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ANALYSIS OF FACTORS CAUSING INFANT DEATH

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ABSTRACT

Judging from the last five years, the incidence of infant mortality in Padang City tends to increase every year. Case reports show that the causes of infant deaths in Padang City in 2018 included LBW, asphyxia, congenital abnormalities, sepsis, diarrhea, pneumonia and other causes. Furthermore, based on reports, the causes of neonatal deaths in Padang City in 2021 include LBW, asphyxia, neonatal tetanus, sepsis, congenital abnormalities, and others. Data from case reports of infant deaths in Padang City in 2022, the highest cases occurred in the Ambacang health center work area. The aim of this research is to determine the factors that cause infant deaths in the working area of the Ambacang Health Center, Padang City in 2022. This research is a qualitative research using in-depth interviews with the parents of babies and related officers. The population of this study was the incidence of infant deaths in the working area of the Ambacang Community Health Center, Padang City in 2022, namely 11 cases of infant deaths, of which 3 were cases of deaths of triplets. The results of the research show that the factors causing infant deaths in the Ambacang Health Center working area in 2022 are serotinus, LBW, prematurity and primigravida, pre-eclampsia, labor with prolonged labor, asphyxia, congenital abnormalities (in this case leaky gut), transverse position of the baby and forced to give birth the normal way, premature rupture of membranes, and there is fluid in the baby's lungs

Keywords: Serotinus, LBW, Prematurity and Primigravida, Pre-eclampsia, Asphyxia, Congenital abnormalities

INTRODUCTION

The National Medium Term Development Plan (RPJMN) 2015-2019 targets reducing the infant mortality rate per 1,000 live births to 24 in 2019(1). In addition, globally sustainable development, known as the Sustainable Development Goals (SDGs), one of the agendas is by 2030, ending preventable deaths in newborns and toddlers, where each country targets to reduce neonatal deaths to at least less than 12 per 1000 births and deaths of children under five to as low as 25 per 1000 births (SDGs 2019).(2)

There are 24 health centers in Padang City, one of which is the Ambacang health center which is located in Kuranji sub-district. Of the 24 community health centers in the city of Padang, the highest number of infant deaths in 2022 will occur in the working area of the Ambacang

community health center. In the last five years, cases of infant mortality, especially in the Ambacang health center working area, have tended to fluctuate and there are still some who have not met the SDGs targets. In 2017 there were 7 cases of infant death. In 2018 there were 4 cases of infant death. In 2019 there were 4 cases of infant death. In 2020 there were 13 cases of infant deaths, in 2021 there were 4 cases of infant deaths, and from 2022 to August 2022 there were 12 cases of infant deaths. The causes of infant deaths in the Ambacang health center working area in 2020 include COVID 19, preeclampsia, maternal age over 40 years, asphyxia, and prolonged labor.(3)

Infant mortality is death that occurs when the baby is born until one day before the first birthday. In terms of causes, infant death is differentiated by endogenous and exogenous factors. Endogenous infant

death (neonatal death) is a death event that occurs in the first month after the baby is born, generally caused by factors that are present at birth, inherited by the parents at the time of conception or acquired from the mother during pregnancy.(4) Meanwhile, exogenous death (post-neonatal death) is the death of a baby that occurs between the ages of one month or up to one year due to factors related to environmental influences.(5)

According to Indawati 2012, infant deaths are caused by the mother's condition during pregnancy being poor, the mother rarely having her pregnancy checked by health workers, the birth spacing being too narrow, the food consumed by the mother being unclean, causing the baby to be born with a low weight and being susceptible to disease which can result in the baby died.(5)

From the results of Maryani's 2019 research, the factor that causes infant deaths is that the place where early delivery services are provided is not health services, but traditional paraji medicine, so that many deaths occur in health facilities.(6)

Research conducted by Guinsburg 2021 shows that the common causes of neonatal death are respiratory problems, birth defects, infections and perinatal asphyxia. The independent variables causing the incidence of neonatal death are maternal education, prenatal care, parity, sex of the baby, and Apgar score.(7)

Research conducted by Xu et al 2022 shows that the common causes of infant mortality are perinatal conditions, congenital abnormalities, LBW and sudden infant death syndrome.(8)

Indar Sulistiyanti's 2015 research showed that educational factors, distance to health facilities, and ANC behavior influence the incidence of infant mortality. Meanwhile, socio-economics, age, socio-culture, and birth attendants have no effect on the incidence of infant death.(9)

