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Research Article

Study of Maternal Mortality Risk Factor 2016 in Aceh Province

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Abstract:
The studies goals was determine the cause of death from 3 factor of delaying that are the delaying in decision making, delaying in reaching health facility and delaying of getting adequate service in the health facilities. The study was conducted in 9 district /cities representing eastern, western and central in Aceh province and there was maternal mortality. Research start from April to Oktober 2016. The sample was all the mothers who experience death in 9 district/cities amounted to 45. Research instrument in the form of quistioner given to family, midwife, midwife coordinator and village head. Research design is deskriptif explorative. Maternal deaths 57.7% were used by bleeding during the pregnancy/childbirth. The mayority maternal death sare due to delays that occurring during pregnancy/childbirth, postpartum, either late in decision making (97.8 %), late referral (95.6%) and delayed access to health facilities (91.1%). Decision making by head of family is influenced by traditional beliefs so that it is the main factor of maternal mortality.

Keywords: Maternal death, late in decision making, late referral, delayed access ro health facilities.

I. Introduction

Maternal and infant mortality rates illustrated success in the health sector, because maternal mortality rate (MMR) and infant mortality rate (IMR) determine the degree of public health that describes the quality of maternal and child health in Indonesia. High level of MMR dan IMR showed low quality of health care in the mother and children and caused economic and social decline in society [1]. Government effort to reduce the number of maternal deaths (MMR) and infant mortality still seem difficult. According to the millennium development target (MDGs) the maternal mortaliy rate is 102 per 100.00 live births and infant mortality rate to 23 per 1000 live births, but this has not been achieved. United Nation and several countries including Indonesia have agreed of sustainable devellopment targets (SDGs) to address the the unreached DGs target [2].

The causes of maternal deaths are caused by direct causes of obstetrics and indirect causes. The direct cause of maternal mortality is associated with complications of pregnancy, labor and childbirth whereas indirect causes are caused by diseases that aggravate pregnancy and increase the risk of morbidity and mortality [3].

In addition, one contribution of maternal death is also caused by 4 too, ie too young, too frequent, too short of gestational distance and too old. In addition, 3 Late is also a contributor to maternal and infant mortality in Indonesia, namely late decision-making, late reaching health facilities and late getting adequate help in health facilities.

A review of an article suggests that the cause of maternal mortality is caused by 3 delays i.e delays in decision making, delay in getting transport and the third delay is the low quality of health services provided at health facilities [4].

Maternal deaths in India are caused by delays in obtaining adequate help in health facilities. Maternal mortality is due to inadequate health facilities in hospitals and mothers must also be transferred to several hospitals causing delays in obstetric treatment [5].

The socio-cultural condition of the family in Indonesia related to the frequent mother and child health is late in making decisions to decide which medical treatment should be obtained by mother and child, and this also happened in Aceh Province. The decision to obtain follow-up care through referrals is given by older relatives such as parents or parents in-laws and husbands. This condition is often aggravated by geographical factors, where the distance of the mother's home to the health care facility and adequate midwifery referral care. This can lead to maternal morbidity and mortality.

About 830 women die every day due to the fact that pregnancy and labor can be prevented. Mortality of 99% of mothers occurs in developing countries and is higher in women who live in rural areas with the povertines. More than half of these deaths occur in sub-Saharan and almost one-third occur in South Asia. One of the goals of the 3rd SDGs is to reduce the global maternal mortality rate to 70 / 100,000 Birth of Life [6].

Indonesia's maternal mortality rate according to Indonesia's health demographic survey is 359 / 100,000 live births and declines to 305 / 100,000 live births in 2015 [7], whereas in

Aceh province the maternal mortality rate in 2015 amounts to 135 / 100,000 live births and up to with April 2016 maternal mortality reached 59 mothers per 100,000 live births [8].

The high number of maternal and infant mortality cases has received serious attention from stakeholders in Aceh Province. This is demonstrated by the survey conducted planning on the community related to the cause of death in the mother and the neonatal by Bappeda Aceh Province. Based on the above background, the purpose of this research is to know the effect of delay in decision making, delay in reaching health facility and delay in getting health service facility to maternal death in Aceh province.

