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Epidemiological Profile and Surveillance of Mortality in Women of Childbearing Age and Deaths Maternal care in Abaetetuba, Pará (2020–2024)

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Epidemiological profile and surveillance of women's mortality in fertile ages and maternal deaths in Abaetetuba, Pará (2020–2024)

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1 INTRODUCTION

The analysis of mortality among women of childbearing age (WCA) constitutes an indicator.
a fundamental sentinel for understanding health conditions and development
socioeconomic development of a nation. Between the years 2006 and 2019, the following was observed in the Brazilian scenario:
a transition in the causes of these deaths, with a decline in infectious diseases and a
significant increase in external causes and neoplasms.

According to Albert et al. (2023), this epidemiological trend requires that the
public policies should be constantly updated to address the new profile of
female morbidity and mortality in the country. In this context, the predictive factors that influence the
Proper recording of these deaths in official systems becomes a crucial object of study for
Health management.

According to Marques et al. (2024), there are significant flaws in the notification of deaths.
female patients in the Hospital Inpatient System (SIH/SUS), which can lead to a
underestimation of the true magnitude of the problem. Therefore, the qualification of the records is
indispensable for statistics to reflect reality and guide effective interventions in
areas of greater vulnerability.

In addition to the challenges of registration, hospitalizations and deaths are directly related to
The pregnancy-puerperal cycle still presents worrying numbers in the national territory.
Teixeira and Araújo Filho (2024) highlight that complications during pregnancy and childbirth
These remain preventable causes that overburden the healthcare system and victimize women.
prematurely.

The persistence of these deaths indicates the need to strengthen the prenatal care network.
Christmas and ensure quality hospital care in all regions of Brazil.
Furthermore, the instability caused by recent health crises has imposed new barriers to...
access to and continuity of maternal care.

Silva (2025) argues that the determinants of maternal death have undergone changes.
drastic changes during and after the pandemic period, exacerbating existing inequalities in
healthcare. Such changes require a close look at how the structures
Social programs and public services have been reorganized to protect the female population of childbearing age.
Reproductive health in the face of new biological and social risks.

To understand this phenomenon from a regional perspective, it is necessary
To characterize the municipality of Abaetetuba, located in the state of Pará, which presents a

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Significant demographic structure, with a population of 158,188 inhabitants according to the 2022 census. (IBGE, 2024).

With a population density of approximately 98.21 inhabitants per square kilometer. Located in a square, the town stands out as one of the important population centers in the region. Amazonian. This population concentration, distributed across a territorial area of 1,610,646 km², requires a detailed analysis of the support network for women of childbearing age, considering the geographical complexity and the growth of the population. female in the region (IBGE, 2024).

In the socioeconomic context, local indicators reveal structural challenges that These factors can directly impact maternal and child health. Monthly household income *per* The average nominal *income* per capita in Abaetetuba is approximately R$ 771.33, while the percentage The percentage of the population employed is only 10.30%, highlighting economic vulnerability. latent (IBGE, 2024).

These socioeconomic factors are social determinants of health, fundamental to... understanding the epidemiological profile of women and the occurrence of maternal deaths in region. In addition, the municipality recorded an infant mortality rate of 20.39 deaths per thousand live births, an index that serves as a sentinel indicator of conditions. of assistance during the pregnancy-puerperal cycle and the available infrastructure (IBGE, 2024).

Therefore, when considering the reality of Abaetetuba, it becomes imperative to cross the Local epidemiological data, along with trends discussed in the scientific literature, contemporary. The municipal public network, composed of approximately 49 establishments linked to the Unified Health System (SUS), faces the challenge of providing assistance in a A scenario in which the low rate of adequate sanitation reinforces vulnerability. environmental impact on women (IBGE, 2024).

Understanding the predominant causes and factors that lead to the fatal outcome. allows for the development of specific strategies to reduce premature mortality among Women in the Amazon. This study therefore seeks to scientifically ground the discussion. on women's health, integrating local findings with global public health challenges.

2 METHODOLOGY

This investigation is characterized as a descriptive study and quantitative approach. According to Gil (2022), descriptive research aims to

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It is essential to describe the characteristics of a given population or phenomenon, establishing relationships between variables without direct manipulation by the researcher. In the context of this work, The study is based on an analysis of the epidemiological profile of female mortality in

The study analyzed data on maternal reproductive age (MRA) and maternal mortality, with the aim of identifying the prevalence of the causes. death according to the International Statistical Classification of Diseases and Related Health Problems Related to Health (ICD-10).

