

Trends and Disparities in Aortic Valve Stenosis-Related Mortality Among Older Adults in the United States from 1999 to 2023

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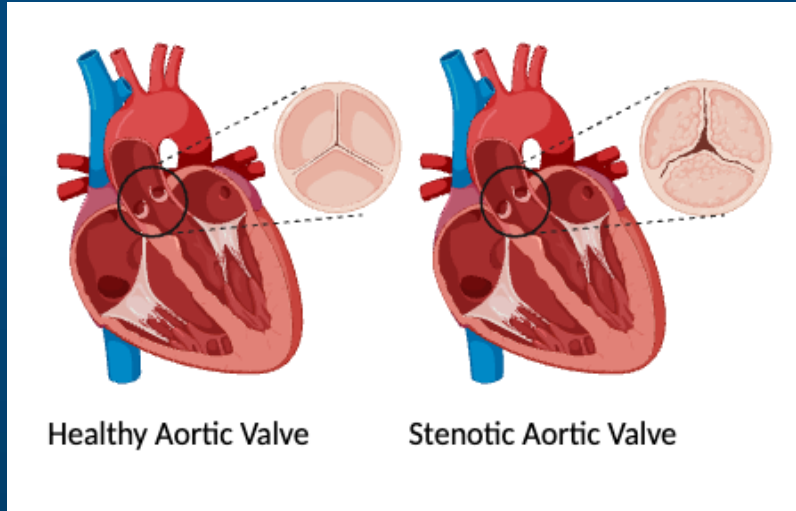


Disclosure of Relevant Financial Relationships

I, Aymen Ahmed, DO NOT have any financial relationships to disclose.

Within the prior 24 months, I have not had a financial relationship with a company producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients.

Background

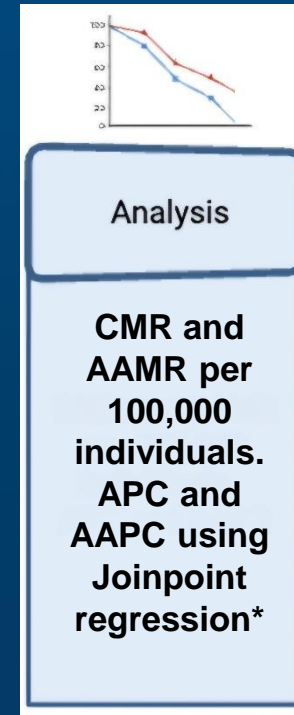
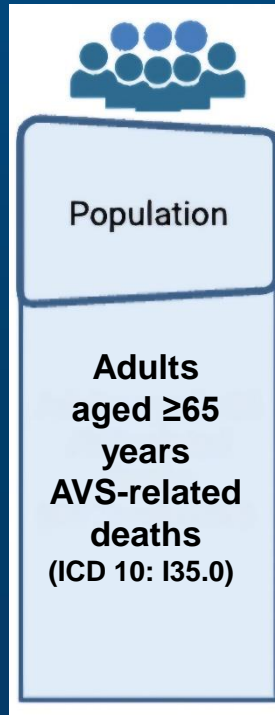


- Despite advances in its management, aortic stenosis (AS) remains a leading cause of cardiovascular death.
- Temporal mortality trends **specifically among elderly patients** remain poorly characterized.

Aim: To analyze trends and disparities in AS-related mortality among elderly patients in the US from 1999 to 2023.

