REUFPI
Revista de Enfermagem da UFPI
ISSN 2238-7234

Original

Intersectionality and mortality in intensive care units

Interseccionalidade e mortalidade em unidade de terapia intensiva

Interseccionalidad y mortalidad en unidades de cuidados intensivos

Maria Eduarda Cardoso Silva[1], Denise Andrade Pereira[1], Renne Rodrigues[1,2]

Corresponding author:
Maria Eduarda Cardoso Silva
E-mail: maria.eduarda.cardoso@uel.br

[1]Universidade Estadual de Londrina. Londrina, Paraná, Brasil.
[2]Universidade Federal da Fronteira Sul. Chapecó, Santa Catarina, Brasil.

How to cite this article:
Silva MEC, Pereira DA, Rodrigues R. Intersectionality and mortality in intensive care units. 2026 [Cited: ano mês abreviado dia];15: e7102. DOI: 10.26694/reufpi.v15i1.7102

Abstract

Objective: To analyze the effect exerted by the intersectionality between gender and race/skin color on mortality among patients admitted to an Intensive Care Unit. **Methods:** A retrospective cohort study conducted with patients admitted to an ICU for adults from April 1st, 2022, to April 30th, 2024. **Results:** The study population was comprised by 4,878 patients, mostly subjected to orotracheal intubation. From this total, 30.5% evolved to death, with higher prevalence among non-white men. The reasons for hospitalization varied according to gender and race/skin color: injuries and poisoning were more common among white women and non-white men; in turn, non-white women and white men were mostly admitted due to diseases of the circulatory system. In relation to outcomes, white and non-white men presented higher risk of death when compared to white women. **Conclusion:** The current study evidenced significant disparities in terms of clinical outcomes in non-white patients admitted to an Intensive Care Unit. Such results reflect inequalities in access to and quality of the health care provided to this population segment.

Descriptors:
Intersectional Framework. Intensive Care Units. Mortality. Racism.

Whats is already known on this?
The current literature signals that racial, social and gender inequalities exert negative impacts on health assistance, generating higher mortality in patients admitted to Intensive Care Units.

What this study adds?
The study evidences that there is intersectionality in intensive care environments; it also shows higher mortality risk in socially marginalized groups.

Resumo

Objetivo: Analisar o efeito da interseccionalidade em relação ao sexo e raça/cor com a mortalidade em pacientes internados em unidade de terapia intensiva. **Métodos:** Estudo de coorte retrospectivo realizado com pacientes internados em UTI adulto no período de 1° de abril de 2022 a 30 de abril de 2024. **Resultados:** A população estudada foi composta por 4.878 pacientes, cuja maioria foi submetida à intubação orotraqueal, dos quais 30,5% evoluíram para óbito, em grande parte homens não brancos. A causa de internação hospitalar variou conforme sexo e raça/cor: lesões e envenenamentos foram mais comuns entre mulheres brancas e homens não brancos, enquanto mulheres não

brancas e homens brancos foram internados, em sua maioria, devido a doenças do aparelho circulatório. Em relação ao risco de óbito, homens brancos e não brancos apresentaram maior risco de óbito quando comparados às mulheres brancas. **Conclusão:** O presente estudo evidenciou disparidades significativas no desfecho clínico de pacientes não brancos internados em unidade de terapia intensiva. Tais resultados refletem desigualdades no acesso e na qualidade do atendimento à saúde prestados a essa população.
Descritores:
Enquadramento Interseccional. Unidades de Terapia Intensiva. Mortalidade. Racismo.

Resumen
Objetivo: Analizar el efecto ejercido por la interseccionalidad entre sexo y raza/color de piel sobre la mortalidad de pacientes internados en una Unidad de Cuidados Intensivos. **Métodos:** Estudio de cohorte retrospectivo realizado con pacientes internados en una UCI para adultos entre el 1 de abril de 2022 y el 30 de abril de 2024. **Resultados:** La población estudiada estuvo conformada por 4878 pacientes, mayoritariamente sometidos a intubación orotraqueal. El 30,5% de dicho total falleció, con mayor prevalencia entre hombres de raza no blanca. Las causas de las hospitalizaciones variaron conforme al sexo y a la raza/color de piel: lesiones e intoxicaciones fueron más comunes entre las mujeres de piel blanca y los hombres de raza no blanca, mientras que las mujeres no blancas y los hombres blancos fueron mayoritariamente internados debido a enfermedades del sistema circulatorio. En relación a los desenlaces, los hombres de raza blanca y no blanca presentaron mayor riesgo de muerte en comparación con las mujeres blancas. **Conclusión:** En el presente estudio se evidenciaron disparidades significativas en los desenlaces clínicos de pacientes de raza no blanca internados en la Unidad de Cuidados Intensivos. Dichos resultados reflejan desigualdades en materia de acceso y calidad de la atención a la salud que se brinda a este grupo poblacional..
Descriptores:
Marco Interseccional. Unidades de Cuidados Intensivos. Mortalidad. Racism.

