POWER OUTAGE AND CARDIORESPIRATORY HOSPITALIZATIONS AMONG OLDER ADULTS IN THE UNITED STATES

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INTRODUCTION

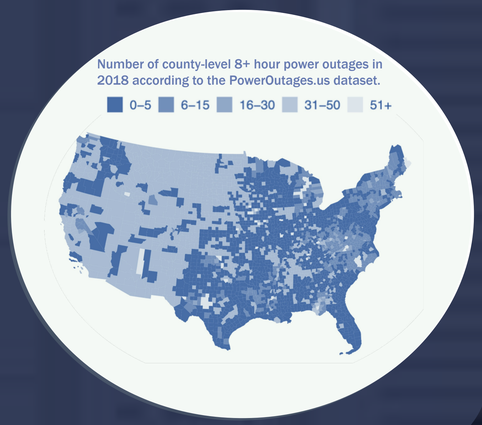
- **Power outages are becoming more common** with climate-related severe weather, wildfires, heat, electrification, and grid expansion for artificial intelligence
- **Danger to health is underappreciated** and understudied in vulnerable groups such as older adults and electricity-dependent medical device users

QUESTION

Do power outages cause cardiorespiratory-related hospitalizations in US older adults 65+?

DATA

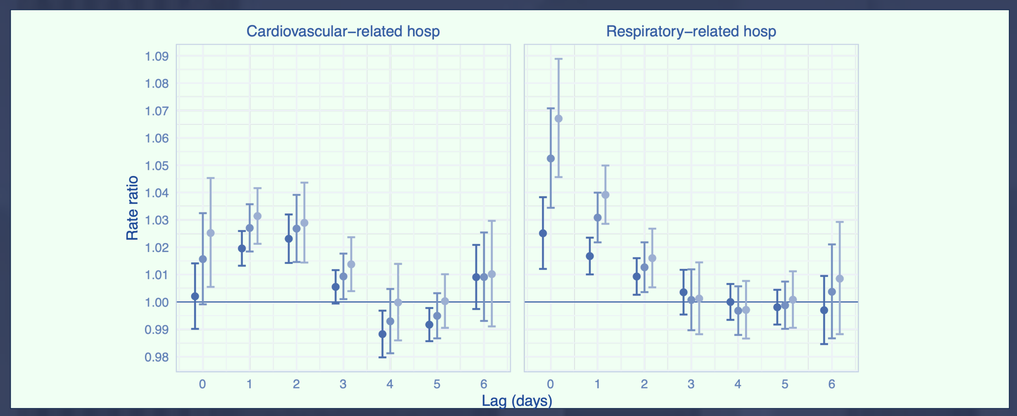
New exposure dataset of hourly county-level power outage exposure for continental US in 2018 and daily cardiorespiratory hospitalizations for 23 million Medicare beneficiaries 65+.



METHODS

- **Case-crossover study** using conditional Poisson model
- Estimated association of **daily power outage** with **daily cardiorespiratory hospitalization rates for days in 2018**
- Estimated lagged association up to 1 week
- Controlled for daily temperature, wind speed, and precipitation (GridMET)
- County-level confounders automatically controlled for by design

RESULTS



Rate ratios and 95% confidence intervals for the association between county-level 8+ hour power outage exposure and cardiovascular- and respiratory-related affecting ≥1%, ≥3%, and ≥5% of county electrical customers.

CONCLUSION

Results support community knowledge that power outages are dangerous for vulnerable populations. Health effects of power outage should be taken into consideration during public safety shutoffs and grid planning.

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