Regarding the technical procedures, the study is structured as research. It is documentary, since it uses data from sources that have not yet been processed. in-depth analytical data, or data that have been reworked for official statistical purposes. According to According to Gil's criteria (2022), documentary research allows for the examination of materials that preserve in its original form, such as administrative reports and records.

For this analysis, information was extracted from the Information System on Mortality (SIM), under the management of the Department of Informatics of the SUS (DATASUS), relating to the historical series from 2020 to 2024 in the municipality of Abaetetuba, Pará.

Data collection focused on extracting variables related to deaths of Women of childbearing age, by ICD-10 chapters, totaling 249 records in the period. selected. The information processing involved organizing the data into series. annual temporal measurements to allow for the observation of trends, such as the predominance of neoplasms (73 cases) and external causes (27 cases), in addition to the specific incidence of deaths. related to pregnancy, childbirth and the postpartum period (13 cases).

The analysis was performed using simple descriptive statistics, ensuring the reliability of health indicators necessary to support the discussions proposed epidemiological measures.

3 RESULTS

TABLE 1. Deaths of women of childbearing age and maternal deaths in Abaetetuba, Pará, between the years 2020 and 2024

ICD-10 Chapter I.	2020	2021	2022	2023	2024	Total
Certain infectious and parasitic diseases II. Neoplasms	13		4	2	4	28
(tumors)	13	5	13	14	14	73
III. Diseases of the blood and hematopoietic organs and immune disorders.	-	19 2	1	1	1	5
IV. Endocrine, nutritional and metabolic diseases 3 V. Mental and		6	1	5	-	15
behavioral disorders.	-	-	-	1	-	1
VI. Diseases of the nervous system IX.	2	-	-	2	1	5
Diseases of the circulatory system	4	6	4	6	9	29

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X. Diseases of the respiratory system XI.	5		4	2	5	17
Diseases of the digestive system XII. Diseases	3	1 2	1	2	-	8
of the skin and subcutaneous tissue XIII. Diseases of the	-	-	-	-	1	1
musculoskeletal system and connective tissue	-	-	1	2	-	3
XIV. Diseases of the genitourinary system XV.	2			-		5
Pregnancy, childbirth and the puerperium.	2	1	1 3	3	1 1	13
XVII. Congenital malformations, deformities and chromosomal abnormalities.	-	4 1	-	-	-	1
XVIII. Symptoms, signs, and abnormal findings from clinical and laboratory examinations.	6	4	4	1	3	18
XX. External causes of morbidity and mortality 4 Total		4				27
	57	55	7 44	7 48	5 45	249

Source: MS/SVSA/CGIAE - Mortality Information System – SIM

The data presented in Table 1 reveal that, in the period from 2020 to 2024, the The municipality of Abaetetuba recorded 249 deaths of women of childbearing age. The main cause Neoplasms (chapter II) were the leading cause of death during the period, totaling 73 occurrences, with particular emphasis on the following: for 2021, which presented the highest volume (19 cases). In second place, we observe the Diseases of the circulatory system (chapter IX), with 29 deaths, which show a trend of growth towards the end of the historical series, reaching 9 cases in 2024. The external causes of Morbidity and mortality (chapter XX) occupy the third position, with 27 cases, which indicates Critical stability, with peaks in 2022 and 2023.

Regarding the causes directly linked to the reproductive cycle (chapter XV — Pregnancy, During childbirth and the postpartum period, 13 deaths were recorded, representing approximately 5.2%. of the total number of deaths from MIF. A significant impact from infectious diseases is also noted and parasitic (chapter I) in 2020 (13 cases), possibly influenced by the start of COVID-19 pandemic. Finally, the record of 18 cases of abnormal symptoms and signs (chapter XVIII) indicates the persistence of deaths from poorly defined causes, which reinforces the importance of Epidemiological investigation for the qualification of vital statistics in the municipality.

4. DISCUSSION

An analysis of mortality among women of childbearing age (WCA) in Abaetetuba, between 2020 And in 2024, it reveals a complex epidemiological scenario that demands rigorous death surveillance. According to the Ministry of Health, monitoring deaths due to MIF (Multiple Infections) is an essential strategy. to identify maternal deaths that are often underreported or recorded under other circumstances.

