



Implementation of Antenatal Screening in Detection Diseases in Pregnant Women at Batuyang Health Center

Siti Naili Ilmiyani^{1,*} Moh Hakimi² Ismarwati³

¹ Sekolah Tinggi Ilmu Kesehatan Hamzar, East Lombok, West Nusa Tenggara 83658, Indonesia

² Universitas Gajah Mada, Sleman Regency, Special Region of Yogyakarta 55281, Indonesia

³ Universitas 'Aisyiyah Yogyakarta, Sleman Regency, Special Region of Yogyakarta 55292, Indonesia

nailiilmiyani@gmail.com

Abstract. One of the causes of maternal death and fetal death is complications in the pregnancy process, based on the profile of the district health service East Lombok, one of the causes of maternal death is disease comorbidities in 15 cases (52.47%), comorbidities were complications and risks to pregnant women, obstetric complications and risks of disease to pregnant women found in the Batuyang Health Center in 268 cases (69%), to detect risk Pregnant women need to undergo early antenatal screening, This research is qualitative research with using purposive sampling with in-depth interview techniques and documentation. The main informants in this research were three village midwives and two midwives Public health center. Data were analyzed by data reduction, data presentation and withdrawal conclusion, The research results show that the screening examination process does not carried out in accordance with the provisions that have been determined such as in the history taking, physical examination, supporting examination and documentation, follow-up Further treatment of patients with comorbidities is not carried out in accordance with standards that have been set, availability of supporting equipment at the health center and the village police are still lacking, there are several obstacles from within and without found during the implementation of antenatal screening. Conclusion: The implementation of antenatal screening was not carried out according to standards that has been determined, the tools used are still lacking and there are obstacles from external and internal factors that influence the implementation of antenatal screening.

Keywords: Concomitant Diseases, Implementation, Antenatal Screening.

1. Introduction

One of the causes of maternal death and fetal death is complications in the process of pregnancy, childbirth and postpartum, which are obstetric complications, diseases and nutritional problems that often occur are: bleeding, preeclampsia/eclampsia, obstructed labor, infection, abortion, malaria, HIV/AIDS, syphilis, TB, hypertension, diabetes

mellitus, iron deficiency anemia and chronic energy deficiency (CED). In an effort to reduce maternal and infant mortality rates, this was carried out services/handling of obstetric complications [1] It is necessary to detect risks and complications early in pregnant women Antenatal screening carried out by midwives [2].

Research on the implementation of antenatal screening has been carried out in Nigeria, the quality of screening for risk factors in Nigeria during pregnancy is very low,

The cause of the low quality of screening in Nigeria is due to lack of equipment, lack of time and compliance of pregnant women to undergo screening [3] Other studies on antenatal screening were conducted [4] the results illustrate that compliance pregnant women in carrying out antenatal screening is very lacking due to lack of knowledge of pregnant women about the importance of antenatal screening. Results Previous research on the implementation of antenatal screening was carried out by [5] in this research states that lack of time and lack of clinical guidelines may influence implementation antenatal screening.

Antenatal screening is carried out by midwives in collaboration with doctors general, laboratory officers and cadres. Antenatal screening is carried out at The Batuyang Community Health Center is still not running optimally because it is still lacking tools and compliance of pregnant women in carrying out antenatal screening.

2. Methods

The research method used in this research is a qualitative method with a phenomenological approach. The samples in this research were taken using techniques purposive sampling with a criterion sampling strategy. Informants in this research are 3 village midwives (Batuyang Village Midwife, Apitaik Village Midwife, Village Midwife East Pohgading, D3 midwifery education, work period of 5 and 7 years, on duty as Village Midwife). 2 community health center midwives (minimum D3 midwifery education, 23 and 24 years of service, serving as implementing midwife at the Community Health Center Batuyang). The supporting informant criteria used in this research are: Head of Batuyang Community Health Center 1 person, general practitioner at Batuyang Community Health Center 1 person, Laboratory officers on duty at the Batuyang Community Health Center are 1 person, a pregnant woman is in the area under the guidance of the Batuyang Community Health Center. 1 person.

