

# Identifying the Transportation Needs of Aging Texans

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# Background



- Transportation is a key component of healthy aging
- Aging population in Texas is projected to increase:
  - 11.5 percent in 2010 were 65+
  - 21 percent in 2050 projected to be 65+
- Texas Legislature wants to understand how transportation can promote healthy aging

# Research Activities



- Document how transportation promotes healthy aging both in Texas and other states
- Review existing transportation programs, policies and technology that promote healthy aging
- Conduct demographic analysis to quantify the existing mobility need of aging population

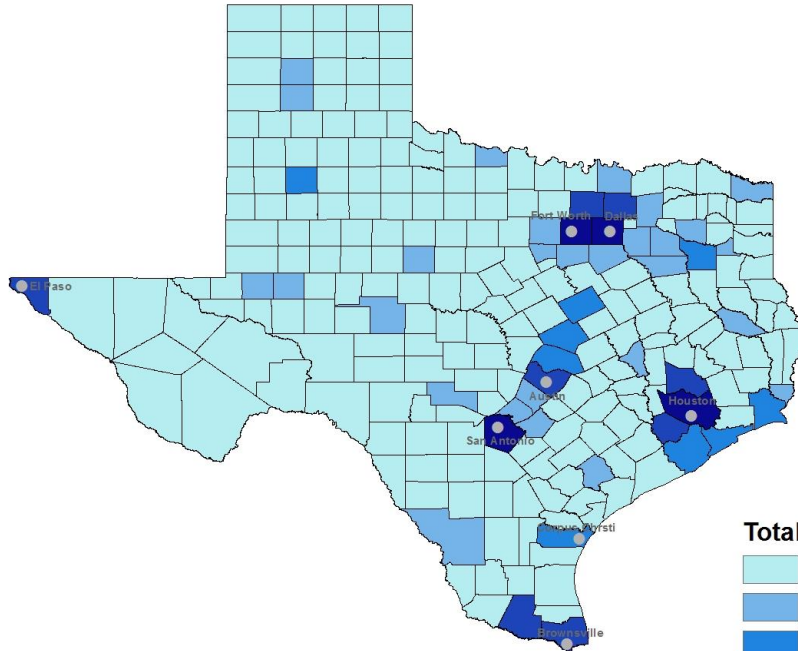
# Where do Older Texans Live?

