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Research Article

Potential Pre-Post-Partum Patient Safety Management Problems by Input-Process-Output Approach in Health Care

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ABSTRACT

Background: The indicator of service quality in hospitals was patient safety. Patient safety can makes patient care safer, minimize risks and so prevent injuries caused by mistakes due to inappropriate actions. The concept of thinking that underlies this research is an understanding of the still high mortality rate for pregnant women, mothers in labor, and infants as well as the low number of specific studies on the assessment of pre-partum services.

Aims: For digging positive values adopted by the community in support of patient safety service of pre-post partum.

Methods: The research was classified as qualitative research with a research and development (R & D) approach, also supported by a case study related to pre-post partum patient safety services in each research location .

Results: Showed that there were potential patient safety issues based on component input, process, and output. The factors that contributed to this component were mothers, babies, and health care institutions. Research locations (Maternity Hospital, Puskesmas, Private Maternity Clinic).

Conclusion: There needs to be a further study to develop a measurement method based on input aspects in health services based on existing problems, there was a need for further studies to develop measurement methods based on process aspects in health services based on existing problems. Further studies was needed to develop measurement methods based on output aspects in health services based on existing problems.

Keywords : Patient Safety, Pre-Post Partum, Evidence-Based Practice

INTRODUCTION

Patient safety was one indicator of service quality in the hospital (RS). Patient safety was a system that makes patient care safer, can minimize risks and can prevent injuries caused by mistakes due to improper actions (Rahayu, 2017). Safe health services for patients in hospitals are encouraged by the Minister of Health Regulation number 11 of 2017 regarding patient safety. There is six target patient safety (SKP) which serves as a guide to improve patient safety in hospitals consisting of patient identification, p Increased communication effective, p Increased safety of drugs that need to watch out, certainty right location, right-procedure, right-patients surgery, reduced risk of healthcare-related infections, and reduced risk of falling patients. The six SKPs are the main basic standard indicators in the 2012 version of Hospital Accreditation assessments (Setiyani, et al., 2016)

The Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR) cases are a contribution of several factors. It could be due to officers, public understanding/awareness, availability of health facilities, socio-economic conditions, culture, and early age marriage/unwanted pregnancy. The high number of MMR and IMR cases in hospitals is due to referrals. Some patient safety does not carry out standard ANC procedures. Including efforts to detect the risk of pregnancy, especially pregnancy counseling. This makes access to higher health services difficult. In general, at the Primary Health Care (PHC) there is no separation of patients at risk from normal patients. Incubator facilities are not available for less healthy babies. Maintenance of facilities and infrastructure at the PHC is not feasible. especially the need for clean water. This research was conducted in South Sulawesi and East Java provinces. This research is classified as

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qualitative research with a research and development (R & D) approach, also supported by case studies related to patient safety pre-post partum services at each research location. Besides, a Focus Group Discussion was also conducted on community leaders who related to the research objectives to explore positive values adopted by the community in supporting pre-post partum patient safety services. Besides, brainstorming and structured interviews were conducted with experts and members of professional groups in the fields of medicine, public health, nursing, and midwifery by the objectives of each study

METHODS

This research was classified qualitative research with a research and development (R&D) approach, also supported by a case study related to pre-post partum patient safety services in each research location. The determination of the location of Makassar City was based on the availability of relatively more advanced health service facilities in eastern Indonesia, both in terms of manpower and supporting facilities and infrastructure. The city of Surabaya represents the western region of Indonesia whose health service characteristics are almost the same as Makassar City so that it can be used as a comparison in this research study. Informants are all health workers (midwives, doctors, and nurses) who are involved in implementing patient safety pre-post partum at each level of health services in Makassar and Surabaya City. The key informant was the person responsible for implementing the pre-post partum at each level of health services. Besides, a Focus Group Discussion was also conducted on community leaders related to the research objectives to explore positive values adopted by the community in supporting pre-post partum patient safety services. Besides, brainstorming and structured interviews were conducted with experts and members of professional groups in the fields of medicine, public health, nursing, and midwifery by the objectives of each study.

The role of partners in this research was a research location that will become one of the health service facilities used to implement the results of the measurement method that will be used. The partner patient safety team is one part of the research team that helps in tracking data related to the risk of implementing patient safety in the hospital. The difficulty faced: that some of the data needed by the research team are sensitive enough data to be asked to the hospital because these

data can show facts about the hospital's performance. Patient safety data are still considered as data that cannot be widely exposed to public needs. Only a few health care facilities want to provide sensitive data. Concerning publication, the journal publishing process continues through several stages. The journal publishing stage must pass a conference, reviewer, and wait for the eligibility of the article to be published.