INTRODUCTION

Intersectionality is a sociological theoretical approach that studies social categorizations such as race, gender and class, which can overlap and create independent inequality and discrimination systems In the health scope, intersectionality is used seeking to understand how different oppression means interfere in the health of the population, aiming at devising strategies to combat the social inequalities found in Public Health.[1-2]

Intensive Care Units (ICUs) are high-complexity environments due to the patients' clinical severity and instability and, in addition to technical-scientific knowledge targeted at qualified care, they require assistance humanization by implementing responsibility, sensitivity, ethics and solidarity principles in the care provided to patients and family members.[3] It is also noted that all critically-ill patients should enjoy fair access to due support for maintaining their vital needs, such as mechanical ventilation, hemodialysis and vasoactive drugs, among others.[4]

The epidemiological data corresponding to patients admitted to ICUs diverge both in national and international scenarios. As for the latter, a cohort study conducted in the Asian continent identified that most of the patients admitted to an ICU belonged to the male gender, with predominance of individuals aged less than 45 years old. It was also observed that the outcome was medical discharge in most of the

cases.[5] A research study conducted in South Korea pointed out that the male gender prevailed among the patients admitted to an ICU, with a mean age of 67.6 years old and 4.1 days of ICU hospitalization time.[6]

In the national scenario, balance between the male and female genders was found among critically-ill patients, with predominance of aged individuals presenting arterial hypertension and diabetes as comorbidities.[7] Another research study (in the Brazilian Midwest region this time) verified that most of the patients admitted to an ICU were male, brown-skinned and with a mean age of 55 years old. In addition, the most prevalent reasons for hospitalization encompassed certain infectious and parasitic diseases and diseases of the circulatory system, with hospitalization times of up to seven days.[8]

In turn, a study conducted at a Brazilian university hospital identified traumas, fractures and COVID-19 as the most frequent reasons for hospitalization, with a mean hospitalization time in ICU for adults of 17 days.[4]

In relation to clinical outcomes, ICUs are culturally recognized as places signaled by fear and suffering. However, 84% of the hospitalized individuals evolved to medical discharge. Consequently, ICUs can also be seen from a hope, care and welcoming perspective.[7] A South Korean research study identified that 88.0% of the patients evolved to favorable clinical outcomes.[6]

In Brazilian hospital settings, the non-white population currently presents higher mortality rates, regardless of schooling level and associated comorbidities. Such result suggests that these patients face more difficulties accessing health services.[8] Associated with institutional racism (which operates silently in health services) and with the implementation of measures targeted at fighting against racism in those institutions, such fact can result in impairments to the health assistance provided to that population group.[9]

Consequently, the research question was as follows: How is race/skin color associated with mortality among patients admitted to an ICU? Consequently, the objective was to analyze the effect exerted by the intersectionality between gender and race/skin color on mortality among ICU patients.

METHODS

A retrospective cohort study developed at a tertiary-level university hospital from southern Brazil that is reference center for the Unified Health System (*Sistema Único de Saúde*, SUS). The study *locus* has 425 beds, with 74 in the ICU for Adults, 10 in the Pediatrics ICU and 10 in the Neonatal ICU.

The study population was comprised by all adult patients admitted to the corresponding ICU from April 1st, 2022, to April 30th, 2024. The inclusion criteria were as follows: patients aged at least 18 years old and admitted to the ICU during the study period. The losses considered were patients with ongoing outcomes when data collection was initiated (May 2024); the collection procedure was conducted by analyzing the medical records of the patients included.

Clinical evolution was considered as the dependent variable, categorized as Discharge from the unit or as In-hospital death in the ICU. The independent variables were gender (female or male) and age (continuous variable), hospitalization ICD code, hospitalization time (continuous variable) and need for orotracheal intubation (yes or no) The variable related to ICD-10 was categorized according to the most prevalent reasons for hospitalization.

