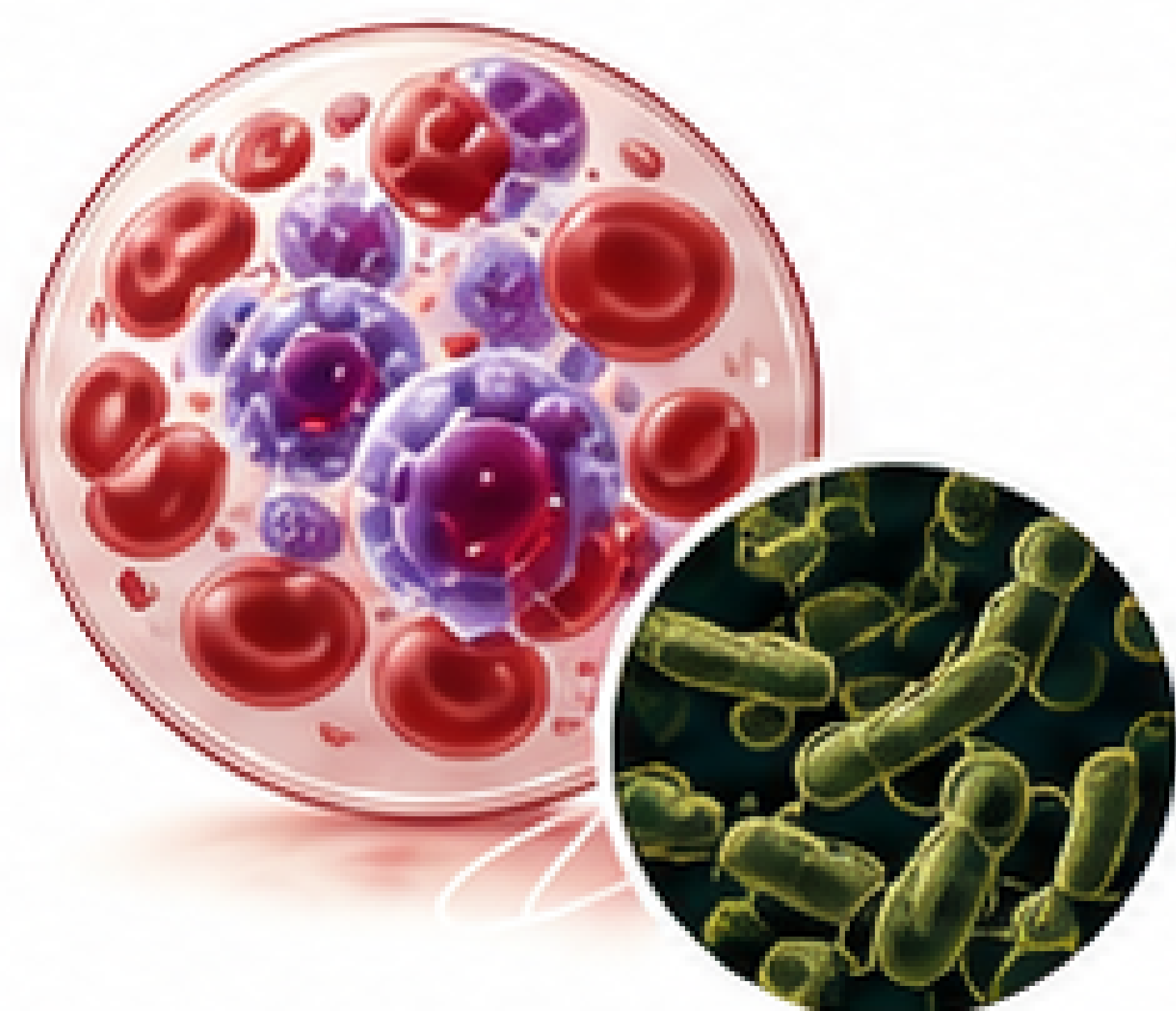


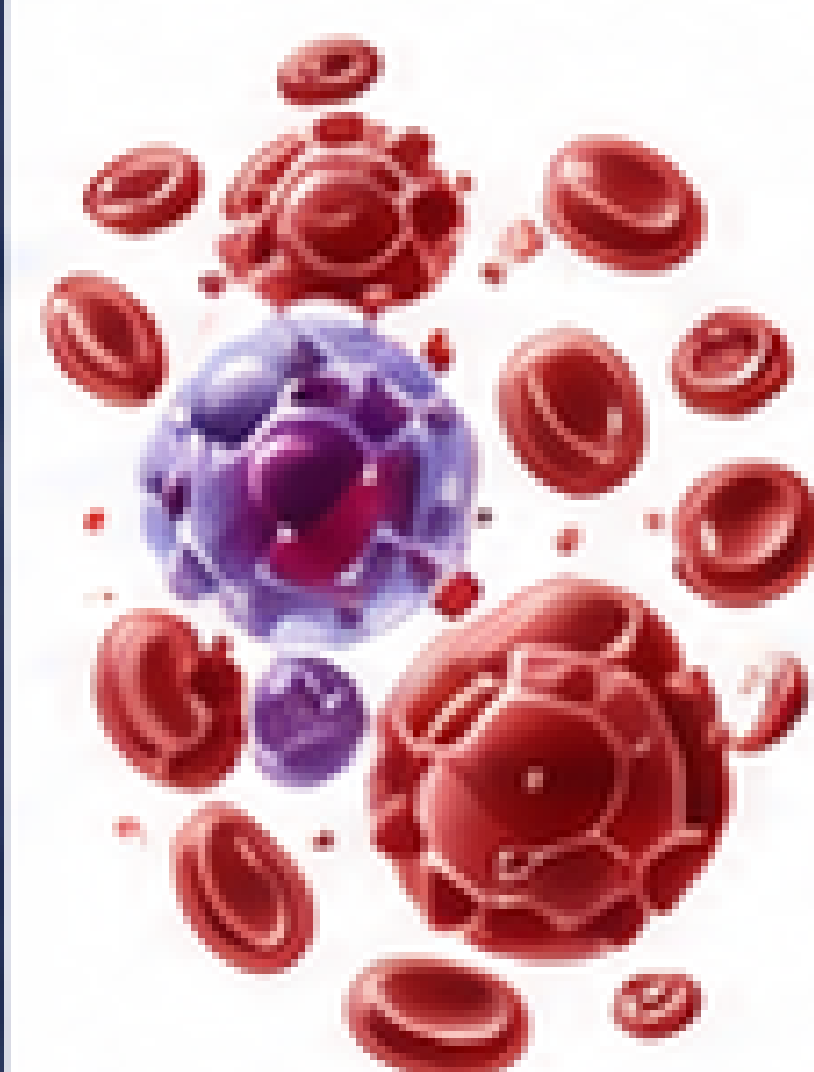


National Trends in Mortality Associated With Leukemias Complicated by Sepsis in U.S. Adults Aged ≥25 Years, 1999-2025

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INTRODUCTION / BACKGROUND



Leukemia predisposes patients to life-threatening infections. Sepsis is a leading cause of non-relapse mortality, but national trends in sepsis-attributable mortality among adults with leukemia are poorly characterized.

OBJECTIVE



To investigate mortality trends and disparities for leukemia complicated by sepsis in U.S. adults from 1999 to 2025.

