

## DESCRIPTION OF MOTHER'S DEATH IN CIAMIS DISTRICT YEAR 2019-2022

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### ABSTRACT

Based on reports from the Maternal & Child Wellbeing program of the Ciamis Locale Wellbeing Benefit, the Maternal Mortality Rate (MMR) for 2019-2022 is still underneath the National MMR and the target set, but proceeds to extend, to be specific 2019;73, 2020;83, 2021;181, 2022;114. The point of this inquire about is to discover out the picture of maternal mortality in Ciamis Rule within the 2019-2022 period. **Intermediary Figure:** 71% of maternal passings happen in high-risk pregnancies. Based on the cause, 24% of maternal passings in 2019-2022 happened due to contamination and 19% of them due to bleeding. **Intermediate Variables:** 66% of maternal passings happen within the 20-35 year age gather. 53% of passings happened in moms with pregnancies less than 5 a long time separated, 60% of passings happened in moms whose to begin with age at marriage was 20-30 a long time. 80% of maternal passings happen in pregnant ladies who experience pregnancy checks more than 4 times or are considered total. 80% of maternal passings happen in healing centers. 64% of maternal passings are not caused by delays. 34% of births were helped by specialists, 31% were helped by maternity specialists, 2% were helped by parajis. **Relevant Variables:** 61% of the most noteworthy maternal deaths occurred in moms with moo instruction, 37% of maternal passings happened within the gather whose spouses were laborers.

Keywords : Maternal Death, health of both mother and child

### INTRODUCTION

Maternal mortality is the number of maternal deaths during a certain time period per 100,000 live births. Maternal death is the death of a woman while pregnant or within 42 days of termination of pregnancy, regardless of the duration and place of pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes (WHO, 2015).

Maternal death is the death of a pregnant woman or death within 42 days after the end of pregnancy, without considering the age and type of pregnancy as a complication of childbirth or postpartum, with causes related to or aggravated by the pregnancy and pregnancy management but not due to accidents (Kadour et al., 2008).

From the operational definition of maternal death above, we can conclude that maternal death can occur during pregnancy due to certain diseases, complications that occur during the birth process, and some time after the birth process or the postpartum period.

Maternal death is caused by direct and indirect factors. Direct causative factors are complications that occur during pregnancy, childbirth, and postpartum. Indirect causative factors are deaths that occur in pregnant women as a result of previous illnesses or those that develop during pregnancy. Indirect causes of death include maternal nutritional status, disease, antenatal care, obstetric history, transportation, family social and economic status, education, and culture. These factors will affect the condition of pregnant women, causing more severe complications, complications not being detected properly, and inadequate treatment caused by birth attendants or because they are late in getting immediate help (Sumarni, 2014).

Factors causing maternal death are divided into three groups: proxy factors, intermediate factors, and contextual factors. Proxy factors consist of complications of pregnancy and childbirth. Intermediate factors consist of health status, reproductive status, access to health services, and healthy behavior. Contextual factors include the status of women in the family, consisting of education level, employment, family status in society (family income, family wealth, education level, and employment status of family members), and finally, the status of society, including the level of welfare, availability of resources, and ease of transportation (Syafudin, 2009).

Research by Broek and Falconer (2011) states that there are 3 factors of delay that cause maternal death, consisting of delays in realizing the need for care and danger signs of pregnancy, delays in services because access to services is not available, because of distance and/or cost of services, or social barriers. culture and delays, the care received at the facility is timely and effective.

This high mortality is caused by various risk factors that occur starting from the pre-pregnancy phase, namely the condition of women of childbearing age who are anemic, lack caloric energy, have obesity, have comorbidities such as tuberculosis, and others. During pregnancy, mothers also experience various complications, such as hypertension, bleeding, anemia, diabetes, infections, heart disease, and others.

