

# Demographics & Disability Status of Adults Living Alone in Rural Areas

A Study of ACS Microdata

Jonathan Schroeder, PhD, MA

Carrie Henning-Smith, PhD, MPH, MSW

Mariana Tuttle, MPH

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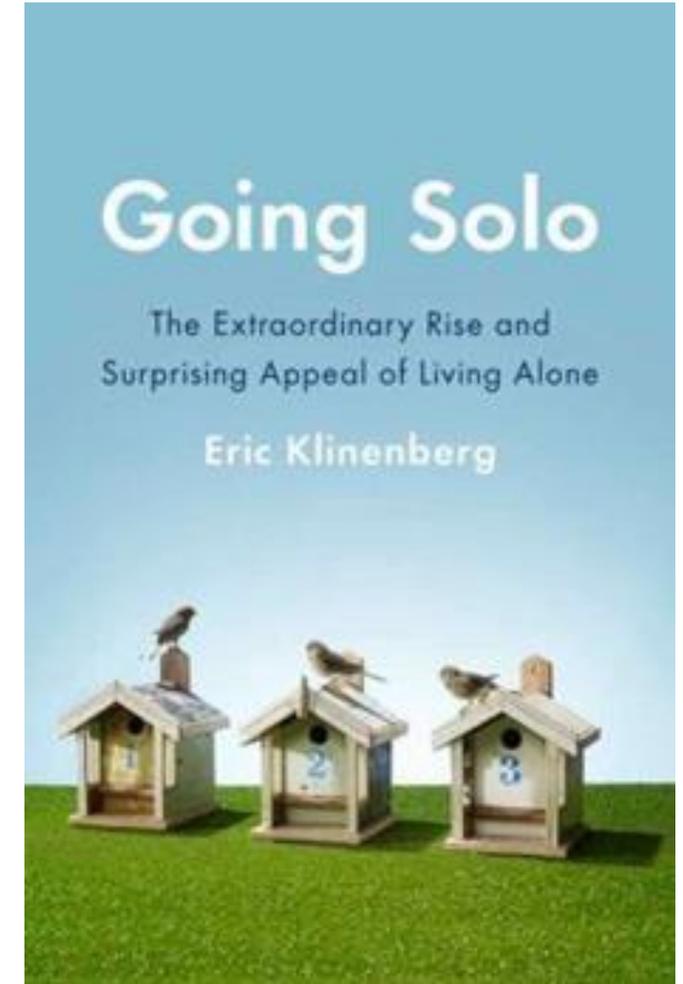
# Background



- Steady increase in living alone across the U.S.
- In 1950, fewer than 10% of households
- In 2019, 28% of households
  - More than 32 million adults live alone

# Living alone & health

- Mixed association
- Can be positive experience
- Without adequate resources, can also be associated with poorer health
  - Risk of isolation, disability, and unmet needs for assistance



# Living alone & COVID-19

THE  
HILL

Terms & Conditions apply. NMLSP# 1130

## COVID-19 poses an unequal risk of isolation and loneliness

BY CARRIE HENNING-SMITH, OPINION CONTRIBUTOR — 03/18/20 05:00 PM EDT  
THE VIEWS EXPRESSED BY CONTRIBUTORS ARE THEIR OWN AND NOT THE VIEW OF THE HILL

97 COMMENTS

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The current COVID-19 pandemic is a visceral reminder of the ways in which we are all connected.

Social distancing is crucial to “flattening the curve” to give our health care system a fighting chance. The short-term loneliness and isolation that will come from limiting interactions with one another will be hard. The potential of COVID-19 to cause long-term isolation and loneliness is

- Risk of isolation, compounded by:
  - *Living arrangement*
  - Location
  - Employment status
  - Access technology
  - Age
  - Health status

# Living alone in rural areas

- Rural areas:
  - Are older, on average
  - Have fewer financial and health care resources
  - Have older housing stock
  - Have poorer health outcomes
- Yet, little is known about rural/urban differences in rates of living alone and impacts for health and wellbeing

# Leveraging the ACS

- Lacks *direct, thorough* health info
  - But includes many correlates of health:  
*Age, sex, race/ethnicity, income, disability, health insurance, etc.*
  - And crucially: *household size*
- Unlike available health surveys:
  - Larger sample, nationally representative
  - Geographic detail → urban/rural status

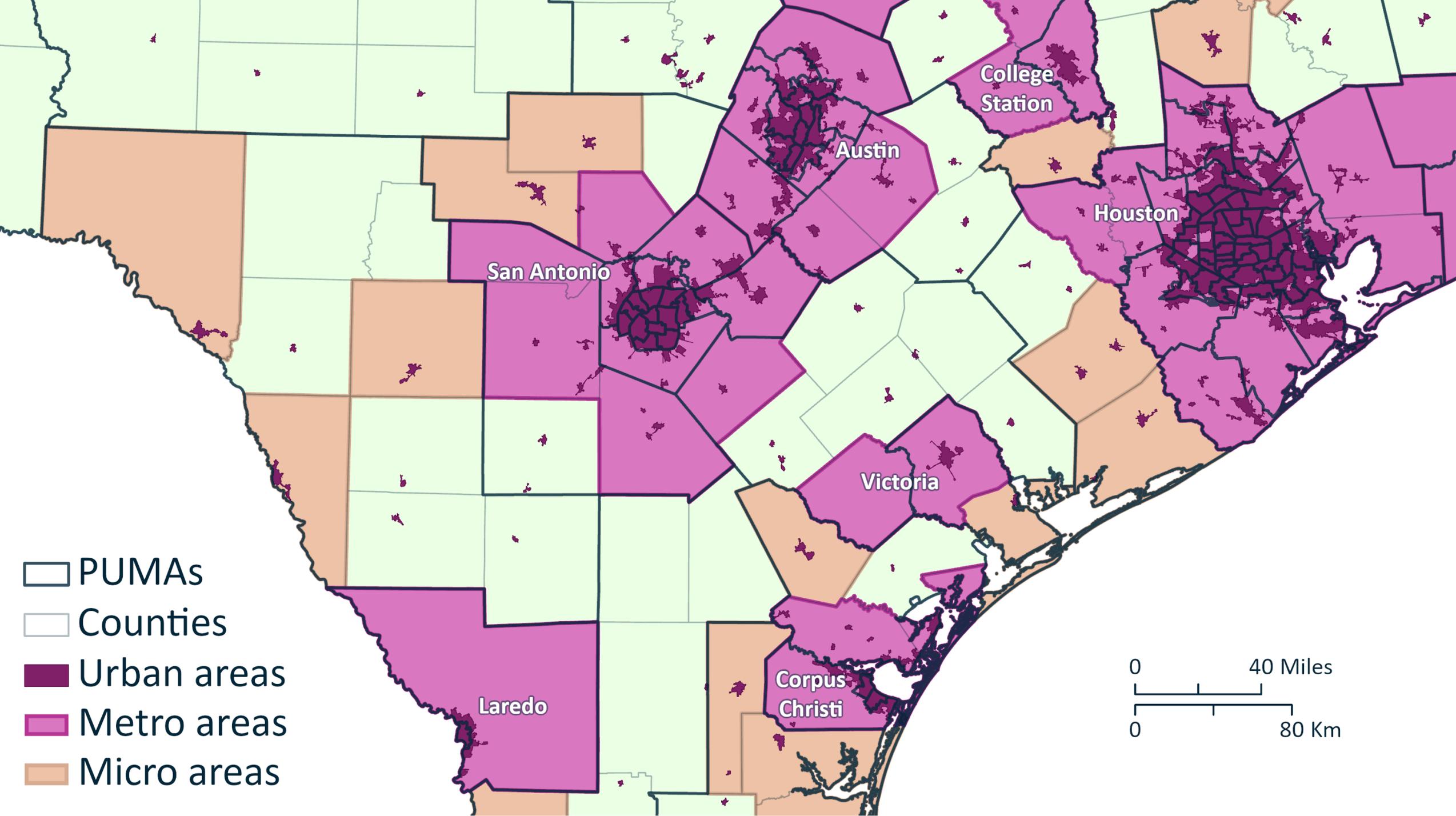
# Leveraging the ACS

## Summary tables

- Aggregate statistics for most geographic areas
- *Limitations:*  
limited content,  
fixed intervals

## Microdata

- Full range of responses for individuals & households
- *Limitations:*  
smaller samples,  
limited geography
  - PUMAs:  
Public Use Microdata  
Areas