Data collection in the research was carried out through in-depth interviews (in-depth interviews) and documentation studies. Researchers conducted interviews with the informants, both main informants, namely midwives, carry out screening activities antenatal care in the ANC program, and supporting informants namely the head of the

community health center, doctors, laboratory personnel and pregnant women, the interview process is carried out accordingly at the time and place agreed upon by the informant.

Documentation This research is documentation used to support the data The results of the interview are in the form of other supporting documents including: activity book, reports and SOPs (Standard Operating Procedures) and referral letters related to the implementation of antenatal screening which is used to support the data The results of the interview are in the form of other supporting documents including: activity book, reports and SOPs (Standard Operating Procedures) and referral letters related to the implementation of antenatal screening.

This research uses thematic analysis by identifying themes that are patterned in a phenomenon, these themes can be identified, coded inductively from raw qualitative data (interview transcripts) as well as deductively based on theory and the results of previous research. Thematic analysis is a process used to process qualitative information. Analysis Thematics can be used in almost all qualitative methods.

3. Results and Discussion

3.1. Results

The informants in this study consisted of 5 main informants, namely 2 midwives Community Health Center and 3 village midwives, selection of village midwives based on the number of patients Most of the cases were experienced among other village midwives. Supporting informant in this study consisted of 4 informants, 1 head of the Community Health Center, 1 general practitioner, 1 laboratory staff and 1 pregnant woman, data collection on informants was carried out with in-depth interviews to get in-depth responses from each participant, as for the series of interviews that were successfully conducted with various meeting settings according to the informant's agreement.

This research is to determine the implementation of antenatal screening in detecting comorbidities in pregnant women in carrying out the implementation there are several stages What you want to know is to see the implementation of the first process antenatal screening, no follow-up to the process of antenatal screening results, internal facilities implementation of antenatal screening, the role of midwives in implementing antenatal screening and barriers that exist in the implementation of antenatal screening as for the research results got it.

- a. The process of implementing antenatal screening starts from registration, history taking, examination, supporting examination, examination stage, and reporting;
- b. Follow-up and treatment of pregnant women with comorbidities in the implementation of antenatal screening for pregnant women;

Handling and follow-up of the antenatal screening examination process for patients with comorbidities carried out by village midwives is by encouraging patients to

give birth by health personnel and taking the patient directly to the hospital, as is the case with patients who are diagnosed with hypertension and hepatitis in accordance with the statement of the first informant village midwife. as follows

"Until now, it's actually important to be screened for hepatitis, why don't you just get checked for hepatitis first? We recommend giving birth by a health worker..." (I1)

Meanwhile, for patients with comorbid hypertension, the follow-up/treatment carried out by midwives on patients who obtained from examination results with hypertension is referring the patient directly to the Community Health Center, the examination is carried out when the patient makes a return visit, in accordance with the statement of the second informant village midwife as follows:

"Until now, the most common comorbidity is hypertension. Referred to the MB Community Health Center, just refer straight away when he visits, we will check his blood pressure again," (I2)

- c. Facilities for implementing antenatal screening (facilities and infrastructure for implementing antenatal screening)

Infrastructure greatly influences the examination process that will be given to patients, the infrastructure at the public health center and village midwife clinic comes from the health service in the district, all programs that will be carried out, the infrastructure will be provided directly from the health service, for facilities such as rooms, chairs and tables and other equipment is adequate, but sometimes the availability of equipment is still lacking, as programs that have just started usually have little infrastructure.

- d. The role of midwives in implementing antenatal screening in detecting comorbidities in pregnant women

The role of midwives in implementing antenatal screening in detecting comorbidities in pregnant women is very important, midwives as counselors by providing patient education can find out health information so that people can understand the importance of health, midwives as motivators for the community with the presence of community motivators can carry out health checks diligently, This is in line with the results of the first informant village midwife's interview as follows:

- e. Barriers to implementing antenatal screening in detecting comorbidities in pregnant women

Obstacles in implementing antenatal screening begin with problems with the equipment used when carrying out screening, especially for examinations that have just been carried out because the examination is new, perhaps the equipment is in

short supply. Obstacles in the community when carrying out laboratory examinations, pregnant women who have been advised by the village midwife to carry out laboratory examinations do not go to the Puskesmas to carry out examinations at the Puskesmas for remote reasons. being referred to another health facility is still waiting for the family to make a decision so that treatment of the patient is delayed.

