

PROJECTIONS OF MORTALITY RATES IN HEMATOLOGIC MALIGNANCIES AMONG OLDER ADULTS: A CENTERS FOR DISEASE CONTROL AND PREVENTION WONDER DATABASE ANALYSIS THROUGH 2035

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INTRODUCTION

Although hematologic malignancies have seen therapeutic breakthroughs, the collective mortality burden in older adults ≥65 years of age remains high. We sought to project long-term trends and to quantify the evolving disparities in sex, geography, and race through 2035.

AIM

To characterize projected mortality trends and evolving disparities in hematologic malignancies among adults aged ≥65 years in the United States through 2035.

METHOD

- Data source: CDC WONDER Multiple Cause of Death database, 1999–2020.
- Population: U.S. adults aged ≥65 years.¹
- Disease classification: Hematologic malignancies identified using ICD-10-CM codes C81.0–C96.9.
- Analysis: Age-adjusted mortality rates (AAMRs) were calculated and stratified by sex, metropolitan status, and race.
- Projection: Log-ARIMA (0,1,0) modeling with drift was used to project mortality trends through 2035.
- Model validation: Forecast accuracy was assessed using mean absolute percentage error (MAPE ≈2.35%).

CONCLUSIONS

- Mortality from hematologic malignancies among U.S. adults aged ≥65 years is projected to decline through 2035.
- Despite overall improvement, substantial disparities persist by sex and geography, with higher mortality among males and nonmetropolitan populations.
- These findings highlight the need for equitable access to specialized hematologic care and targeted strategies to address persistent mortality gaps.

RESULTS

- Overall AAMR is projected to decline from 124.60 in 2021 to 114.14 per 100,000 by 2035.
- Sex disparity: Male AAMR was 156.00 vs 84.43 in females in 2021; the gap is projected to remain substantial at 68.86 points in 2035.
- Geographic disparity: The nonmetropolitan–metropolitan gap is projected to widen from 11.75 points in 2021 to 16.47 points by 2035.
- Racial disparity: The White–Black mortality gap is projected to narrow from 11.95 points to 8.73 points by 2035.
- Overall, mortality is projected to decrease across groups, but sex and geographic disparities persist.

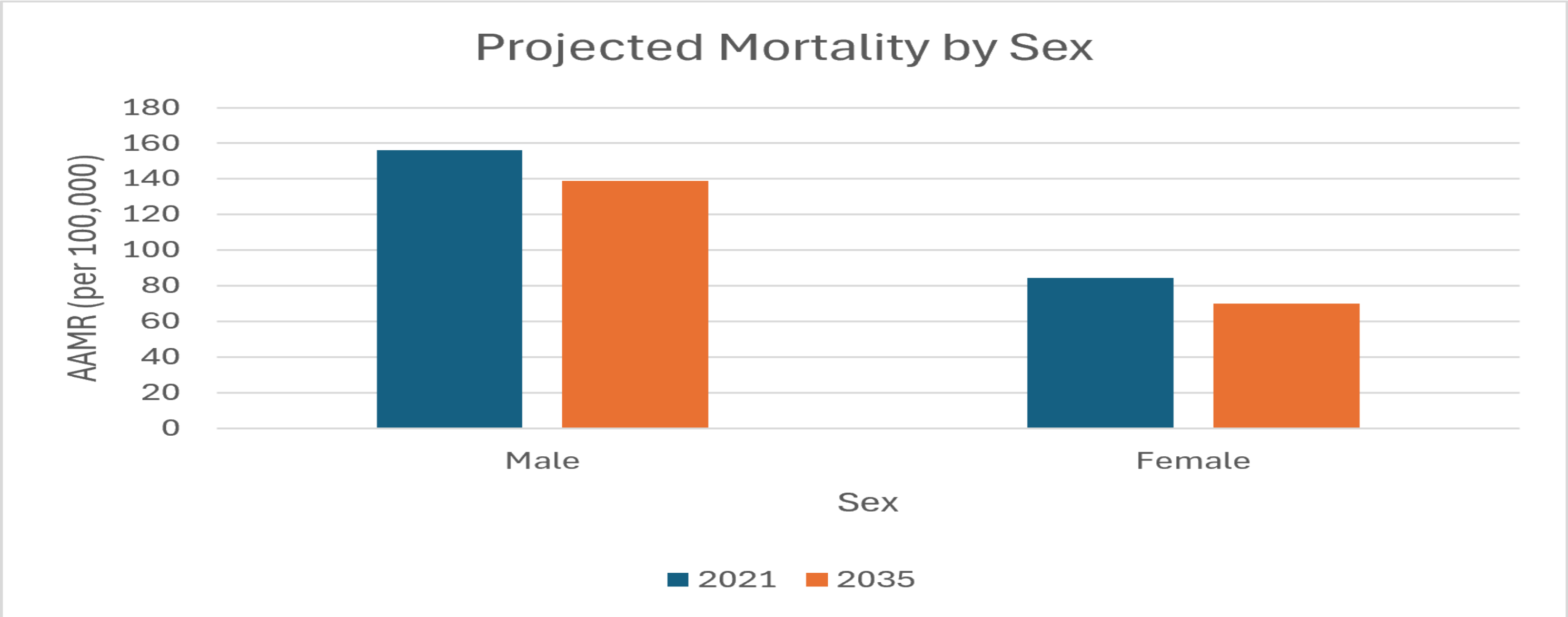


Figure 1. Projected mortality by sex among older adults with hematologic malignancies, 2021 vs 2035.

Disparity	2021 gap	2035 gap	Projected change
Sex	71.57	68.86	↓ 2.71
Geography	11.75	16.74	↑ 4.72
Race	11.95	8.73	↓ 3.22

Table 1. Projected disparities in hematologic malignancy mortality among older adults by sex, geography, and race, 2021–2035. Table summarizing projected gaps across three domains. Sex disparity remains the largest mortality gap despite a modest projected narrowing by 2035.

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