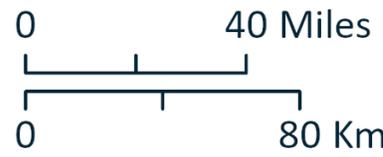
□ PUMAs

□ Counties

■ Urban areas

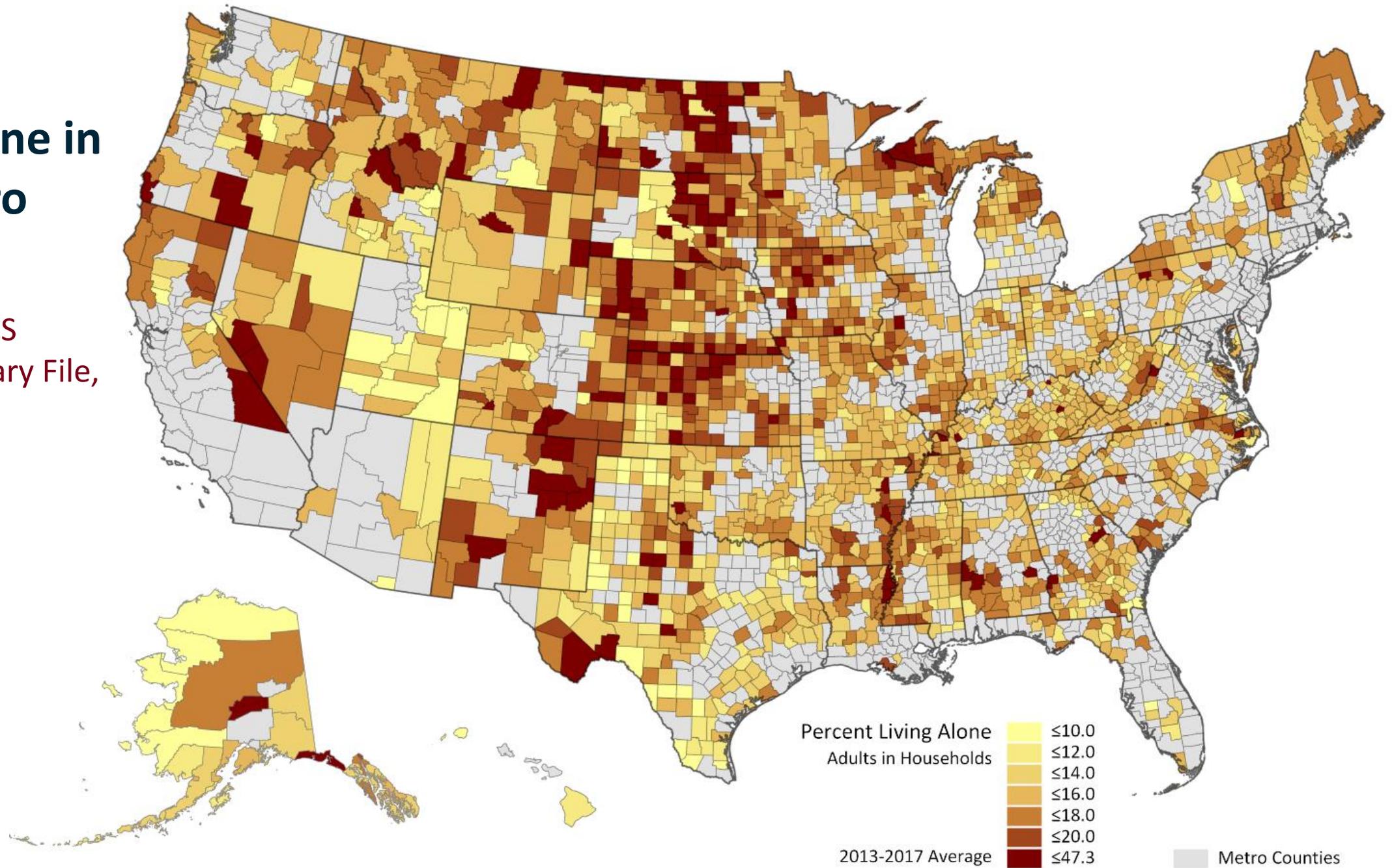
■ Metro areas

■ Micro areas



# Living alone in non-metro counties

2013-2017 ACS  
5-Year Summary File,  
IPUMS NHGIS





**DATA CART**

- 0 SOURCE TABLES
- 0 TIME SERIES TABLES
- 0 GIS FILES

SHOW SELECTIONS CONTINUE

FILTER » OPTIONS » REVIEW

APPLY FILTERS ?

HOW TO USE THE DATA FINDER

**GEOGRAPHIC LEVELS**

**YEARS** ✓ 2015-2019

**TOPICS** ✓  Age **AND** Household and Family Size

**DATASETS**

RESET FILTERS

SELECT DATA ?

8 SOURCE TABLES | 0 TIME SERIES TABLES | 85 GIS FILES

PAGE 1 OF 1 | 20

VIEW 1 - 8 OF 8

	POPULARITY	TABLE NAME	UNIVERSE	CLASSIFICATIONS	YEAR - DATASET	BREAKDOWNS
+	<div style="width: 20%;"></div>	<a href="#">b09020. Relationship by Household Type (Including Living Alone) for the Population 65 Years and Over</a>	Population 65 years and over	Household Size (2), Household, Family and Group Quarters Type (4), Relationship to Householder (6), Sex (2)	2015_2019_ACS5a	Spatial
+	<div style="width: 20%;"></div>	<a href="#">b09021. Living Arrangements of Adults 18 Years and Over by Age</a>	Population 18 years and over in households	Age (4), Household Size (2), Household, Family and Group Quarters Type (5), Presence and Sex of Unmarried Partners (2), Relationship to Householder (6)	2015_2019_ACS5a	Spatial

### BREAKDOWN VALUES

Dataset: 2019 American Community Survey: 5-Year Data [2015-2019, Block Groups & Larger Areas]:

#### GEOGRAPHIC SUBAREA (2010 CENSUS AND AMERICAN COMMUNITY SURVEY)

- Total area
- Urban
- Rural
- American Indian Reservation and Trust Land--Federal
- American Indian Reservation and Trust Land--State
- Oklahoma Tribal Statistical Area
- Tribal Designated Statistical Area
- Alaska Native Village Statistical Area
- State Designated Tribal Statistical Area
- Hawaiian Home Land
- In metropolitan or micropolitan statistical area
- In metropolitan statistical area
- In metropolitan statistical area--in principal city
- In metropolitan statistical area--not in principal city
- In micropolitan statistical area
- In micropolitan statistical area--in principal city
- In micropolitan statistical area--not in principal city
- Not in metropolitan or micropolitan statistical area
- Not in metropolitan statistical area

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## Rate of Living Alone by Rurality and Age

Carrie Henning-Smith, PhD, MPH, MSW

Jonathan Schroeder, PhD, MA

Mariana S Tuttle, MPH

### Key Findings

- Rates of living alone are higher in Census-defined urban areas than in rural areas across all age categories, but rates are also higher in non-metro counties than in metro counties. This seeming contradiction is possible because of the differences in how "urban areas" and "metro areas" are officially defined.
- The higher rates in both urban areas and non-metro counties indicate that living alone is especially prevalent in outlying small cities and large villages (areas that are officially both urban and non-metro) but relatively uncommon in the surrounding "countryside" (officially rural areas in either metro or non-metro counties).
- The likelihood of living alone increases with age, so areas with older populations generally have higher rates of living alone and vice versa. This partly explains the urban/rural trends.
- Among non-metro counties, there is a pattern of high rates of living alone across the Great Plains and in a few smaller regions in the Upper Midwest, the Deep South, and the Mountain West.
- When developing policies and programs to ensure that people living alone have appropriate support and resources, the higher rates in non-metro cities and in certain non-metro regions should receive special attention.

### Purpose

Living alone is increasingly common and is associated with higher risk of social isolation and poor health for populations without access to appropriate support and resources. Little is known about how rates of living alone vary by rurality, however. In this infographic, we identify rates of living alone for all adults and within specific age groups using two different classifications of rurality.

### Data

To compute rates of living alone by rurality and age, we use summary data from the U.S. Census Bureau's 2013-2017 American Community Survey (ACS) 5-Year Estimates, acquired through the IPUMS National Historical Geographic Information System ([www.nhgis.org](http://www.nhgis.org)). We limit all figures to *adults in households* (excluding children and people living in group quarters).

