MORTALITY TRENDS AND DISPARITIES IN SPLENIC DISORDERS AMONG ADULTS AGED45+ IN U.S (1999-2020): A CDC WONDER DATABASE ANALYSIS

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Introduction

- Splenic disorders, though relatively rare, can result in severe complications and mortality, particularly among older adults.

Aim/Objectives

- Despite improvements in healthcare, trends in splenic disorder mortality across various demographic groups remain understudied.
- This study aims to analyze the mortality trends associated with splenic disorders in the U.S. from 1999 to 2020, focusing on variations by age, sex, race, region, and urbanization.

Methods

- Data from the CDC WONDER Multiple Cause of Death database (1999–2020) were used to examine mortality rates for adults aged 45 and older with splenic disorders, identified by ICD-10 codes D73.0–D73.9. Both age-adjusted and crude mortality rates were calculated annually.
- Joinpoint regression analysis was performed to assess trends and estimate annual percentage changes (APC) and average annual percentage changes (AAPC) with 95% confidence intervals. The data were stratified by sex, race/ethnicity, region, and urbanization.
- From 1999 to 2020, there were 12,189 splenic disorder-related deaths in adults aged 45+.

Results

- The age-adjusted mortality rate (AAMR) declined from 0.65 per 100,000 in 1999 to 0.47 per 100,000 in 2020.
- By 2020, the West had the highest AAMR (0.60), while Northeast had lowest (0.42).
- Non-Hispanic Whites experienced the highest AAMR in both years, while Hispanics and non-Hispanic Blacks had lower rates.
- Males had higher mortality rates than females in both 1999 and 2020. Urban populations showed a greater decline in mortality rates compared to rural areas.
- The largest decline in AAMR occurred among non-Hispanic Black individuals (AAPC: -3.15%), while the smallest decline was seen in non-Hispanic Whites (AAPC: -1.59%).
- Regionally, the Midwest experienced the steepest decline (AAPC: -2.66%), while the South showed the smallest change (AAPC: -1.86%).

Discussion

- While overall splenic disorder mortality declined from 1999 to 2020, significant disparities by race, sex, age, and rurality persist. Rural and older populations experienced slower declines, which may be due to delayed care or limited access to healthcare.
- Addressing these disparities requires targeted, equity-driven public health interventions.