

**BACKGROUND**

Patients with multiple myeloma (MM) are at increased risk of severe infections due to disease-related immune dysfunction, advanced age, and immunosuppressive therapies. Pneumonia remains a major contributor to morbidity and mortality in MM patients. This study evaluated temporal trends and racial disparities in pneumonia-related mortality associated with MM in the United States from 1999 to 2020.

**METHOD**

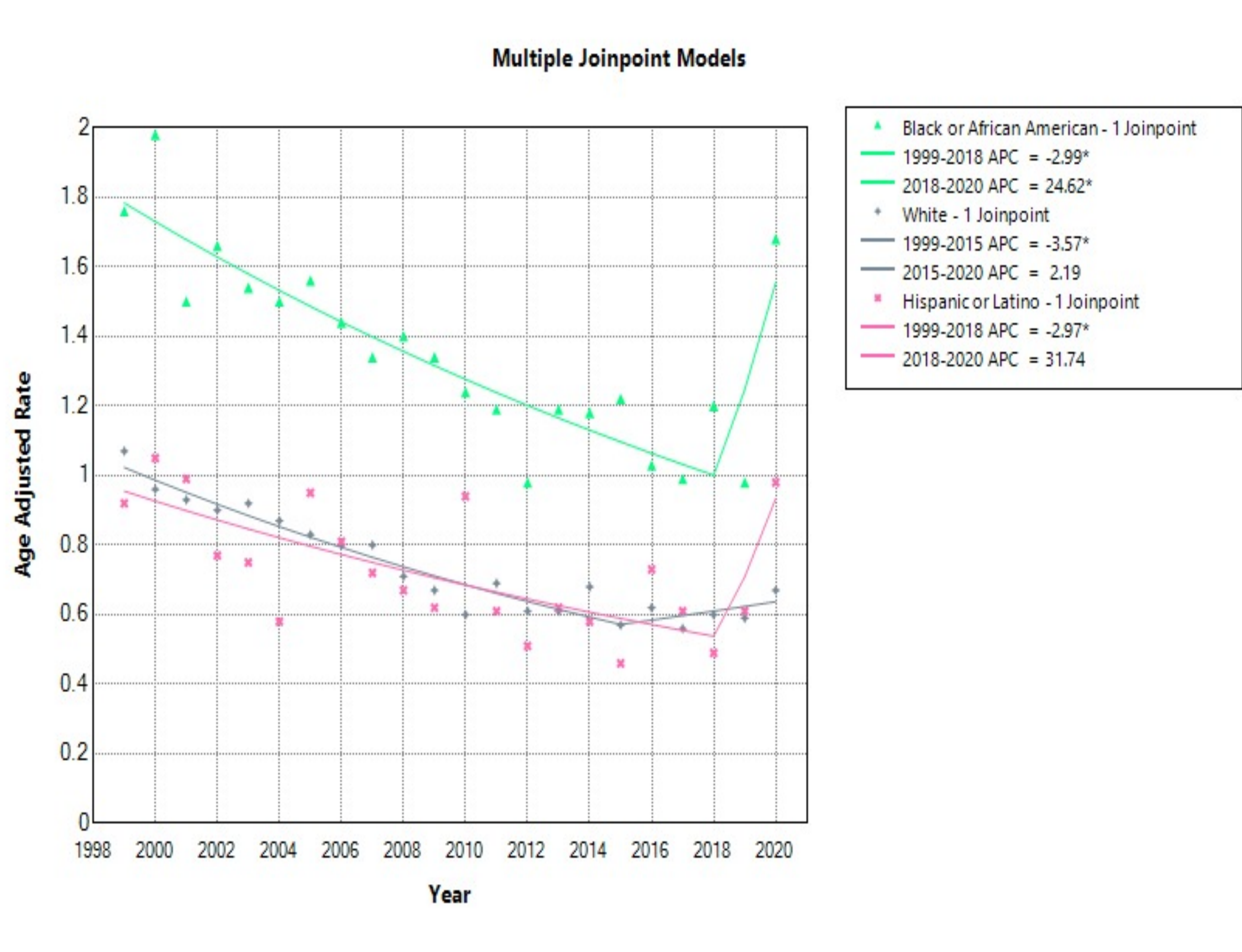
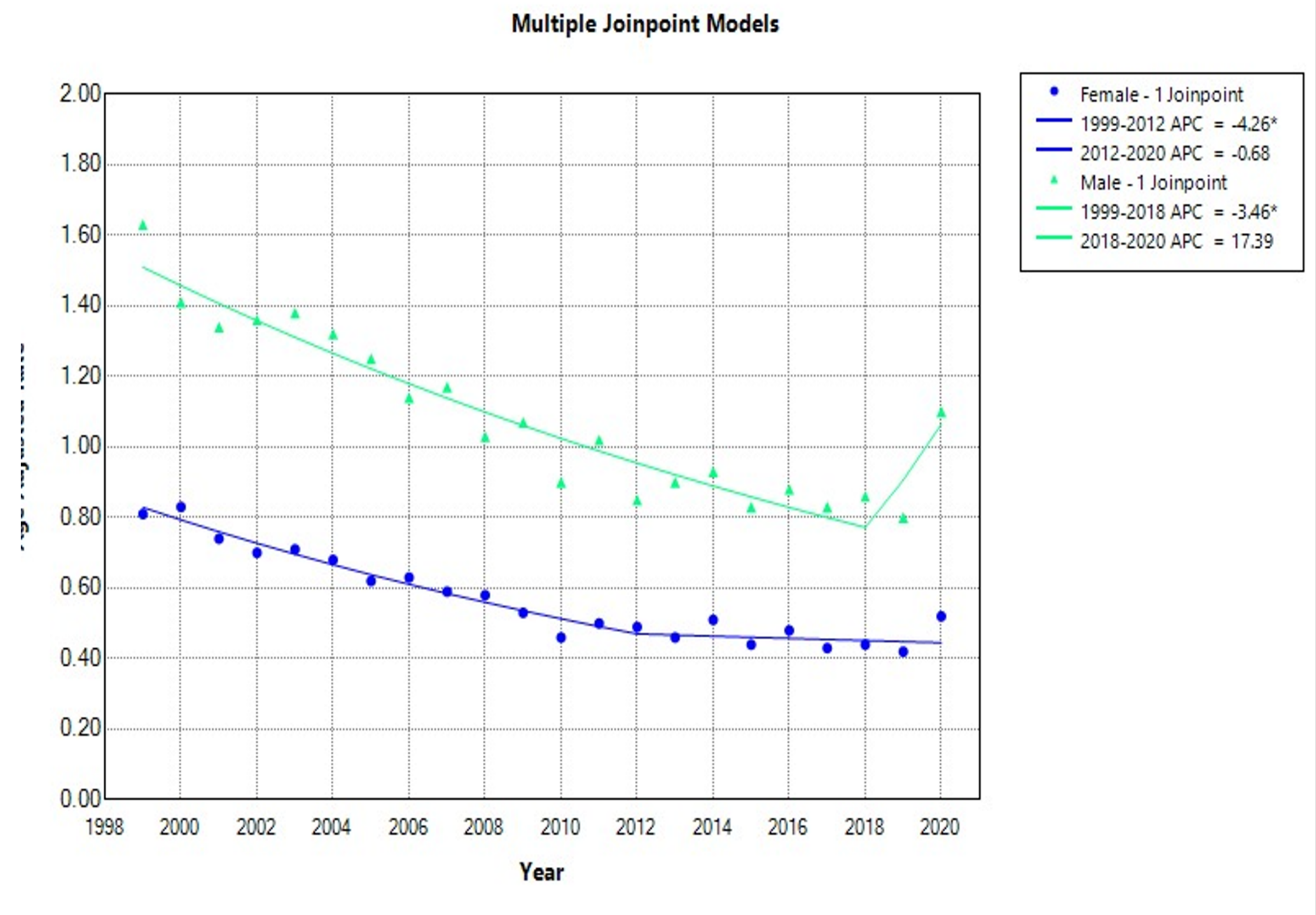
Data were extracted from the CDC WONDER database from 1999 to 2020. Age-adjusted mortality rates (AAMRs) per 100,000 persons were calculated. Jointpoint regression analysis was used to determine annual percent change (APC). Adults aged 45–85+ years were identified using ICD-10 code C90.0 for multiple myeloma as the underlying cause of death and pneumonia-related ICD-10 code J18.9 as multiple causes of death.