The data were analyzed in a descriptive way by means of absolute and relative values (categorical variables) and mean values and standard deviations (continuous variables). Association tests between the clinical variables and the outcomes were performed with the objective of identifying possible variables for fitting the regression model. A chi-square test was carried out for the categorical variables; in turn, Mann-Whitney's was performed for the non-parametric continuous variables (according to Kolmogorov-Smirnov). The variables that presented p-values<0.20 in the initial multivariate analysis were incorporated to a Poisson regression model with robust, manual backward variance to obtain the Relative Risk (RR), the 95% Confidence Interval (95%CI) and the p-value. Only factors with p<0.050 were kept in this model, and the final model was controlled by age, hospitalization time and need for orotracheal intubation. The data were analyzed in SPSS® (version 20.0).

This study is part of a matrix project entitled "Care for patients with chronic health conditions". It was approved by the UEL Research Ethics Committee (*Comitê de Ética em Pesquisa da UEL*, CEP/UEL) under CAAE protocol: 68448023.1.0000.5231 and Opinion No. 6,047,128, meeting the recommendations set forth in National Health Council (*Conselho Nacional de Saúde*, CNS) Resolution No. 466/2012 for research studies with human beings.

RESULTS

A total of 4,965 ICU admissions were recorded during the study period. After applying the inclusion criteria, 87 of these admissions were excluded because the patients in question remained hospitalized only until data collection initiation, resulting in a population for analysis comprised by 4,878 subjects.

Most of the study population was subjected to orotracheal intubation (54.2%) and 69.5% evolved to favorable outcomes, whereas 30.5% evolved to death, especially non-white men (Table 1).

Table 1. Distribution of the clinical variables in relation to the gender-race/skin color intersection. Londrina, PR, Brazil, 2022-2024.

Categorical variables, n (%)	White women	Non-white women	White men	Non-white men	General population
Total	1,667(34.2)	344(7.1)	2,320(47.6)	547(11.2)	4,878(100)
Intubation					
Yes	810(48.6)	180(52.3)	1,323(57.0)	329(60.1)	2,642(54.2)
No	857(51.4)	164(47.7)	997(43.0)	218(39.9)	2,236(45.8)
Clinical outcome					
Death	465(27.9)	94(27.3)	740(31.9)	191(34.9)	1,490(30.5)
Hospital discharge	1,202(72.1)	250(72.7)	1,580(68.1)	356(65.1)	3,388(69.5)
Continuous variables, (SD)	White women	Non-white women	White men	Non-white men	General population
Age (years old)	62.2(18.7)	56.9(19.9)	59.5(18.1)	55.6(17.6)	59.8(18.5)
ICU hospitalization time (days)	8.2(14.4)	9.8(15.5)	9.1(14.3)	9.6(17.0)	9.0(14.8)

ICU: Intensive Care Unit; X: Mean value; SD: Standard Deviation.
Source: The authors.

The main reasons for hospitalization among white women and non-white men were injuries, poisoning and some other consequences of external causes; in turn, non-white women (16.0%) and white men (19.7%) were mainly admitted due to diseases of the circulatory system (Table 2).

Table 2. Distribution of the reasons for hospitalization among the patients admitted to the ICU according to gender and race/sin color. Londrina, PR, Brazil, 2022-2024.

Categorical variables, n (%)	White women	Non-white women	White men	Non-white men	General population
ICD I00-I99	283(17.0)	55(16.0)	457(19.7)	88(16.1)	883(18.1)
ICD S00-T98	303(18.2)	41(11.9)	383(16.5)	105(19.2)	832(17.1)
ICD R00-R99	239(14.3)	50(14.5)	359(15.5)	80(14.6)	728(14.9)
ICD A00-B99; ICD J00-J99; ICD C00-D48; and ICD K00-K93	483(29.0)	103(29.9)	684(29.5)	167(30.5)	1437(29.5)
Others	350(21.0)	93(27.0)	524(18.3)	105(19.2)	973(19.9)

ICU: Intensive Care Unit; ICD: International Classification of Diseases;
ICD I00-I99: Diseases of the circulatory system; ICD S00–T98: Injuries, poisoning and some other consequences of external causes; ICD R00-R99: Symptoms, signs and abnormal findings from clinical and laboratory tests; ICD A00-B99: Certain infectious and parasitic diseases; ICD J00-J99: Diseases of the respiratory system; ICD C00-D48: Neoplasms; CID K00-K93: Diseases of the digestive system;
Source: The authors.

