Research Opportunities with Registries Cardiac Arrest Registry to Enhance Survival

OHCA Registry Meeting October 2018 Singapore

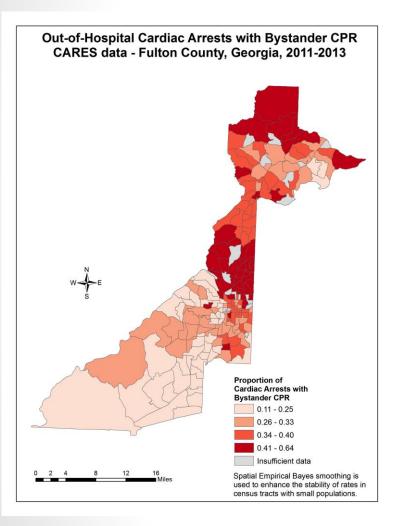


PREVIOUS CARES RESEARCH

51 Peer Reviewed Publications



Bystander CPR & Neighborhood Race

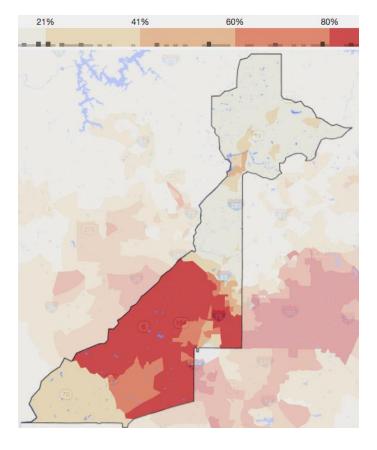


CARES

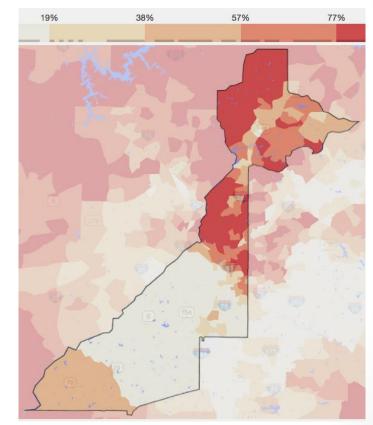
Cardiac Arrest Registry

to Enhance Survival

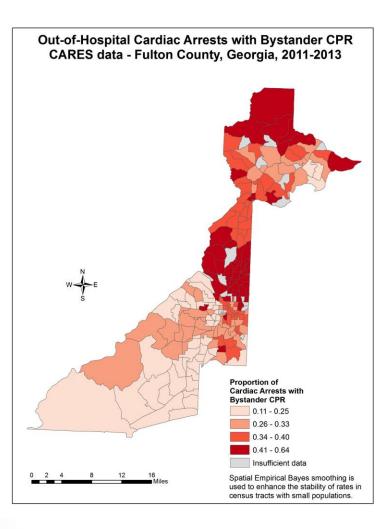
Black race as a percentage of the population (%)



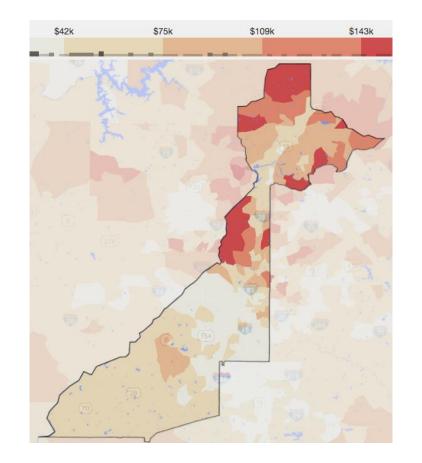
White (non-Hispanic) race as a percentage of the population (%)