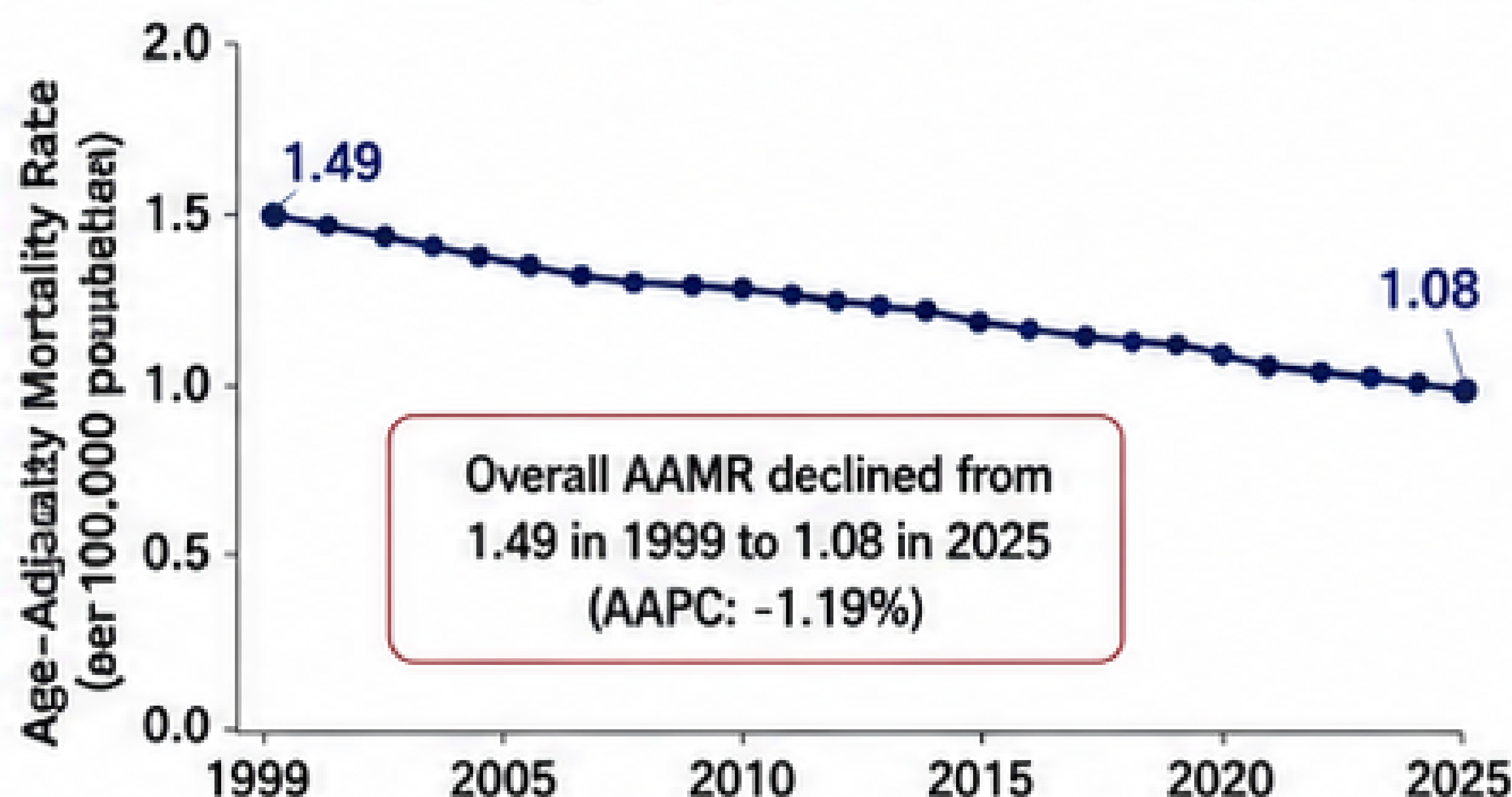
METHODS



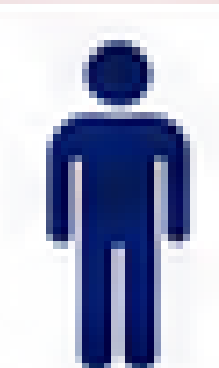
- Analyzed CDC WONDER data for leukemia (C91-C95) with sepsis (A40-A41) in adults ≥25 years
- Calculated age-adjusted mortality rates (AAMRs)
- Stratified by sex, age, race/ethnicity, census region, and urbanization
- Joinpoint regression estimated annual percent changes (APCs) and average annual percent changes (AAPCs) with 95% CI

RESULTS (Total deaths: 80,103)

Overall Trend in Age-Adjusted Mortality Rate (AAMR)



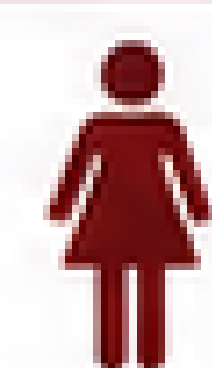
By Sex (APC)