Figure 1: Percent Living Alone by Age and Census-Defined Rural/Urban Location

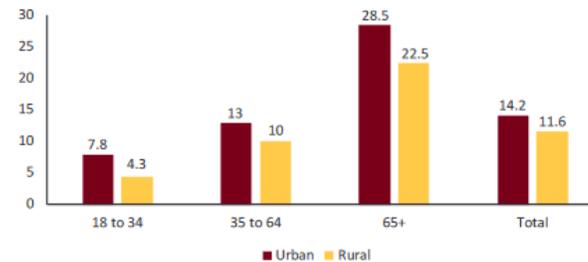
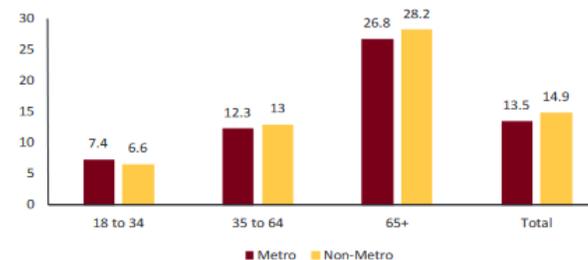
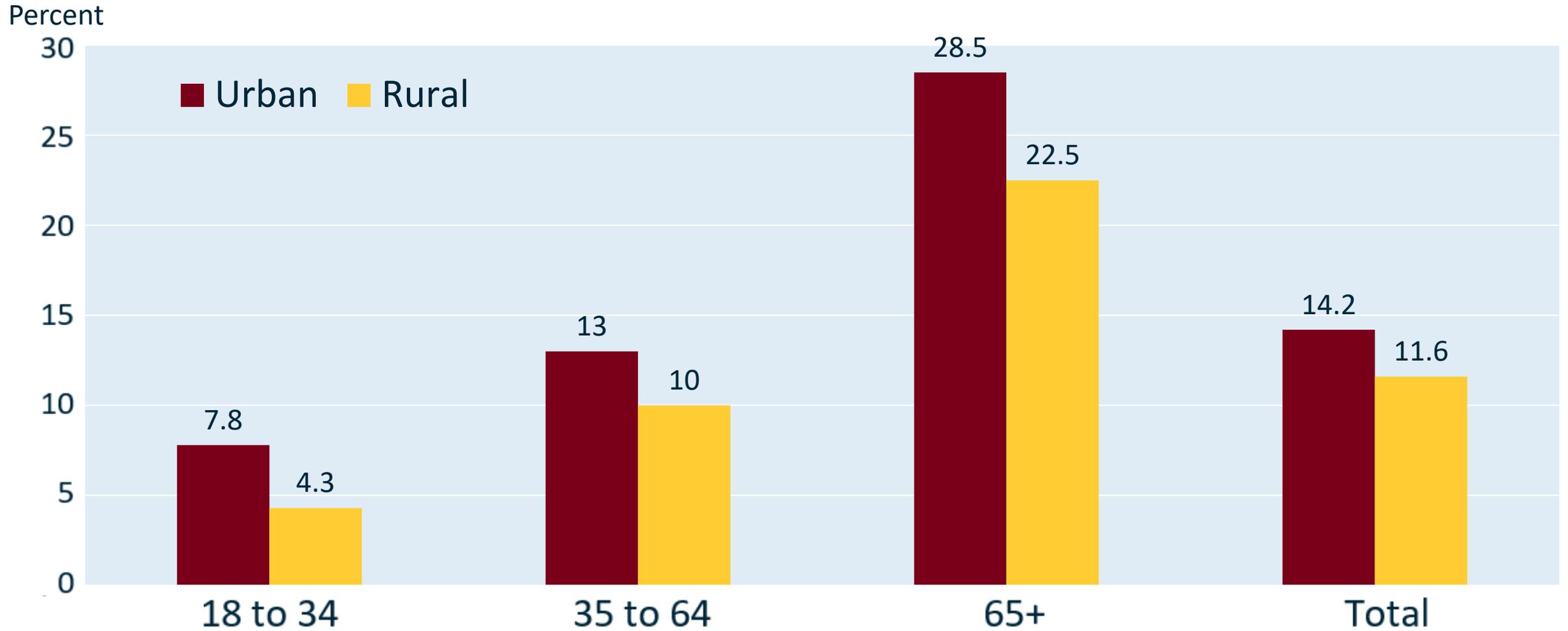


