



Impact of Access to Acute Stroke Care in Kentucky

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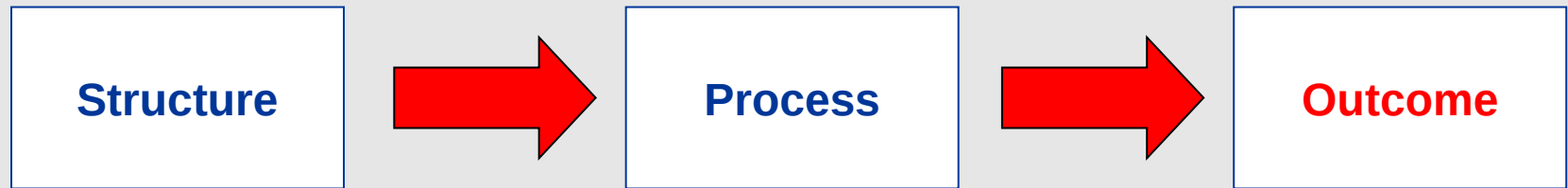
RESEARCH LETTER

Comparison of Centers for Disease Control and Prevention and Hospital-Based Stroke Mortality Data in Kentucky: The Paul Coverdell National Acute Stroke Program

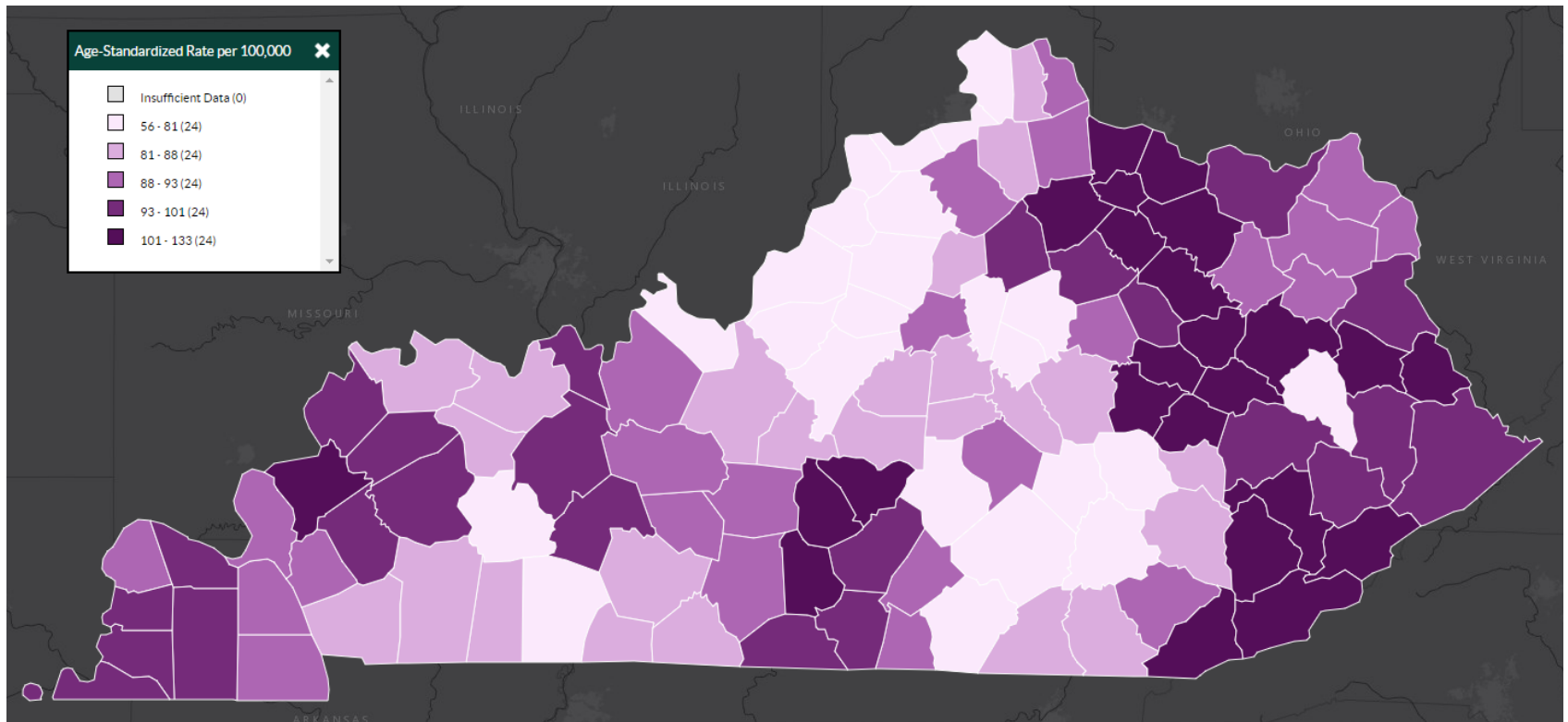
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Improving Stroke Care and Outcomes