When compared to white women, both white and non-white men presented higher risk of death in the unadjusted model and in the one adjusted by age and hospitalization time. However, the association was only maintained for non-white men in the final model (also adjusted by endotracheal intubation) (Table 3).

Table 3. Progressive fit models for the association between gender, race/skin color and risk of death. Londrina, PR, Brazil, 2022-2024

	Risk of death		
Intersectional categories	Unadjusted model (RR)	Model 1 (RR)	Model 2 (RR)
White women	1.00	1.00	1.00
Non-white women	0.980 (0.811-1.183)	1.030 (0.856-1.239)	0.999 (0.859-1.163)
White men	1.143 (1.037-1.260)*	1.182 (1.072-1.302)*	1.042 (0.962-1.280)
Non-white men	1.252 (1.090-1.437)*	1.305 (1.138-1.496)*	1.143 (1.021-1.280)*

RR: Relative Risk; *: p-value<0.05; Model 1: Adjusted by age and hospitalization time; Model 2: Adjusted by age, hospitalization time and endotracheal intubation.
Source: The authors.

DISCUSSION

The objective of the current research study was to analyze the effect exerted by intersectionality in relation to gender-race/skin color and mortality among ICU patients. Higher mortality chances were identified in the male gender, regardless of race/skin color. However, non-white men presented higher risk of death.

It was observed that most of the patients that required ICU hospitalization belonged to the male gender (58.8%) and to the white race/skin color (81.8%). The result regarding gender corroborates data from studies carried out in ICUs from the Brazilian Midwest and Northeast regions, although diverging in terms of racial condition, as prevalence of non-white patients was observed.[10-11]

Around five out every ten patients required invasive ventilatory support, especially non-white men (60.1%). Such findings are in consonance with the literature, as critically-ill patients require more advanced life support, including invasive ventilatory assistance.[12]

A study conducted in the USA also noticed that black-skinned patients required mechanical ventilation for longer periods of time and, consequently, longer hospitalizations.[13]

In addition to that and as for race/skin color, it is conjectured that non-white men present more severe conditions possibly due to men accessing health services less for preventing diseases and promoting health. A cohort research study showed that, among the patients who required invasive mechanical ventilation, the male population was more prone to evolving to unfavorable outcomes.[14]

In addition, the low frequency of men attending health services is culturally associated with factors such as preconceptions in relation to undergoing preventive treatments, as well as financial and work-related issues. Some studies have indicated that the fact that men rarely seek health services is related to work overload, to low prioritization regarding their own health and to health professionals' limited training in specific male issues.[15]

Health policies targeted at men are still incipient in Brazil. The National Policy for Men's Comprehensive Health Care (*Política Nacional de Atenção Integral à Saúde do Homem*, PNAISH) has five thematic axes: Access and welcoming, Sexual and reproductive health, Fatherhood and care, Prevalent diseases in the male population and Prevention of violence and accidents. However, PNAISH finds barriers to its implementation, both arising from the male population itself and those inherent to professional unpreparedness due to inefficient qualifications regarding men's health care.[16]

It was noticed that almost one-third of the patients admitted to the ICU evolved to unfavorable outcomes (30.5%), with non-white men and non-white women presenting the highest (34.9%) and lowest (27.3%) mortality rates, respectively. A Spanish research study conducted in patients diagnosed with COVID-19 also identified a higher mortality rate in the male gender.[17]

As for race/skin color, a number of studies have shown that the black-skinned male population presents higher mortality rates, associated with more precarious living conditions. Black men face barriers to access health services every day, from financial difficulties to institutional racism, which results in lower assistance quality and, thus, late diagnoses of diseases and limitations in terms of access to intensive hospitalizations and treatments.[18-19]

Institutional racism exerts a direct influence on the health of the black-skinned population (especially among men), thus intensifying neglect in terms of public policies ensuring equality in terms of treatments. Given this scenario, it becomes essential to implement public policies targeted at racial equality in health, by training professionals to provide care with no racial biases, applying access to health in disadvantaged communities and strengthening programs targeted at reducing social inequalities.[18-19]