Mortality Rate (MMR) in Ciamis Regency can be described as follows: in 2014, the MMR was 145/100,000, in 2015, it was 57/100,000, in 2016 it was 78/100,000, in 2017 it was 67/100,000, in 2018 it was 78/100,000, in 2019 it was 73/100,000, in 2020 it was 83/100,000, in 2021 it was 181/100,000, in 2022 it was 114/100,000.

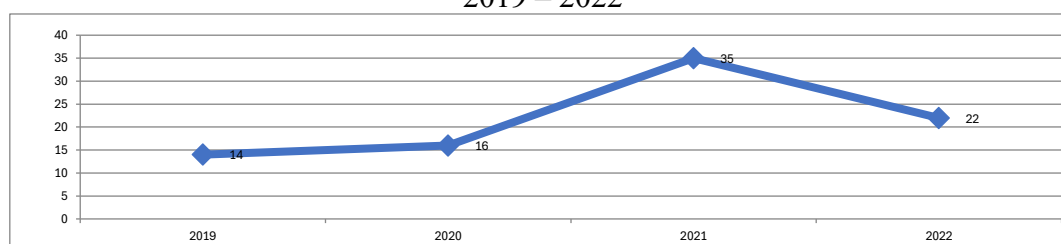
## METHODOLOGY

In carrying out research on the description of maternal mortality in Ciamis Regency in 2019–2022, researchers used descriptive research using library study techniques. The research object is secondary data on maternal deaths sourced from the Maternal and Child Health program. The research was conducted at the Ciamis District Health Service from February to March 2023 on maternal mortality data for the 2019–2022 period. The sample used in this research was the total sample of maternal deaths that occurred in the period 2019–2022, which occurred in the Ciamis Regency working area, totaling 97 cases.

## RESULTS AND DISCUSSION

Based on data from the Ciamis District Health Service, the number of maternal deaths in the period 2014 to 2022 is still relatively high, in 2019 as many as 14, in 2020 there will be 16, in 2021 there will be 35, and in 2022 there will be 22.

Graphics.1  
Trends in the Number of Maternal Deaths In Ciamis Regency  
2019 – 2022



### Characteristics of Maternal Mortality in Ciamis Regency

The characteristics of maternal deaths in Ciamis Regency can be described in two ways: the distribution of death cases per health center and the distribution of maternal death cases based on the period of pregnancy, maternity, or postpartum. The highest number of maternal deaths in 2019–2022 was in the Ciamis Health Center area, namely 16 cases. This is because the proportion of pregnant women to the total population of the Ciamis Health Center area is in the top 2nd position for the highest number of pregnant women. There were no maternal deaths found in the Cieurih, Cisaga, and Payungsari health center areas in the 2019–2022 period.

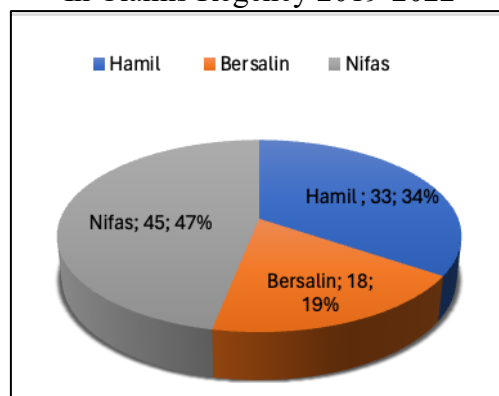
Cases of Maternal Death Per Puskesmas are as explained in Table 1 below.