Bystander CPR & Median Household Income



Median household income by census tract

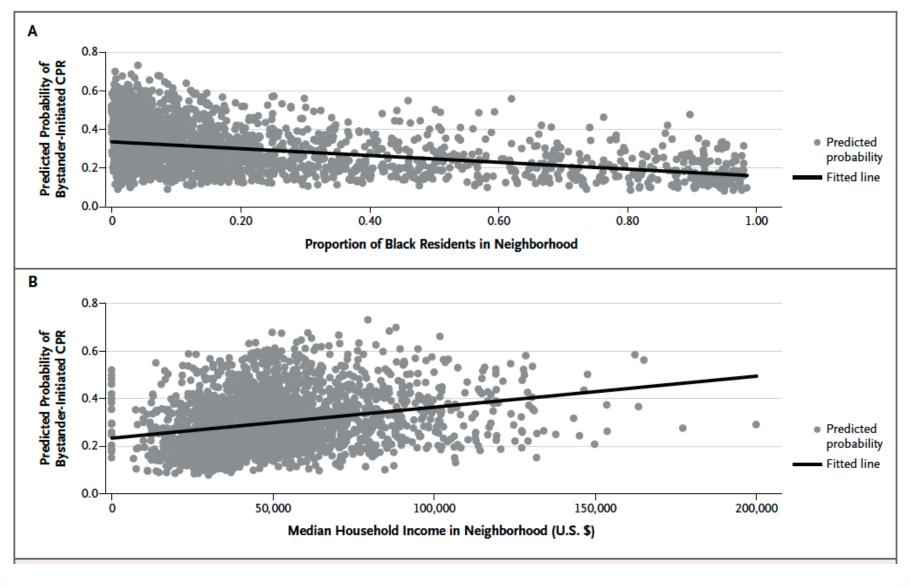




Bystander CPR & Neighborhood Characteristics

CARES

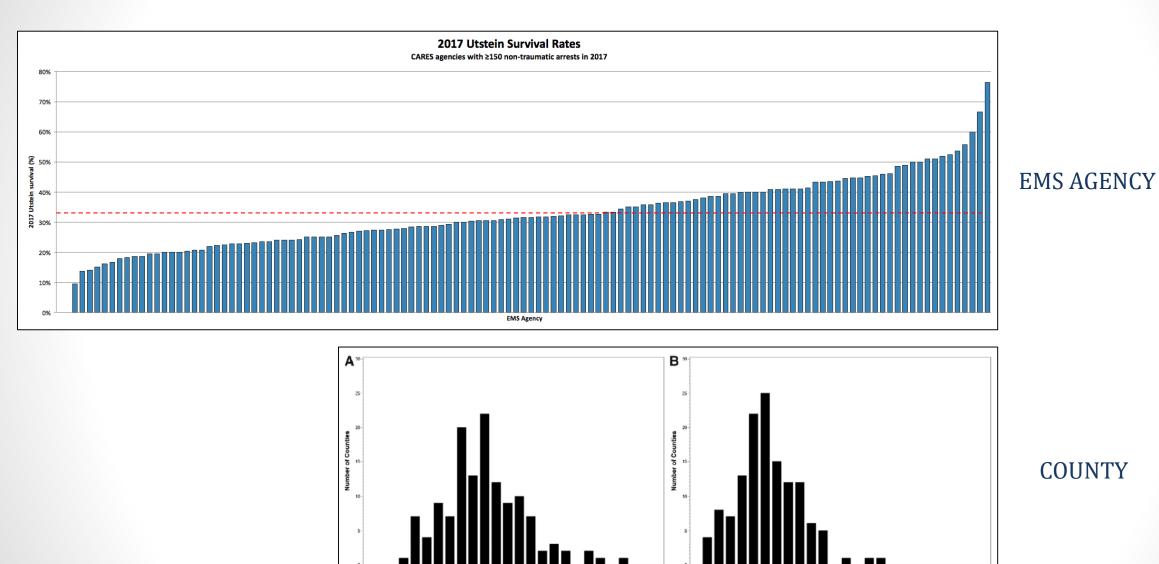
Cardiac Arrest Registry to Enhance Survival



Sasson C, et al. Association of neighborhood characteristics with bystander-initiated CPR. N Engl J Med. 367(17):1607-15 (2012).