3.2. Discussion

The process of implementing antenatal screening starts from registration, history taking, examination, supporting examination, examination stage, and reporting

Service flow is a procedure that must be had to achieve the desired results, Changes from input to desired output are carried out during processing which involves methods and procedures in the system. If a process is carried out using good methods and procedures, then the service process can run well.

Previous research was conducted [2] states that village midwives are still lacking in reviewing patient complaints in detail at 69%, there are several things that midwives often overlook in terms of reviewing disease history, such as reviewing the history of PMS, history of PMS must still be asked because it is included in the examination SOP and enter into antenatal screening.

Examination of pregnant women to support the process of antenatal screening examinations of pregnant women. Antenatal SOPs in the Community Health Center for examining patients, examinations carried out by midwives on pregnant women include measuring height, weighing body weight, heart, lungs, conjunctiva, swelling of the face/hands, knee reflex, TFU, FHR, breasts, and vulva.

Research conducted by [6] states that to increase midwives' compliance in providing antenatal services, midwives must provide services in accordance with Standard Operating Procedures (SOP) so that it is necessary to monitor midwives while providing antenatal services in the hope of increasing midwives' competence in providing antenatal services.

Laboratory examination of pregnant women in the process of antenatal screening examinations of pregnant women. The screening process can be carried out in depth through supporting examinations on patients. The research results showed that supporting examinations on patients were carried out during the first trimester and when the mother first came to the midwifery service, at the research site the examination was carried out in two places. Village midwife clinic and public health center examinations carried out at village midwife clinic are different from examinations carried out at Public health center, patients from village midwife clinic can come directly to the public health center to get the same examination, but the laboratory examinations carried out at Village midwife clinic and Public health center are incomplete, thus affecting the examination process.

Based on the work instructions [1] laboratory examinations carried out on each pregnant mother are as follows: Hb (hemoglobin) examination, blood type, urine protein are examined on each pregnant mother, blood sugar/reduction is examined if there are indications in patients who are suspected of suffering, blood tests for malaria in malaria endemic areas, in non-endemic malaria areas, malaria if there are indications, TB: sputum test for AFB, Syphilis and HIV: every officer is obliged to offer HIV and syphilis tests to pregnant women inclusively with other tests at antenatal visits and at other visits.

Examination stages for pregnant women who are at risk and who are not at risk in carrying out antenatal screening. Based on statements from the main informants from village midwives and community health center midwives and reinforced by supporting informants from community health center doctors who stated that the examination process for antenatal screening in this study was good, in patients who were at risk the midwife collaborated with the doctor to carry out further action, while in patients For those who are not at risk, the midwife will continue with further examinations and repeat laboratory examinations during the third trimester.

Research conducted by [7] which states that the screening examination process is given to everyone if the test result is negative at some point a retest will be carried out, whereas if the test result is positive a specific diagnostic examination is carried out and if the test result is positive intensive treatment is carried out and if the test result is negative a retest is carried out.

Documentation of examination results in the implementation of antenatal screening for pregnant women. It is very necessary to document the results of examinations in book form so that midwives can remain aware of the results of examinations carried out and so that they can quickly carry out further treatment if the patient is at risk.

