follows:

"You've never received socialization about referrals, I also don't know how referrals work" (NH, 64 years).

"I once got socialization regarding referrals but when I wanted to refer, even then I didn't really understand so in the process of making a referral I asked people what the procedure was, what to bring" (SA, 59 years).

"Never got socialization, I don't know about 155 diseases" (SL, 45 years).

The results of in-depth interviews with the Health Office are as follows:

"For socialization to the community, we from the Health Office have never directly conducted outreach to the community because the socialization has flowed like from the Office to the Health Center and the Health Center to the Community" (DA, 43 years).

Referral patients from the Maccini Sombala Health Center have never received socialization regarding referrals and do not know what types of referrals are

Based on the results of the study, patients have never received socialization related to the referral system. An explanation of the referral flow is usually given individually when they have asked for a referral, and there are also some patients who only ask friends or family who have made a referral, there are even patients who go straight to the hospital without bringing a referral so that the patient is returned to the public health center.

5. Conclusion

Resources The human resources at the Maccini Sombala health center are sufficient for the standards set for the public health center, the health workers at the public health center are sufficient. The number of health workers at the Maccini Sombala Health Center has met the standards that refer to the RI Minister of Health No. 75 of 2014. The availability of medicines at the Maccini Sombala Health Center is still limited, there are still many empty

drug stocks and delays in the distribution of drugs and there are constraints from the Health Service, namely budget constraints, buying or ordering drugs cannot be done all at once, but gradually this results in delays in the distribution of drugs in public health center and also many drug stocks that experience emptiness. In the implementation of referrals at the Maccini Sombala Health Center, it is carried out according to medical indications, and patients who have the most referrals are patients who have chronic diseases, such as diabetes mellitus, heart disease, hypertension, and eye disease. This has resulted in an increase in the number of patient referrals. The availability of facilities at the Maccini Sombala health center is inadequate, we can see from complaints from patients that medical devices are not yet available, such as X-rays, EKGs, and also medical devices for eye diseases. available in the E-Catalog. Regulations related to the referral system at the Maccini Sombala health center are in accordance with the rules set by the BPJS, and non-capitation funds are slow to be submitted to the public health center and for BPJS patients the problem is that in making referrals the BPJS card is not active. Health workers at the Maccini Sombala Health Center have received socialization regarding referrals, but there are several health workers who do not know the types of referrals and the 155 disease diagnoses that must be handled at the Public health center, while the Health Office always conducts outreach every 2 years if there is a new update. Most of the referral patients never received socialization regarding referrals, while those who received socialization only when making referrals and patients did not know the types of referrals and referral flow as well as 155 disease diagnoses. Meanwhile, the health office stated that the Health Office could not directly conduct outreach to the community because socialization related to referrals to the community was the authority of the Public health center, the health office only carried out outreach to the Public health center, not to the community

6. Suggestion

The Makassar city health office should pay attention to the drug distribution schedule so that there are no vacancies in the drug supply at the Maccini Sombala Health Center. The Maccini Sombala Health Center needs to pay attention to medical devices in the public health center that are incomplete or damaged and work together with the Makassar City Health Office to be able to complete the existing medical equipment facilities in the public health center and the Health Service should know what equipment is needed by patients at the Public health center in support health services to the community, especially referral services. The Makassar City Health Office is working with BPJS Health and the Maccini Sombala Health Center to be able to carry out socialization related to the Referral System as a whole to health workers at the Maccini Sombala Health Center. The Makassar City Health Office is working with BPJS Health and the Maccini Sombala Health Center to conduct a thorough outreach to the community regarding the referral system. For future researchers, if they can do more in-depth research related to other aspects that affect the implementation of the Referral system.