Table 1  
Distribution of Maternal Death Cases Per Community Health Center in Ciamis Regency  
2019-2022

PUSKESMAS	2019	2020	2021	2022	JUMLAH
Ciamis	0	2	3	3	8
Cipaku	3	2	1	0	6
Rajadesa	1	1	2	2	6
Cijeungjing	1	3	0	0	5
Kertahayu	0	1	2	2	5
Lambung	1	0	4	0	5
Sindangkasih	1	0	2	2	5
Cigayam	0	0	3	1	4
Cihaurbeuti	1	1	1	1	4
Handapherang	1	2	1	0	4
Jatinagara	0	1	2	0	3
Panjalu	0	1	0	1	3
Panumbangan	1	0	2	0	3
Purwadadi	1	1	1	0	3
Rancah	0	2	0	1	3
Banjarsari	1	1	0	0	2
Cidolog	0	1	0	1	2
Cikoneng	1	0	0	1	2
Gardujaya	0	0	2	0	2
Imbanagara	0	1	0	1	2
Kawali	1	0	0	1	2
Kawalimukti	1	0	1	0	2
Pamarican	1	0	0	1	2
Sadananya	0	0	1	1	2
Sukamantri	0	1	1	0	2
Sukamulya	0	0	2	0	2
Baregbeg	0	0	1	0	1
Cimaragas	0	0	1	0	1
Ciulu	0	1	0	0	1
Lakbok	0	0	0	1	1
Panawangan	0	1	0	0	1
Sidaharja	0	0	1	0	1
Sukadana	0	0	0	1	1
Tambaksari	0	0	1	0	1
Cieurih	0	0	0	0	0
Cisaga	0	0	0	0	0

PUSKESMAS	2019	2020	2021	2022	JUMLAH
Payungsari	0	0	0	0	0
KABUPATEN	16	23	35	21	97

Graph 3  
Distribution of Maternal Mortality Based on Pregnancy/Maternity/Postpartum Period  
In Ciamis Regency 2019-2022



Most maternal deaths in Ciamis Regency occur during the postpartum period, namely 45% (47 cases), during pregnancy 34% (33 cases), during childbirth 18% (19 cases).

### Overview of Factors Causing Maternal Death in Ciamis Regency.

The description of the causes of maternal death in Ciamis Regency is divided into 3 parts, namely:

#### 1. Proxy Factors

Proxy factors are factors that are directly related to death due to complications that occur during pregnancy, childbirth, or postpartum. Proxy factors consist of two things, namely cause-of-death factors and pregnancy diagnosis.

##### a. Proxy factors

Maternal deaths in Ciamis Regency during 2019 to 2021 can be seen from the proxy factors that cause the highest deaths due to infection at 24% both during pregnancy and after childbirth, bleeding at 19%, hypertension at 16%, circulatory system disorders at 14%, metabolic disorders at 13%, other and unknown causes at 4%, prolonged labor at 4%, and abortion. There were no cases.

Several types of infections that pregnant women may experience include chickenpox, group B Streptococcus, CMV (cytomegalovirus), hepatitis B, hepatitis C, genital herpes, rubella, and COVID-19. The types of infection are known as COVID-19 (20 cases), TB (2 cases), and DHF (2 cases). Changes in the immune system during pregnancy can make a pregnant woman's body susceptible to infection. Immunizations that pregnant women may have received before becoming pregnant also play a role in providing immunity against various infections.

Postpartum hemorrhage is bleeding that occurs after the baby is born beyond normal physiological limits. Bleeding can be caused by the mother's age being too young or old, delivery being too close, anemia, uterine stretching, obstructed labor, parity, or oxytocin drip.

The proxy factors for maternal mortality in Ciamis Regency can be seen more clearly in table 3 below:

Distribution of Maternal Mortality Based on Cause of Death  
In Ciamis Regency 2019-2022

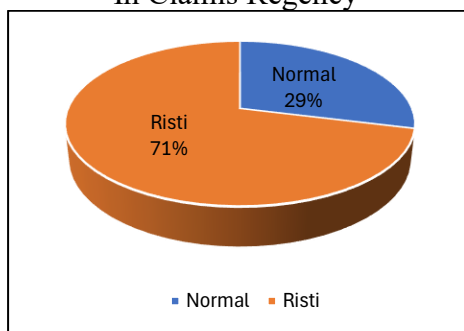
Cause	%	Amount
Infection	25	24
Bleeding	20	18
Hipertension	16	16
Circulatory System Disorders	14	14
Metabolic Disorders	13	13
Other causes	4	4
Unknown	4	4
Long Parturition	4	4
Abortus	0	0
Total	100	97

