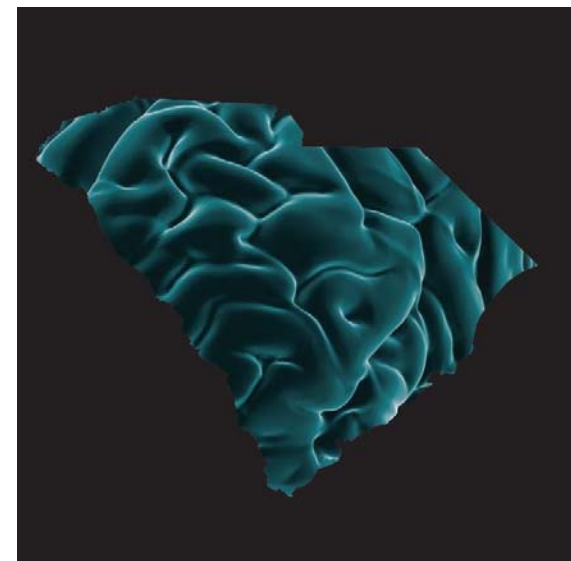


# Office for the **Study of Aging**

**ARNOLD SCHOOL OF PUBLIC HEALTH  
UNIVERSITY OF SOUTH CAROLINA**

## **Social Determinants of Health and Alzheimer's Disease Risk by South Carolina Counties**

Maggi Miller MS, PhD  
Registry Manager



CCADMR Seminar  
May 10, 2019



# Presentation Outline

- Social Determinants
    - Definition
    - Examples
    - County-level Maps
  - ADRD Prevalence by County
  - Current Registry Studies focusing on Social Determinants
-

# Background–Social Determinants



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- Social determinants of health (SDOH) are conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.



- Understanding the relationship between how population groups experience “place” and the impact of “place” on health is fundamental.

Source: CDC Health People Healthy People 2020

# SDOH cont.



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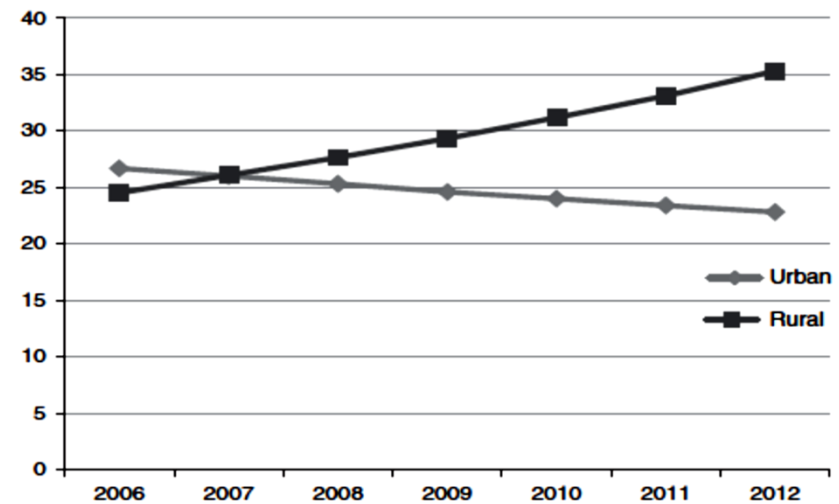
Source: CDC  
Health People  
Healthy People  
2020

# Rural/Urban



## Rurality

- Higher ADRD prevalence (and mortality) observed in rural compared to urban areas



**Figure 2. Median trajectories in dementia mortality by urban/rural in China, 2006 to 2012, adjusted for age, sex, and region.**

Yin P, Feng X, Astell-Burt T, Page A, Liu J, Liu Y, et al. Temporal Trends and Geographic Variations in Dementia Mortality in China Between 2006 and 2012. *Alzheimer Dis Assoc Disord.* 2016;30(4):348-53