References

- Anita, B., & Suryani, D. (2013). In an effort to efficiency and effectiveness of service policy analysis of Bengkulu city health insurance. 2(2), 151–160.
- Adisasmito, W. (2016). *Health system*. Rajawali Press.
- BPJS Kesehatan. (2015). Understand more about the tiered referral system and payment patterns for BPJS Kesehatan to health facilities. Jakarta.
- Bi. (2017). Analysis of the implementation of tiered referral system for JKN participants at public health center X Kota Surabaya. 5, 145–154.
- Faulina, A. C., Khoiri, A., & Herawati, Y. T. (2021). Study of the implementation of a tiered referral system in the National Health Insurance Program (JKN) in Upt. Jember University health services. 1, 91–102.
- Ministry of Health. (2012). *National referral system guidelines*. Jakarta: Ministry of Health of the Republic of Indonesia.
- Ministry of Health. (2014). Decree of the Director General of Pharmacy and Medical Devices Development Number HK.02.03/III/1346 of 2014 concerning guidelines for implementing the National Formulary. Jakarta: Indonesian Ministry of Health.
- Kasmadi. (2015). Analysis of referral management for National Health Insurance (JKN) health services at the Tgk Abdullah Syafii Regional General Hospital, Pidie Aceh District.
- Ministry of Health. (2016). *General guidelines for the Healthy Indonesia Program with a family approach*. Jakarta: Ministry of Health, Republic of Indonesia.
- Khoirunnisa, S. D. (2016). Analysis of the tiered referral system in health services National Health Insurance (JKN) Subulussalam City Hospital in 2016.