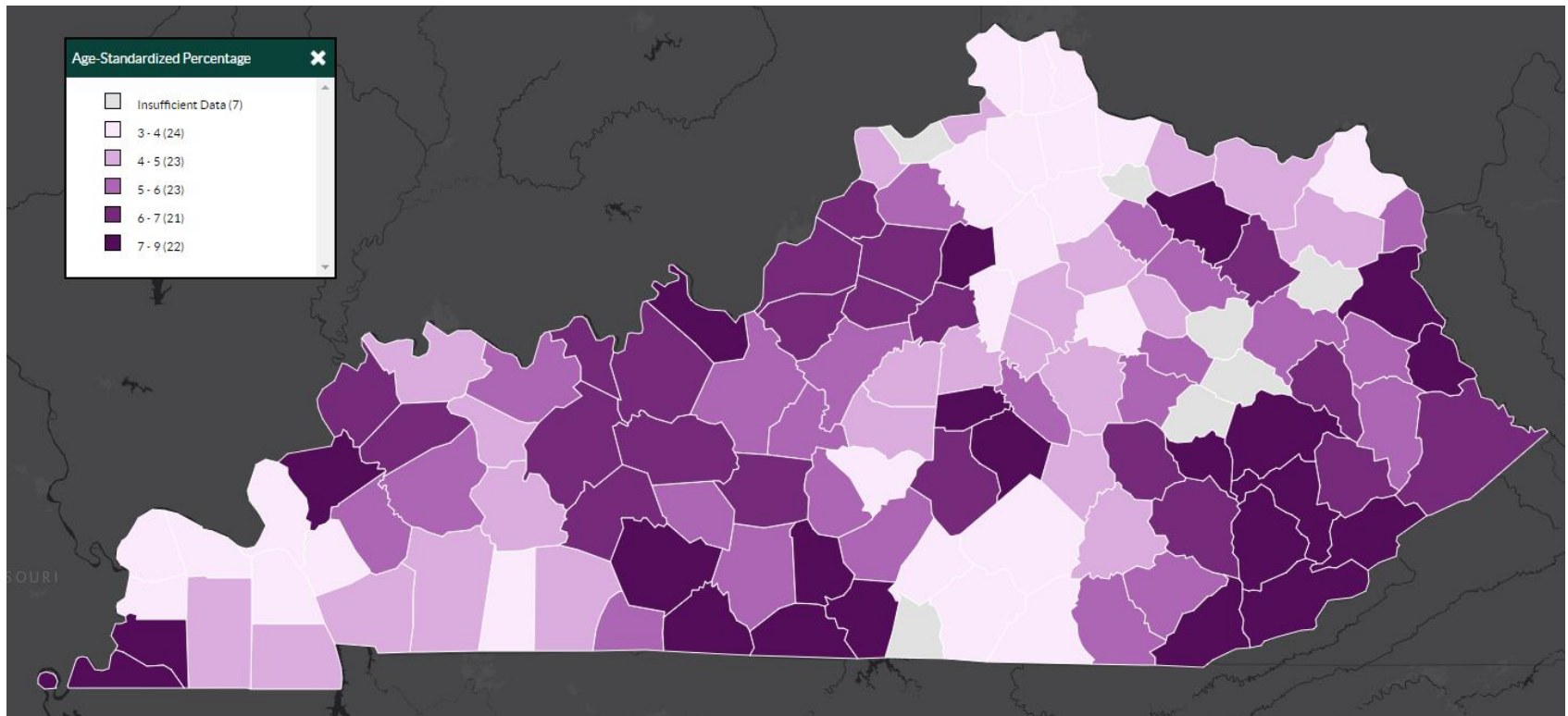
Health Services Model



Age Standardized Stroke Mortality 2019-2021



Age Standardized In-Hospital Stroke Mortality 2019-2021



Methods

- We compared acute in-hospital stroke mortality rates for PCNASP-participating hospitals based on:
 - Patient residence in a high- versus low- mortality county
 - High- mortality
 - Age- standardized death rate > 80.4 per 100,000 population
 - County of residence level of social deprivation
- County-level stroke mortality estimates for 2018 to 2020 from the CDC Interactive Atlas of Heart Disease and Stroke
- Data for in-hospital deaths extracted from Get With The Guidelines–Stroke registries from 2021 to 2023