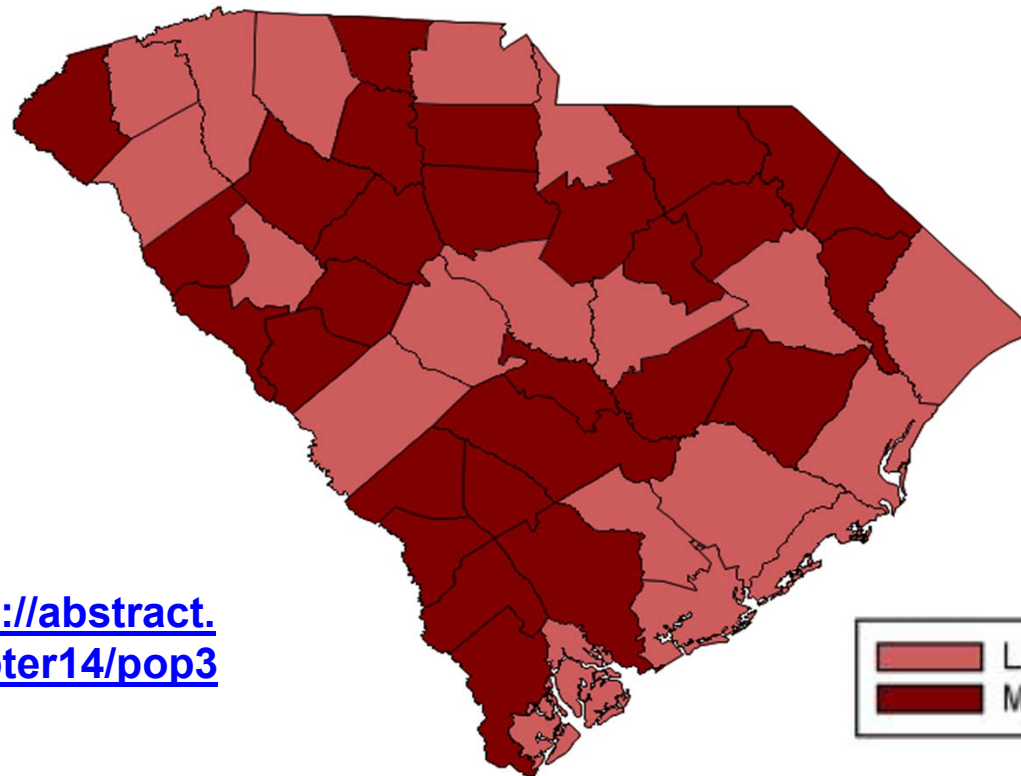
# Rural/Urban



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## Counties by Percent Rural



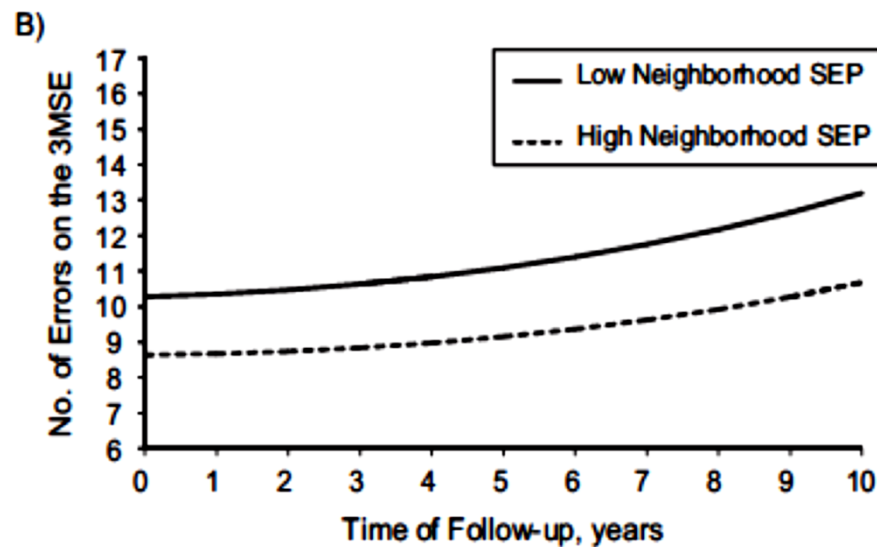
Source: <http://abstract.sc.gov/chapter14/pop31.html>

# Neighborhood SES



## Neighborhood Socioeconomic Status

High NSES plays a protective  
role for cognitive function



Al Hazzouri AZ Al, Haan MN, Osypuk T, Abdou C, Hinton L, Aiello AE. Neighborhood socioeconomic context and cognitive decline among older mexican Americans: Results from the sacramento area latino study on aging. *Am J Epidemiol.* 2011;174(4):423–31.