- Laora, T. R. N. (2015). Implementation of the maternal and child health referral system at the Tanah Tinggi Health Center in Binjai City in 2015.
- Lestari, Y. K. (2013). Evaluation of the implementation of tiered referrals for maternal and neonatal emergency cases in the JAMPERSAL program at the Kencong Health Center in 2012.
- Luti, I., et al. (2012). Island regional health referrals in remote areas and islands in the regency know the picture of the policy that referrals are made by sea and referrals are only several types of transportation used in this referral process. *1*(1), 24–35.
- Parman. (2017). Study of the implementation of the first level outpatient referral system (RJTP) for BPJS Health participants at the public health center in Kendari City in 2016. *JIMKESMAS*, 2.
- Permenkes. (2012). Regulation of the Minister of Health Number 001 of 2012 concerning the individual Yankes referral system. Jakarta: Indonesian Ministry of Health.
- Permenkes. (2013). Regulation of the Minister of Health of the Republic of Indonesia Number 71 of 2013 concerning health services in the National Health Insurance. Jakarta: Indonesian Ministry of Health.
- Permenkes. (2014a). Regulation of the Minister of Health Number 5 of 2014 concerning clinical practice guidelines for doctors in primary health care facilities. Jakarta: Indonesian Ministry of Health.
- Permenkes. (2014b). Regulation of the Minister of Health Number 28 of 2014 concerning guidelines for the implementation of the JKN program. Jakarta: Ministry of Health.
- Permenkes. (2014c). Regulation of the Minister of Health number 75 of 2014 concerning community health centers. Jakarta: Ministry of Health.
- Health BPJS. (2014a). Practical guide to tiered referral systems. Jakarta.
- Health BPJS. (2014b). Back referral guide. Jakarta.
- BPJS Kesehatan. (2015). Understand more about the tiered referral system and payment patterns for BPJS Kesehatan to health facilities. Jakarta.
- JKN participants at public health center X Kota Surabaya. (2017). Analysis of the implementation of tiered referral system for participants of National Health Security at primary health center X of Surabaya. *5*, 145–154.
- Ministry of Health. (2012). *National referral system guidelines*. Jakarta: Ministry of Health of the Republic of Indonesia.
- Ministry of Health. (2014). Decree of the Director General of Pharmacy and Medical Devices Development Number HK.02.03/III/1346 of 2014 concerning guidelines for implementing the National Formulary. Jakarta: Indonesian Ministry of Health.
- Kasmadi. (2015). Analysis of referral management for National Health Insurance (JKN) health services at the Tgk Abdullah Syafii Regional General Hospital, Pidie Aceh District.
- Ministry of Health. (2016). *General guidelines for the Healthy Indonesia Program with a family approach*. Jakarta: Ministry of Health, Republic of Indonesia.
- Khoirunnisa, S. D. (2016). Analysis of the tiered referral system in health services National Health Insurance (JKN) Subulussalam City Hospital in 2016.
- Laora, T. R. N. (2015). Implementation of the maternal and child health referral system at the Tanah Tinggi Health Center in Binjai City in 2015.
- Lestari, Y. K. (2013). Evaluation of the implementation of tiered referrals for maternal and neonatal emergency cases in the JAMPERSAL program at the Kencong Health Center in 2012.
- L. The role of health workers as executors of public health center health services. In Health Research and Development Agency (Ed.), *2009 Jakarta: Indonesian Ministry of Health*.
- Luti, I., et al. (2012). Health referrals for island areas in remote areas and islands in the regency know the picture of the policy that makes referrals by sea and only referrals. Several types of transportation equipment used in this referral process are sea-going health center ships, ambulances, ferries, and planes. *1*(1), 24–35.
- Maman. (2015). The National Health Insurance program from the aspect of human resources implementing health services. *Journal of Public Health*, *11*(1), 32–42.
- Manik, E. (2015). Analysis of the MCH referral system at the public health center BT.VI Pematang Siantar in 2015.
- Mutia, D. (2015). Analysis of the implementation of National Health Insurance (JKN) participant referrals at the Susoh Health Center and Blangpidie Health Center in Southwest Aceh District. *Journal of Public Health*.
- Notoatmodjo, S. (2003). *Public health sciences*. Jakarta: Rineka Cipta.
- Notoatmodjo, S. (2007). *Health promotion and behavioral science*. Jakarta: Rineka Cipta.
- Nurul. (2014). Analysis of health center referral ratio based on health center service capacity. *Journal of Administration to LS*, 2017. Analysis of the implementation of first level outpatient referrals for BPJS Health participants at the health center. *Diponegoro Medical Journal*, *6*, 758–771.
- Parman. (2017). Study of the implementation of the first level outpatient referral system (RJTP) for BPJS Health participants at the public health center in Kendari City in 2016. *JIMKESMAS*, 2.
- Permenkes. (2012). *Regulation of the Minister of Health Number 001 of 2012 concerning the individual Yankes referral system*. Jakarta: Indonesian Ministry of Health.
- Permenkes. (2013). *Regulation of the Minister of Health of the Republic of Indonesia Number 71 of 2013 concerning health services in the National Health Insurance*. Jakarta: Indonesian Ministry of Health.
- Permenkes. (2014a). *Regulation of the Minister of Health Number 5 of 2014 concerning clinical practice guidelines for doctors in primary health care facilities*. Jakarta: Indonesian Ministry of Health.
- Permenkes. (2014b). *Regulation of the Minister of Health Number 28 of 2014 concerning guidelines for the implementation of the JKN program*. Jakarta: Ministry of Health.
- Permenkes. (2014c). *Regulation of the Minister of Health number 75 of 2014 concerning community health centers*. Jakarta: Ministry of Health.
- Primasari, K. L. (2015). Analysis of the national hospital referral health insurance system. *Dr. Adjidarmo, Lebak Regency. Journal of Health Administration and Policy*, *1*, 78–86.
- Puspitaningtyas, A., et al. (2014). Implementation of a referral system in Banyudono Hospital. *XI*(2).
- Sidora, M. W. (2017). Factors influencing the increase in outpatient referrals for BPJS Health participants at the health center in Poso City.
- Simamarta, T. S. (2016). Analysis of the implementation of first level outpatient referrals for participants in the National Health Insurance program at the Mandala Health Center, Medan Tembung District, 2016.

Sugiyono. (2011). *Quantitative, qualitative research methods and R&D*. Bandung: Alfabeta.

Rabiatul, A. (2017). Analysis of referrals to the Panyabung Jae Health Center in Mandailing Natal Regency in the era of National Health Insurance in 2017.

Woro, P., et al. (2019). For BPJS Kesehatan participants implementation of reference policy final for BPJS Health participants. *Vol.5.No.1*.