## Total Population



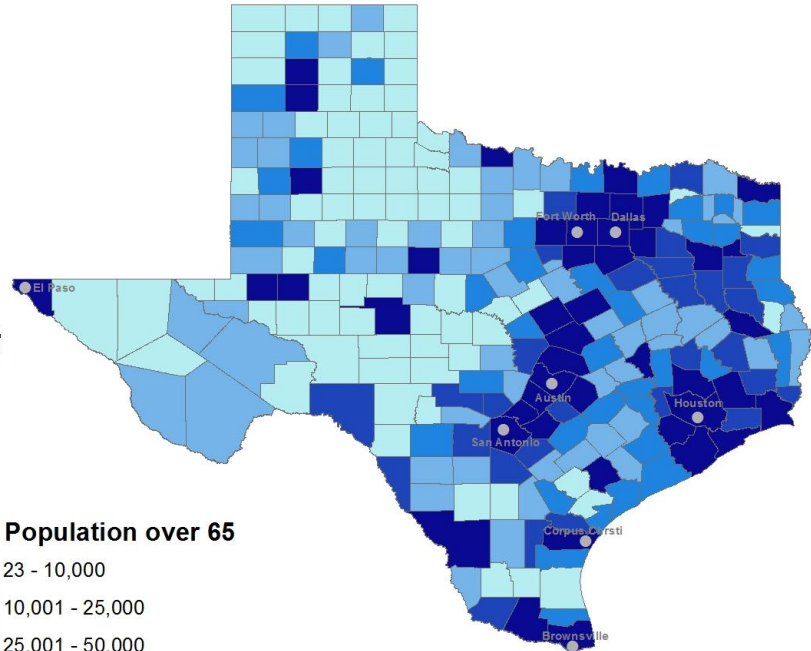
2015 Count

American Community Survey Data

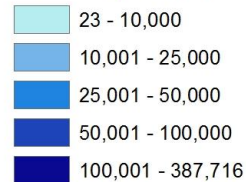


2040 Projected

Texas State Data Center



**Total Population over 65**



# Where do Older Texans Live?

## Percent of Population

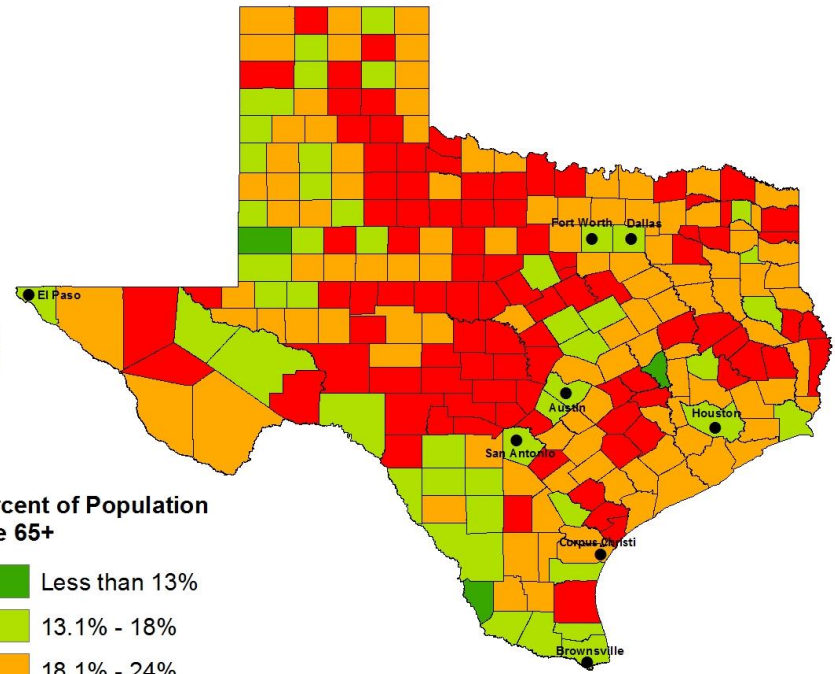
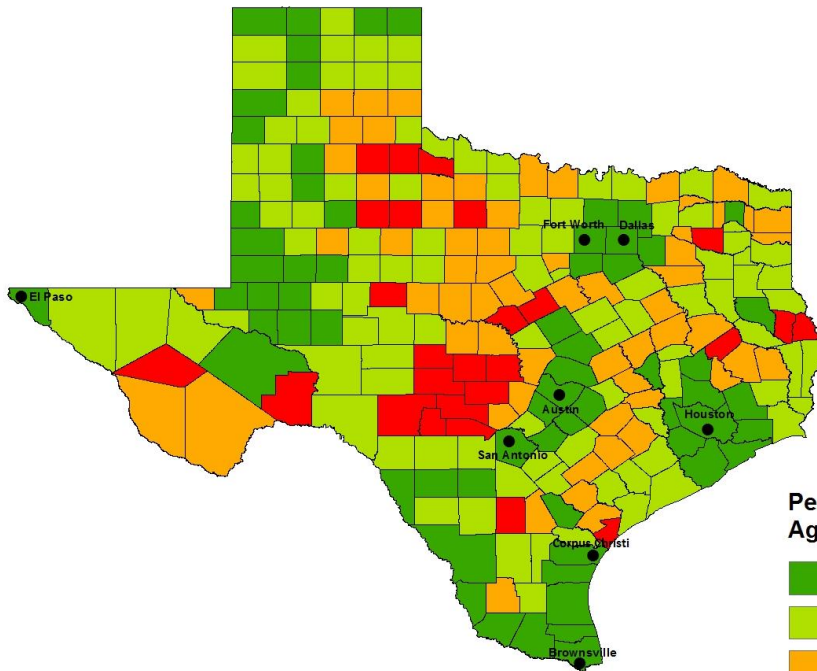