RESULTS

This research was conducted in two provinces, namely South Sulawesi and East Java. The results showed that there were differences in the application of patient safety in health service facilities at each research location. The general policy of the hospital is that every patient who comes to his needs is thoroughly served by providing the patient's care and treatment needs, both drugs and equipment required, without prescribing that the patient must buy, without a down payment. All just paid by the patient after the patient is ready to go home. This policy is a policy that has existed since the RSB. X stands and a basic value for RSB X.

As time goes by, Maternity X Hospital is increasingly trying to improve its facilities and infrastructure and services from year to year, this is a difficult goal to further increase consumer confidence in Maternity X Hospital. The number of patient visits at Maternity X Hospital every year has always increased significantly. This is proof that the Maternity X Hospital can strengthen its brand to consumers

Analysis of Potential Input Problems Facilities and infrastructure

Based on the results of the interview, information about the sara na and prasana problems was obtained as follows:

"... Health facilities and health workers. From the health worker factors, namely early detection, namely early screening, there are risks from pregnant women, if early detection and early treatment will prevent risks, such as preeclampsia, if they are detected early, they must be screened early or detected early, such as recommending mandatory delivery in a hospital or to a more complete health service facility ... "(FR_40)

Other informants also added as follows;

"... Not all PKM have adequate MCH service facilities. For example an Ambulance, not all PKM have, if any, sometimes the request is more than

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the available facilities (at the time of the same request). In the PHC there is no separation of patients at risk from normal patients. Incubator facilities are not available for babies who are less healthy. Maintenance of facilities and infrastructure at the PHC is not feasible, especially for clean water needs ... "(NF_38TH)

Mother Factor

Mother's factor has an important role, along with an excerpt from the interview;

".. The cause of death for mothers and children in PKM is for example due to pre- eclampsia for mothers and Asfixia for children. There are many other contributing factors that must involve cross-programs, especially nutrition .. " (HN_38)

Other informants also added;

"... Many factors cause AKI. The sources of maternal and infant mortality are many factors, it can be from the mother ... " (FR_40)

Officer Factor

The officer factor also plays an important role in MCH problems. The results of the interview excerpt are as follows;

"... The MMR and AKB cases are a contribution of several factors. It could be due to officers, understanding / public awareness, availability of health facilities, socio- economic conditions, culture and early age marriage / unwanted pregnancy ... " (NS_38)

Added by other informants;

Some PKMs do not have health promoter staff to conduct counseling to pregnant women as a promotive and preventive effort, especially for high-risk mothers . " (YS_35)

Based on the results of the study, it was concluded that there were several potential problems in the input aspect, namely from pregnant women and babies, originating from health service institutions (Primary Health care / Hospitals / clinics), supporting facilities and infrastructure as well as low competence and commitment from officers.

This is different from other informants at location Y. The following is an excerpt from the interview conducted.

"... Anticipation of Primary health care with high LBW. In the PHC there are already incubators , if there is a high risk of hypothermia, they are immediately referred to the hospital .. "(LN_42)

Added by other informants;

".. In Malang , almost all PHC are accredited ... as basic health services, PHC have PONEK ... all services that are physiological if pathological must

be referred, so they must be strengthened in ANC ..." (LN_42)

Based on the research results, there were several problems from the input aspect, namely; the problem of the mother herself, the baby, the facilities and infrastructure, the health service as well as the factor of the staff.

Analysis of Potential Process Problems Risk Detection Efforts

Efforts to detect risks are important, along with excerpts from interviews from informants; "... Including efforts to detect the risk of pregnancy. Especially pregnancy counseling , .. "(YS_35)

ANC (Antenatal Care) Service Procedure

Antenatal care efforts are an important factor in this aspect of the process. The following is an excerpt from the interview;

"... Regarding patient safety, it depends on the standard used, for example using PMK 75, both in terms of energy and training. Whether the PKM has fulfilled it or not. If not, what efforts have we put into fulfilling that? " (NF_38)

Reference Factor

As a follow-up action to deal with complications, referrals are made to patients. The following is an excerpt from the interview;

"... For example, a patient in a certain condition must be adjusted to the appropriate health service referral. What can trigger also is the referral system, because the BPJS system must be in accordance with referrals, for example the Referral system must be in accordance with procedures, for example being referred to a Type C Hospital first, this can also be a problem. Patients should not go straight to type B ... "(FR_40TH)

Prevention of risks

Based on the results of the interview, it was found that there were several efforts made by health services in reducing risks. The following is an excerpt from the interview;

