

The Burden of Cardiovascular Disease in Brazil: Insights From a Decade of Emergency Hospital Admissions

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Editorial referring to the article: *Epidemiological Analysis of Emergency Hospitalizations in Brazil Due to Cardiovascular Diseases From 2013 to 2023*

Cardiovascular disease (CVD) remains the leading cause of death both globally and in Brazil.^{1,2} Although cancer has surpassed CVD as the top cause in some countries, projections indicate that CVD will continue to be the primary cause of mortality in Brazil for the decades to come.^{2,3}

Epidemiological analyses are essential for evaluating current public health strategies and informing future policy decisions. In this issue of the *International Journal of Cardiovascular Sciences*, an epidemiological study of recent emergency hospital admissions for CVD in Brazil is presented. Using data from the Department of Informatics of the Brazilian Unified Health System (DATASUS), the authors report data from over eight million hospital admissions from 2013 to 2023.⁴

The trend analysis provided is particularly noteworthy, demonstrating a stable scenario, with a 2% increase in hospital admissions from 2013 to 2023. Admissions rose among males (from 390,000 in 2013 to 418,000 in 2023) but declined among females (from 357,000 to 345,000). Additionally, while the number of admissions decreased among individuals under 60 years of age, they increased among those aged 60 and older, reflecting the aging of the Brazilian population. Although hospitalizations for heart failure have declined, likely due to advances in management, those for myocardial infarction and cerebrovascular diseases have risen, underscoring the relevance of ischemic CVDs.⁴

Overall, these findings indicate the persistently high burden of CVD in Brazil, largely driven by demographic growth and population aging. The results are consistent with national mortality reports. According to the Global Burden of Disease (GBD), the crude CVD mortality rate in Brazil has remained relatively stable over recent decades (from 192 to 184 per 100,000 in males in 1990 and 2021, respectively; 157 per 100,000 in females in 1990 and 2021). In the overall population, this rate decreased slightly by 2.2%, from 174 to 170 per 100,000, contrasting with a

6.5% global increase (from 231 to 246 per 100,000) during the same period.^{1,2}

Importantly, standardized CVD mortality rates, a more appropriate metric for evaluating improvements in disease prevention, treatment, and healthcare access, demonstrate that Brazil has outperformed global averages. According to the GBD, standardized CVD mortality rates have declined consistently from 1990 to 2021 in Brazilian males (from 387 to 188 per 100,000) and females (from 287 to 127 per 100,000). In the overall population, these rates fell from 334 to 154 per 100,000, representing a 54% reduction, which is substantially greater than the 34% decrease observed worldwide (from 358 to 235 per 100,000).^{1,2}

Another significant finding from the publication is the impact of the COVID-19 pandemic, which led to a reduction in CVD hospital admissions in 2020 and 2021.⁴ Several studies have reported similar patterns, as well as increases in in-hospital mortality and deaths from CVD at home.^{1,5-9} Possible explanations include reduced hospitalizations due to fear of infection, overwhelmed hospitals with fewer available beds for CVD patients, and underreporting of CVD admissions in cases co-occurring with COVID-19. Notably, the pandemic disproportionately affected socially vulnerable populations.⁶ Lessons from this experience must be considered in developing contingency plans to better prepare the healthcare system for future crises.

Collecting comprehensive national health data in Brazil remains a challenge due to the country's size and the complexity of its healthcare system, which comprises both public and private sectors. Accurate epidemiological data are critical for assessing health trends and informing public health policies. The current publication highlights the ongoing significant burden of CVD in Brazil, despite the substantial decline in standardized CVD mortality rates observed in the recent decades. Given that many cardiovascular events are preventable, there remains considerable potential for interventions to reduce this burden.

Keywords

Cardiovascular Diseases; Hospitalization; Epidemiology; COVID-19

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