Recording examination results is part of quality integrated antenatal care standards. Every time there is an examination, health workers are required to record the results in medical colleagues, the mother's card and the KIA book. Currently, the recording of antenatal examination results is still very weak, so the data cannot be analyzed to improve the quality of antenatal care. By implementing registration as part of service standards, the quality of antenatal care can be improved [1]

Follow-up of the antenatal screening process (handling and follow-up carried out by midwives for at-risk patients, collaboration between health workers, and the community referral system carried out by midwives)

Handling and follow-up screening for at-risk patients is still lacking, at-risk patients are obtained from the results of previous screening examinations, at-risk patients the midwife is responsible for carrying out visits and monitoring the therapy given by the doctor, monitoring carried out by the midwife for at-risk patients is very important so that patients continue to receive appropriate care until the delivery process, the results of research obtained from informants show that the follow-up carried out by midwives on patients at risk is still lacking, for every patient who is at risk the midwife always makes repeat visits

and still recommends the mother to give birth by a health worker but not carrying out follow-up actions in accordance with the treatment and follow-up provided in the existing integrated antenatal care guidelines, such as for pregnant women with hypertension.

The most common diseases found in the Batuyang Community Health Center are hypertension and hepatitis in pregnant women. The follow-up carried out by midwives in treating hypertension and hepatitis patients is not only carried out by home visits, but midwives are responsible for carrying out therapy during home visits.

Case follow-up in the integrated antenatal guidelines for patients with hypertension is Treat hypertension according to standards, Recheck in 2 days, if blood pressure increases immediately refer, If there are fetal disorders immediately refer, Nutritional counseling, diet for hypertension in pregnancy. Research conducted by [7] treatment of mild and moderate hypertension patients carried out in pregnant women is carried out from 12-28 weeks of pregnancy by giving 81 mg of aspirin every day. The results of this study can provide benefits by reducing the risk slightly for the mother and fetus.

Collaboration between health workers in implementing antenatal screening is very important, because in its implementation midwives cannot carry out all examinations independently, ongoing cooperation between health workers is very necessary, from the research results it was found that cooperation between health workers at the Batuyang Community Health Center very good, not only is cooperation between health workers needed in implementing antenatal screening in detecting comorbidities, but good cooperation is also needed between the community, cadres and village officials in the Public health center area.

According to the main informants, village midwives, community health center midwives and confirmed by the results of interviews with supporting informants and laboratory staff, the form of collaboration carried out with health workers such as nutrition officers, in patients who receive examination results with poor nutrition, midwives will collaborate with nutrition officers. and Public health center doctors to carry out follow-up meals, apart from health workers, midwives also collaborate with cadres, the community and village officials. One form of collaboration carried out by midwives in collaborating with cadres is that midwives ask for help from cadres to call mothers to carry out examinations until accompany the mother to the community health center for an examination

The referral system at the Public health center starts with a consultation with the Public health center doctor, then the Public health center doctor will make a referral letter to the patient. The referral letter at the Public health center is in accordance with the format obtained from BPJS and the health service. The referral system at the Village midwife clinic is different from the referral system. in the Public health center, the referral system in the Village midwife clinic starts with patients who are at risk being taken directly to the Public health center then the village midwife will consult with the Public health center doctor, if the patient brought can be handled at the Public health center then the Public health center midwife will be responsible for the patient from the Village midwife clinic, in addition, the

Village midwife clinic midwife will continue to monitor the patient until outpatient treatment, however, if the patient has to be taken to hospital then the village midwife will take the patient to the hospital, there is no referral letter from the Village midwife clinic to the Public health center, midwives usually take the patient directly to the Community Health Center without using a referral letter.

This is also the same as research conducted by [8] stating that in Kalimantan village midwives who will make referrals to the Community Health Center never bring a referral letter from the village police, but this is not the same as making a referral from the Community Health Center. To the hospital, the midwife will include a referral letter and KIA book every time she makes a referral with the aim of making a Jampersal claim.

Facilities for implementing antenatal screening (facilities and infrastructure for implementing antenatal screening)

According to the main informant, this was strengthened by statements from supporting informants from the head of the community health center and the doctor at the community health center, the facilities and infrastructure that have been used in the implementation of antenatal screening are adequate, however, there is a comparison of the number of facilities available at the community health center and the community health center, there are several tools used at the time. Antenatal screening is not available at the Village midwife clinic so patients have to have an examination at the Public health center, and there is also a lack of equipment available at the Public health center, for example the availability of tools for new examinations carried out at the Public health center. Therefore, it is necessary to increase the availability of equipment at both the village police and community health centers so that implementation can run well.

midwives who have the best quality of antenatal care are influenced by supporting facilities and infrastructure. Facilities and infrastructure have a very big influence on the quality of antenatal care services.