Figure 2: Percent Living Alone by Age and Metropolitan/Non-Metropolitan County

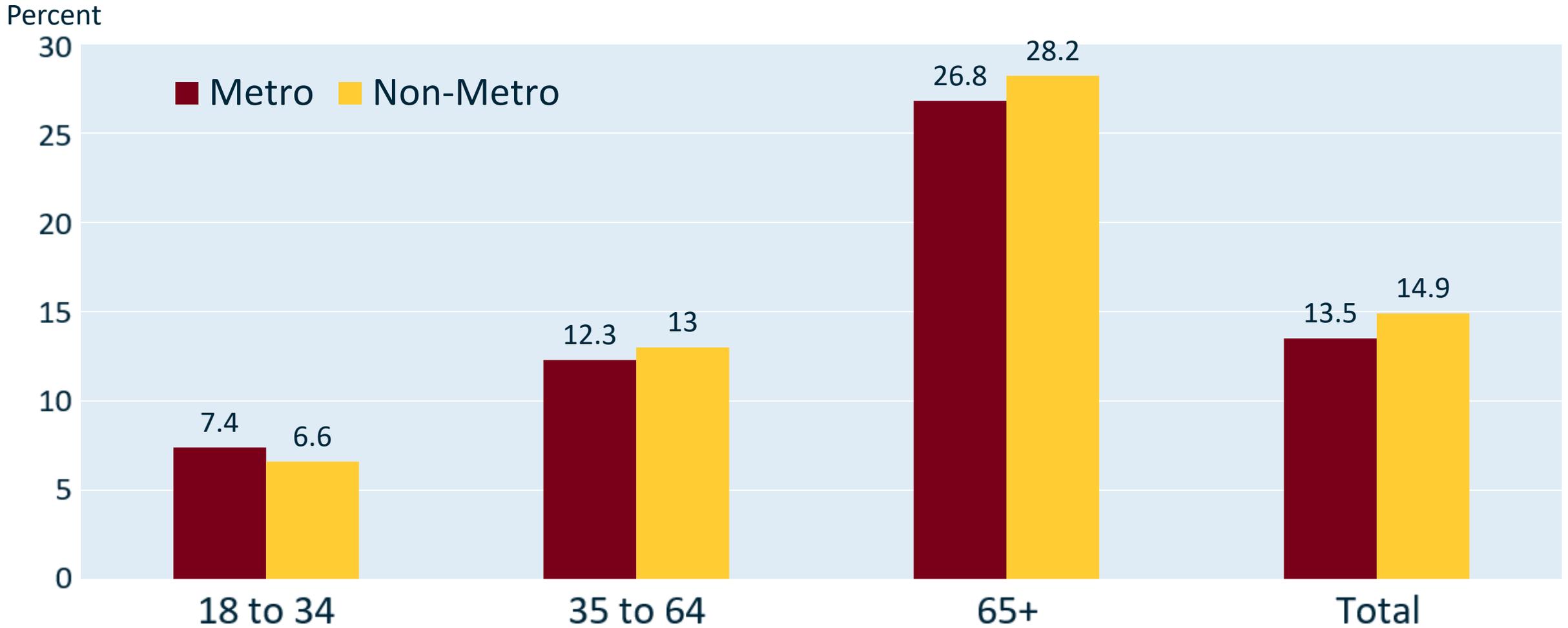


# Living alone by age by urban/rural

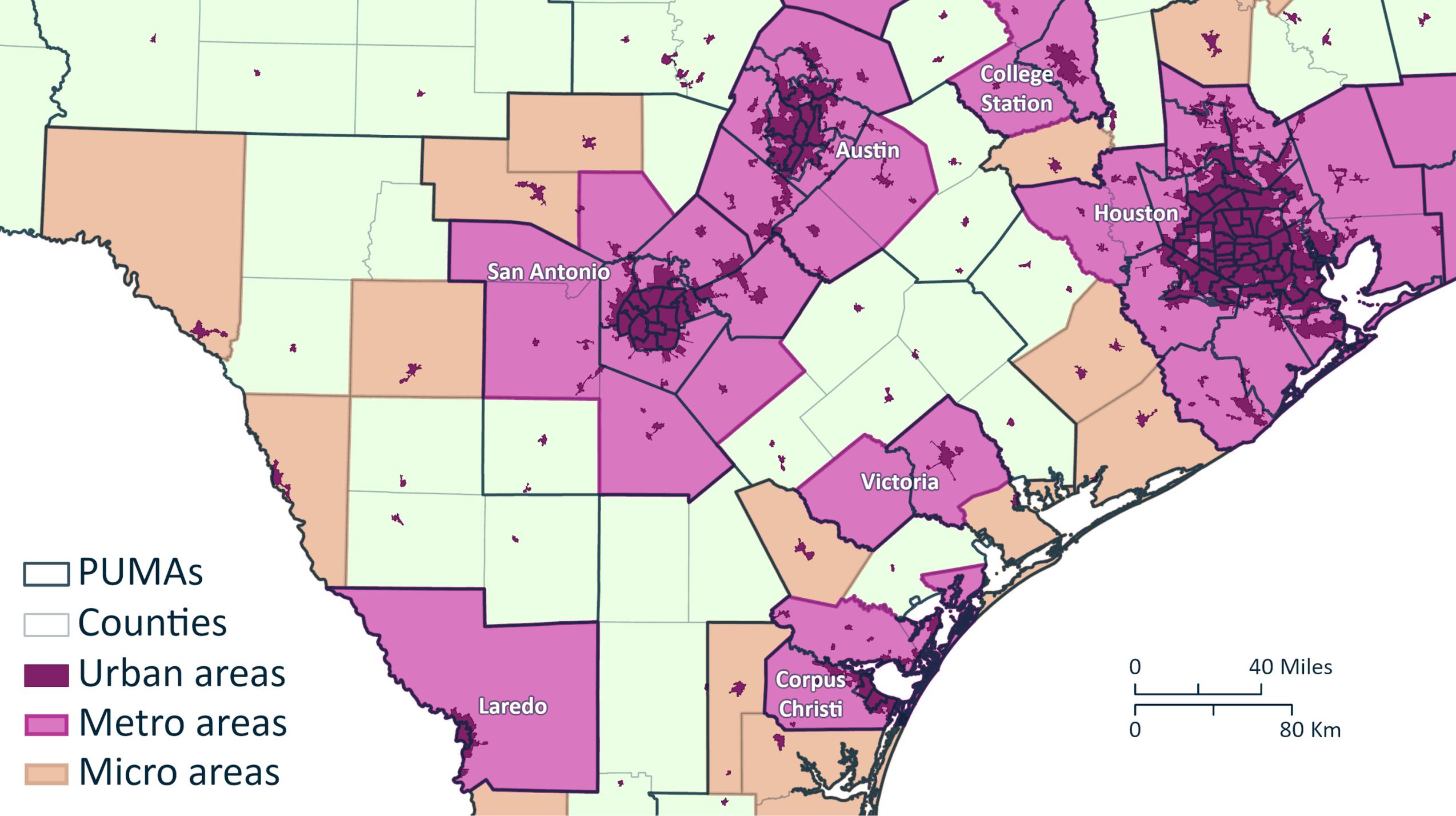


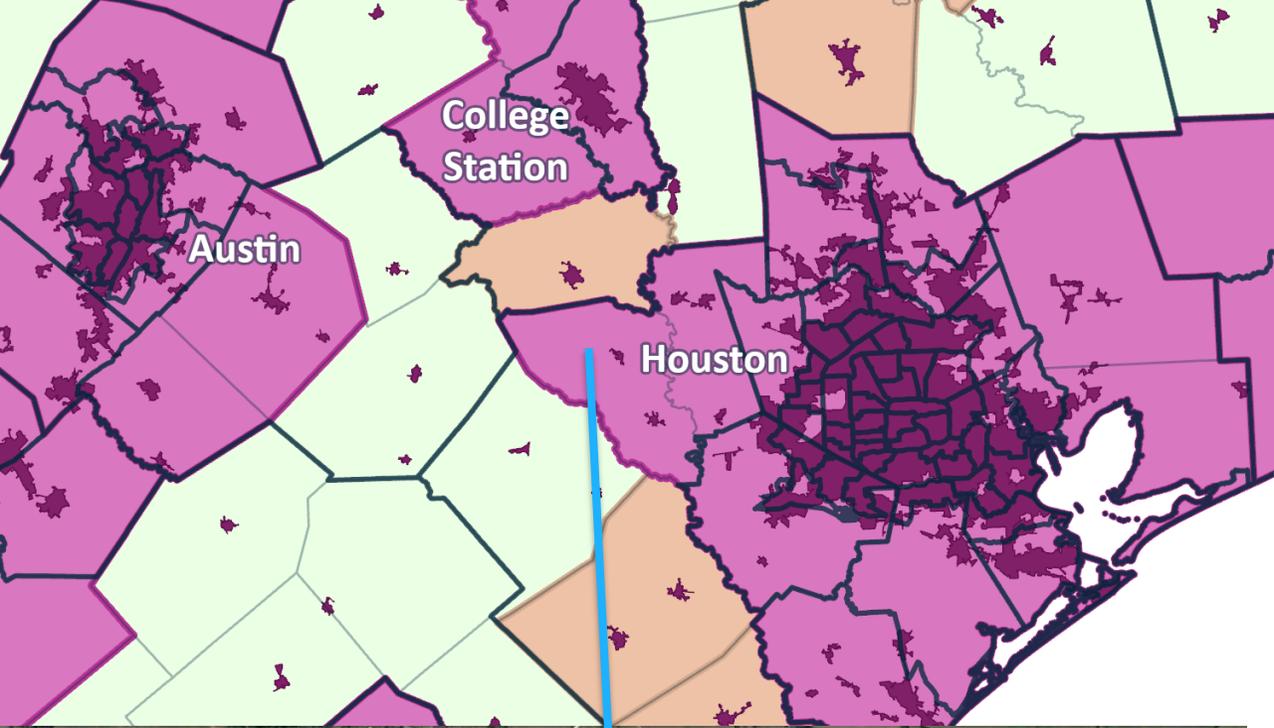
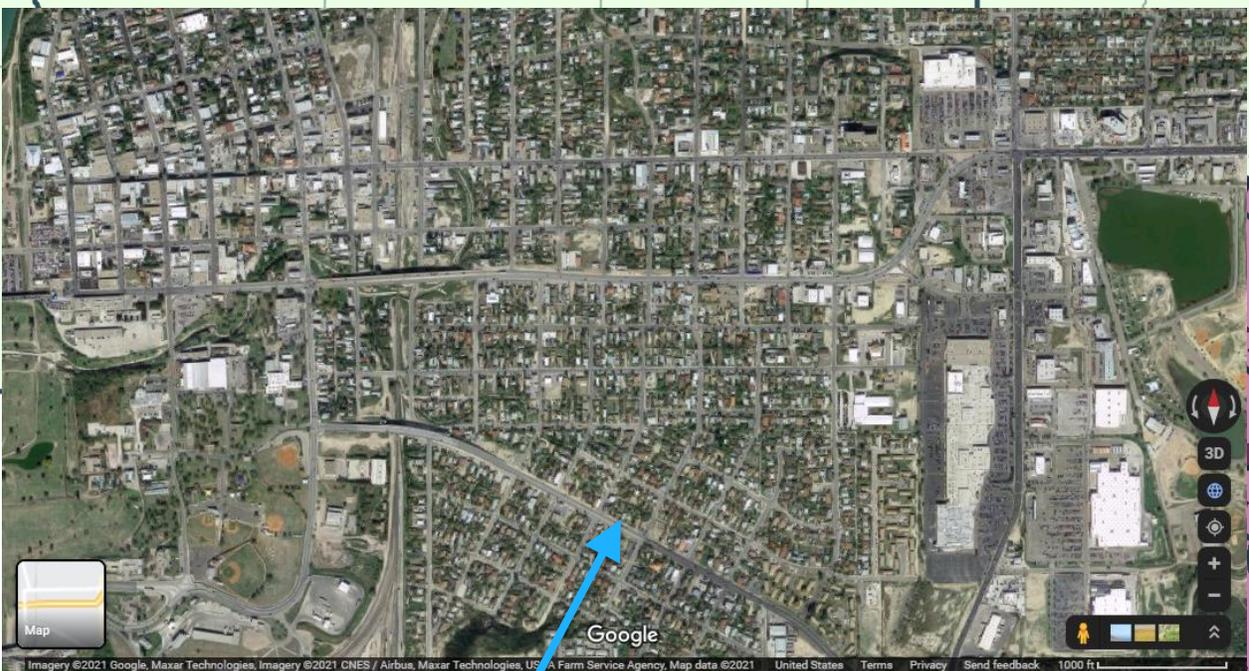
2013-2017 ACS 5-Year Summary File, IPUMS NHGIS

