

ANÁLISE EPIDEMIOLÓGICA DOS ÓBITOS MATERNOS DE 2018-2025

EPIDEMIOLOGICAL ANALYSIS OF MATERNAL DEATHS 2018-2025

João Pedro Cardoso Faccio¹, Karolinne Buzzacaro Ribeiro²

1. Professor de Medicina da Afya Centro Universitário de Pato Branco – PR, 2. Acadêmico de Medicina da Afya Centro Universitário de Pato Branco – PR, karolinnebuzzacaroribeiro@gmail.com

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RESUMO

Introdução: A mortalidade materna constitui um importante indicador da qualidade da assistência médica prestada durante a gestação, o parto e puerpério, permanecendo um desafio para a saúde pública brasileira. **Objetivo:** Analisar epidemiologicamente os óbitos maternos ocorridos no Brasil entre 2018 e 2025, considerando a distribuição segundo região e raça/cor. **Método:** Estudo epidemiológico, descritivo, quantitativo, realizado a partir de dados secundários disponíveis no DATASUS. **Resultados:** Foram registrados 13.444 óbitos maternos no período. Observou-se aumento expressivo entre 2020 e 2021 (aproximadamente 45% dos óbitos ocorreram nesse período), seguido por redução progressiva a partir de 2022. Quanto à raça/cor, mulheres pardas representam 53% dos registros. Regionalmente, Sudeste e Nordeste concentram aproximadamente 66% dos óbitos. **Discussão:** Os resultados evidenciam comportamento temporal heterogêneo e desigual perante raça/cor e território, compatíveis com fatores relacionados à pandemia de COVID-19, condições sociais e organização dos serviços de saúde. **Conclusão:** A mortalidade materna apresentou importante variação temporal, racial e territorial, reforçando a necessidade de fortalecer a vigilância epidemiológica, qualificar a assistência e desenvolver estratégias voltadas à redução de desigualdades.

Palavras-chaves: Mortalidade materna; saúde materna; epidemiologia, Brasil.

ABSTRACT

Introduction: Maternal mortality is an important indicator of the quality of medical care provided during pregnancy, childbirth and the postpartum period, remaining a challenge for public health in Brazil. **Objective:** To epidemiologically analyze maternal deaths that occurred in Brazil between 2018 to 2025, considering their distribution according to region and race/skin color. **Methods:** Epidemiological, descriptive, quantitative study based on secondary data available from DATASUS. **Results:** A total of 13,444 maternal deaths were recorded during the study period. A marked increase was observed between 2020 and 2021 (approximately 45% of deaths occurred during this period), followed by a progressive reduction from 2022 onward. Regarding race/skin color, brown women accounted for 53% of the records. Regionally, the Southeast and Northeast regions accounted for approximately 66% of the deaths. **Discussion:** The results demonstrate heterogeneous temporal patterns and disparities according to race/skin color and geographic region, consistent with factors related to the COVID-19 pandemic, social conditions and the organization of healthcare services. **Conclusion:** Maternal mortality showed significant temporal, racial, and regional variation, reinforcing the need to strengthen epidemiological surveillance, improve the quality of healthcare, and develop strategies aimed at reducing health inequalities.

Keywords: Maternal mortality; maternal health; epidemiology; Brazil.

INTRODUCTION

One of the main indicators that reflects the health conditions and quality of care for pregnant women is the maternal mortality rate. Although advances associated with improved medical care for pregnant women during childbirth and the postpartum period have been

observed in recent years, the reduction in maternal deaths is perpetuated as a challenge for public health in Brazil. There is a heterogeneity in the distribution of causes of maternal death due to oscillations between the contexts of each region, not only that, there is also a difference between direct and indirect obstetric causes, highlighting the influence of clinical and social factors and especially of the organization of health services itself on this outcome¹.

The observation of maternal mortality numbers makes it possible to analyze distribution patterns over a period marked by strong changes in health, allowing the identification of changes and permanences in the maternal mortality profile. Thus, this study aims to epidemiologically analyze maternal deaths in the period from 2018 to 2025, considering characteristics of region and race, with the intention of contributing to the direction of prevention measures and qualification of medical care.

METHOD

This is an epidemiological, descriptive, retrospective study with a quantitative approach, carried out using secondary data in the public domain. The research was developed based on maternal death records available on the TabNet platform of the Department of Informatics of the Unified Health System (DATASUS). Maternal deaths obtained in the periods from 2018 to 2025 were considered. The variables analyzed were the year of death, the region of residence and the woman's race/color. The analysis was performed descriptively, considering the distribution of maternal deaths according to the variables and the period studied. The data were used to prepare tables in the presentation of the results. Regarding the ethical aspects, it was not necessary to submit the study to the Research Ethics Committee, since exclusively secondary data from public sources were used.

RESULTS

The total number of maternal deaths that were registered in the years 2018 to 2025 in Brazil is 13,444. When observing the temporal distribution, variations are evident during the period studied, with the most significant increase between the years 2020 and 2021, in contrast, comparing 2018 and 2019 it is possible to see a slight decrease. The highest number of deaths was recorded in 2021, representing approximately a 92% increase compared to 2019. From 2022 onwards, a progressive reduction was observed, in 2025 the value is about 28% lower than that of 2018 and 61% lower than the peak recorded in 2021. This behavior reveals that there was no linear trend in the period analyzed, it was marked by an abrupt increase in mortality followed by a reduction in subsequent years, about 45% of deaths were concentrated in the years 2020 and 2021.

The distribution following the variation of race/color evidences the inequality in the profile of deaths. Brown women concentrate approximately 53% of the total, while white women represent 31% and black women 12%. If we consider black and brown together, it is possible to see that about 65% of maternal deaths occurred among these categories, indicating that maternal mortality disproportionately affected the black population in the period analyzed. However, yellow and indigenous women correspond, respectively, to 0.3% and 1.9% of the records, in addition to the unknown data that make up 2% of the total, as can be seen in Table 1.