This research is in line with research conducted by [9] regarding the implementation of services for pregnant women (K4) by midwives based on SPM at the Silungkang health center, stating that the facilities and infrastructure that support antenatal services (K4) are available, such as ANC kits, KIA books, mother's card, mother's cohort and officers' two-wheeled transportation to the field. However, Sahli's HB was not available at the sub-district health center, so the HB level check was referred to the Public health center.

The role of midwives in implementing antenatal screening

The role of midwives in implementing antenatal screening is very important. From the results of research on the role of midwives conveyed by informants, most of the informants act as motivators and as counselors, in relation to the implementation of antenatal screening, midwives act as motivators in providing direction to pregnant women so that pregnant women can be enthusiastic and not afraid to carry out antenatal screening examinations, midwives as instructors in every event midwives usually provide counseling about maternal

health such as when conducting classes for pregnant women, even usually during antenatal care.

The role of the midwife in implementing antenatal screening in the integrated ANC guidelines is to provide services and counseling including nutrition so that the pregnancy is healthy, carry out early detection of problems, diseases and complications/complications of pregnancy, plan anticipation and early preparation to make referrals if complications/complications occur, carry out case management and referrals in a timely manner as needed.

Another study conducted by [10] stated that midwives have a very strong role in encouraging pregnant women to carry out complete examinations for infectious diseases such as TB, HIV/AIDS until the pregnant mother understands and gives her permission to carry out the examination. If the midwife's role is good then The client will carry out examination or prevention of disease.

Barriers to implementing antenatal screening in detecting comorbidities in pregnant women

Based on the statement from the main informant, the midwife was strengthened by the statement from the supporting informant, the doctor at the community health center. The research results show that the obstacles found in the implementation of antenatal screening can vary depending on the place of examination. , Public health center midwives are very constrained when making referrals to the next referral place, usually pregnant women who will be referred take a very long time in making decisions which can even hinder the treatment that will be given, decision making is made by the family and community where the pregnant mother lives, before there is a decision from the family and the community, pregnant women do not dare to make their own decisions.

This research is in line with research conducted [11] in research conducted in Nepal which states that Nepali women have more knowledge about the danger signs of pregnancy than their husbands, but they do not have the opportunity to make decisions during health services, they still follow husband's decision.

Decision making is very influential on the continuity of the implementation of antenatal screening, decision making in making referrals from research results, so to overcome this solution the Public health center midwife will collaborate with village officials, because usually village officials are highly respected by the community, perhaps it is not only village officials who are invited cooperation in overcoming this problem, perhaps religious leaders can also be invited to collaborate by midwives, namely by conducting health education about the importance of carrying out immediate referrals and the importance of antenatal screening examinations by inviting village officials and religious leaders in each village about the importance of antenatal screening examinations to improve the health of pregnant women. and the fetus she contains.

The quality of the implementation of antenatal screening can be influenced by the lack of equipment available, this is in line with research conducted by (Prual et al., 2000) which states that the cause of the low quality of implementation of antenatal screening in Nigeria is influenced by lack of personnel, lack of equipment, lack of time and lack of compliance of pregnant women in carrying out antenatal screening, while the antenatal screening program is a policy that continues to be implemented and improved.

The obstacles found at the Village midwife clinic are different from the obstacles found at the Community Health Center, the obstacles found at the Village midwife clinic come from the community itself, people do not want to carry out a complete examination at the Community Health Center due to the distance factor, pregnant women who have a long distance from the Community Health Center sometimes reluctant to carry out examinations, apart from the distance factor, the advice used to carry out examinations is also an obstacle in screening screening. Pregnant women are unable to carry out complete examinations at the health center because there are no facilities to use to get to the examination site.