# Living alone by age by metro/non-metro

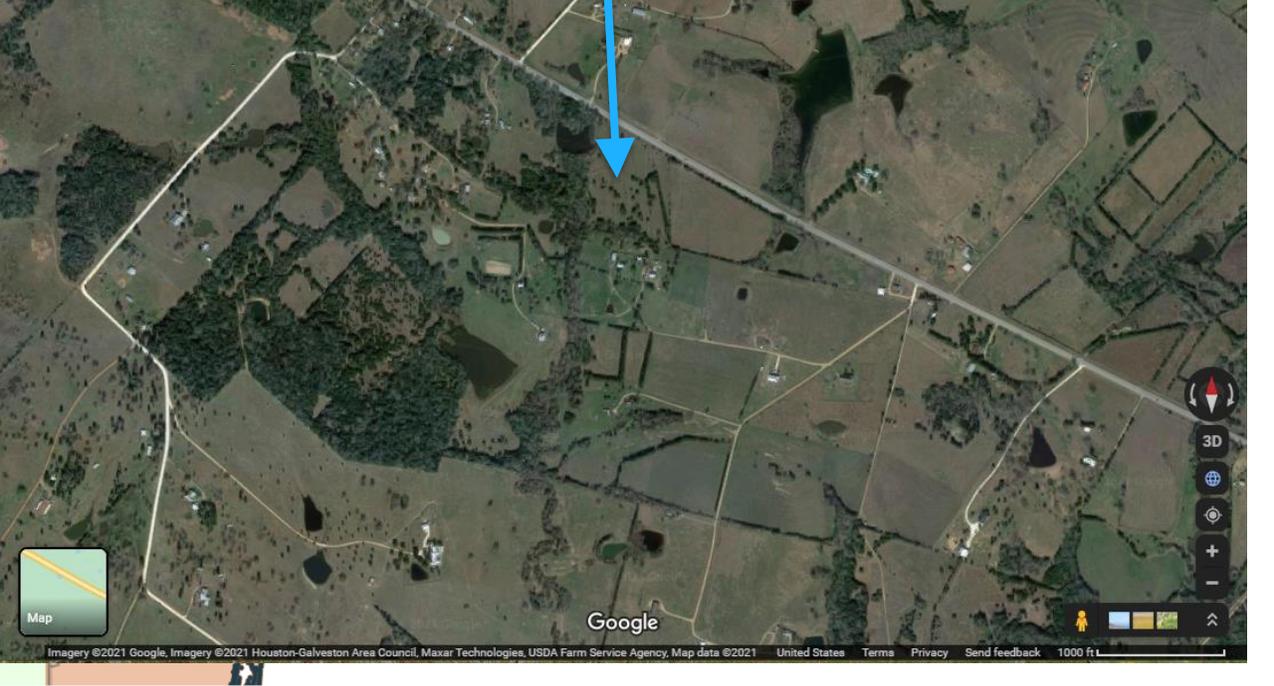
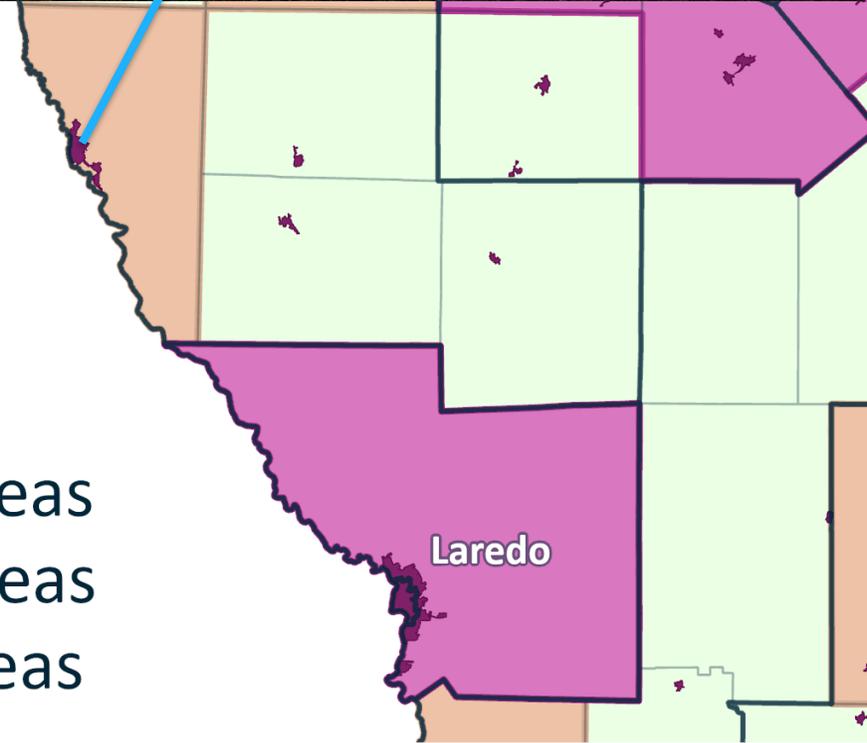


2013-2017 ACS 5-Year Summary File, IPUMS NHGIS



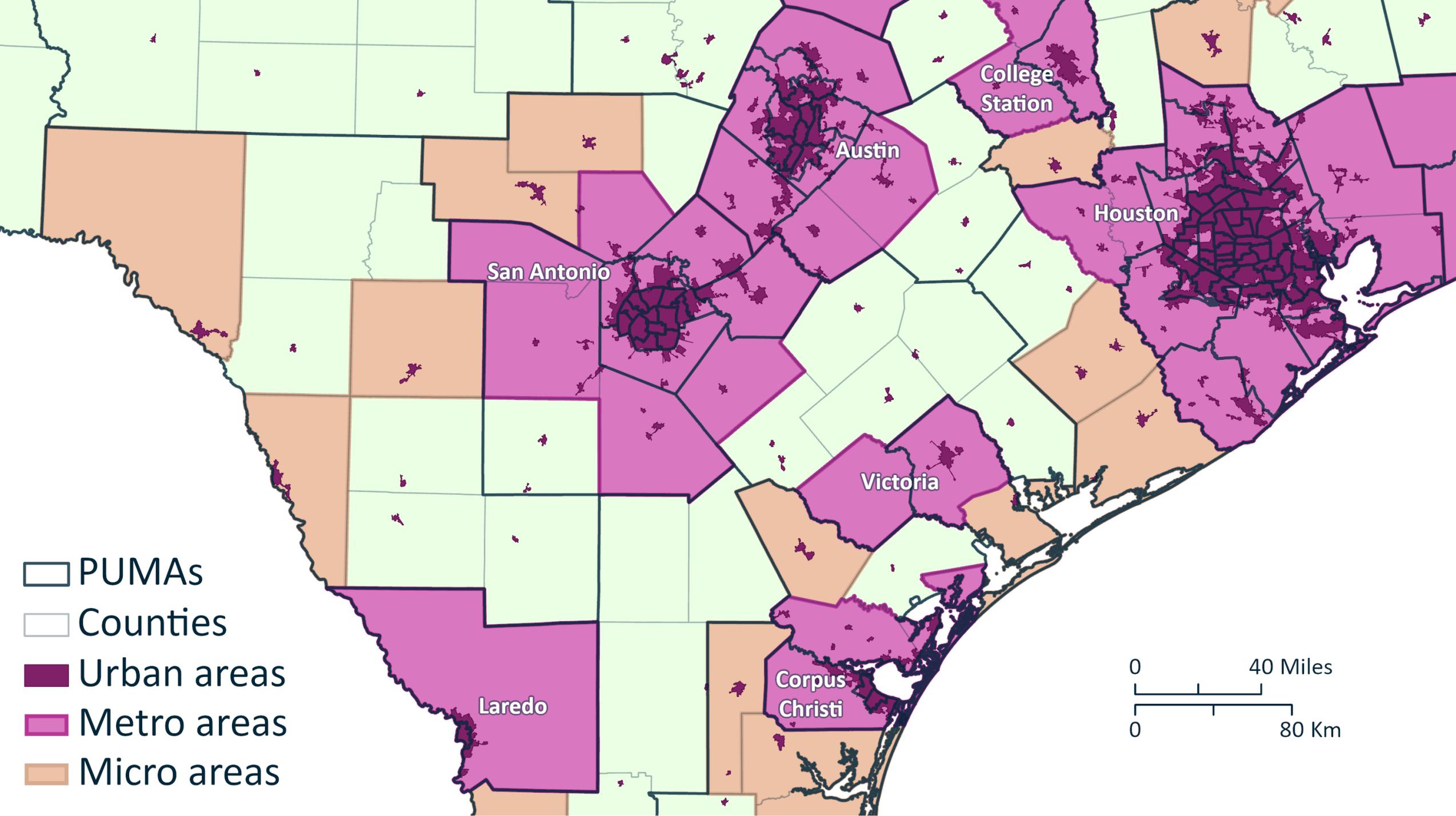


- PUMAs
- Counties
- Urban areas
- Metro areas
- Micro areas



# Questions leveraging ACS microdata

- How do adults living alone differ from those living with others?
- How do those living alone differ between urban and rural populations?
  - Do those in rural areas have greater health risks or service needs (older age, disabilities)?
  - Are vulnerable populations more likely to live alone in rural areas?