II. MATERIALS AND METHODS

The population in this study were all mothers who were referred and experienced emergency resulting in death during the study. Mother's death amounts to 45 people. The research design used in this study is descriptive explorative to know the description of factors causing maternal mortality based on 3 delays. The study was conducted in 9 districts/ cities from April to October 2016. The research sites were conducted in Aceh Singkil District; Aceh Barat Distric; Aceh Besar District; Pidie District; Bireuen District; Aceh Utara District; Lhokseumawe District; Aceh Tamiang District; and Pidie Jaya District. The reason for choosing the place of study is to represent the eastern, western and central areas, and there is maternal mortality in the district.

The sampling technique in this study is the total population according to the inclusion and exclusion criteria. The inclusion criteria in this study are: Mothers who were referred and died both when referred and when to place referral, Family willing to be respondents. While the exclusion criteria in this study are: deaths that occurred not caused by emergency cases.

Instruments in this study are questionnaires given to the respondent's family, village midwife, midwife coordinator and village head to know the cause of death in terms of 3 Late. The stages of the implementation of the study as follows: The data collected is the primary data that is data obtained directly from the field through the spread of questionnaires. This research is conducted through several stages: Preparation of research, implementation of research and preparation of reports.

Preparation of research begins by capturing data of maternal deaths that experienced deaths due to emergency cases. Data collection to the field according to the death data has been obtained, conducted by technical team of Aceh Regional Development Planning Board consisting of 4 people in 1 team. The final stage is the preparation of reports after performing data analysis, discussion of results, and drawing conclusions from the study. Data analysis was done by univariate analysis to know maternal mortality factor presented in tabular form and narrated textually

III. RESULT AND DISCUSSION

Based on the results of research conducted from April to October 2016 showed that majority maternal deaths occur during pregnancy caused by bleeding, eclampsia or preeclampsi

Table 1. Frequency Distribution of Maternal Mortality in 9 Districts / Cities in Aceh Province

No.	Regency / City	Mother's death	
		f	
1	Aceh Besar	4	8.9
2	Pidie	7	15.6
3	Pidie Jaya	2	4.4
4	Bireuen	2	4.4
5	Aceh Utara	10	22.2
6	Lhoksemawe	5	11.1
7	Aceh Tamiang	6	17
8	Aceh Barat	4	8.5
9	Aceh Singkil	5	10.6
	Total		**100**

Based on the above table it can be seen that the majority of maternal deaths are in the District of North Aceh as many as 10 people (22.2%) maternal mortality.

Table 2. Frequency Distribution of Causes of Maternal Mortality in 9 Districts / Cities in Aceh Province

No.	Causes of Maternal Death	Amount	
		F	
	Eklamsi	11	25.5
	Pre Eklamsi	3	6.3
	Bleeding(Abortus, Atonia Uteri, Retentio Plasenta, Laserasi jalanlahir)	27	59.7
	Neglected Labour	2	4.3
	PlacentaPrevia/Solutio Plasenta	1	2.1
	Sick	1	2.1
Total		**45**	**100**

Based on the above table it can be seen that the majority of causes of maternal mortality is due to bleeding that occurred during pregnancy / childbirth that is as many as 27 people (59.7%).

Table 3. Frequency Distribution of Risk Factors Found in Maternal Mortality in 9 Districts / Cities in Aceh Province

Risk factor	Maternal death	
	f	%
Risk	15	33.3
Not Risk	30	66.7
Total	45	100

Based on the above table it can be seen that the majority of maternal deaths occur in mothers who are not at risk in pregnancy / childbirth that is as many as 30 people (66.7%).