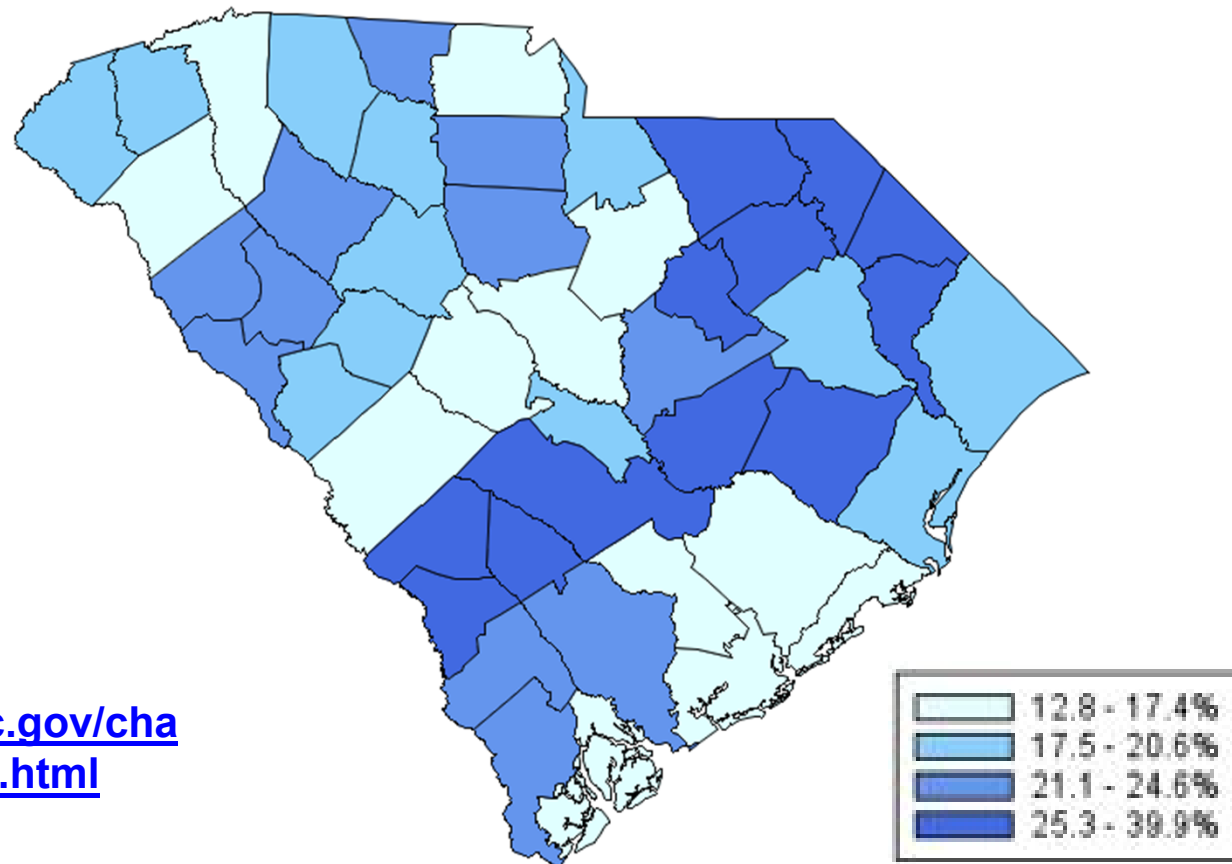
# Poverty



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## Percent Below Poverty Level