□ PUMAs

□ Counties

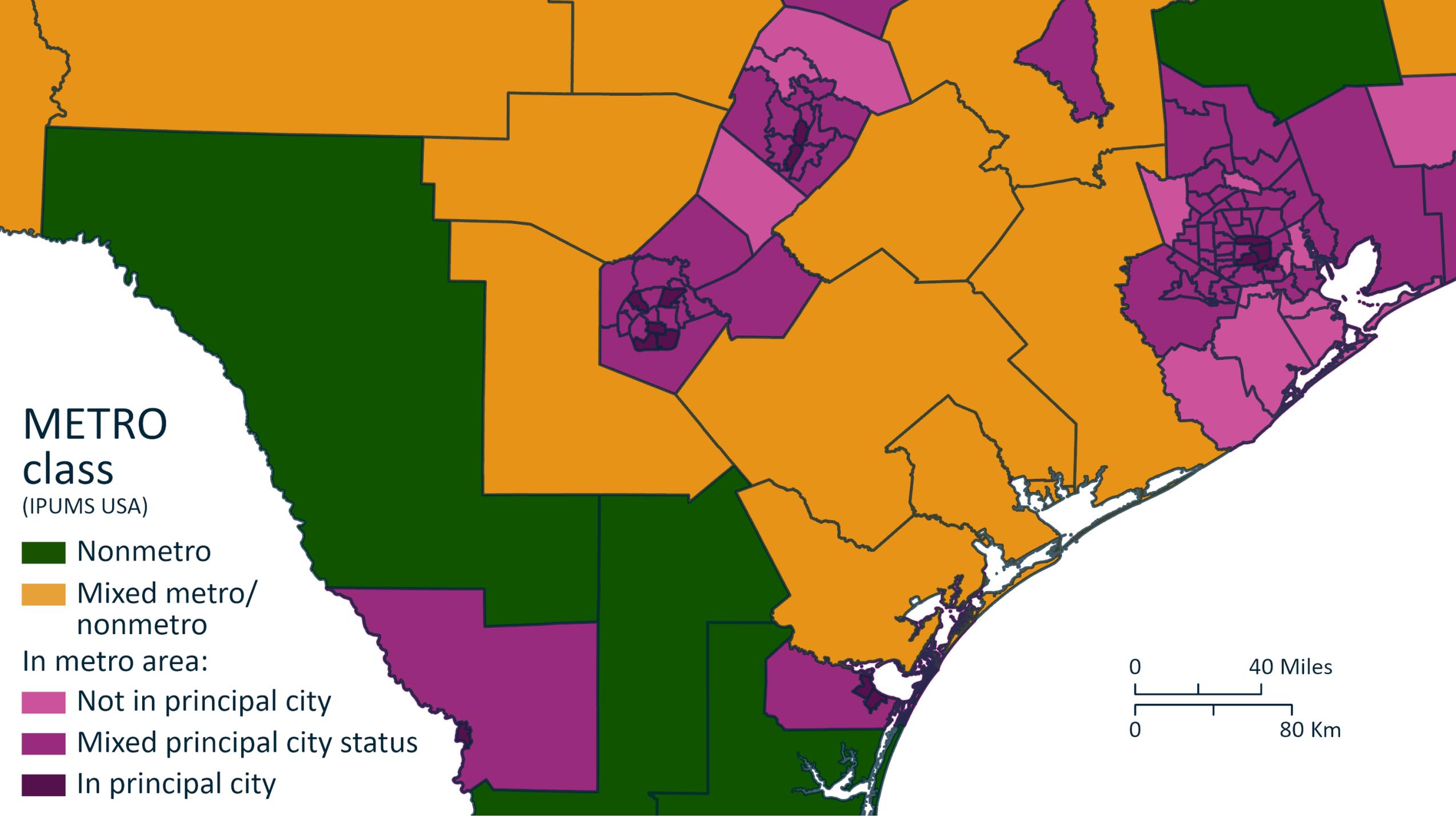
■ Urban areas

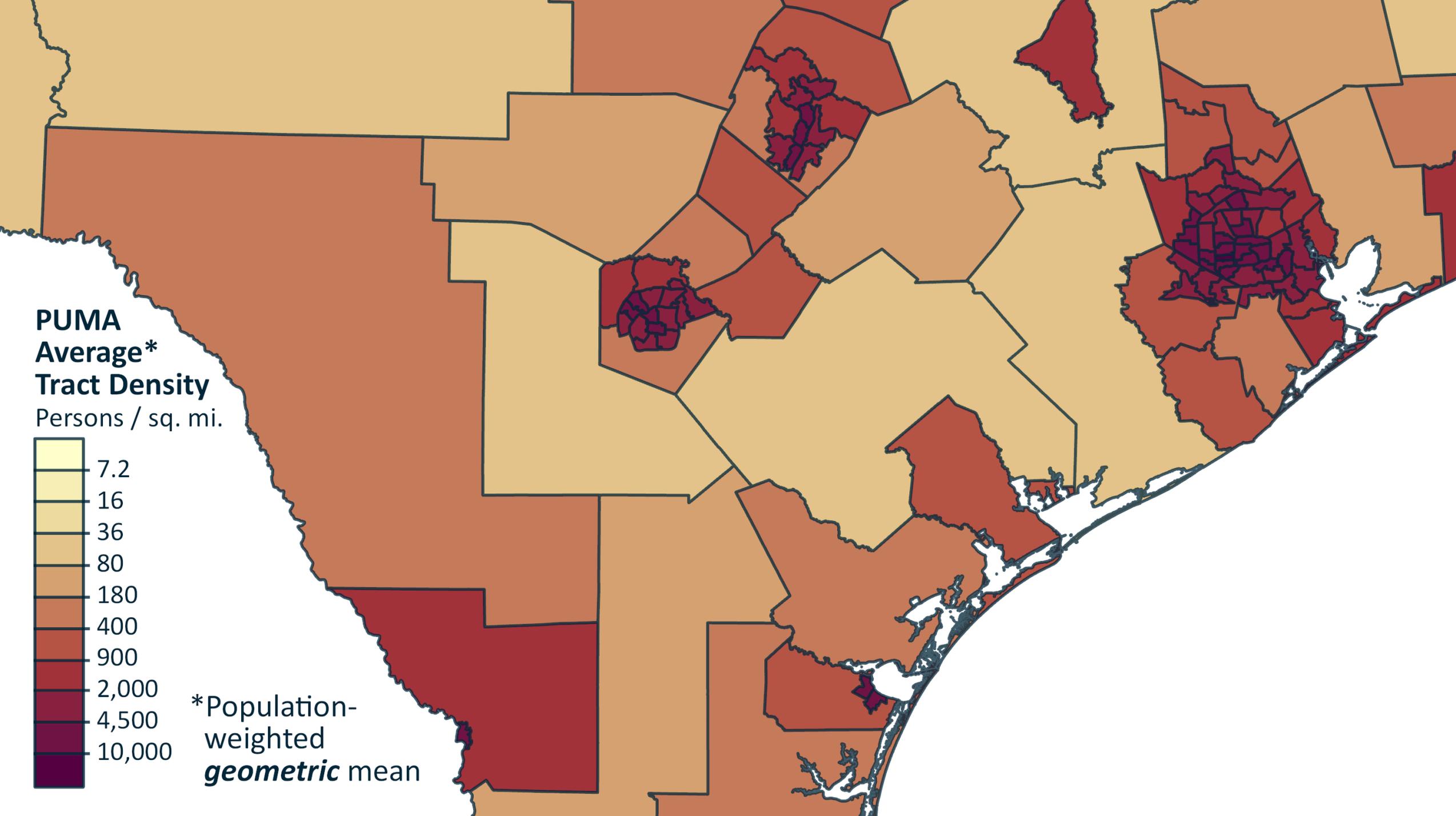
■ Metro areas

■ Micro areas

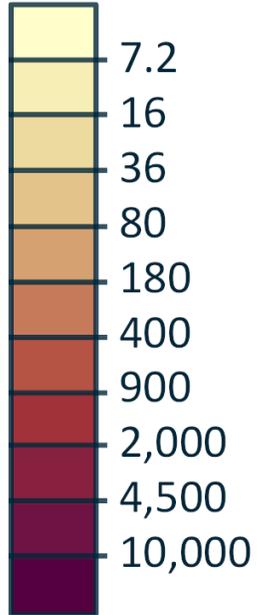
0 40 Miles

0 80 Km



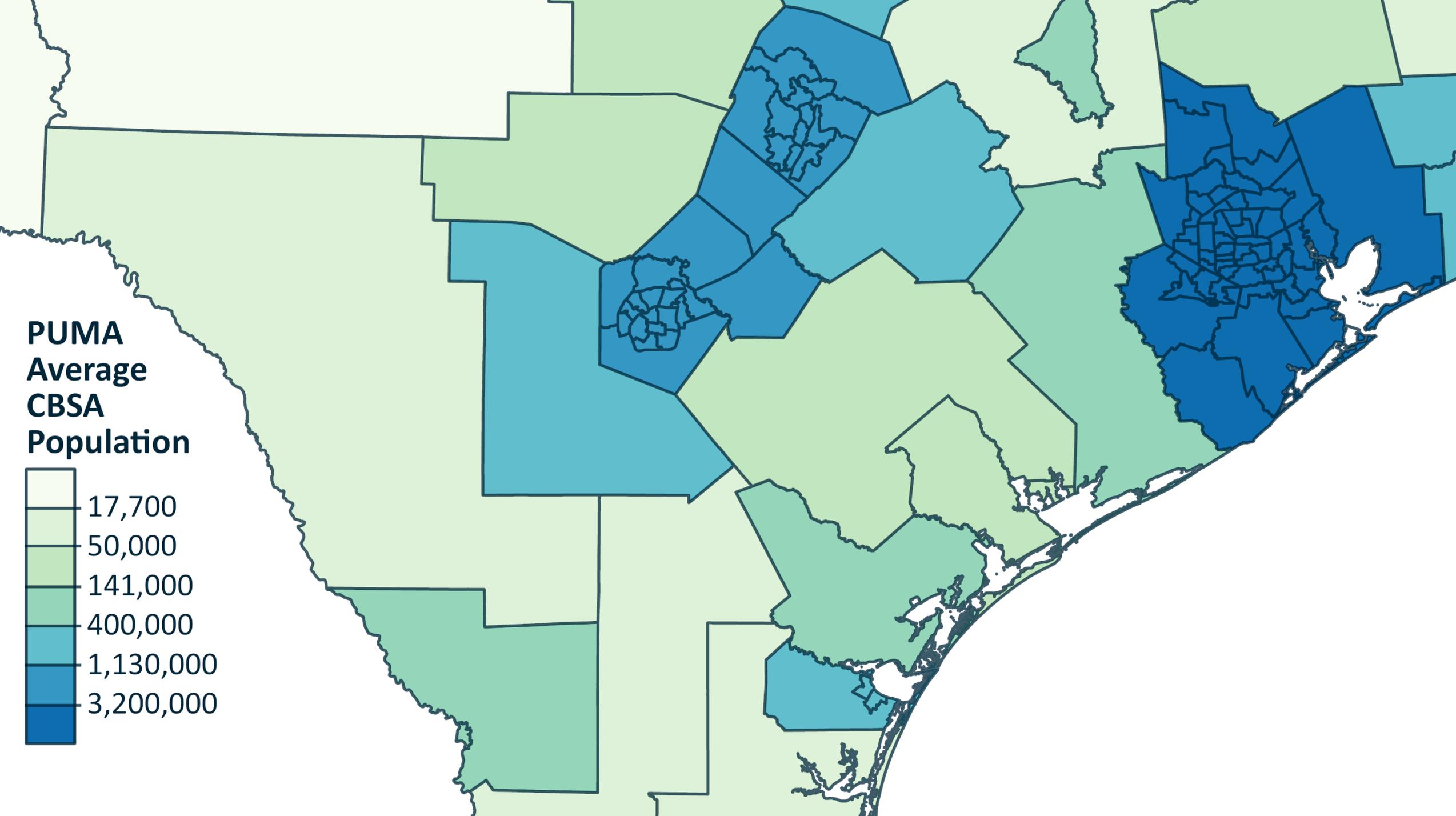
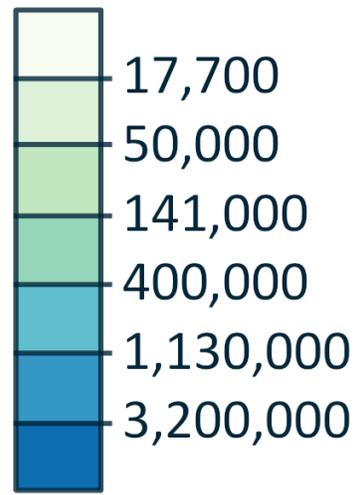