#### b. Proxy Factors Based on Pregnancy Diagnosis

71% of maternal deaths in Ciamis Regency in the 2019-2022 period occurred in high-risk pregnancies. From the previous diagram, it can be seen that the risks that can be predicted for death include bleeding which is usually characterized by anemia at 19%, hypertension/eclampsia at 16% and circulatory system disorders at 14%, usually characterized by high blood pressure, metabolic disorders are usually characterized by high blood pressure, blood sugar and other blood chemicals by 13%. It is estimated that the lack of regular health checks during pregnancy causes a lack of monitoring of the mother's health status.

Proxy factors for maternal mortality in Ciamis Regency are based on pregnancy diagnosis as in graph 4 below:

Distribution of Maternal Mortality Based on Pregnancy Diagnosis  
In Ciamis Regency



## 2. Intermediate Factors

Factors that cause maternal death are divided into 2 parts, namely:

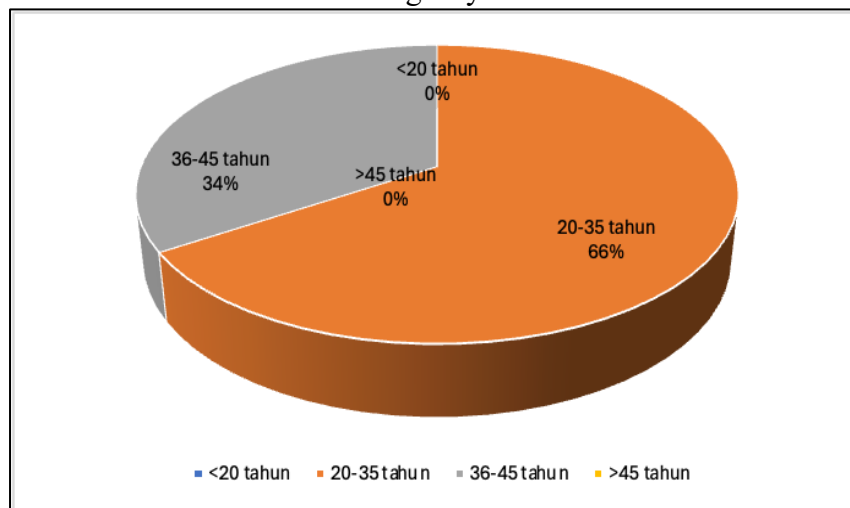
#### a. Maternal Health Status

The mother's health status can be seen from her nutritional status and reproductive status. In this case, the nutritional status of the mother cannot be studied because there is no available data. Meanwhile, factors that cause maternal death based on reproductive status include the mother's age, pregnancy interval, and age at first marriage. The highest proportion of maternal deaths in Ciamis Regency in 2019–2022, based on age, was in the

20–35 year age group (66%). This is thought to occur because the number of pregnancies in Ciamis Regency is dominated by 20–35-year-olds. This meets the ideal gestational age requirements. In the 36-45 year age group, it is also quite high, namely 34%. Pregnancy over 35 years is considered vulnerable to death due to weak body condition, parity, risk of complications such as placenta previa and preeclampsia, etc.

Distribution of maternal deaths by age group in Ciamis Regency in the period 2019 to 2021 as in graph 5 below:

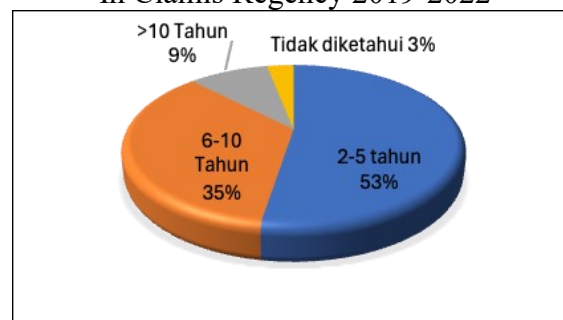
Graphic.5  
Distribution of Maternal Mortality by Age Group  
In Ciamis Regency 2019-2022