Table 4. Maternal Mortality Factors Viewed from 3 Delays in 9 Districts / Cities in Aceh Province

3 Factor of delay	Death at pregnancy		Maternal death at maternity		Maternal dath during childbirth		Amount	
	f	%	f	%	f	%	f	%
ɔ late to make a decision								
- Late		44.4	12	26.7	12	26.7	44	97.8
- Not late		0	1	2.2	0	0	1	2.2
ıount	20	44.4	13	28.9	12	26.7	45	100
ɔ late to reach the place of reference								
- Late	20	44.4	12	26.7	11	25.6	43	95.6
- Not late	0	0	1	2.2	1	2.2	2	4.4
Amount	20	44.4	13	28.9	12	26.7	45	100
Late service in health facilities								
- Late	18	43.9	12	29.3	11	24.4	41	91.1
- Not Late	2	4.4	1	2.2	1	2.2	4	8.9
Amount	20	44.4	13	28.9	12	26.7	45	100

The table above shows that the majority of mothers die due to delays occurring, either when making decisions during referrals, when reaching a reference point or arriving at a health facility.

The results showed that late decision-making factors, late arrivals and late delivery of services in health facilities were the main factors of maternal deaths. This can happen as a result of the mother's reluctance to get to the health facility immediately because she believes that the signs of complications are common in pregnancy, while other family members are unaware of the obstetric obstacles [9].

The literature review indicates that the increase in maternal mortality is caused by 3 delays. Delay in decision-making is caused by the stigma that occurs in the community, the attitude of the patient and the lack of information received by the mother related to pregnancy health. While the second delay is due to distance factor, geographic and socioeconomic conditions are not good and not available ambulance when referrals are needed. The delay in receiving adequate services is due to the existing health management system in the Hospital and the clinical skills of health personnel when faced with emergency cases [10].

Research conducted by Mohammed, et al (2011), shows that maternal deaths occur due to a 3 phase delay. Approximately 75% of respondents had medical problems in their pregnancies and 73.4% were late in seeking medical help, late in arriving at the facility due to unavailability of transport and a third delay of 68.8% due to late medical handling, unavailability of drugs and health workers at place of reference [11].

The results of this study indicate that 59.7% of maternal death is caused by bleeding, whether that occurs during pregnancy, childbirth or during childbirth. The cause of maternal mortality in Indonesia is caused by the main causes of death, namely bleeding, hypertension in pregnancy and infection [2].

The highest maternal mortality rate in North Aceh District was 22.2% and the majority of deceased mothers had a good pregnancy condition, of which 66.7% of mothers during pregnancy were at no risk / low risk. But the delay conditions for the referral process lead to maternal death.

The result of the study showed that the delay in decision making up to maternal mortality was 97.8%. This study was supported by a study conducted by Febriana, IK (2007) showing a delay in decision making to refer when complications occur at 50.8 times greater maternal mortality than those with no late referral [12].

Traditional beliefs and delays in decision-making in seeking care at health facilities are still occurring in the community. Traditional beliefs embraced by certain communities will

influence decision making by husbands as family heads or people who play an important role in the family. As a result, in case of emergency cases in pregnant women, delivery or postpartum should involve multiple parties to consult. This will lead to a delay in decision making which results in maternal death [2,13]

Husband's perception is very strong in determining that the mother should be referred to as mother's education, because of the cultural context where the husband is the mother's companion who will decide on the health conditions that occur in the family. However, maternal education is very beneficial to her in order to immediately find out the signs of abnormalities that occur so that they can seek immediate health help [14].

The decision to get the treatment for the family was decided by the husband, but the husband sometimes went to work from the morning, so the mother had to wait until the night when the husband came home to get medical help. A woman who has a placenta retinalion should wait up to 7 hours until her husband returns to the hospital, so that maternal deaths occur during the trip to the hospital [11]. The late husband's decision was given to the occurrence of delays in maternity assistance, transportation was also difficult to bring to the health facility, this is the cause of maternal death.

In addition, cultural and traditional factors still play a role in the postpartum care process through the influence of families who play a role in postpartum care. Among them is the practice of abstinence and or necessity to eat certain foods. During childbirth, mothers only consume white rice without animal protein and limit the consumption of water because it is considered to slow the process of wound healing. This can reduce the condition of postpartum mothers who need enough nutrient intake to restore the condition of the body and help the process of breastfeeding [15].

The results also show that the delay in reaching the facility of reference place causes maternal mortality of 95.6%. Research conducted by Fibriana, A.I and Azam. M. (2011) in KabupatenCilacap shows that community factors (availability of transportation) and community involvement in majority obstetric referrals have transportation availability of 79%. While the rest do not have the availability of transportation because they still rely on cars from health workers [16].