RESEARCH METHODS

In this study, researchers want to know the factors causing infant mortality in 2022 in the working area of the Ambacang Community Health Center, Padang City. This research was carried out in December 2022- July 2023

This research is qualitative research and data collection techniques use in-depth interviews, document review and observation as well as secondary data collection using literature data. Data analysis uses content analysis which includes input (human resources, related policies, facilities and infrastructure), process (the process through which the baby's death occurs, namely ANC, monitoring and evaluation), output (what causes the death baby). To ensure that the data obtained is correct, data validity is carried out by data triangulation. In this study there were 11 cases of infant death, three of which were triplets. The informants in this research were the parents of the babies (nine people), one head of the Community Health Center, and one person in charge of the MCH program at the Ambacang Community Health Center, Padang City.

RESULTS AND DISCUSSIONS

Based on the data analysis carried out, it can be described as follows:

A. Description of research informants and interview materials

Table 1 Description of research informants and interview material

No	Kode	Jabatan	Materi Wawancara			Pendidikan	Pekerjaan	Lama Bekerja
			Input	Proses	Output			
1	IF 1	Kepala UPTD Pukesmas Ambacang	√	√	√	Ked	PNS	19 Tahun
2	IF 2	Bidan Penanggung Jawab KIA	√	√	√	DIV Keb	PNS	13 Tahun 3 Bulan
3	IF 3	Orang Tua Bayi	√	√	√	S1	IRT	3 Tahun
4	IF 4	Orang Tua Bayi	√	√	√	SMP	IRT	10 Tahun
5	IF 5	Orang Tua Bayi	√	√	√	SMP	IRT	12 Tahun
6	IF 6	Orang Tua Bayi	√	√	√	SMA	IRT	4 Tahun
7	IF 7	Orang Tua Bayi	√	√	√	SMA	IRT	4 Tahun
8	IF 8	Orang Tua Bayi	√	√	√	SMP	IRT	5 Tahun
9	IF 9	Orang Tua Bayi	√	√	√	SMA	IRT	2 Tahun
10	IF 10	Orang Tua Bayi	√	√	√	SMA	IRT	14 Tahun
11	IF 11	Orang Tua Bayi	√	√	√	S1	IRT	2 Tahun

Based on table 1, it can be seen that the informants come from different educational backgrounds.

B. Input Components

Input is input that influences the analysis of factors causing infant mortality in the Ambacang Health Center Working Area, Padang City in 2022. Several things that are included in the input are policy, human resources, funds and facilities/infrastructure.

1. Policy

The policy implemented as an effort to prevent infant mortality in the Ambacang Health Center Working Area, Padang City, is to carry out pregnancy checks and high risk detection as early as possible. If a baby's death occurs, a verbal autopsy and regular audits regarding the baby's death will be carried out, and it will be immediately reported to the Padang City Health Service and a minimum of 2 audits will be carried out a year regarding the cause of the baby's death.

Table 2 Policy Triangulation Matrix

Topic	Wawancfig mendalam	Document review n	Study observations	Triangular analysis
Wisdo man	The policy regarding the analysis of factors causing infant death is good and in accordance with the requirements and regulations of the Padang City Health Service. Material audits are carried out at least twice a year.	Can be seen from the material audit report Whichhave been done.	It can be seen from the implementation of verbal audits carried out regarding infant death incidents.	The policy regarding factor analysis of infant mortality is good and in accordance with the SOP and regulations from the Padang City Health Service. Every time a baby's death occurs, a verbal audit is always carried out and then reported to the City Health Service. Padang

Based on the interview above, the meaning that can be drawn by the researcher is that informant 1 explained that the policy regarding the incidence of infant deaths was quite good, then informant 2 explained that every time a baby death occurs, it is always reported to the Health Service and every year a maternal audit is carried out.

2. Human resources

The human resources in this research are people who have roles and responsibilities related to the analysis of factors causing infant deaths in the working area of the Ambacang Community Health Center, Padang City in 2022. The analysis of factors causing infant deaths is managed by the Head of the Community Health Center, the person in charge of the MCH program (children's section). From the research results, it was found that human resources had been met and implementation had been carried out well.