Based on pregnancy spacing, maternal deaths in Ciamis district occurred in the gestational spacing group of less than 5 years (53%). Pregnancy spacing of less than 5 years is considered to mean that the uterus is not ready enough to experience the next pregnancy. The ideal pregnancy interval is between 6 and 10 years. From the diagram, it can be seen that maternal mortality in the 6–10 year pregnancy interval group is also quite high because the average pregnancy interval is more than 5 years.

The distribution of maternal deaths based on pregnancy distance in Ciamis Regency in the period 2019 to 2021 is as shown in graph 6 below

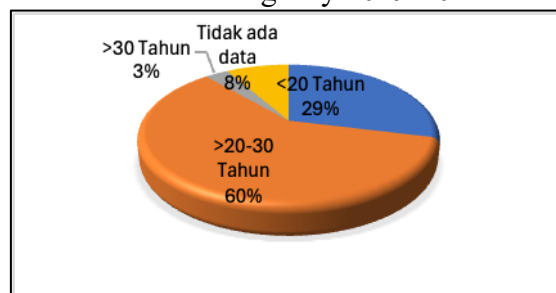
Graphic.6  
Distribution of Maternal Mortality Based on Pregnancy Distance  
In Ciamis Regency 2019-2022



60% of maternal deaths based on K1 marriage age (age at first marriage) occur in the 20–30 year age range. This may be related to the marriage age requirement in Ciamis district of 20 years. There are still 29% aged <20 years and 3% aged >30 years. This is because the marriage age requirement in Ciamis district is 20 years old

The distribution of maternal deaths based on pregnancy distance in Ciamis Regency in the period 2019 to 2021 is as shown in the following graph:

Grafik 7  
Distribution of Maternal Mortality Based on Age of First Marriage  
In Ciamis Regency 2019-2022

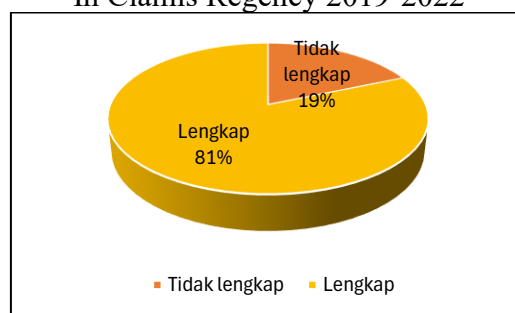


#### b. Access to Health Services/Access to Health Services

Factors among the causes of maternal death seen in Access to Health Services can be assessed from three things: ANC (antenatal care), place of death, and delay (late decision, late getting help, late transportation). 80% of maternal deaths in Ciamis district underwent pregnancy checks more than four times or were considered complete. The aim of ANC is to identify potential abnormalities during pregnancy that result in complications and maternal death. Seeing this, it is necessary to consider this when evaluating the quality of ANC in Ciamis Regency.

Distribution of maternal deaths based on ANC status in Ciamis Regency in the period 2019 to 2021 as in graph 8 below:

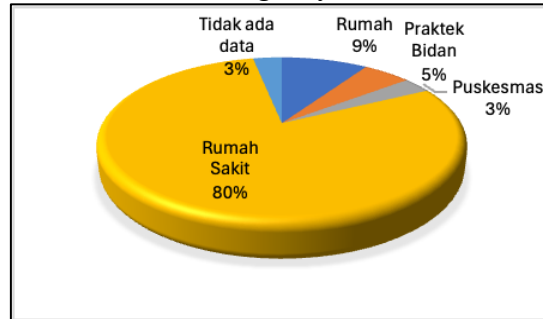
Graph.8  
Distribution of Maternal Mortality Based on ANC Status  
In Ciamis Regency 2019-2022



80% of maternal deaths occur in hospitals, 3% in community health centers, and 5% give birth in midwifery practices. This shows that the referral system is quite good. However, 9% of maternal deaths still occur at home. This is because the cause of death was not due to complications from pregnancy or the birth process. But other diseases occur during the postpartum period.

