Mortality among disaster-exposed older adults in the US Health and Retirement Study

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Background

- Disaster exposure data is sparse
- When available, it is often from community/regional exposure or single events (Brilleman et al., 2017; Huang et al., 2023)
- Disasters such as hurricanes and flooding are associated with health outcomes
  - mortality, all-cause and cause-specific (Chu et al., 2025; Lynch et al., 2025)
  - other health outcomes such as cardiovascular disease (Ghosh et al., 2025)
- Mechanisms are in need of further study

Research question

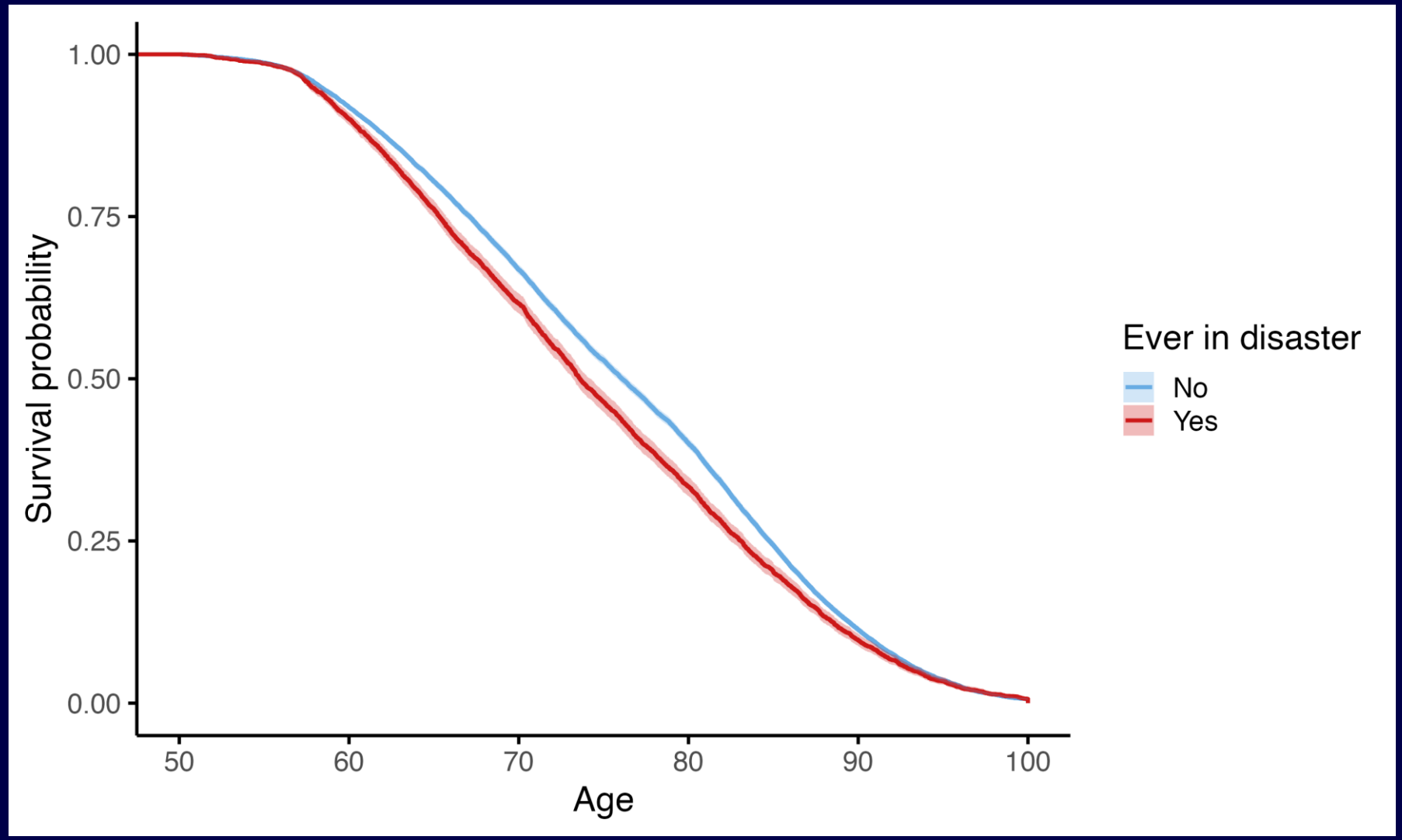
To investigate mortality, including survivorship, and other health outcomes following disasters, using individual-level exposure data

Data

Health & Retirement Study

Cross-wave Lifecourse file joined to RAND Longitudinal file (N=22,000)