"... Handrails and infusion hangers in patient lavatories ..." (NH_38TH)

Added by other informants;

"..Denah evacuation route ..." (NH_38TH)

Added by other informants;

"... The implementation of patient safety at PKM varies, but for certain standards (such as the use of PPE) should be the same .. " (NH_38TH)

Accuracy and responsiveness in serving emergency problems Process- related problems are described in the following interview excerpt;

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"... The staffs speed in serving patients, including the skills of officers for handling emergencies at PHC ..." (YS_35TH)

Based on the research results, it is found that there are several problems from the following output aspects; ANC completeness, low effort to detect high risk targets, cultural elements prevailing in society. The results of research conducted at location Y obtained the following information. The following is an excerpt from the interview of the process problem.

"... the ones who have to enter are at least APN, CTU, there are breastfeeding counselors. If there is APN training, it can help ..." (JB_45)

Analysis of Potential Output Problems

The following is an excerpt from the interview regarding the output problem;

"... Every health service has different procedures ..." (NF_38)

Based on the research results, it was found that there is a potential problem from the output aspect, namely the problem of lack of follow-up both in quantity and quality. The research results related to the output problem at location Y are as follows. The following is an excerpt from the interview regarding the output problem.

"... Trend 3 last year precisely figure 18% higher

LBW, national LBW 10 , 2 %, oddly born LBW on Mother did not target high risiiko. Premature less than 2000 must be referred ... even though LBW is quite months, but BW is 1800 grams, but in good condition and based on good midwife observations, stable temperature conditions do not fluctuate, ..." (LN_42)

Other informants also added;

"... The success of the city of Malang in decreasing AKI IMR, regular assistance from midwives every month, the awareness of pregnant women about MCH is high, even though there are cases of prematurity but still safe, Already in the hospital, because of the high awareness of mothers ..." (LN_42)

Based on the results of the study, information was obtained about the problem of output, namely the lack of good follow-up for mothers and babies after childbirth, low attendance, and inadequate health education.

DISCUSSION

Analysis of Potential Patient Safety Problems

Based on the results of research that has been carried out in the Provinces of East Java and Sulawesi, it is described in the following table of potential problems.

Table 1: Analysis of Potential Pre Post Partum Patient Safety Problems in Health Services in 2018

Step	Analysis of Potential Problems in the Implementation of Patient Safety Pre post Partum in Health Services		
	Aspect		
	Pregnant Mothers and Babies	Services (PHC / Clinic)	Hospital
Step	Analysis of Potential Problems in the Implementation of Patient Safety Pre post Partum in Health Services		
	Aspect		
	Pregnant Mothers and Babies	Services (PHC/ Clinic)	Hospital

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Input	High Risk Group	Officers : Number and quality of officers -> Competence (level of education, skills and work experience). There is still a lack of officers who receive training in handling risky cases.	Officers : Number and quality of officers -> Competence (level of education, skills and work experience). There is still a lack of officers who receive training in handling risky cases.
	Mother (Age, Parity, suffering from certain diseases, nutritional status, economic status)	Facilities and infrastructure: Availability of standard incubators, Number and quality of vehicles (ambulance), Availability of PONEK and PONEK Puskesmas, and USG Availability of clean water, availability of triage facilities .	Responsiveness and speed of handling emergencies
	Infants (suffering from certain diseases, LBW, nutritional status)	Commitment of officers to be on site Quality of Puskesmas that is not standardized (not yet accredited) Availability and implementation of SOPs	Interprofessional collaboration in handling emergencies
Process	ANC completeness	Low / lack of effort at detecting high risk targets	
		Cultural elements that apply to each region, especially the treatment of mothers and babies.	Cultural elements that apply to each region, especially the treatment of mothers and babies.
Output	Low level of awareness of visits to postpartum health services	Staff negligence in monitoring Pregnant women who are not at risk (not targeted)	
		Monitoring neonatal services	

Source: Nurmiati et al, 2019

Based on the causes of the death of mothers and children at the Puskesmas, it can be caused by various things. For example, due to the case of pre-eclampsia for mothers and Asfixia for children. Besides, many other contributing factors must involve cross- programs, especially nutritional issues. Regarding patient safety, it depends on the standards used, for example using PMK 75, both in terms of energy and surprise. Whether the PKM has fulfilled it or not. If not, what efforts have we made to fulfill it In terms of energy, 2 aspects need attention. In terms of number (meet / not) and competence (competent or not). Regarding patient safety, even though the health facilities are

inadequate, there must be evidence to show that there are efforts to implement it. Starting from small things, identify the patient, for example, at least 2 (name and date of birth). Handrails and infusion hanger d WC patients. Evacuation route plan. The implementation of patient safety in patient safety varies, but for certain standards (such as the use of PPE) it should be the same. If patient safety is related to clinical practice because there are standards/guidelines used. Must be the same.