Source:  
<http://abstract.sc.gov/chapter13/income12.html>



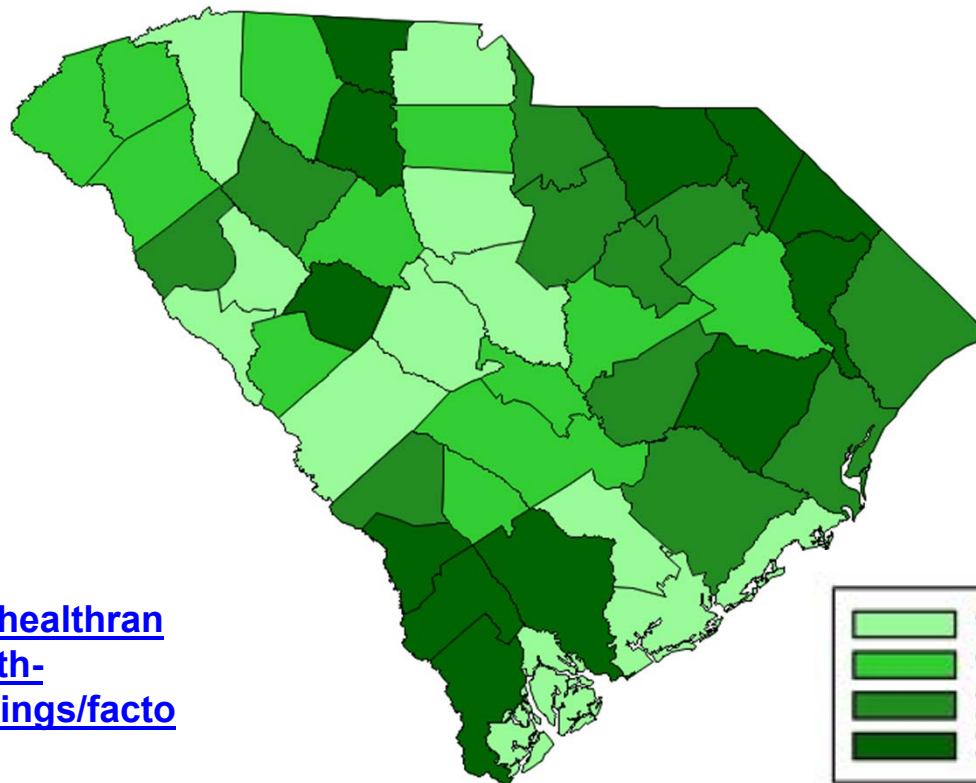
# Access to Healthcare



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## Counties Ranked by Access to Clinical Health Care



Source:  
<http://www.countyhealthrankings.org/app/south-carolina/2014/rankings/factors/2>

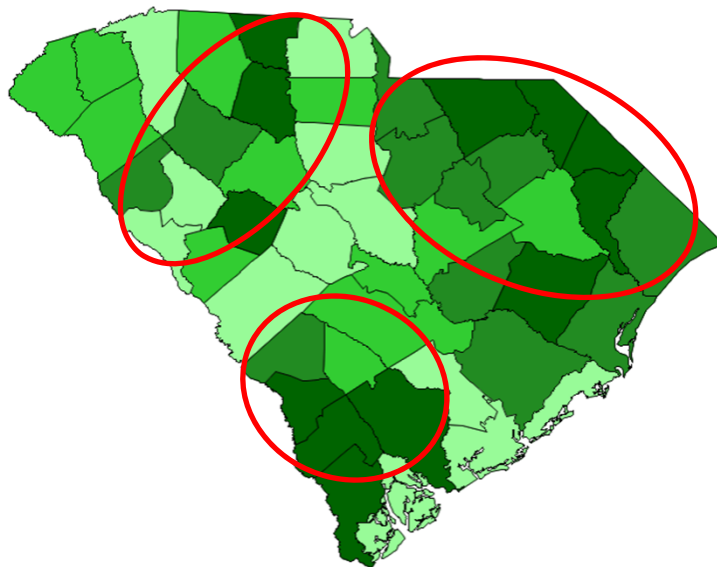
# ADRD Prevalence by County



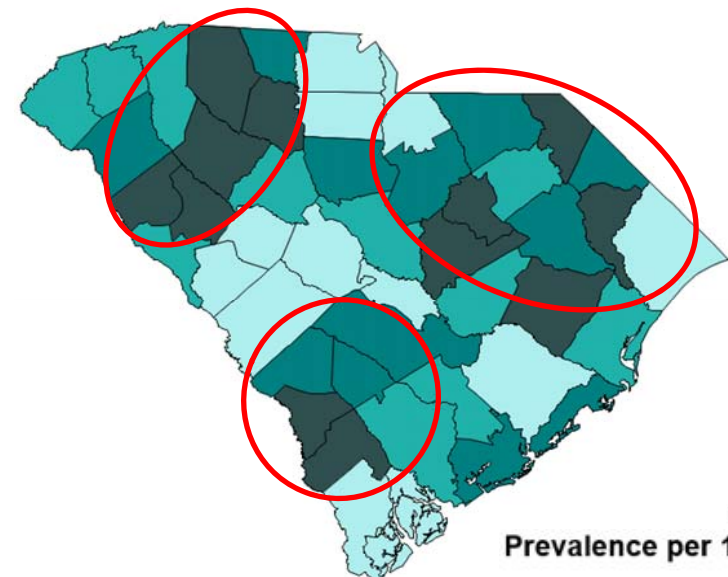
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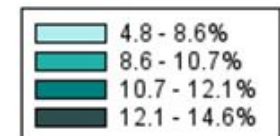
## SDOH Map Overlay, 2014



## ADRD Prevalence 65+, 2014



Prevalence per 100



\*Includes maps for rurality, healthcare access, and poverty. Darker counties are considered to be at higher risk.