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causes. The record of 249 deaths in the period reinforces the need for systematic investigation.
as recommended by the surveillance guide, to determine the proportion of preventable deaths and
the determining factors involved.

According to De Souza et al. (2021), primary health care plays a central role in surveillance.
epidemiological, and the early identification and monitoring of chronic diseases.
Social vulnerabilities can drastically reduce deaths from preventable causes.
Additionally, with regard specifically to maternal deaths recorded in the series
Historically, Da Costa et al. (2021) emphasize that qualified prenatal care, based on
Prompt identification and early detection of risks are the determining factors in stopping the incident.
the chain of events that leads to death. Thus, the predominance of causes that are likely to
Early intervention in the municipality reinforces the need to strengthen search strategies.
Active participation and longitudinal monitoring of women within the primary healthcare network.

The predominance of neoplasms (73 cases) and the impact of external causes (27 cases)
in Abaetetuba corroborate the epidemiological transition discussed by Albert et al. (2023).
However, the Ministry of Health emphasizes that many deaths recorded in chapters such as
"Diseases of the Circulatory System" (29 cases) or "Abnormal Symptoms and Signs" (18 cases)
They can mask indirect maternal deaths or poorly defined underlying causes. Surveillance
epidemiological experts must therefore perform backprocessing of this data, investigating whether the
The death occurred during the pregnancy-postpartum period, in order to guarantee reliability.
from vital statistics.

The 13 deaths specifically recorded in Chapter XV (Pregnancy, childbirth and the postpartum period)
They represent the most visible aspect of maternal mortality in the region, however, they may also be
Underestimated. The surveillance guide establishes that the investigation of deaths of infants with maternal age is mandatory.
to identify "masked maternal death," which occurs when the underlying cause of death on the death certificate is incorrect.
Death does not reflect the relationship with the reproductive cycle. This process of active search and rectification
It is essential to correct the notification failures mentioned by Marques et al. (2024).
allowing the health management of Abaetetuba to understand the true magnitude of mortality.
local maternal line.

Furthermore, the variation in deaths from infectious diseases (28 cases), peaking in 2020
(13 cases), reflects the impact of health crises on women's health. The Ministry of Health
It points out that surveillance should be attentive to infectious causes that may be aggravated during
Pregnancy requires a rapid flow of information between hospitals and municipal health surveillance.
These findings are consistent with Silva (2025), who demonstrates how biological factors and

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Social factors influence the fatal outcome, especially in areas with structural challenges.
sanitation and income.

Finally, the low occupancy rate and limited *per capita* income in Abaetetuba
They hinder timely access to health services, increasing the risk of death. The guide
The ministerial office emphasizes that the analysis of death should not be solely clinical, but should also consider...
The socioeconomic context is crucial for proposing effective prevention measures. Integrate surveillance.
Epidemiological care in primary and hospital care is, therefore, the main strategy for
transforming this data into actions that reduce preventable hospitalizations and deaths, such as
discussed by Teixeira and Araújo Filho (2024).

CONCLUSION

The study of the epidemiological profile of mortality among women of childbearing age in
Abaetetuba, between 2020 and 2024, shows that the municipality is undergoing a transition.
epidemiological factors including chronic-degenerative causes, such as neoplasms and diseases
Circulatory causes predominate over infectious causes. However, the persistence of 13 deaths
Direct maternal factors and the considerable volume of external causes reveal that vulnerability
The female gender imbalance in the region is multifactorial, influenced by deficiencies in healthcare.
as well as by socioeconomic and environmental determinants specific to the Amazonian reality.

The analysis demonstrated that monitoring maternal death and infant mortality is a tool.
indispensable for municipal management. The significant number of deaths from unforeseen causes
defined by pathologies that can mask indirect maternal deaths highlights the urgency of
Strengthen the death investigation committees. Correct underreporting and improve qualifications.
The registration of records in the Mortality Information System (SIM) are fundamental steps for
that public policies on women's health be based on real data and not on...
Underestimated estimates.

In conclusion, reducing premature mortality among women in Abaetetuba requires
an integrated approach that combines improved access to cancer diagnosis
early strengthening of the emergency and urgent care network for external causes and,
Primarily, the focus is on improving the quality of prenatal and hospital care. The findings are expected to...
May the findings of this research contribute to the planning of intersectoral actions that take into account the low
per capita income and local geographical barriers, aiming to guarantee the right to health and
preserving the lives of women during their reproductive period.

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