Research conducted by [12]in his research also stated that geographic factors, distance and road infrastructure greatly influence people's access to referrals, especially for people who live in remote areas and they have to use traditional means of transportation (in Bulle). to make maternal referrals to health facilities.

4. Conclusion

Based on the results of the research and discussion, it can be concluded that the implementation of antenatal screening in detecting comorbidities in pregnant women at the Batuyang Community Health Center, East Lombok Regency has started to be carried out but is not yet optimal so there is a need to increase the examination of patients in implementing antenatal screening. There are several things that need to be paid attention to. to support the success of antenatal screening, such as the examination process, follow-up to the implementation of antenatal screening, facilities for implementing antenatal screening, the role of midwives in implementing antenatal screening and the obstacles that exist in implementing antenatal screening

References

1. Kemenkes, *Pedoman Pelayanan Antenatal*. Jakarta: Kemenkes RI, 2013.
2. S. Idhayanti, R. I., *Dukungan keluarga berpengaruh terhadap skrining antenatal bidan desa*. 2016.
3. A. Prual, A. Toure, D. Huguet, and Y. Laurent, "The quality of risk factor screening during antenatal consultations in Niger," *Health Policy Plan.*, vol. 15, no. 1, pp. 11–16, 2000, doi: 10.1093/heapol/15.1.11.

4. M. Nykänen, M. Nykänen, K. Vehviläinen-Julkunen, K. Vehviläinen-Julkunen, and R. Klemetti, "The expectations of antenatal screening and experiences of the first-trimester screening scan," *Midwifery*, vol. 47, no. September 2016, pp. 15–21, 2017, doi: 10.1016/j.midw.2017.02.004.
5. S. Ahmed, L. D. Bryant, and P. Cole, "Midwives' perceptions of their role as facilitators of informed choice in antenatal screening," *Midwifery*, vol. 29, no. 7, pp. 745–750, 2013, doi: 10.1016/j.midw.2012.07.006.
6. W. S. D. Yanuaria M R, "Penyusunan Upaya Peningkatan Pelayanan Antenatal Care Berdasarkan Voice of Customer," *Adm. Kesehat. Indones.*, vol. 1, 2013.
7. J. R. Jackson and A. R. Gregg, "Updates on the Recognition, Prevention and Management of Hypertension in Pregnancy," *Obstet. Gynecol. Clin. North Am.*, vol. 44, no. 2, pp. 219–230, 2017, doi: 10.1016/j.ogc.2017.02.007.
8. A. Palimbo, A. Sriatmi, and T. Kuntjoro, "Pelaksanaan Sistem Rujukan Kasus Ibu Hamil Risiko Tinggi oleh Bidan Desa ke Public health center Poned Kabupaten Banjar - Kalimantan Selatan (Studi Kasus di Public health center Sungkai) Implementation on the Referral System of High Risk Pregnant Women from Villages Midwives," *J. Manaj. Kesehat. Indones.*, vol. 03, no. 01, 2015.
9. G. L. Andriani, Edison, "Implementasi Pelayanan Ibu Hamil (K4) oleh Bidan Berdasarkan SPM di Public health center Silungkang," *J. Kesehat. Masy.*, vol. 8, 2013.
10. C. Vos, A. A., & Obstetrics, "Assessment and care for non-medical risk factors in current antenatal health care," 2015.
11. B. Shrestha, "Gender Study on Knowledge and Decision Making on Maternal Health Care in Nepa," 2012.
12. F. K. Irasanty, G. D., Rujukan, K., Irasanty, G. D., Hakimi, M., Hasanbasri, M., Kesehatan, M., ... Ugm, "AVOIDING DELAYS IN MATERNAL REFERRALS IN MAJENE REGENCY , diberikan pada tingkat pelayanan dasar oleh bidan dan merujuk secepatnya . Untuk itu , dibutuhkan gambaran pencegahan keterlambatan rujukan Majene , serta memperbaiki pengelolaan sarana dengan ranc," 2013.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