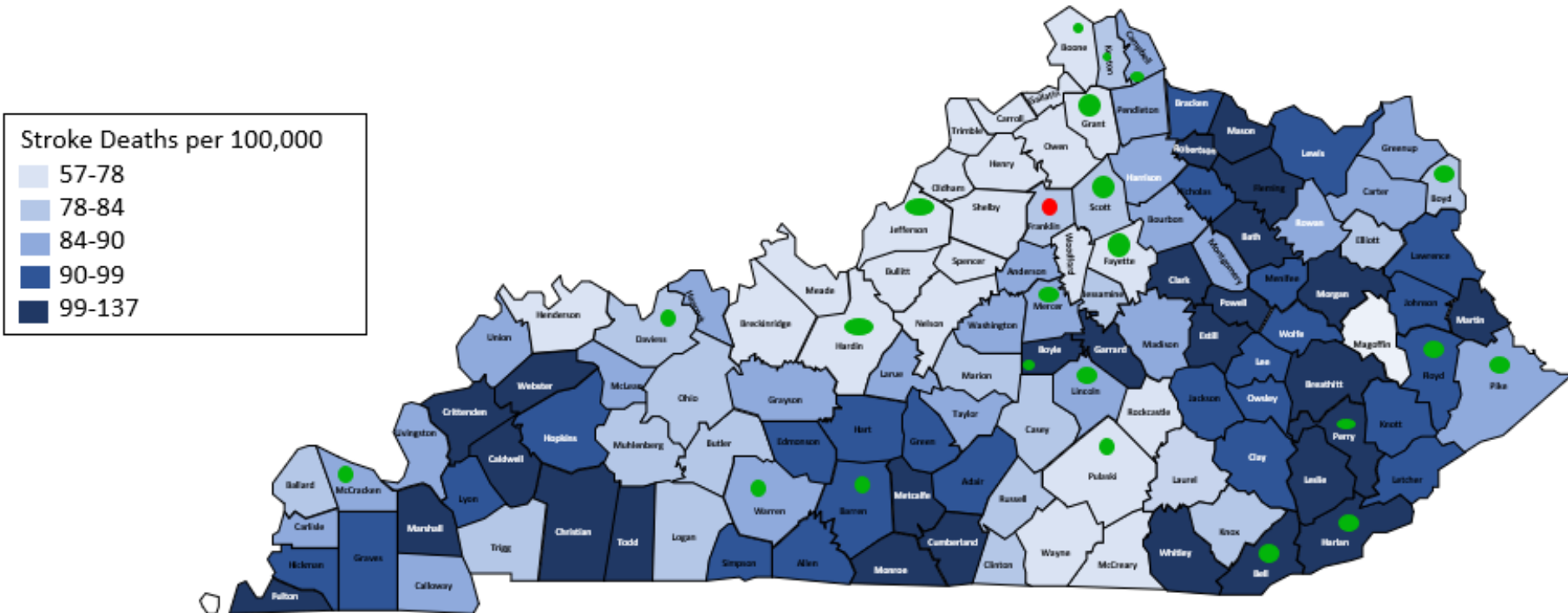
Social Deprivation Index

Composite
measure of
area level
deprivation
based on
seven
demographic
characteristics

- Percent living in poverty
- Percent with <12 years of education
- Percent single-parent households
- Percent living in rented housing units
- Percent living in the overcrowded housing unit
- Percent of households without a car
- Percent unemployed adults age <65 years

Coverdell National Acute Stroke Program

Hospitals that have signed the Coverdell Amendment to GWTG-S and are submitting data to the Coverdell team