Methodology

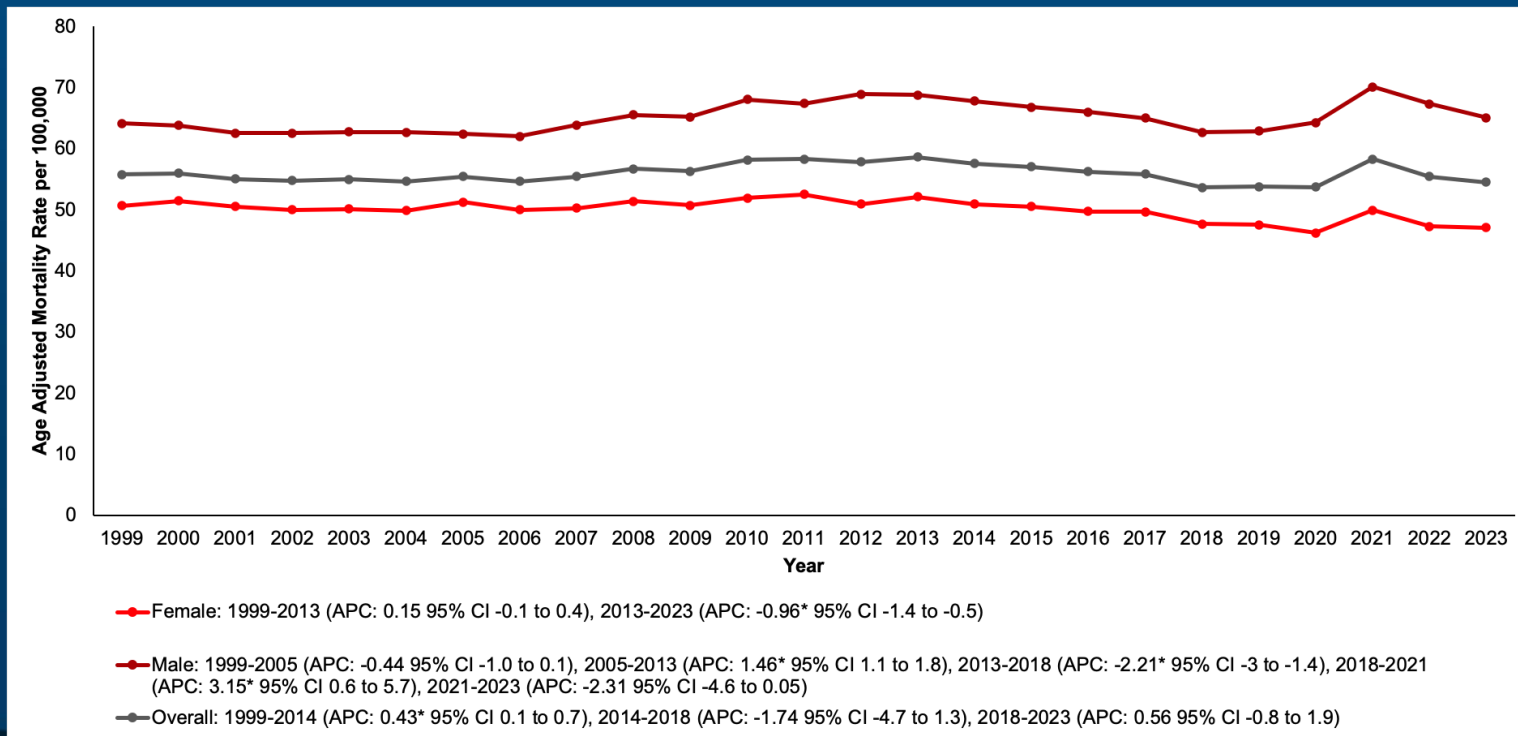
Centers for Disease Control and Prevention Wide-ranging Online Data for Epidemiologic Research (CDC WONDER) database
1999 - 2023