From the epidemiological point of view, several chronic health problems characterize the non-white population as the most vulnerable in terms of diagnosis. In this sense, the National Policy for the Black Population Comprehensive Health Care aimed at reducing racial disparities in order to flexibilize this population group's access to health services, thus ensuring that the SUS principles are implemented.[20]

It was verified that the oldest population group corresponded to white-skinned women, whereas non-white men were the youngest. Another research study conducted in the ICU of a university hospital also detected an aged population where men were older than women.[10] Such finding may denote that white-skinned women attend health services more throughout their life. Thus, they can become critically-ill with advanced age, urging a discussion about gender and race/skin color. On the other hand, black-skinned women face structural barriers, resulting in lesser access and quality in terms of care.[21-22]

The longest ICU hospitalization time was detected in non-white women. Such findings are consistent with a study developed in Brasília,[10] which also evidenced that social factors permeate access to health services. When seeking health services, black-skinned women have their doubts dismissed by the biomedical knowledge presumption, which not surprisingly may result in invalidating or silencing their complaints, consequently impairing the quality of the treatments prescribed.[23]

In the current study, the main reason for hospitalization among non-white women was related to the circulatory system. In turn, non-white men presented external causes as reasons for their hospitalization. A European retrospective study had already identified that most ICU admissions in 2021 were due to conditions affecting the circulatory system.[24]

Circulatory system diseases rank first among the reasons for hospitalization and causes of death in the general population, both in the national and international scenario. Non-white individuals are more susceptible to heart diseases, as verified in the current study.[10] A study in the USA identified that mortality due to cardiovascular reasons is higher in the black-skinned population.[25]

The findings detected in this research indicated increased risk of death for male individuals, regardless of their race/skin color. However, when considering the need for orotracheal intubation, it was observed that the high mortality risk was limited to black-skinned men. A retrospective study developed in Oceania identified similar results in relation to gender.[26] According to the race/skin color criteria and considering the lower accessibility detected among non-white individuals as for attending health services, higher mortality rates end up being a consequence in that population segment, as inequalities in access and care quality contribute for chronic diseases to persist.[27]

It was also noticed that North American black-skinned patients presented higher hospitalization, ICU admission and mortality rates.[28] On the other hand, a financial analysis performed in that country pointed out that institutions providing services to black-skinned patients enjoyed lower reimbursements form health insurance plans. Such factor contributed to those institutions hiring fewer professionals, with precariousness in terms of care provision and of the assistance quality offered to that minority.[29]

Another study conducted in the USA found that black-skinned patients presented greater clinical severity and were also less prioritized in terms of intensive care resources when compared to patients belonging to other races.[13] Such findings reflect the racism found in health services at the global level, when severely-ill patients in need of specialized assistance face barriers to access health services due to their race/skin color.[30]

In addition to discussions on intersectionality that delimit factors such as gender and race/skin color, the need to implement humanization policies in health services was observed, with emphasis on the ethical approach that governs the professionals' actions. The National Humanization Policy ensures equality in care, considering individuality and respect regardless of any aspect related to gender or race/skin color.[31]

The findings detected in this study contribute to advancing knowledge about intersectionality in the intensive care scope, which may result in better health assistance for all patients.

One of the study limitations is its retrospective design, for having relied on medical records that may contain incomplete information. In addition to that, it is noted that the race/skin color classification was restricted to medical records, which are subject to reporting biases.

CONCLUSION

The current study evidenced significant disparities in terms of clinical outcomes among non-white patients admitted to an ICU. Non-white men presented OTI indication more frequently, higher risk of evolving to death, and external events as main reasons for their hospitalizations. In turn, non-white women

remained hospitalized for longer periods of time and, on average, were the youngest ones at the hospitalization time. Such findings reflect inequalities in access to and quality of the health care provided to the population, corroborating the existing literature, which signals inefficiency in implementing public policies in the clinical practice to produce changes in the current unfavorable epidemiological scenario. The black-skinned population still faces significant barriers to accessing health services, which leads to worse prognoses and higher mortality rates.

In addition to that, ICUs only represent the tip of the iceberg in the health care network for the black-skinned population. It is necessary to more effectively articulate the different assistance levels (mainly Primary Health Care) to reduce inequalities.

One of the study strengths is having addressed a theme that is still scarcely explored in the literature on critically-ill patients, using a robust and safe methodological design to assess causes and effects, in order to contribute to advancing knowledge about intersectionality in the assistance offered in ICUs.

