

# Disparities in Acute Pancreatitis-Related Mortality Among Diabetics in the United States

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## Introduction

- Diabetes mellitus (DM) and acute pancreatitis (AP) are prevalent conditions in the United States (US).
- Previous studies have established an association between DM and adverse outcomes in AP, but there is still a gap in understanding mortality disparities and trends within this context.
- This study seeks to uncover these disparities and provide insights crucial for shaping future healthcare strategies to reduce mortality among this demographic.

## Methods and materials

- We performed a retrospective analysis using the Centers for Disease Control and Prevention Wide-Ranging Online Data for Epidemiologic Research (CDC WONDER) database.
- We used ICD-10 codes (K85, E10-14) among diabetic individuals aged 15 and older who died with AP from 1999 to 2020.
- Outcomes were stratified by age, gender, race, region, rural/urban classification, and place of death,

reported as age-adjusted mortality rates (AAMR) with 95% confidence intervals (CI).

- Joinpoint regression calculated trends over time and average annual percentage change (AAPC).

## Results

- From 1999 to 2020, a total of 15,107 patients with DM died due to AP, resulting in an AAMR of 0.3 per 100,000 (95% CI: 0.3-0.3).
- The AAMR declined from 1999 to 2018, followed by an increase from 2018 to 2020 (AAPC -0.65; 95% CI: -2.52 to 0.4).
- Male patients exhibited a higher AAMR compared to females (0.3 vs. 0.2), while Black individuals had twice the AAMR of White individuals (0.5 vs. 0.2).
- Geographically, the West and South regions showed the highest AAMR at 0.3 each. Among states, Oklahoma and West Virginia had the highest AAMR (0.6 and 0.5), whereas North Dakota reported the lowest (0.2).
- Rural areas displayed a higher AAMR than urban areas (0.3 vs. 0.2).
- Most deaths occurred in inpatient settings (65%), with individuals aged 65–74 years comprising the most significant proportion (20.9%) of fatalities.

## Conclusions

- Our nationwide analysis revealed significant disparities in AP-related mortality among diabetic populations in the US. Mortality rates are consistently increasing across genders and racial groups.