Male

1999–2022
APC: -0.81%

After 2022
APC: -4.22%



Female

1999–2025
APC: 0.92%

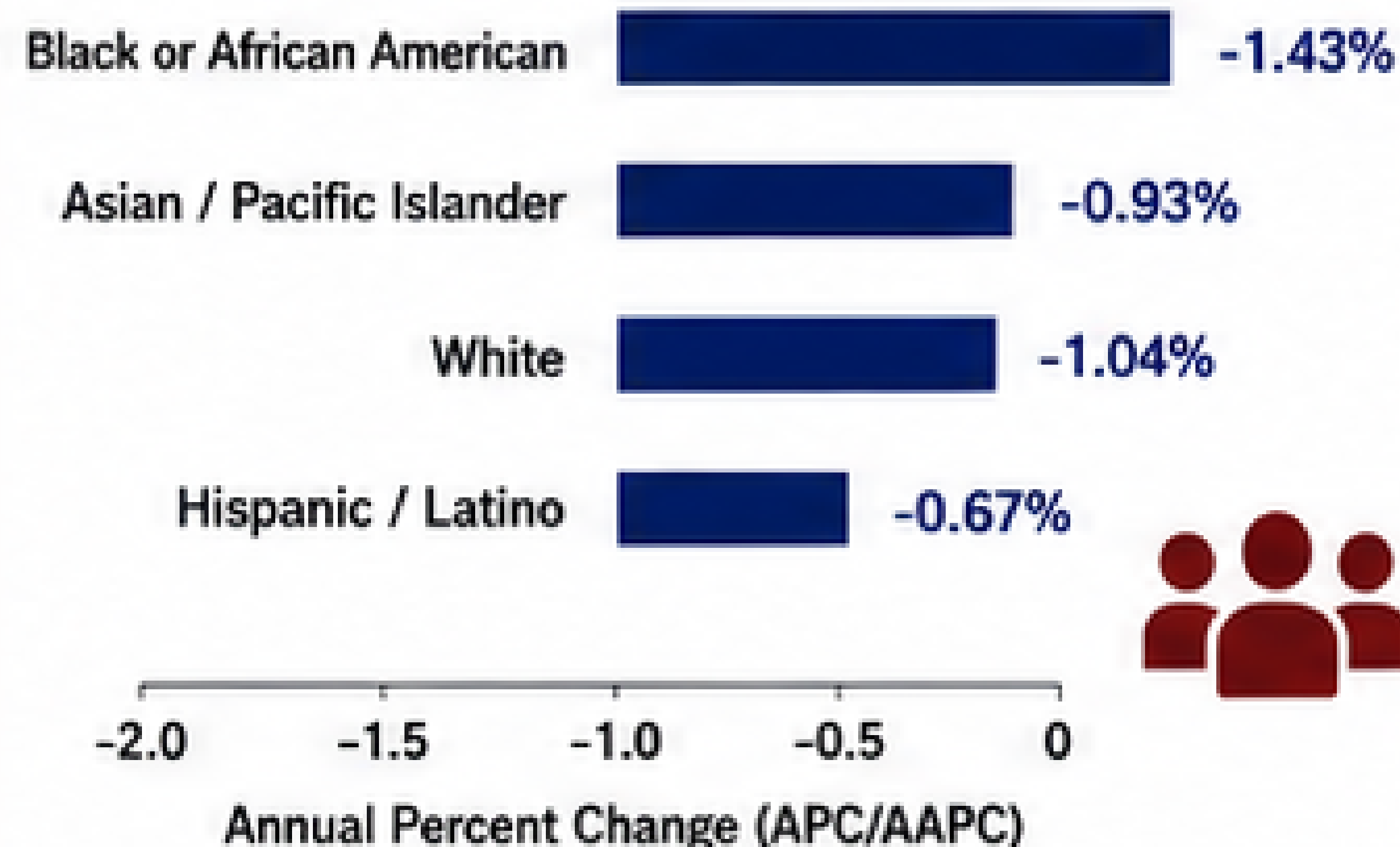


Female mortality declined steadily across the entire period. Male mortality accelerated decline after 2022.