CONTRIBUITIONS

Study conception or design: Silva MEC, Pereira DA, Rodrigues R. Data collection: Silva MEC, Pereira DA. Data analysis and interpretation: Silva MEC, Pereira DA, Rodrigues R. Writing or critical review of the article: Silva MEC, Pereira DA. Final approval of the version to be published: Silva MEC, Pereira DA, Rodrigues R.

REFERENCES

1. Siira E, Linden K, Wallström S, Björkman I. Intersectionality in nursing research: A systematic review. Nursing open [Internet]. 2023;10(12):7509-27.https://doi.org/10.1002/nop2.2021

2. Bowleg L. Evolving intersectionality within public health: from analysis to action. AJPH [Internet]. 2021;111(1):88-90. https://doi.org/10.2105/AJPH.2020.306031

3. Nascimento BA, Lima DM, Passos SG. Humanização da assistência de enfermagem na unidade de terapia intensiva. Revista JRG de Estudos Acadêmicos. 2023;6(13):2024-32.

4. Corrêa GP, Rabito LBF, Ciccheto JRM, Salci MA, Oliveira Moura DR, Sanches RdCN. Perfil clínico-epidemiológico de pacientes internados em unidade de terapia intensiva de um hospital escola. Enfermería Global. 2024;23(2):495-533.

5. Sungono V, Hariyanto H, Soesilo TEB, Adisasmita AC, Syarif S, Lukito AA, et al. Cohort study of the APACHE II score and mortality for different types of intensive care unit patients. Postgraduate medical journal. 2022;98(1166):914-8.

6. Oh T-K, Kim H-G, Song I-A. Epidemiologic study of intensive care unit admission in South Korea: a nationwide population-based cohort study from 2010 to 2019. International journal of environmental research and public health. 2022;20(1):81.

7. Associação de Medicina Intensiva Brasileira (AMIB). UTIs não são o fim da linha para pacientes críticos [Internet]. 2024 [citado 2024 set 5]. Available from:https://amib.org.br/category/noticias/utis-brasileiras/

8. Cardoso FS, Gomes DCK, Silva ASd. Racial inequality in health care of adults hospitalized with COVID-19. Cadernos de Saúde Pública. 2023;39:e00215222.

9. Santos GSR, Paulino GB, Rocha FM, Luz RS, Santos GVR, Dumas GB, et al. Política pública, saúde e racismo: revisão integrativa da literatura. Práticas e Cuidado: Revista de Saúde Coletiva. 2022;3:e14537-e.

10. Santos PSA, Mateus SRM, Oliveira Silva MF, Souza Figueiredo PT, Campolino RG. Perfil epidemiológico da mortalidade de pacientes internados por Covid-19 na unidade de terapia intensiva de um hospital universitário. Brazilian Journal of Development. 2021;7(5):45981-92.

11. Almeida NHF, Silva Matos R, Santos Morais L, Lima Silva JMF, Pinheiro WR, Souza ASR. Perfil sociodemográfico e clínico de pacientes com COVID-19 que foram a óbito em Unidade de Terapia Intensiva. Revista Eletrônica Acervo Saúde. 2024;24(6):e16385-e.

12. Lima LR, Severina IC, Moreira VR, Stival MM. Perfil epidemiológico e de morbimortalidade da unidade de terapia intensiva de um hospital público. REVISA. 2021;10(2):446-58.

13. Riviello ED, Dechen T, O'Donoghue AL, Cocchi MN, Hayes MM, Molina RL, et al. Assessment of a crisis standards of care scoring system for resource prioritization and estimated excess mortality by race, ethnicity, and socially vulnerable area during a regional surge in COVID-19. JAMA network open. 2022;5(3):e221744-e.

14. Lopes GM, Paixão Duarte TT, Silva KGN, Silva Magro MC. Gravidade e mortalidade de pacientes críticos em ventilação mecânica. Research, Society and Development. 2022;11(12):e548111234761-e.

15. Silva Júnior CD, Souza JR, Silva NS, Almeida SP, Torres LM. Saúde do homem na atenção básica: fatores que influenciam a busca pelo atendimento. Revista Ciência Plural. 2022;8(2):1-18.

16. Silva JO, Nodari PRG, Alencar BT, Silva RB, Aleixo MLM. Desafios da implementação da Política Nacional de Atenção Integral a Saúde do Homem em Mato Grosso. Research, Society and Development. 2022;11(2):e5311225354-e.