Table 1: Maternal deaths by race/color according to year of death.

Year of death	White	Black	Yellow	Brown	Indigenous	Ignored	Total
Total	4.198	1.580	39	7.123	257	247	13.444
2018	505	177	8	904	26	38	1.658
2019	475	184	1	855	25	36	1.576
2020	589	229	10	1.055	29	53	1.965
2021	1.051	355	6	1.520	43	55	3.030
2022	397	188	4	738	20	23	1.370
2023	399	145	1	723	47	10	1.325
2024	428	160	3	686	39	10	1.326
2025	354	142	6	642	28	22	1.194

Source: MS/SVSA/CGIAE – Sistema de Informações sobre Mortalidade - SIM

In summary, the analysis shows that maternal mortality in Brazil has a strong ethnic-racial component, reinforcing the need for indicators to be analyzed in a disaggregated way so that inequalities between different population groups are not hidden.

From a regional point of view, it is verified that the concentration of maternal deaths is concentrated in the Southeast and Northeast regions, accounting for approximately 66% of all records between 2018 and 2025. The Southeast corresponds to about 35% of the national total and the Northeast 31%. The North, South and Central-West regions represent 15%, 11% and 9% (Table 2).

Table 2: Maternal deaths by region according to year of death.

Year of death	North	Northeast	Southeast	South	Midwest	Total
Total	1.963	4.116	4.718	1.412	1.235	13.444

2018	230	525	606	146	151	1.658
2019	233	478	582	147	136	1.576
2020	285	662	685	162	171	1.965
2021	438	838	1.055	385	314	3.030
2022	218	430	469	135	118	1.370
2023	202	413	457	131	122	1.325
2024	178	393	450	179	126	1.326
2025	179	377	414	127	97	1.194

Source: MS/SVSA/CGIAE – Sistema de Informações sobre Mortalidade - SIM

Together, the results show three main characteristics of maternal mortality: the temporal concentration of deaths in 2020-2021, the highest number of records among brown women, and the territorial predominance in the Northeast and Southeast. It is noteworthy that the data presented are absolute frequencies and do not allow us to affirm in isolation that a certain racial group or region presents a higher risk of maternal death.

DISCUSSION

The findings of this study show the heterogeneous behavior of maternal mortality in Brazil, with an important break in the years 2021 and 2021. The increase observed in this interval is compatible with the evidence produced during the COVID-19 pandemic, which showed an increase in mortality among pregnant and postpartum women. Studies based on national data recognize greater severity of cases and increase in maternal deaths during the second wave of the pandemic, especially in 2021 when more transmissible variants of the disease were circulating and health services were overloaded².

The concentration of deaths among brown women converges with national surveys that demonstrate persistent racial inequality in maternal mortality. An analysis carried out with Brazilian data from 2017 to 2022 recognized. The mortality ratio is approximately 2 times higher among black women, in addition to the maintenance of this inequality in the pandemic. The convergence between the results reinforces that the racial dimension is a fundamental element for understanding maternal mortality in Brazil. However, the higher number of deaths among brown women observed should not be interpreted in isolation as evidence of higher risk in this population, since the analysis did not incorporate the number of live births, according to studies that use the maternal mortality ratio show that the black population has an even more evident disadvantage when the number of deaths is related to the exposed population³.

From a clinical point of view, the results reinforce the relevance of strengthening epidemiological surveillance of maternal deaths and transforming data into strategies for concrete interventions. The investigation of each death makes it possible to identify essential points related to prenatal care, alarm signs, hospital care and follow-up. A systematic review demonstrated that when data are used to create an educational environment, using these resources to improve leadership, training, and adequate resources, they contribute not only to describe mortality, but to guide prevention policies and qualification of obstetric care⁴.

One limitation of the study was the use of absolute data, which prevents direct comparison of the risk of death between regions and racial groups. In addition, the use of secondary data is subject to problems of completeness, classification and updating of records.

CONCLUSION

Thus, it is concluded that maternal mortality in Brazil presents an important temporal variation, especially in the years 2020 and 2021, followed by a reduction in deaths. It was possible to observe a concentration of deaths. And these findings show the persistence of racial and territorial inequalities in maternal mortality and reinforce the need to understand this phenomenon beyond exclusively clinical factors. The results highlight the importance of strengthening epidemiological surveillance, qualifying obstetric care, and implementing strategies aimed at reducing health inequalities.

BIBLIOGRAPHIC REFERENCES

1. Cresswell JA, Alexander M, Chong MYC, Link HM, Pejchinovska M, Gazeley U, et al. Global and regional causes of maternal deaths 2009-20: a WHO systematic analysis. *Lancet Glob Health*. 2025;13(4):e626-e634. DOI:10.1016/S2214-109X(24)00560-0.
2. Golçalves BMM, Franco RPV. Maternal mortality associated with COVID-19 in Brazil in 2020 and 2021: comparison with non-pregnant women and men. *PLoS One*. 2021;12(12):e0261492. DOI:10.1371/journal.pone.0261492.
3. Andreucci CB, Knobel R. Racial disparities and maternal mortality in Brazil: findings from a national database. *Rev Saude Publica*. 2024;58:26. DOI:10.11606/s1518-8787.2024058005862.
4. Willcox ML, Okello IA, Maidwell-Smith A, Tura AK, van de Akker T, Knight M. Maternal and perinatal death surveillance and response: a systematic review of qualitative studies. *Bull World Health Organ*. 2023;101(2):62-75G. DOI: 10.2471/BLT.22.288703.