**PUMA  
Average\*  
Tract Density**  
Persons / sq. mi.

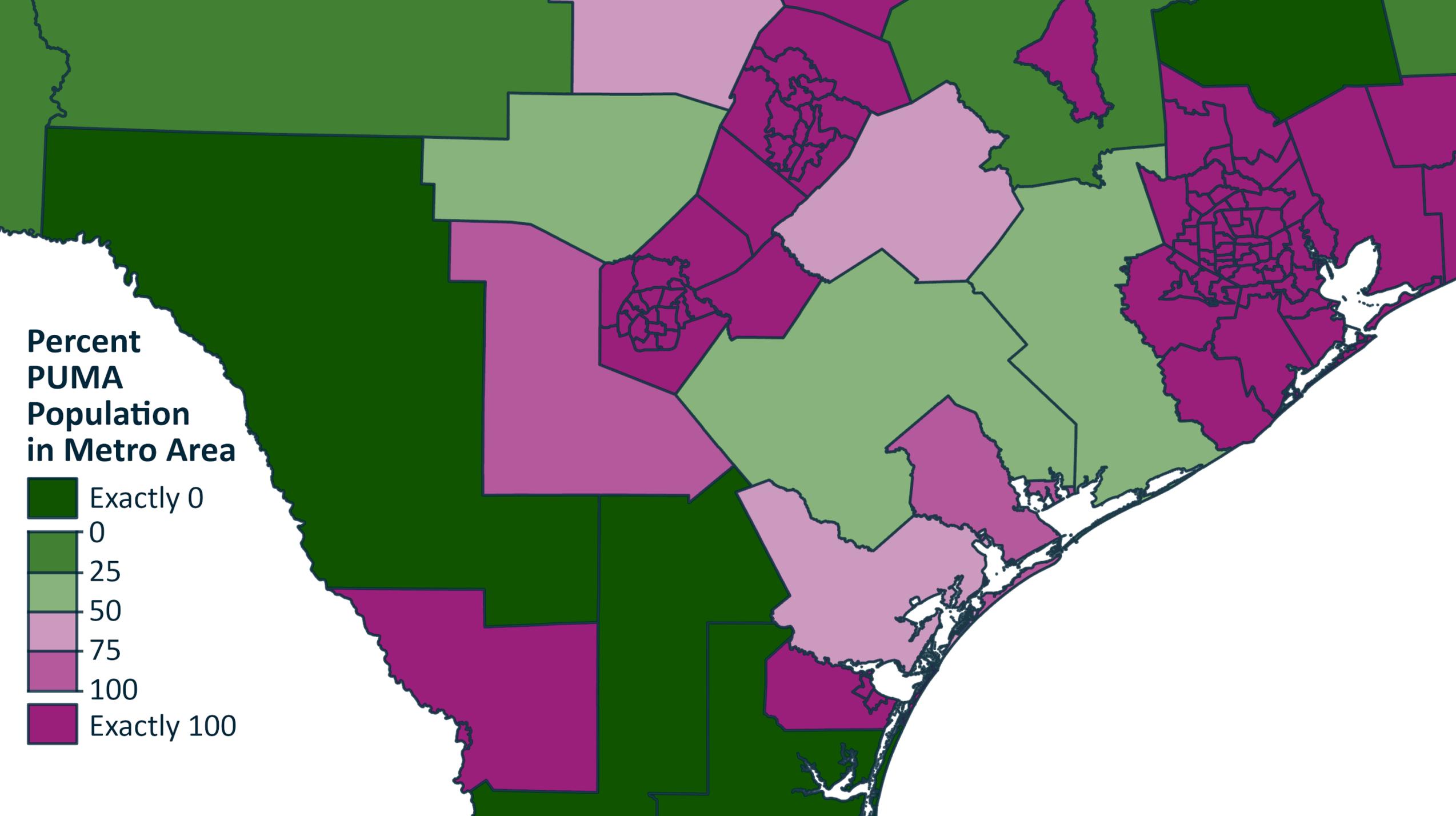
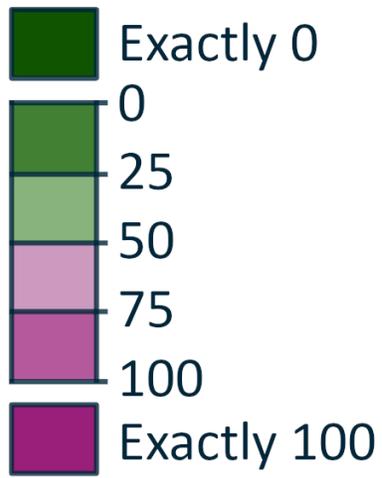