The MMR and IMR cases are a contribution of several factors. It could be due to officers, public understanding/awareness, availability of health

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facilities, socio-economic conditions, culture, and early age marriage/unwanted pregnancy. The high number of MMR and IMR cases in hospitals is due to referrals, there is a term SPOG RS when receiving referrals from mothers who give birth "remaining traditional midwives remaining". The officer factor here is phenomenal because it will affect other contributing factors, such as if the officer is not competent in terms of Integrated ANC, it will affect: 1. Understanding/awareness of pregnant women/families 2. early detection of risk factors, 3. Management of cases if specific problems are found, in pregnant women (perhaps even some officers do not know about this). That's just talking about Integrated ANC, we haven't talked about the 26 pregnant women screening. Not to mention talking about APN (Normal Childbirth Care). Do the officers who serve the above matters have the competence or not.

Some PKMs do not carry out standard ANC procedures. Not all pregnant women receive ANC service items. Including efforts to detect the risk of pregnancy. Particularly for pregnancy counseling, some PKMs do not have health promoter staff to provide counseling to pregnant women as a promotive and preventive effort, especially for mothers at high risk. Not all PKM have adequate MCH service facilities. For example, an Ambulance, not all PKM has, if any, sometimes the request is more than the available facilities (at the time of the same request). This makes it difficult to access higher health services [RS].

In general, at the Puskesmas there is no separation of patients at risk from normal patients. Incubator facilities are not available for less healthy babies. Maintenance of facilities and infrastructure at the Puskesmas is not feasible. especially for clean water needs. The limited number of human resources in Puskesmas, the ratio of human resources to community needs. There are village midwives who sometimes do not stay in one place, so the number of personnel available is insufficient. Lack of manpower causes a high workload because it is not by community needs. Regions in South Sulawesi that have high MMR and IMR are Toraja, Jenepono, Gowa, and Luwu. Patient safety facilities at the Puskesmas are inadequate. The speed of staff in serving patients, including the skills of officers for handling emergencies at Puskesmas.

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Not all PKM have adequate MCH service facilities. For example, an Ambulance, not all PKM has, if any, sometimes the request is more than the available facilities (at the time of the same request). This makes access to higher levels of health care [RS] difficult. In Puskesmas there is no separation of patients at risk from normal patients. Incubator facilities are not available for less healthy babies. Maintenance of facilities and infrastructure at the Puskesmas is not feasible. especially for clean water needs.

The limited number of human resources at Puskesmas, the ratio of human resources to community needs. There are village midwives who do not live in one place, so the number of personnel available is insufficient. Lack of manpower causes a high workload because it is not by community needs. Regions in South Sulawesi that have high MMR and IMR are Toraja, Jenepono, Gowa, and Luwu. Patient safety facilities at the Puskesmas are inadequate. The speed of staff in serving patients, including the skills of officers for handling emergencies at Puskesmas. Many factors cause AKI. The sources of maternal and infant mortality are many factors, including mothers, health facilities, and health workers. From the health worker factors, namely early detection, namely early screening, there are risks from pregnant women, if early detection and early treatment will prevent risks, such as preeclampsia, if they are detected early, they must be screened early or detected early, such as recommending mandatory delivery in a hospital or to a more complete health service facility. Each hospital and health facility has its standards. At the Puskesmas there are also things called PONEK, PONEK, each of which has its standards and types.

CONCLUSION

Based on the results of the study, an analysis of potential problems was obtained based on the input process and output consisting of; input, process, and output problems. The problems for each component are the input problem consisting of; problems originating from pregnant women and babies, originating from health service institutions (Puskesmas / Hospitals/clinics), facilities and infrastructure owned by health facilities, and low competence and commitment of officers. The process problem consists of; completeness

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utilization of ANC, low- high-risk target detection efforts and culture prevailing in the society that supports pregnancy lb u until postpartum. The output problem consists of; Factors awareness of mothers and families, lack of monitoring by officers postpartum (service neonates), lack of follow-up to the clerk and pregnant women, need no further study to develop measurement methods based on aspects of input in health care based on the existing problems, need There is a further study to develop measurement methods based on process aspects in health services based on existing problems. Need there are his further studies to develop a method of measurement based on the output facet of health care based on the existing problems.

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