- Characteristics of HRS
  - Longitudinal
  - Follow-up regarding loss to follow-up (alive, dead)
- Survey Question:
  - ever been “in a major fire, flood, earthquake, or other natural disaster”
  - if so what year



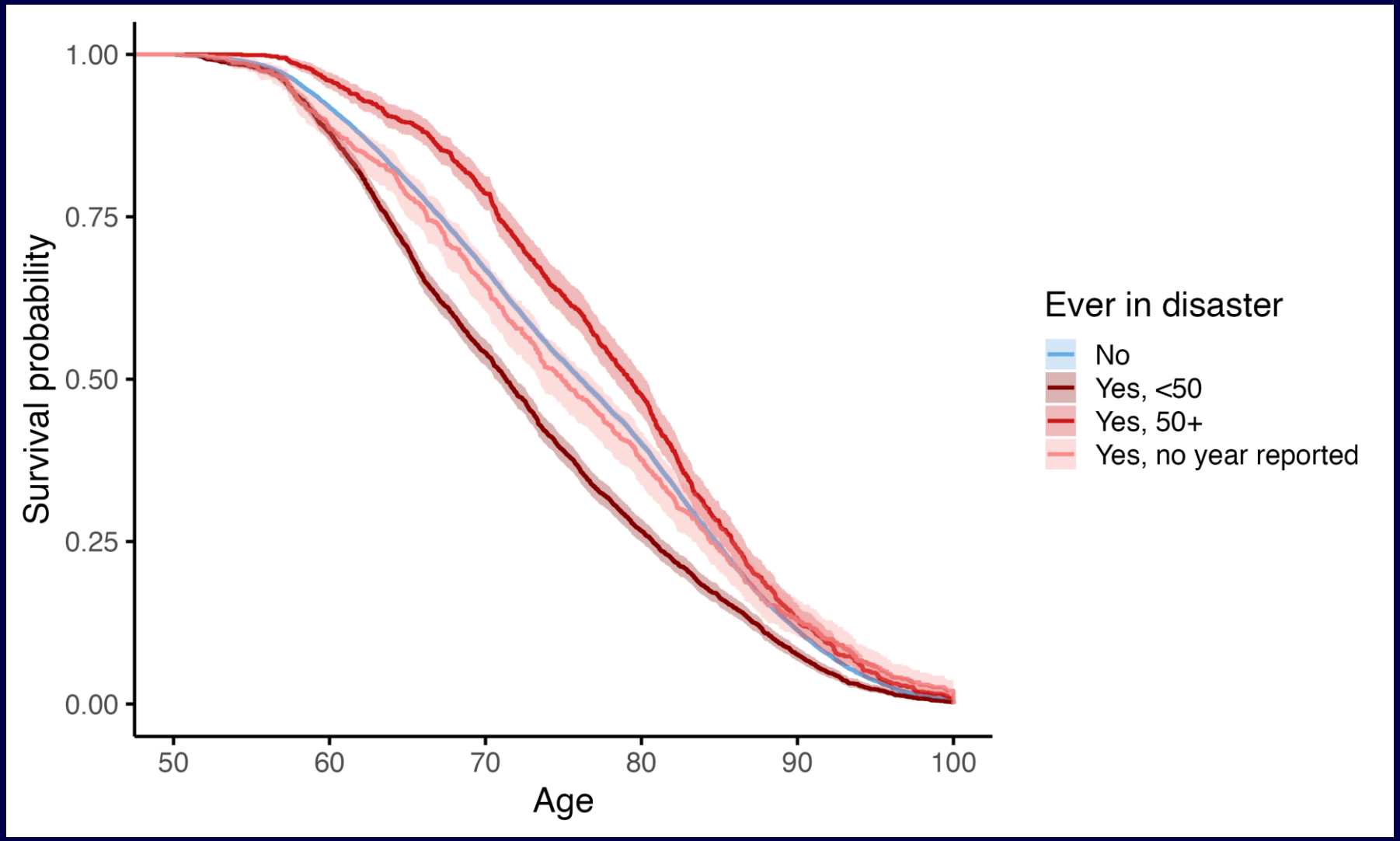
Results

(preliminary)

Significant differences by group:

- Survivorship curves
- Age-specific mortality rates
- Life expectancy at 50:
  - Yes: 24.47
  - No: 25.99

Years of Life Lost (YLL_{50}): 1.52 years



Driven by those who experienced disaster before age 50

What could be going on?

- Survivorship?
- Migration into hazard-prone areas? (Florida?)

Next steps:

- Explore mechanisms, hypothesis-generating
- Explore other health (self-reported) and related outcomes (loneliness/isolation)
- Use restricted data, link disaster data such as SHELDUS and FEMA data