2015 Count

American Community Survey Data

2040 Projected

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Percent of Population  
Age 65+

- Less than 13%
- 13.1% - 18%
- 18.1% - 24%
- 24.1% or greater

# Analysis: Mobility Need Index (MoNI)



- Spatial analysis adapted from Transit Need Index (TNI) used in transit planning
- Identify demographics that indicate increased mobility need for 65+ population
- Develop an index for each county in Texas
  - Calculate county population density for selected demographics
  - Combine selected demographics to create indices for all counties in the state

# What Demographics Indicate Mobility Need for Aging Population?



- Age:
  - Age 65–74 (young-old)
  - Age 75–84 (old)
  - Age 85 and over (old-old)
- 65 and over living in poverty
- 65 and over with no household vehicle
- 65 and over with a disability

# Calculating Population Density for Selected Demographics

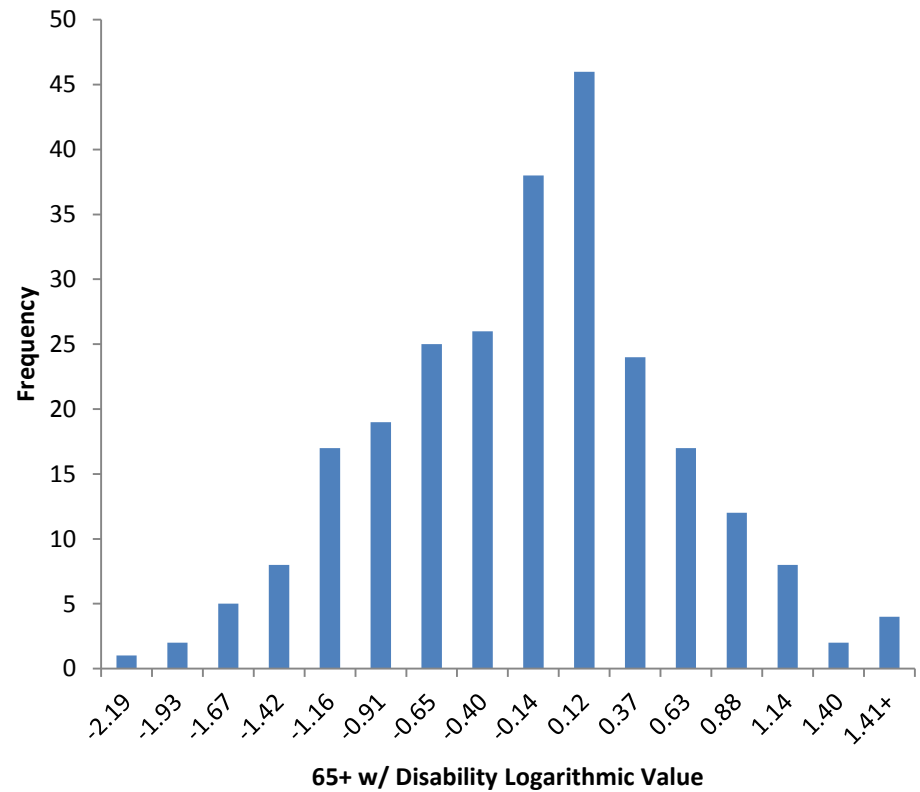
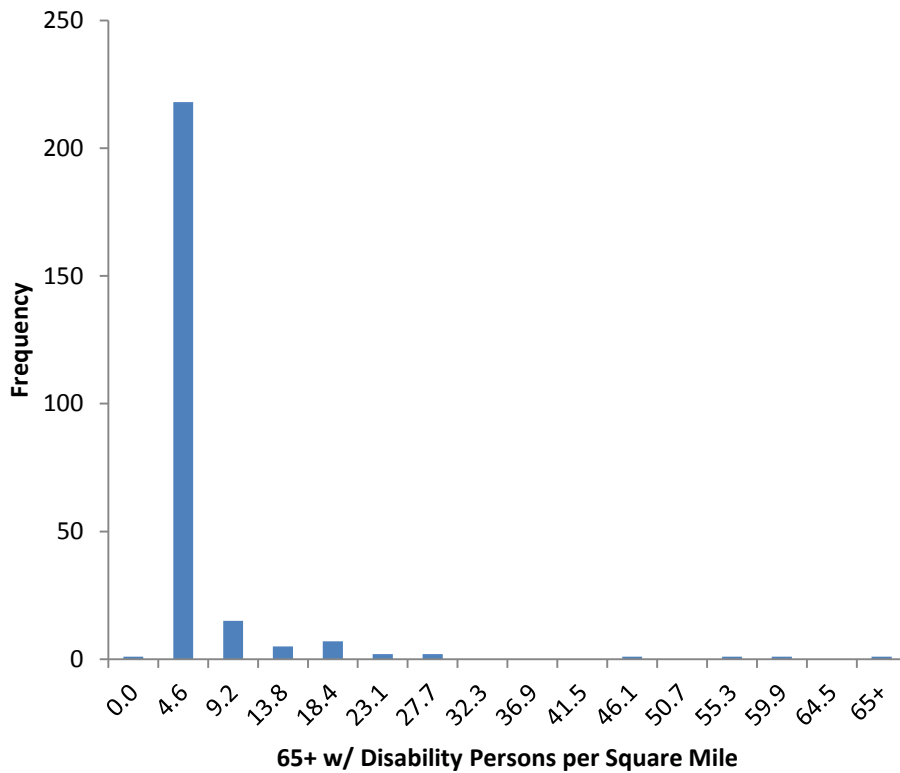