This can be caused by several things, including distance, availability of transportation and can also be caused by costs. Interviews conducted with some village heads found that the unavailability of village ambulances that could be used as a means of transportation when referral. The means of transportation used when bringing the mother to a referral facility using a vehicle belonging to the nearest neighbor only so it takes longer to take the mother to a referral facility.

Distance becomes an important constraining factor for patients in reaching the nearest hospital, especially rural areas. The effect of distance will be more felt if the lack of transportation and road conditions are less good so that the more influence the patient in making decisions [17].

The results also showed that 91.1% of deaths were due to late mothers receiving treatment at referral health facilities. Of the 45 mothers who died, 86.7% of mothers died at the referral facility, 8.9% of deaths occurred at home and 4.4% occurred on the way to the referral facility. The data is submitted by the respondent and the midwife who made the referral. The results of this study differ from the 2007 study, in which maternal mortality 65% occurred at home, 32% in health facilities and on the way (3%) [18].

Maternal deaths in health facilities can be prevented if the mother can be brought immediately, but unknown emergency conditions and 2 other delays lead to an increase in maternal mortality. Conditions of alarm can be recognized early if the mother routinely performs the examination of pregnancy and get quality pregnancy services. Research conducted by Aeni (2013) showed that poor and incomplete antenatal examination increased the risk of maternal mortality by 7.86 times ($p = 0.008$; 95% CI = 1.49-41.3) [9]. Similarly, research conducted in Bulukumba District in 2007-2009 indicated that women who did not perform regular antenatal examinations or <4 times were at risk of death 4.57 times greater than those who regularly performed antenatal screening [19].

Good and qualified pregnancy checks can only be provided by qualified health workers, not only measured by technical skills and facilities, but also the attention and views of health workers on obstetric care issues in the community, ranging from the introduction of problems, efforts to improve the quality of health , and disease prevention efforts are the problem [20].

In this study it was found that delays in decision-making and reaching health facilities were the most common cause of maternal mortality, and handling in unhealthy health facilities was also the cause of deaths. Researchers assume that panic and ignorance of emergencies during pregnancy and childbirth can inhibit actions that should be done quickly due to delays in family decision-making. Delay in seeking help is also caused by a belief and resignation from the community that everything that happens is a destiny that has been set by Allah SWT.

IV. CONCLUSIONS AND RECOMMENDATIONS

There were 97.8% of maternal deaths due to delays in decision making, 95.6% occurred due to delay in reaching the referral site and delays in obtaining services at health facilities accounted for 91.1% of maternal mortality. It is therefore advisable for local governments and stakeholders to be able to:

a. Midwifery Update (MU), Interpersonal Communication and Counseling Training (KIPK), Training on Obstetric Obstetrics, Normal Birth Attendance Training (APN), etc. The quality of midwife development in terms of knowledge and skills in accordance with the development of the times through training and workshops
b. Revitalization of basic and comprehensive emergency obstetric care services (PONED / PONEK) to reduce maternal mortality due to obstetric and neonatal emergency obstetrics.
c. Basic health services to improve the quality of KIA service standards through facilitative supervision
d. Mobilizing community empowerment in improving

maternal and child health, such as Desa Siaga program, village ambulance, blood donor group, Birth Planning and Complication Prevention (P4K) Program and village fund allocation are mostly used for health sector

e. Can place companion referrals in primary health care and independent teams that oversee the service process from patient acceptance until the patient gets action at the hospital.
f. Availability of Birth Waiting Home close to the hospital for closer access to referral health care facilities and to prevent delayed treatment of pregnant women, maternity, childbirth and newborns
g. Utilization of public safety center (PSC) for immediate referral mobilization in emergency obstetric cases
h. The implementation of the bride and groom course (Suscatin) involves cross-sectoral (Dinas Syariat Islam and Dayah Education and Development Board) in order to add information about gender-responsive marriage so that there is equality of rights between husband and wife in family decision making
i. Optimization Health education on the community about the importance of pregnancy checkups by midwives in the village
j. Assistance of pregnant women by health / peer cadres to ensure maternal health during pregnancy, childbirth and childbirth.

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