Table 3 HR Triangulation Matrix

Topic	Wawancdeep fig	Document review n	Study observations	Triangulation analysis
SDM	Human resources, especially existing health workers inThe working area of the Ambacang Community Health Center is sufficient as seen from the placement of midwives as regional supervisors in the Ambacang Community Health Center working area which has been fulfilled.	It can be seen from the documents of employees or workers It's at the Ambaca Health Center.	It can be seen from observations of the implementation of aan posyand u every month, that midwives have been accompanied as regional supervisors in each area in the working area of the Ambacang Community Health Center.	For human resources, carry out an analysis of factors causing infant deaths in the working area of the Ambacang City Health Center Padang in 2022, SDM has fulfilled the requirements seen from the fulfillment of the distribution of midwives in every area in the Ambacang Community Health Center working area, and none midwives who have duties and responsibilities double answer.

Based on the interview excerpt above, the meaning that can be concluded by the researcher is that informant 1 explained that the HR (Human Resources) implementation of the analysis of factors causing infant mortality was sufficient, HR had met the requirements and had been assigned to every sub-district in the working area of the Ambacang Health Center, Padang City.

3. Socioeconomic

The socio-economic assessment can be seen from the occupation of the baby's parents.

Table 4 Socioeconomic Triangulation Matrix

Topic	Interviewra deep	Review the document n	Study observations	Triangulation analysis
Social economy	Socioeconomic conditions of parents i.e. all mothers are housewives and most fathers are laborer.	It can be seen from the resident documents It's in the working area of Mas Health Center Ambaca ng.	It can be seen from observations of parents of babies that infant deaths occur in the working area of Mas Health Center Ambaca ng.	For the social and economic conditions of the baby's parents, the income and income of the baby's parents is the minimum wage, and the jobs of the baby's parents are almost all laborers (fathers) and housewives (mothers).

Based on the interview excerpt above, the meaning that can be taken by researchers is that the socio-economic status of the baby's parents, the incidence of infant death is middle to lower (income of minimum wage or less than minimum wage).

4. Facilities and infrastructure
The facilities and infrastructure referred to here are all those used as tools in carrying out analysis of factors causing infant deaths and in preventing infant deaths in the Ambacang Community Health Center Work Area in 2022.

Table 5 Triangulation Matrix of facilities and infrastructure

Topic	Deep interview	Telaah dokumen	Observe breast milk	Triangulation Analysis	Proof
Facilities and infrastructure	The existing facilities and infrastructure in the working area of the Ambac Community Health Center are sufficient, seen from their compliance with the indicators in Minister of Health Regulation no. 43 of 2019. Availability and availability of facilities and infrastructure supported by BLUD.	It can be seen from the recording of the facilities and infrastructure available at the Amba Cang Public Health Center.	It can be seen from the observation of the facilities and infrastructure available at Amba Cang Community Health Center.	For facilities and infrastructure, carrying out an analysis of factors causing infant mortality in the working area of Mas Ambacang Health Center, Padang City in 2022, It is quite well available, complete and in accordance with the standards of the Mas Health Center.	Can seen t from the list infrastructure and facilities at Amba Cang City High School Padang g

Based on the interview excerpt above, the meaning that can be taken by the researcher is that informant 1 explains that the facilities and infrastructure are analysis of the factors that cause infant deaths in the work area.

The Ambacang Community Health Center, Padang City in 2022 will be available in good condition, complete and in accordance with community health center standards. Facilities and infrastructure such as blood pressure monitors, stethoscopes, fetal dopplers, adult scales, HB checking tools and urine checking tools are available. These tools are used to prevent infant deaths. Then the report regarding the incidence of infant deaths was used as material and benchmark for analyzing the incidence of infant deaths at the Ambacang Community Health Center, Padang City in 2022.

C. Process
The process that goes through and is the cause of infant death.
1. ANC

ANC is a pregnancy examination which aims to improve the physical and mental health of pregnant women optimally so that they are able to face the period of childbirth, postpartum and exclusive breastfeeding. It is recommended that ANC be carried out 6 times during pregnancy, with details of 2 times in the 1st trimester, 1 time in the 2nd trimester, and 3 times in the 3rd trimester. ANC is carried out to prevent infant death.

Table 6 Triangulation Matrix for Antenatal Care (ANC) services

Topic	Wawancdeep fig	Review the document	Study observations	Analysi s*triang ulation*
Antennatal Care (ANC)	Service n ANC to detect the risk of pregnancy as early as possible.	It can be seen from the recording of pregnancy visits carried out by pregnant women every year 2022 that is It's at the Ambaca Health Center.	It can be seen from the observation that it has been carried out well and received a positive response from pregnant women, namely a form of satisfaction with the services received at Ambacang Community Health Center	For ANC it's been done well.