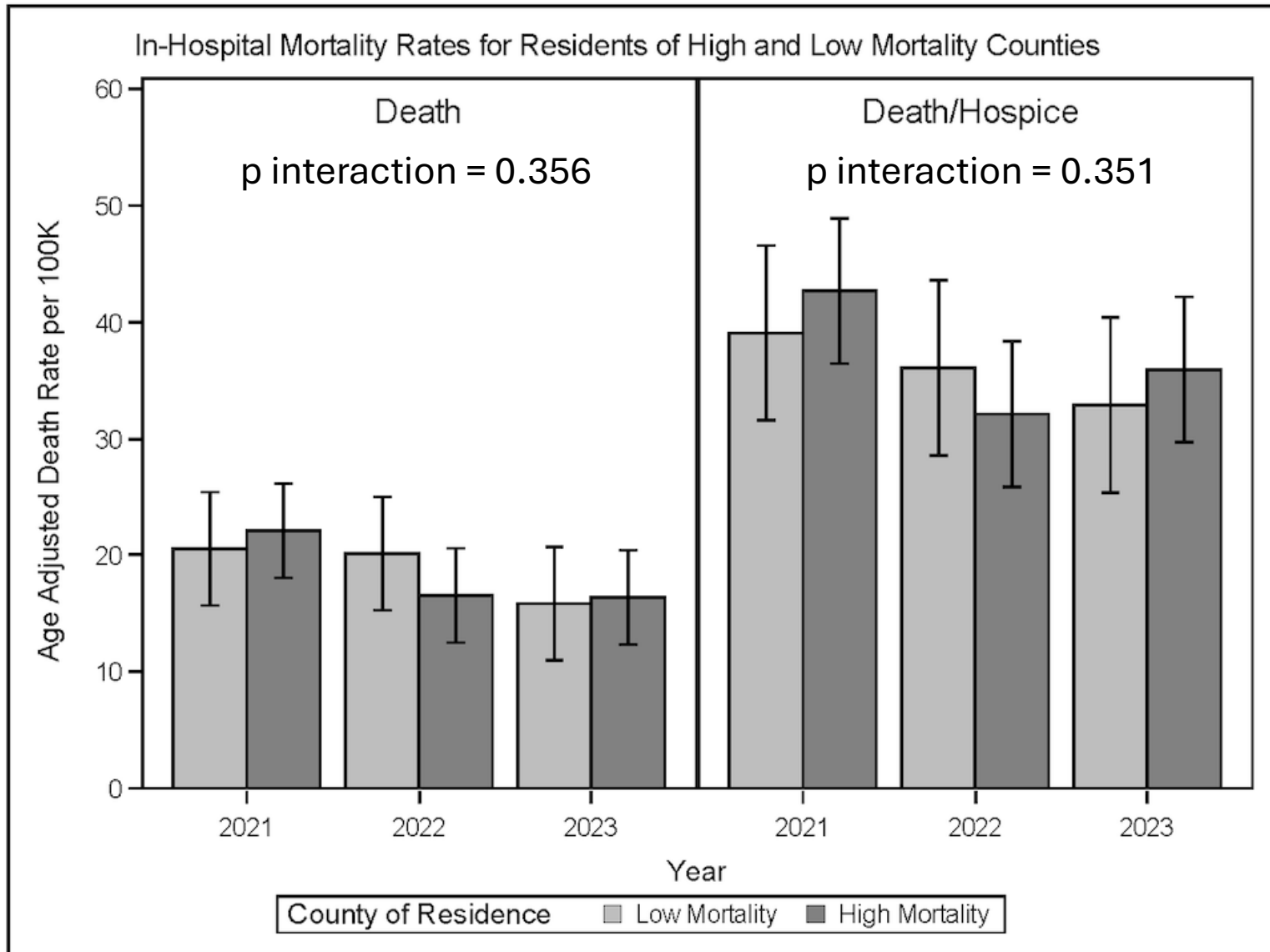
Results

2021 vs 2023 Rate

- Mortality decreased over time
 - 5.2% lower (95% CI, 1.5–8.9); $P=0.006$
- Mortality or discharge to hospice decreased over time
 - 6.5% lower (95% CI, 0.8–12.2); $P=0.026$