- Example
  - Travis County (Austin)
  - Demographic: 65+ living in poverty

$$\frac{\text{Total population 65+ living in poverty}}{\text{Land Area (square miles)}} = \frac{7,336}{1,023} = \mathbf{7.171}$$



# Logarithmic Transformation



# Calculating Mobility Need Indices



- Determine weight of each selected demographic
  - Age 65–74 (0.5)
  - Age 75–84 (1.0)
  - Age 85 and over (1.5)
  - 65 and over living in poverty (1.5)
  - 65 and over with no household vehicle (1.5)
  - 65 and over with a disability (1.5)

# Calculating Mobility Need Index



- Example
  - Travis County (Austin)
  - Value: 65+ living in poverty

$$\begin{array}{rcccl} \text{Total population 65+} & & \text{Demographic} & & \\ \text{living in poverty} & \times & \text{weight} & & \\ & & & & \\ 0.87 & \times & (1.5/7.5) & = & \mathbf{0.174} \end{array}$$

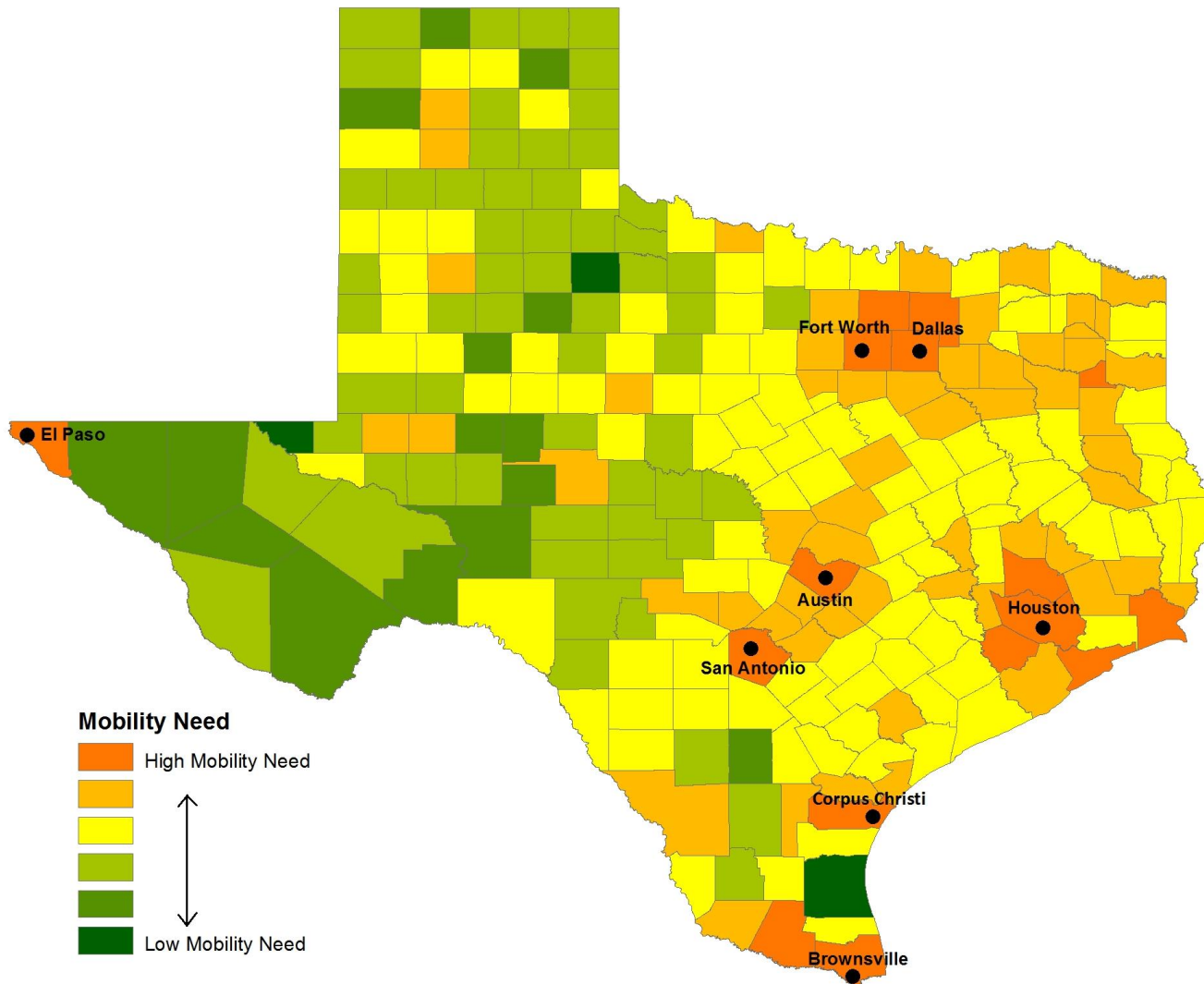
# Calculating Mobility Need Indices



- Example
  - Travis County (Austin)
  - Sum of the weighted values of all selected demographics = MoNI

$$\begin{array}{cccccc} 65+ \text{ in} & + & 65+ \text{ no} & + & 65+ \text{ with} & + & 65 -74 & + & 75-84 & + & 85 \text{ or} \\ \text{poverty} & & \text{vehicle} & & \text{disability} & & & & & & \text{older} \\ 0.174 & + & 0.296 & + & 0.152 & + & 0.116 & + & 0.189 & + & 0.211 & = & \mathbf{1.137} \end{array}$$

# Mobility Need for Aging Population in Texas



# Policy Implications



- There is significant mobility need throughout the State of Texas for aging population.
- Challenge for planners and policy makers is that transportation solutions are vastly different in urban, suburban and rural areas.
- Suburban, and to a larger extent rural counties “near” urban cores have greatest mobility challenges

# Future Research Interests



- Conduct Mobility Need analyses for numerous regions in Texas
- Custom census tabulations can provide more granularity and reveal additional nuances of need

# Thanks.



## Full Report:

<https://static.tti.tamu.edu/tti.tamu.edu/documents/PRC-17-83-F.pdf>

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