

A Twenty-Five-Year Reckoning: Influenza-Related Mortality Trends In Older Adults With Hematological Malignancies Across United States



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Introduction

Older adults (≥ 65 years) with hematological malignancies (HM), notably in those receiving hematopoietic cell transplant and immunosuppression, are at a high risk to contract influenza, which may progress to critical lower respiratory tract infection and death. Despite this, population-level data on influenza-related mortality in this vulnerable group remain limited, highlighting the need to characterize national mortality trends and disparities.

Results

- A total of **114,248** deaths occurred due to HM and influenza, with a decline in overall AAMR (AAPC: -2.38%).
- Female patients (AAPC: -2.55%) demonstrated greater decline in mortality rates in comparison to male patients (AAPC: -2.52%).
- By age groups, the 65–74 year cohort showed modest decline throughout the study span (AAPC: -2.45%).
- Regionally, the Midwest observed the greatest decline (AAPC: -2.74%), followed by the West (AAPC: -2.65%).
- Racially, White patients experienced the largest decline (AAPC: -2.29%).
- Additionally, rural areas (AAPC: -1.80%) experienced greater decline than urban areas (AAPC: -1.69%).

Conclusion

Although mortality due to influenza with HM amongst older adults has declined between 1999–2024, critical geographical and demographic discrepancies exist. They underscore the importance for improved testing to counteract delayed presentation and call for equitable and early access to antiretroviral therapy.

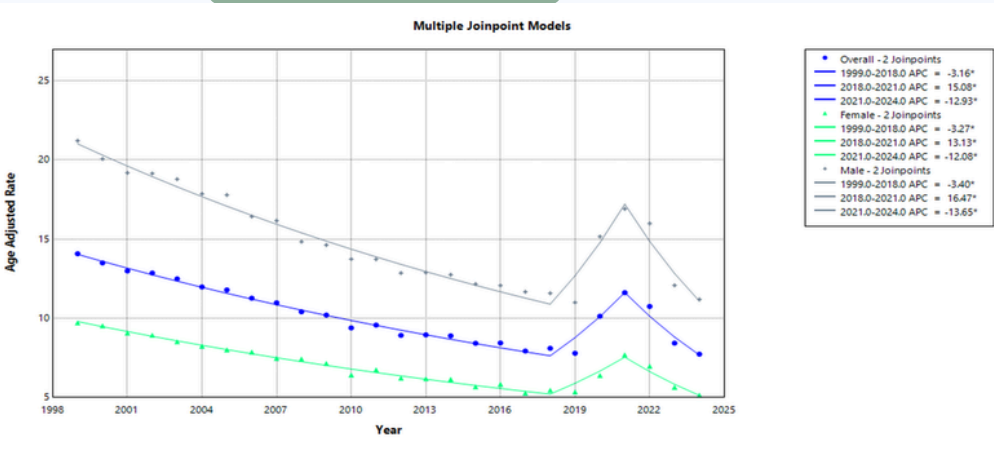
Objective

We assessed long-term temporal trends from 1999–2024 to define the burden of influenza-related mortality in older adults (≥ 65 years) with HM in the United States (U.S.)

Methodology

Data was obtained using the CDC WONDER Multiple Cause of Death database to identify influenza-related deaths in older adults (≥ 65 years) with HM. Age-adjusted mortality rates (AAMRs) per 100,000 population (standardized to the 2000 U.S. population) were calculated. Annual percent change (APC) and average annual percent change (AAPC) with 95% confidence intervals were assessed using Joinpoint regression analysis. Data was stratified by age, sex, race/ethnicity, U.S. census region, and urbanization status.

Overall and Sex Graph



States Map