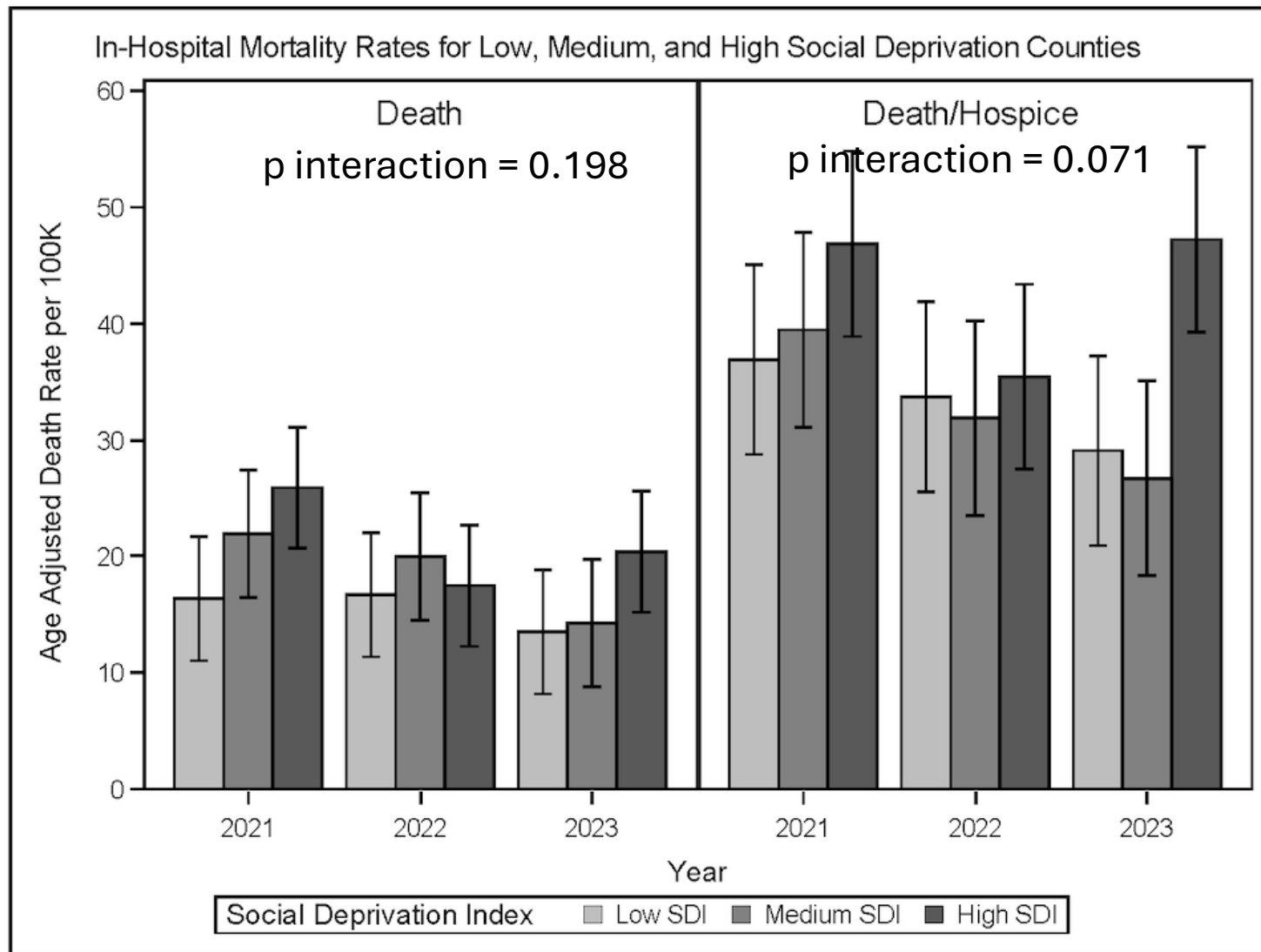
In Hospital Mortality

High vs Low Mortality County of Residence



In Hospital Mortality

High, Medium or Low SDI County of Residence



Higher frequency of discharge to hospice in counties with greater social deprivation

Summary of Acute Stroke Mortality

Similar for persons residing in high and low mortality Kentucky counties who receive care in participating hospitals

A large, light blue downward-pointing arrow indicating a flow from the first box to the second.

Similar for persons residing in counties with low, medium, and high social deprivation who receive care in participating hospitals

A large, light blue downward-pointing arrow indicating a flow from the second box to the third.

Decreased in persons residing in both high and low mortality Kentucky counties between 2021 and 2023

Summary of Acute Stroke Mortality/Discharge to Hospice

Higher rates of discharge to hospice in patients residing in counties with greater social deprivation



Socioeconomic factors may influence post discharge decisions, reflecting possible disparities in access to in-homecare or in patient and family preferences

Conclusions

- Data reflects PCNASP hospitals that all participate in GWTG-Stroke
- Findings highlight the need for public health strategies that focus on improving access to high-quality acute stroke care, particularly for residents of high stroke mortality and socially deprived counties
- Better understand post-stroke care in high SDI counties