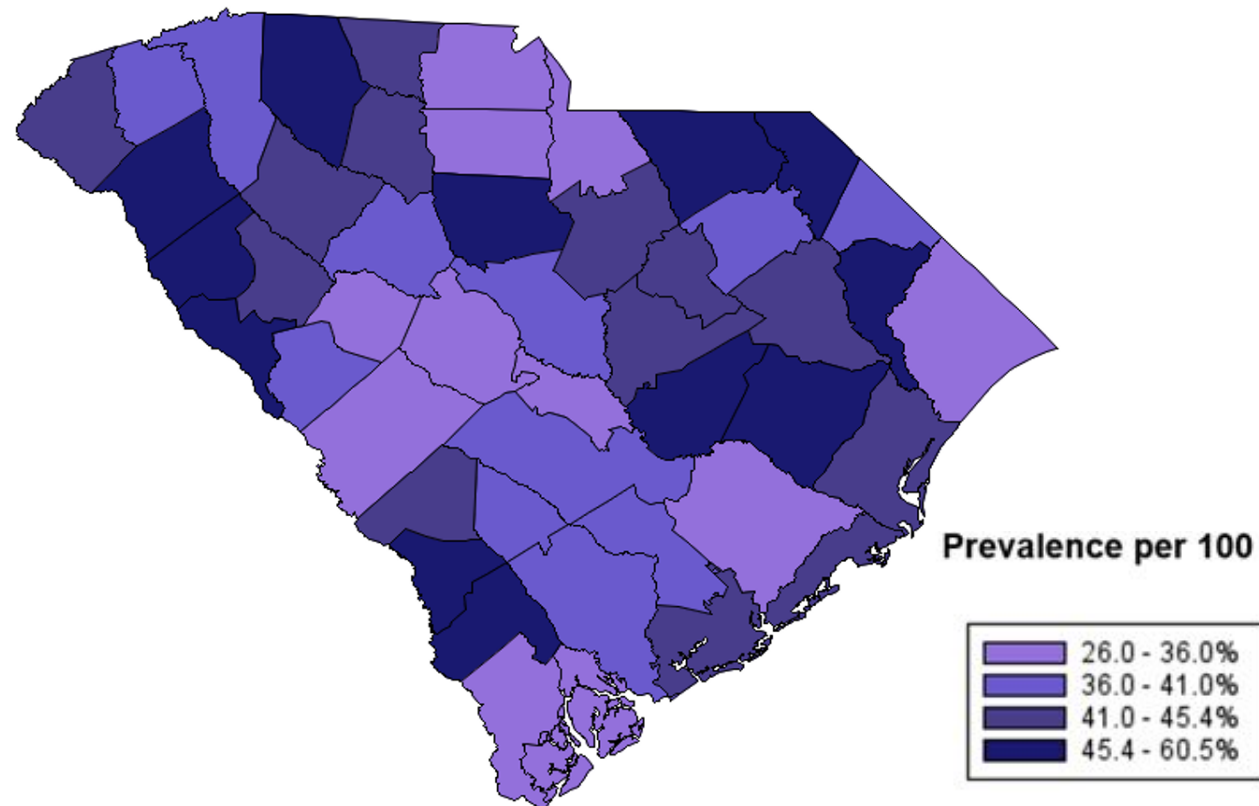
# ADRD Prevalence by County



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## ADRD Prevalence for Individuals 85+, 2014



# Current SDOH Research

- Project 1:

- 1) Investigate associations between county level neighborhood characteristics and ADRD incidence



- 2) Estimate the associations between neighborhood characteristics and AD behavioral symptoms among community-dwelling older adults and nursing home residents.
- 3) Estimate the associations between neighborhood characteristics and depression among caregivers who live with the individual with AD.

# Current SDOH Research cont.



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- Project 2:

- 1) **Determine whether sociodemographic factors (e.g. race, gender, geographic location) contribute to ADRD prevalence across counties in South Carolina.**
- 2) **Examine variation of health-care utilization by race, rural/urban counties, ADRD type, and co-morbid conditions.**



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If you are interested in requesting data or would like to learn more about the Registry contact us at:

[osainfo@mailbox.sc.edu](mailto:osainfo@mailbox.sc.edu)