Variability in Outcomes

0 1 2



Survival rate, %

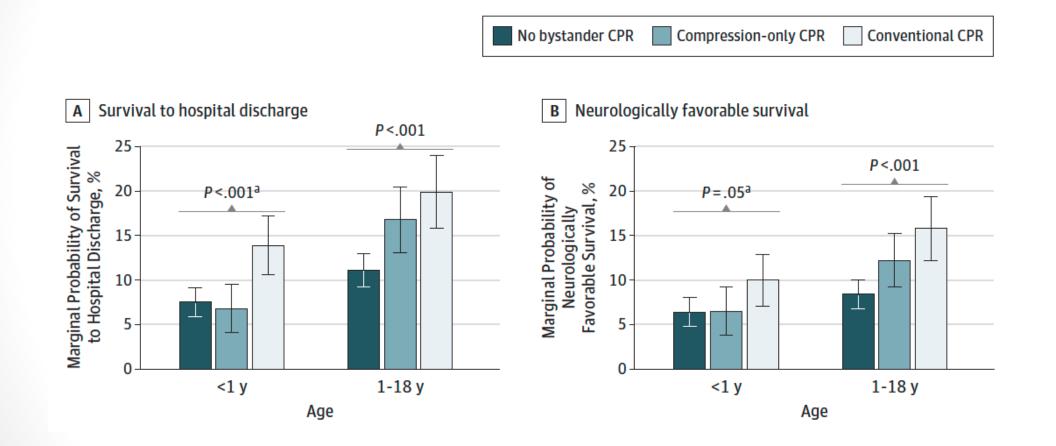


Girotra S, et al. Regional Variation in Out-of-Hospital Cardiac Arrest Survival in the United States. Circulation. 133(22):2159-68 (2016).

Survival with good neurological function, %

21 22 23 24

Bystander CPR and Pediatric Outcomes





Naim MY, et al. Association of Bystander Cardiopulmonary Resuscitation With Overall and Neurologically Favorable Survival After Pediatric Out-of-Hospital Cardiac Arrest in the United States: A Report From the Cardiac Arrest Registry to Enhance Survival Surveillance Registry. *JAMA Pediatr*. 171(2):133-141 (2017).

CURRENT CARES PROJECTS

16 National 15 State-Level



National Data Sharing Projects

- Association of sex with OHCA characteristics, hospital interventions, & outcomes
- Association of neighborhood characteristics and survival
- EMS Agency TOR rates and overall survival
- Impact of state CPR and AED education legislation
- Disparities in receipt and utilization of DA-CPR
- Scene time interval and neurological outcomes
- DALY lost due to OHCA



National Data Sharing Projects – Unique Populations

- Type of CPR & outcomes following drowning
- Characteristics of OHCA in outpatient dialysis clinics
- Pediatric Analyses
 - Conventional vs. CO-CPR
 - Characteristics and outcomes of AED use in public
 - Association of neighborhood characteristics and bCPR provision
 - Advanced airway placement



State Data Sharing Projects

- Impact of California wildfires on OHCA incidence/outcomes
- Opioid epidemic atlas (Northern New England)
- HeartSafe community designation and OHCA outcomes in Connecticut
- Association of hands-only CPR knowledge and bCPR rates
- Care and outcomes of urban and non-urban OHCA patients
- Post admission variability in OHCA survival outcomes
- Using administrative claims data for measuring risk-adjusted outcomes (Medicare linkage)



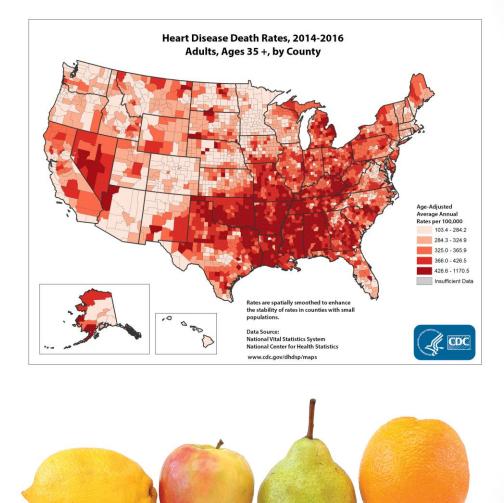


FUTURE DIRECTIONS



Opportunities for Data Enhancement

- Linkage with other datasets (Medicare)
- Data visualization in ArcGIS
- Risk-adjusted survival rates
- Evaluating temporal trends in community outcomes
- Comparison among "like" EMS agencies





International Collaboration

 Out-of-hospital cardiac arrest survival in international airports







PAROS - shared software platform and taxonomy