Based on the interview above, the meaning that can be taken by researchers is that informants 1 and 2 explained that the Ambacang Community Health Center provides pregnancy check-up services to every pregnant mother in the Ambacang Community Health Center working area, as well as providing information to pregnant women and their families about the danger signs. during pregnancy so that you can be checked quickly at a health facility. Pregnant women who use ANC services at the Ambacang Community Health Center, Padang City, are satisfied with the services provided by health workers.

Table 7 Triangulation Matrix for education about dangers to pregnancy and babies

Topic	Wawancfig deepm	Document review n	Study observations	Triangular analysis
Antennatal Care (ANC)	Counseling about the dangers to pregnancy and babies.	It can be seen from the recording of pregnancy visits made by pregnant women in 2022 which exist in Ambaca Health Center ng.	It can be seen from the observations that it has been carried out well and is satisfactory at positive response from pregnant women, namely a form of satisfaction with the service they received at Mas Ambaca Health Center ng.	Counseling has been carried out well while providing ANC services.

2. Monitoring and evaluation

Monitoring and evaluation is carrying out a verbal audit of the incidence of infant deaths and then taking precautions so that it does not happen again and the incidence of infant deaths decreases.

Table 8 Monitoring Triangulation Matrix

Topic	Wawan cara mendalam	Document review n	Study the observations	Analysis*breast milk triangle*
Monitoring and evaluation	Monitoring maternal health and infants and the incidence of infant deaths is carried out routinely.	It can be seen from the recording of death incident reports babywhich exists inworking area of Mas Health Center Ambaca ng.	It can be seen from the observations that it has been carried out well because there is innovation in the form of providing education to pregnant women about the danger signs. In pregnancy and babies	Monitoring has been carried out properly and under the supervision of the Health Service in Padang City.

Table 9 Evaluation Triangulation Matrix

Topic	Interview deepm	Document review n	Study the observations	Analysis*breast milk triangle*
Monitoring and evaluation	Evaluation of the incidence of infant mortality is carried out periodically at a minimum 2 times a year.	It can be seen from the audit recording of infant mortality incidents in the working area of Mas Ambaca Health Center.	It can be seen from the observations that it has been carried out well because there is innovation in the form of providing education to pregnant women about the danger signs during pregnancy. and babies.	The evaluation has been carried out properly and under the supervision of the Padang City Health Service.

Based on the interview excerpt above, the meaning that can be taken by researchers is that informants 1 and 2 explained that monitoring and evaluation of maternal and child health, as well as the incidence of infant mortality, went well because it was always reported and evaluated by the Padang City Health Service.

D. Output
The output is the implementation of an analysis of the factors causing infant deaths in the working area of the Ambacang Community Health Center, Padang City in 2022 so that health workers and families of infants know what causes infant deaths.(10)

Table 10 Output Triangulation Matrix

Topic	Interviewra mendalam	Document review n	Study the observations	Analysis*breast milk triangle*
Causes of infant death	It can be concluded that the causes of infant deaths in the Working Area of the Ambacan Community Health Center in Padang City in 2022 namely: serotinus, LBW, premature and primigravida, preeclampsia, labor with prolonged labor, asphyxia, congenital abnormalities (in this case a leaky gut), transverse position of the baby and forcing normal delivery, premature rupture of membranes, and there are internal fluid baby's lungs	It can be seen from recording reports of infant death incidents which exists inAmbaca Health Center working area.	It can be seen from the observations that have been made regarding infant deaths in the Ambaca ng Community Health Center Working Area.	For the cause of infant death, a verbal audit has been carried out properly by Ambacang Community Health Center officers, Padang City.

Based on the interview excerpt above, the meaning that can be taken by researchers is that the causes of babies dying in the Ambacang Health Center Working Area, Padang City in 2022 are: serotinus, LBW, prematurity and primigravida, pre-eclampsia, labor with prolonged labor, asphyxia, congenital abnormalities (in In this case, the intestines are leaking), the baby's position is transverse and forces a normal birth, the membranes rupture prematurely, and there is fluid in the baby's lungs.(11)

CONCLUSION

From this research, it was found that human resources are sufficient, policies have been implemented well and according to regulations, facilities and infrastructure are complete and in accordance with the guidelines of Minister of Health Regulation No. 43 of 2019, supported by BLUD funds. ANC process services have been carried out optimally and according to the rules

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