**CONCLUSIONS**

Pneumonia-related mortality in patients with MM generally declined between 1999 and 2020, likely reflecting advances in supportive care and MM-directed therapies. However, significant sex- and race-based disparities persist, with the highest mortality burden observed among Non-Hispanic Black individuals and males. The recent increase in mortality after 2018 highlights the continued vulnerability of MM patients to infectious complications, with the upward trend becoming more pronounced during the COVID-19 era.

**RESULTS**

Overall pneumonia-related mortality associated with MM demonstrated a declining trend during the study period. Among females, AAMR decreased significantly from 1999 to 2012 (APC: -4.26%), followed by a stable trend from 2012 to 2020 (APC: -0.68%). Among males, mortality rates declined from 1999 to 2018 (APC: -3.46%), then increased from 2018 to 2020 (APC: 17.39%). Non-Hispanic Black individuals had the highest mortality burden, with declining mortality from 1999 to 2018 (APC: -2.99%) followed by an increase between 2018 and 2020 (APC: 24.62%). Non-Hispanic White individuals demonstrated decreasing mortality from 1999 to 2015 (APC: -3.57%) with stabilization thereafter (APC: 2.19%). Hispanic individuals also experienced declining mortality from 1999 to 2018 (APC: -2.97%) followed by an increase from 2018 to 2020 (APC: 31.74%). Non-Hispanic Asian populations were not included in subgroup analysis due to inconclusive data.



**REFERENCES**

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