By Age Group

Age Group	Trend	Change
25–74 years	Significant decline	AAPC: -1.54% to -1.42%
55–64 years	Steady decline	AAPC: -1.72%
75–84 years	Non-significant decline	AAPC: -0.66%
≥85 years	No significant change	APC: 0.34%

By Race / Ethnicity (APC/AAPC)

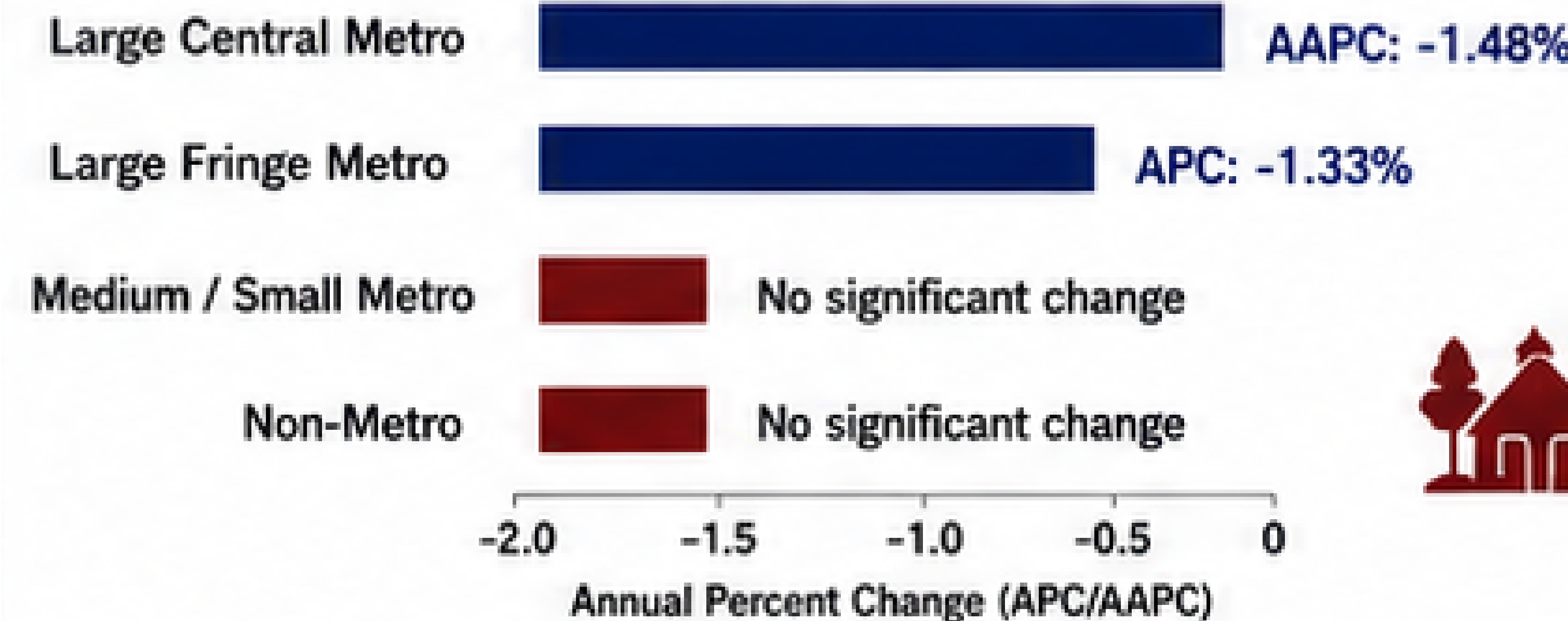


By Census Region (APC)



The Northeast had the sharpest decline in mortality, while the West had the smallest decline.

By Urbanization Level



Mortality declined in large metropolitan areas but showed no significant change in medium/small metro and non-metro areas, highlighting a rural-urban disparity.



CONCLUSION

Sepsis-related mortality in U.S. adults with leukemia declined significantly from 1999–2025, with accelerated improvement after 2022. However, mortality remains stagnant in adults ≥75 years and in non-metropolitan areas, underscoring the need for targeted sepsis management in these vulnerable populations.

