Sociodemographic Trends in Multiple Myeloma-Related Mortality from 1999 to 2020 and the Effect of the COVID-19 Pandemic

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BACKGROUND

Newer treatment modalities have improved survival in multiple myeloma over time while it continues to be an incurable disease

AIMS

To study the sociodemographic differences and trends in multiple myeloma-related mortality in the US

METHODS

We examined death certificate data using the CDC WONDER (Wide-Range Online Data for Epidemiologic Research) from 1999 to 2020

Inclusion criteria: Adults aged 25 and above with multiple myeloma related deaths (ICD-10 code C90.0)

Analysis:

Stratified the data for gender, census region, urbanization, and place of death

Calculated Age Adjusted Mortality (AAMR) for each group and annual percent change using Joinpoint regression analysis

CONCLUSION

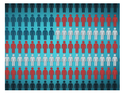
Overall AAMR has decreased in the last two decades in both men & women with multiple myeloma

Differences were noted in census regions (Midwest vs Northeast), but not in urbanization level (metropolitan vs non-metropolitan)

More deaths occurred at home or hospice facilities over time

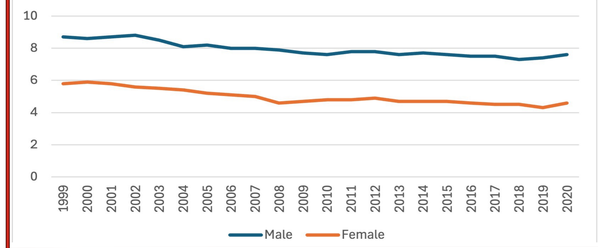
RESULTS

OVERALL AGE ADJUSTED MORTALITY RATE (AAMR)



From 1999- 2020, 294,263 multiple myeloma-related deaths in patients >25 years old

Overall AAMR decreased from 7 in 1999 to 5.7 in 2019, then increased to 5.9 in 2020 during the COVID-19 pandemic



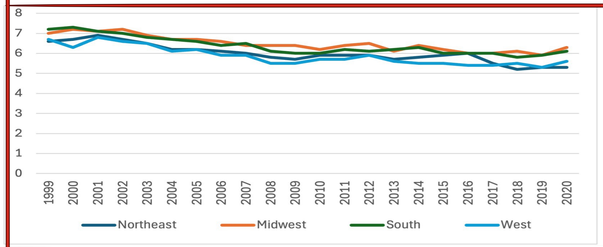
AAMR STRATIFIED BY GENDER

	Age adjusted mortality rate	Average Annual Percent Change (AAPC)
♀	Women: 1999: 5.8 women vs 2020: 4.6	women – 1.33; CI: -1.4 to -1.17
♂	Men: 1999 8.7 in men vs 7.6 in men	men – 0.82; CI: -1.05 to -0.60



METROPOLITAN VS NON-METROPOLITAN AREAS

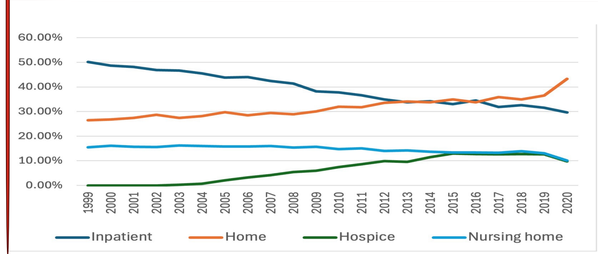
Similar age adjusted mortality rates



AAMR STRATIFIED BY CENSUS REGIONS

Highest in Midwest: AAMR 6.3 AAPC -0.85 CI: -1.1 to. -0.60

Lowest in Northeast: AAMR 5.3 AAPC 1.09 CI: -1.36 to -0.85



PLACE OF DEATH



Inpatient deaths decreased over time: 50.15% in 1999 to 29.69% in 2020



Deaths at home increased with time: 26.46% in 1999 to 43.34% in 2020

Hospice Care

Deaths at a hospice facility increased from 2003 to 2019, with a decline in 2020.