Distribution of maternal deaths based on place of death in Ciamis Regency in the period 2019 to 2021 as in graph 9 below

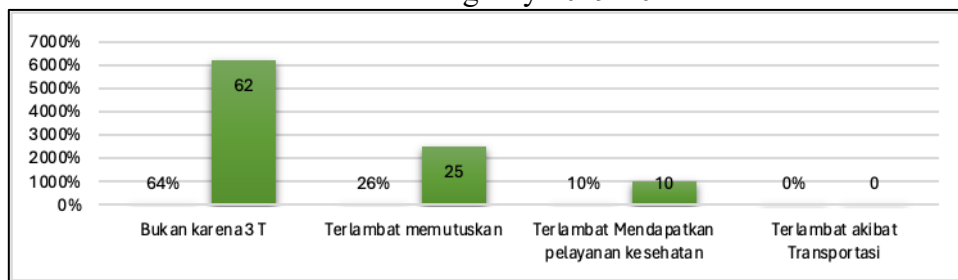
Grafik 9  
Distribution of Maternal Mortality By Place of Death  
In Ciamis Regency 2019-2022



64% of maternal deaths in Ciamis Regency are not caused by delays. This is in line with Diagram No. 2, which states that maternal deaths occur in health care facilities.

Distribution of maternal deaths based on 3 Latest in Ciamis Regency in the period 2019 to 2021 as in graph 10 below:

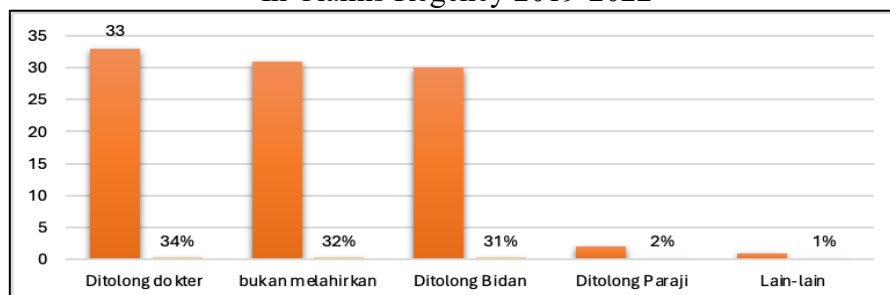
Graph 10  
Distribution of Maternal Mortality Based on 3 Late  
In Ciamis Regency 2019-2022



32% of maternal deaths are not during the birth process but during the postpartum period. 34% of births are assisted by a doctor, 31% are assisted by a midwife, and 2% are assisted by a paraji. It shows that public awareness of the birthing process is quite good.

Distribution of maternal deaths based on birth attendants in Ciamis Regency in the period 2019 to 2021 as in graph 11 below:

Graph 11  
Distribution of Maternal Mortality Based on Birth Attendant  
In Ciamis Regency 2019-2022





### 3. Contextual Factors

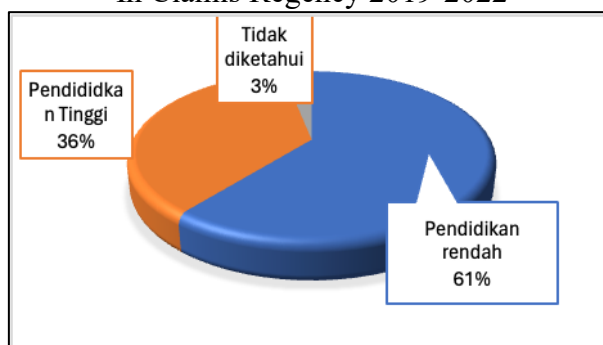
Contextual factors are factors related to a person's environment or an individual's interaction with the external environment, such as level of education, employment, family status in society, such as family income, family wealth, education level and employment status of family members, and community status, such as level of welfare and availability of resources. power, availability, and ease of transportation.