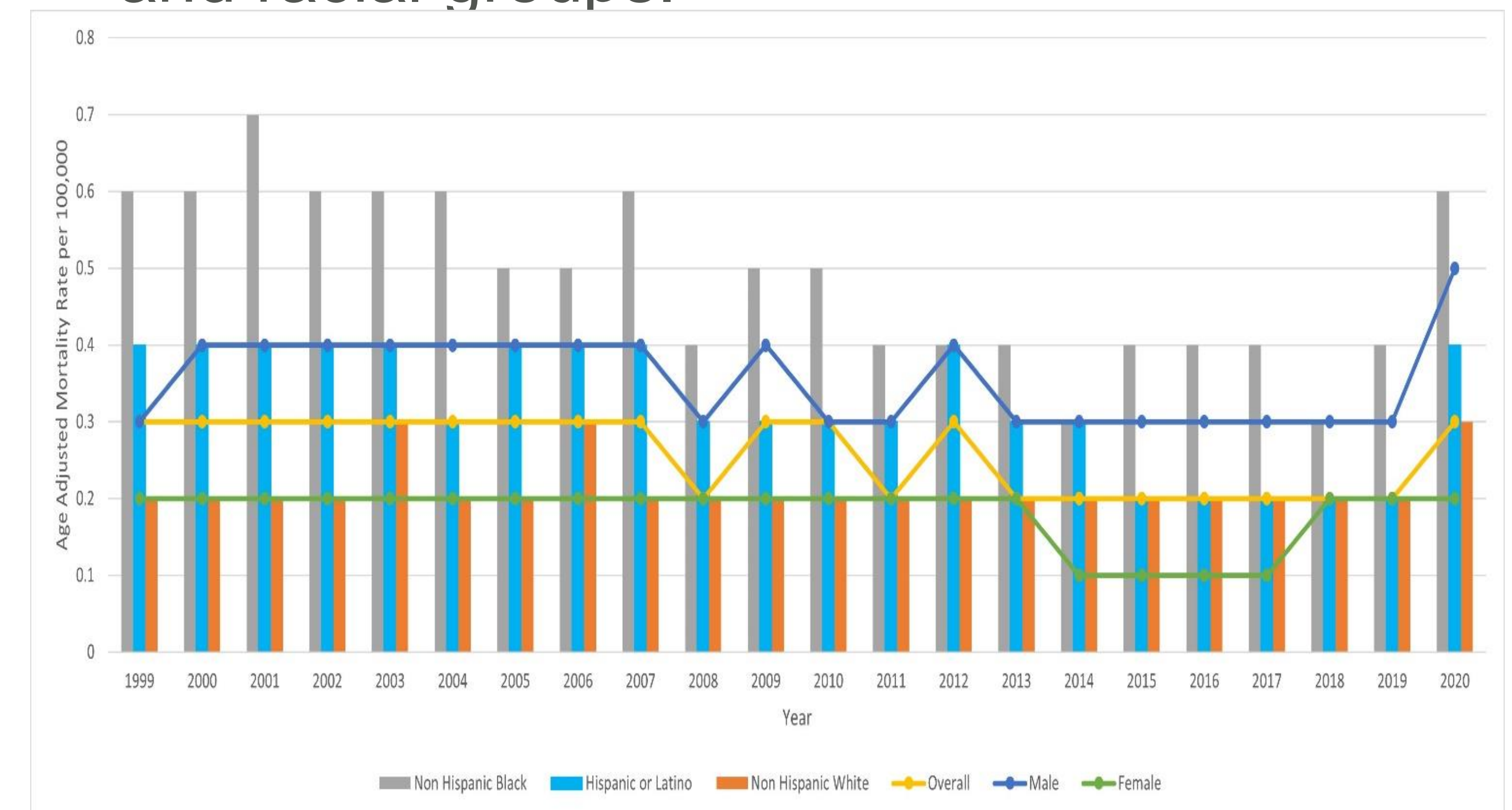
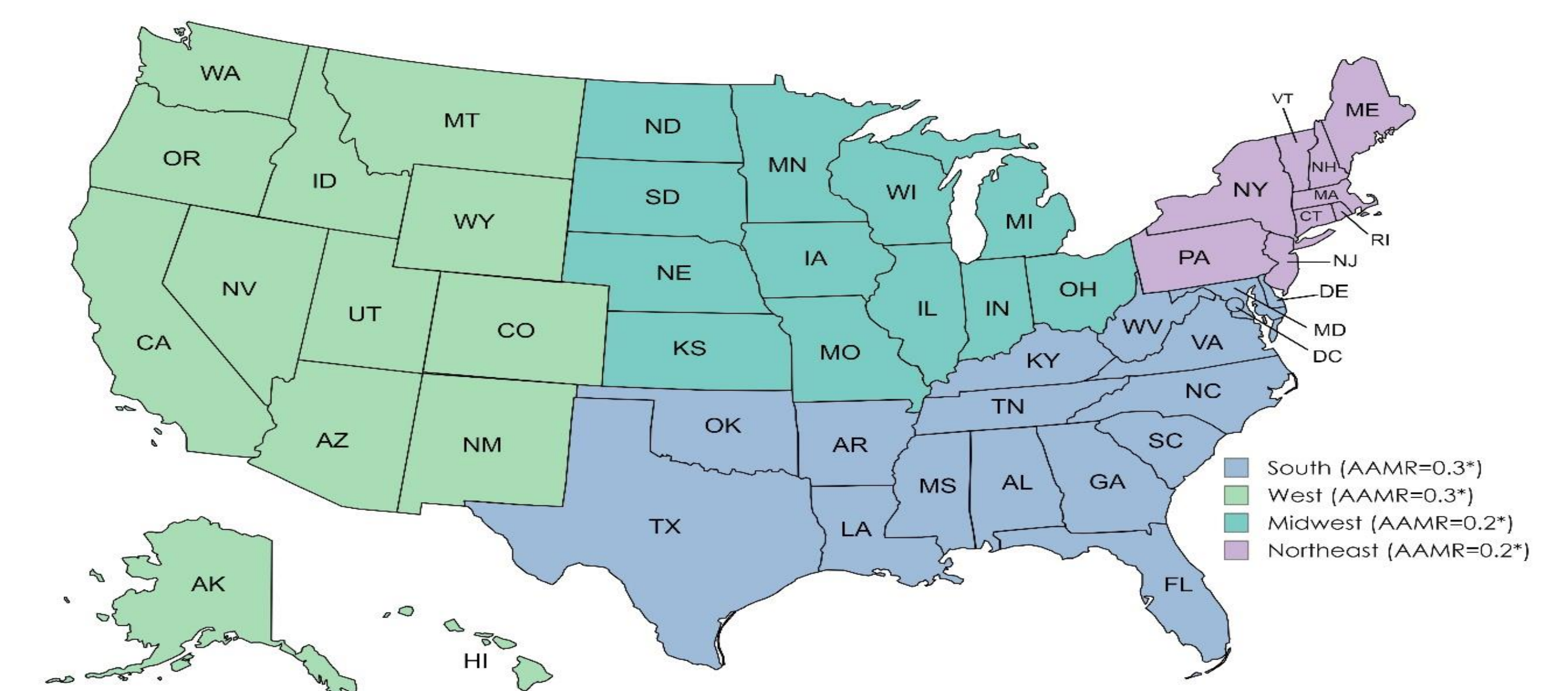


Figure 1: AP-related age-adjusted mortality rate among DM patients from 1999 to 2020 in the United States stratified by gender and race.



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Figure 2: AP-related age-adjusted mortality rate per 100,000 among DM patients from 1999 to 2020 in the United States census regions.