17. Miró Ò, Alquézar-Arbé A, Llorens P, Martín-Sánchez F, Jiménez S, Martín A, et al. Comparison of the demographic characteristics and comorbidities of patients with COVID-19 who died in Spanish hospitals based on whether they were or were not admitted to an intensive care unit. Medicina Intensiva (English Edition). 2021;45(1):14-26.

18. Dantas MNP, Silva MdFdS, Barbosa IR. Reflexões sobre a mortalidade da população negra por covid-19 e a desigualdade racial no Brasil. Saúde e Sociedade. 2022;31:e200667pt.

19. Anunciação D, Pereira LL, Silva HP, Nunes APN, Soares JO. (Des) caminhos na garantia da saúde da população negra e no enfrentamento ao racismo no Brasil. Ciência & Saúde Coletiva. 2022;27:3861-70.

20. Oliveira LGF, Magalhães M. Percurso da implantação da política nacional de saúde integral da população negra no Brasil. Revista brasileira de estudos de população. 2022;39:e0214.

21. Cândido NMdO, Detoni PP, Ginar-Silva S. Percepção de racismo em ambientes de saúde e fatores associados em mulheres negras. Saúde em Debate. 2024;48:e8692.

22. Goes EF, Nascimento ERd. Mulheres negras e brancas e os níveis de acesso aos serviços preventivos de saúde: uma análise sobre as desigualdades. Saúde em Debate. 2013;37:571-9.

23. Silva MT, Teixeira LB, Santos DCR, Santos Filho LEP, Correa PDS. Acesso a saúde tem cor e não é preta: revisão integrativa do racismo institucional à população negra. RECIMA21-Revista Científica Multidisciplinar-ISSN 2675-6218. 2021;2(10):e210871-e.

24. Jäntti S, Ponkilainen V, Kuitunen I, Uimonen MM, Huttunen T, Mattila VM. Intensive care unit admissions with and without COVID-19 in Finland from 2017 to 2021: a retrospective register-based study. BMC anesthesiology. 2023;23(1):251.

25. Kyalwazi AN, Loccoh EC, Brewer LC, Ofili EO, Xu J, Song Y, et al. Disparities in cardiovascular mortality between Black and White adults in the United States, 1999 to 2019. Circulation. 2022;146(3):211-28.

26. Modra LJ, Higgins AM, Pilcher DV, Bailey MJ, Bellomo R. Sex differences in mortality of ICU patients according to diagnosis-related sex balance. American journal of respiratory and critical care medicine. 2022;206(11):1353-60.

27. Agenda Mais SUS. Relatório Técnico nº 2/2023: Saúde da População Negra [Internet]. 2023 [citado 2025 mar 15]. Available from:https://agendamaissus.org.br/wp-content/uploads/2023/06/ieps-boletim02-saude-populacao-negra.pdf

28. O'Halloran AC, Holstein R, Cummings C, Kirley PD, Alden NB, Yousey-Hindes K, et al. Rates of influenza-associated hospitalization, intensive care unit admission, and in-hospital death by race and ethnicity in the United States from 2009 to 2019. JAMA Network Open. 2021;4(8):e2121880-e.

29. Himmelstein G, Ceasar JN, Himmelstein KE. Hospitals that serve many Black patients have lower revenues and profits: structural racism in hospital financing. Journal of General Internal Medicine. 2023;38(3):586-91.

30. Reis SS, Bortoloto CC. Racismo estrutural nas Política de Saúde: impressões de usuários negros. Revista Serviço Social em Revista Vol. 2024;27(3):806-31.

31. Ministério da Saúde (BR). HumanizaSUS: Política Nacional de Humanização [Internet]. Brasília: Ministério da Saúde; 2013 [citado 2025 mar 31]. Available from:http://bvsms.saude.gov.br/bvs/publicacoes/humanizasus_politica_nacional_humanizacao.pdf

Conflicts of interest: No
Submission: 2026/15/09
Revised: 2026/02/11
Accepted: 2026/05/05
Publication: 2026/09/11

Editor in Chief or Scientific: José Wicto Pereira Borges
Associate Editor: Antonio Werbert Silva Costa

Authors retain copyright and grant the Revista de Enfermagem da UFPI the right of first publication, with the work simultaneously licensed under the Creative Commons Attribution BY 4.0 License, which allows sharing the work with acknowledgment of authorship and initial publication in this journal.