In the study of maternal mortality in Ciamis Regency during 2019–2021, contextual factors were assessed based on the mother's education level and husband's occupation. Maternal education is synonymous with understanding how to maintain personal health and that of her future baby during pregnancy. Meanwhile, the husband's job is identical to the family's ability and readiness to obtain maximum health services.

The highest proportion of maternal deaths in Ciamis Regency in 2019–2022, based on maternal education, was in the low education group (61%), higher education (36%), and data unknown (3%). It is assumed that mothers with low education do not understand information about healthy pregnancies, so education is needed for prospective pregnant women or mothers with early pregnancies to increase understanding about maintaining pregnancy.

The distribution of maternal deaths based on maternal education in Ciamis Regency in the period 2019 to 2021 is as shown in graph 12 below:

Graph 12  
Distribution of Maternal Mortality Based on Mother's Education  
In Ciamis Regency 2019-2022



The highest proportion of maternal deaths in Ciamis Regency in 2019–2022, based on husband's occupation, was in the labor group at 37% and self-employed at 32%. Labor is synonymous with minimal income, so it is assumed that there are limitations in accessing quality health services, efforts to fulfill nutritional needs before and during pregnancy are less than optimal, and there is the possibility of transportation difficulties when you need help.

## CONCLUSION

Based on data from the study in the previous chapter, it is known that the maternal mortality rate (MMR) in Ciamis Regency for 2019–2022, namely 73–114/100,000 live births, is still below the national target (183/100,000 live births). However, it increases every year. Maternal deaths occurred during the postpartum period in 45% (47 cases), during pregnancy in 34% (33 cases), and during delivery in 18% (19 cases).

1. Proxy factors The cause of maternal death occurred due to infection as much as 24%, namely COVID-19 (20 cases, 2 cases of TB, and 2 cases of DHF), with diagnoses of high-risk pregnancies that can be predicted for death, including bleeding (possibly characterized by anemia) at 19%, hypertension/eclampsia at 16%, circulatory system disorders at 14% (may be characterized by high blood pressure), and metabolic disorders (may be characterized by high blood sugar levels and other blood chemicals) at 13%.
2. Intermediate Factors The highest proportion of maternal deaths in Ciamis Regency in 2019–2022 occurred in the 20–35 year age group (66%), with 36–45 year olds at 34%. Pregnancies less than 5 years apart (53%) Pregnancies less than 5 years apart are considered to mean that the uterus is not quite ready to experience the next pregnancy. Maternal mortality with a pregnancy interval of 6–10 years is also quite high because the average pregnancy interval is more than 5 years. 60% of maternal deaths occurred in the group of mothers who married between the ages of 20 and 30 years, 29% at the age of <20 years, and 3% at the age of >30 years. This is because the marriage age requirement in Ciamis district is 20 years old. 80% of maternal deaths in Ciamis district underwent ANC examinations more than four times or were considered complete.
3. Contextual factors The highest proportion of maternal deaths in Ciamis Regency in 2019–2022, based on maternal education, was in the low education group (61%), higher education (36%), and data unknown (3%). The highest proportion of maternal deaths in Ciamis Regency in 2019–2022, based on husband's occupation, was in the labor group at 37% and self-employed at 32%.

### Limitations and future direction

From the basic data from the results of the study that has been carried out, the reviewer can recommend further research, including:

1. Effect of ANC Frequency and Quality on Maternal Mortality Rate
2. Relationship between level of knowledge and maternal mortality rate
3. Factors that cause bleeding in pregnant women and give birth
4. The effectiveness of immunization in preventing maternal death

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### Declarations

There is no conflict of interest

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