Results

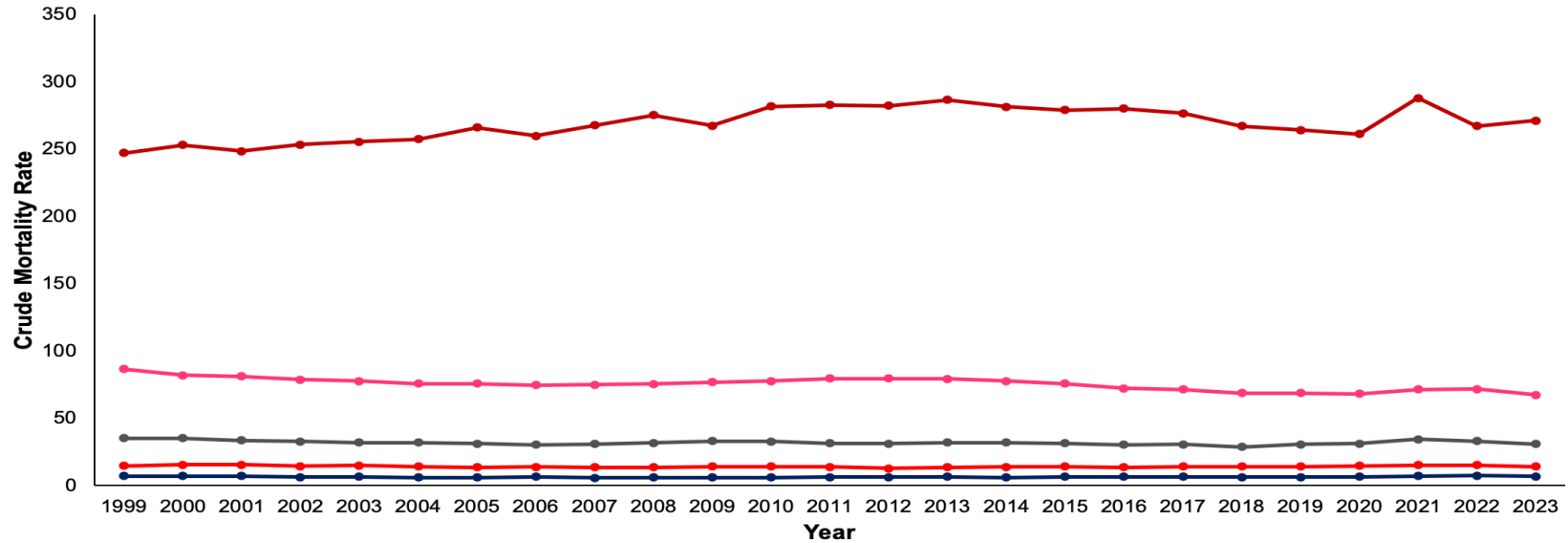
Overall & Gender-based Mortality Trends

A total of 608,508 deaths were recorded. Overall, AAMRs for **AS-related mortality** did not significantly decrease from 1999 (55.74) to 2023 (54.49) (AAPC 0.1, $p = 0.7$).



Results

Age-based Mortality Trends



65-69 years: 1999-2007 (APC: -2.38* 95% CI -3.8 to -1.0), 2007-2023 (APC: 1.13* 95% CI 0.7 to 1.5)

70-74 years: 1999-2012 (APC: -0.97* 95% CI -1.5 to -0.5), 2012-2023 (APC: 1.08* 95% CI 0.5 to 1.6)

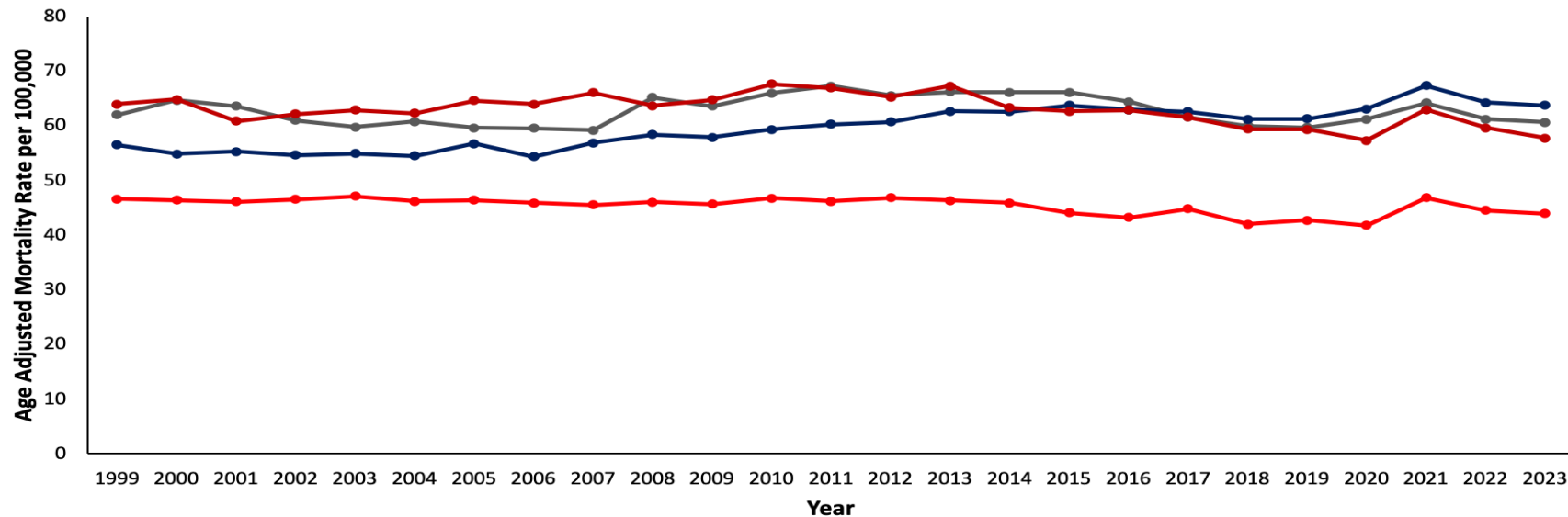
75-79: 1999-2006 (APC: -2.16* 95% CI -2.8 to -1.5), 2006-2009 (APC: 2.86 95% CI -2.1 to 8.1), 2009-2018 (APC: -1.21* 95% CI -1.7 to -0.7), 2018-2021 (APC: 4.59* 95% CI 0.2 to 9.2), 2021-2023 (APC: -3.91* 95% CI -7.7 to -0.001)

80-84 years: 1999-2005 (APC: -2.26* 95% CI -3.2 to -1.3), 2005-2013 (APC: 0.93* 95% CI 0.2 to 1.7), 2013-2018 (APC: -2.91* 95% CI -4.6 to -1.2), 2018-2023 (APC: 0.23 95% CI -1.0 to 1.4)

85+ years: 1999-2012 (APC: 1.10* 95% CI 0.7 to 1.5), 2012-2023 (APC: -0.52* 95% CI -1.0 to -0.1)

Results

Regional Mortality Trends



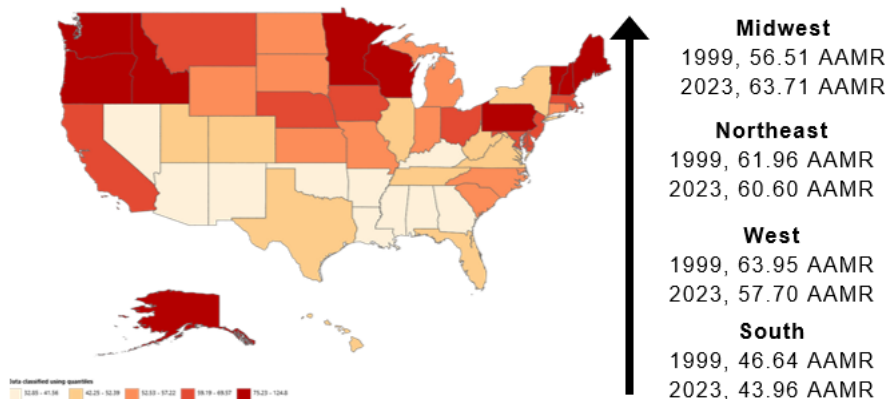
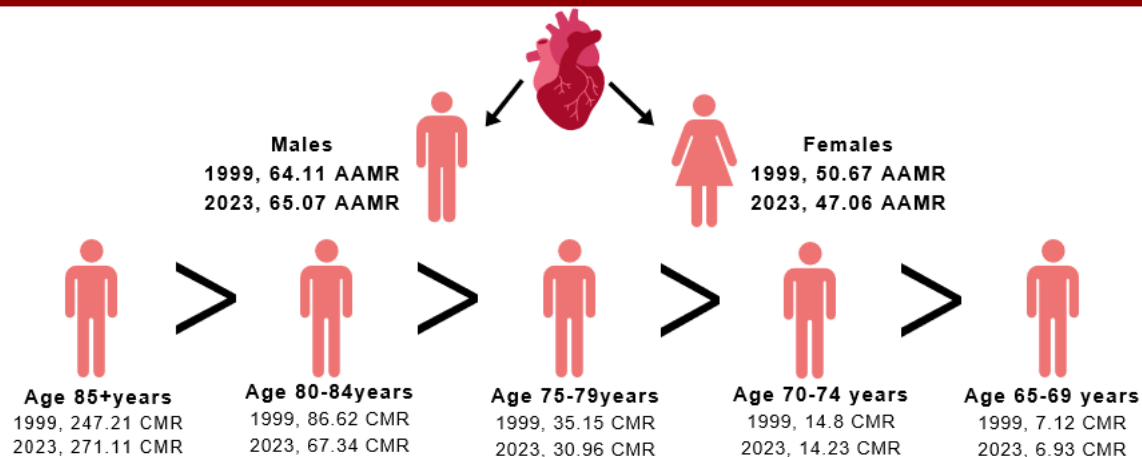
— Northeast: 1999-2006 (APC: -1.07 95% CI -2.3 to 0.1), 2006-2010 (APC: 3.19 95% CI -1.2 to 7.8), 2010-2023 (APC: -0.81* 95% CI -1.2 to -0.4)

— Midwest: 1999-2004 (APC: -0.52 95% CI -1.6 to 0.6), 2004-2015 (APC: 1.46* 95% CI 1.1 to 1.8), 2015-2018 (APC: -1.66 95% CI -5.6 to 2.4), 2018-2021 (APC: 2.80 95% CI -1.2 to 7.0), 2021-2023 (APC: -1.91 95% CI -5.7 to 2.0)

— South: 1999-2023 (APC: -0.31* 95% CI -0.5 to -0.1)

— West: 1999-2011 (APC: 0.52 95% CI -0.01 to 1.0), 2011-2023 (APC: -1.10* 95% CI -1.6 to -0.7)

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Conclusion

- AVS-related mortality has remained largely unchanged over recent years, despite substantial progress in diagnostic and therapeutic approaches.
- Pronounced demographic and regional disparities persist, underscoring the need for further investigation and the development of targeted, evidence-based interventions.

Thank you!