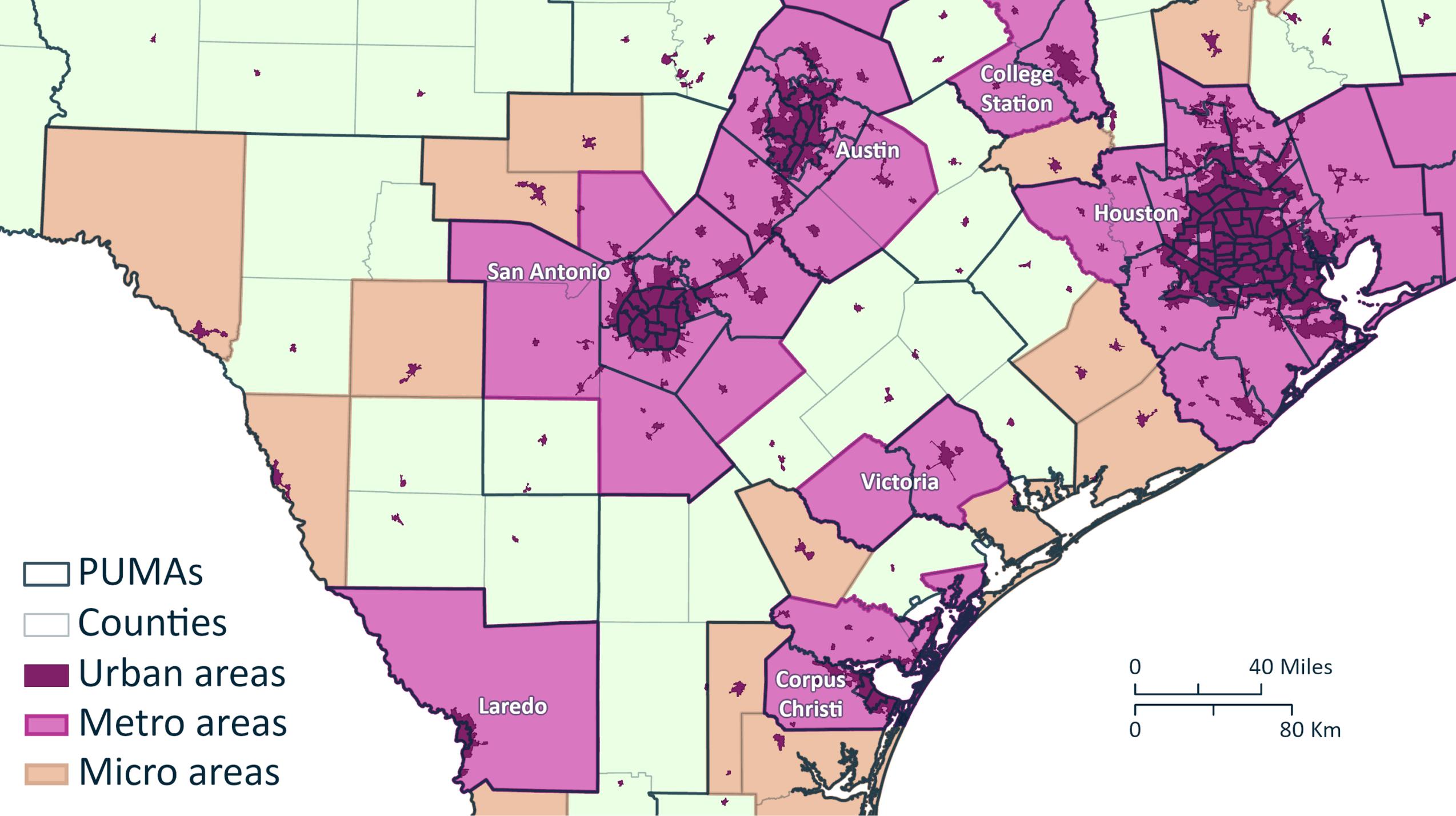
\*Population-weighted *geometric* mean

**PUMA  
Average  
CBSA  
Population**



# Percent PUMA Population in Metro Area





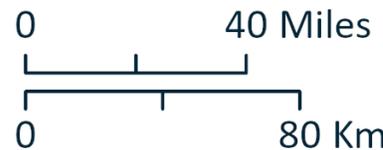
□ PUMAs

□ Counties

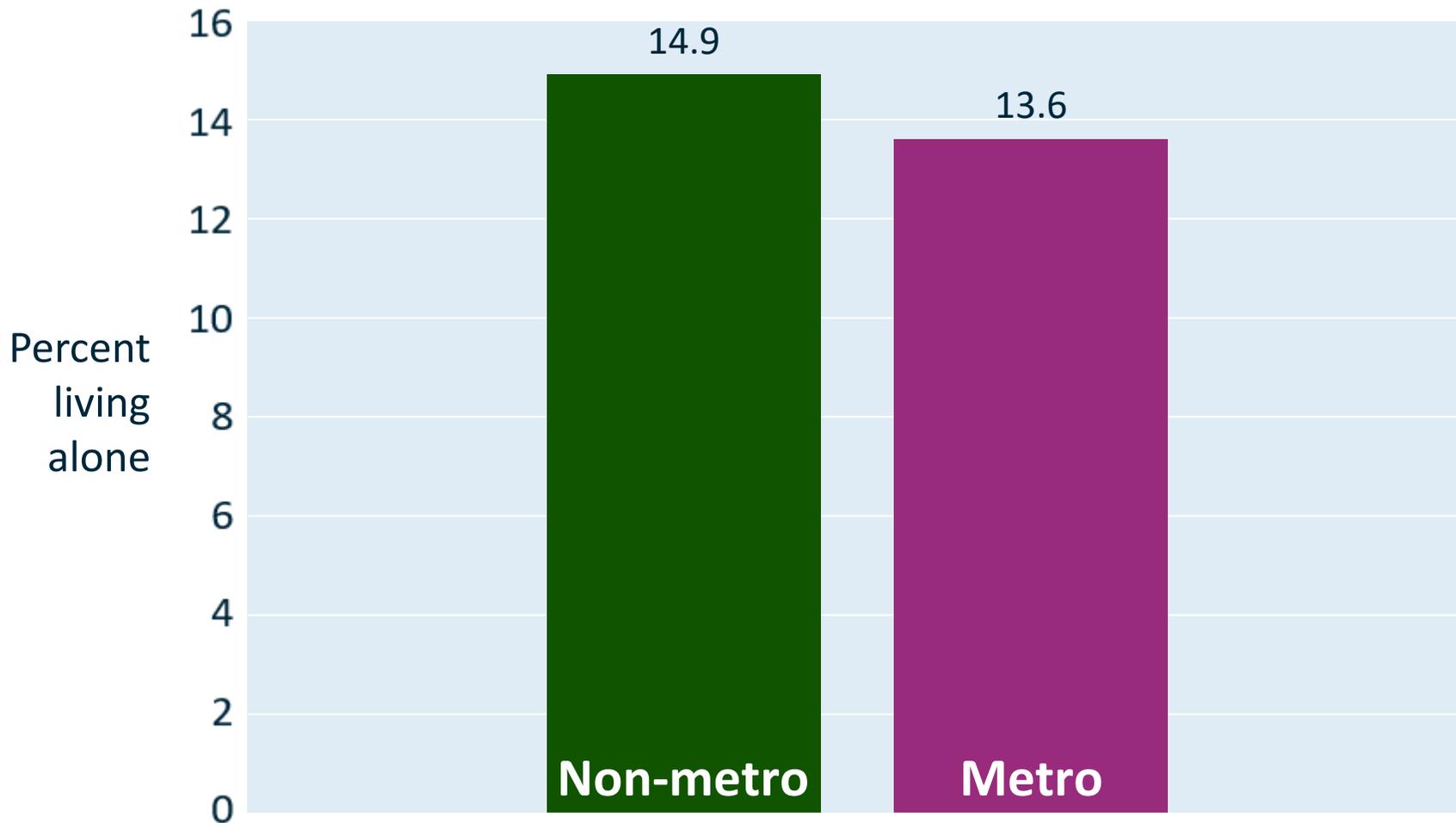
■ Urban areas

■ Metro areas

■ Micro areas

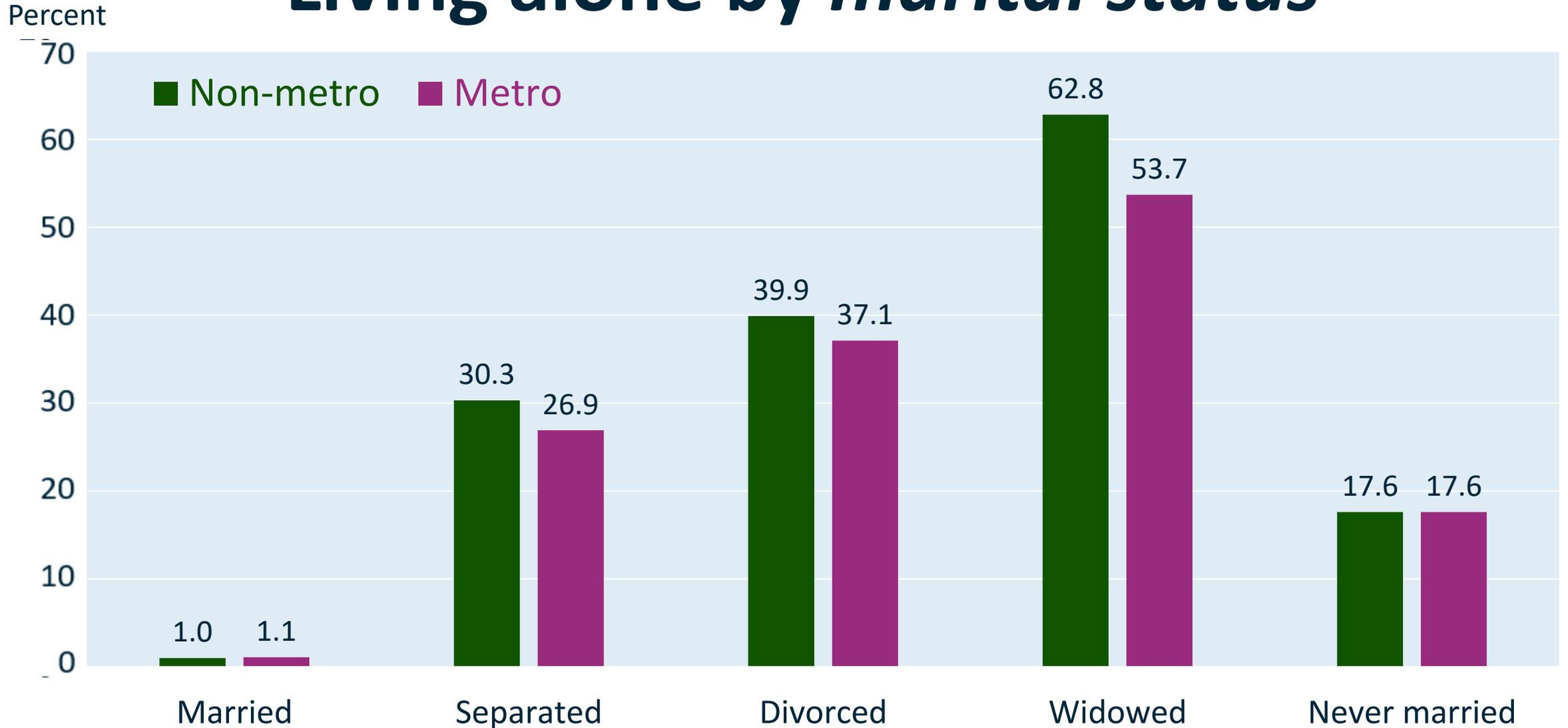


# Living alone by *metropolitan status*



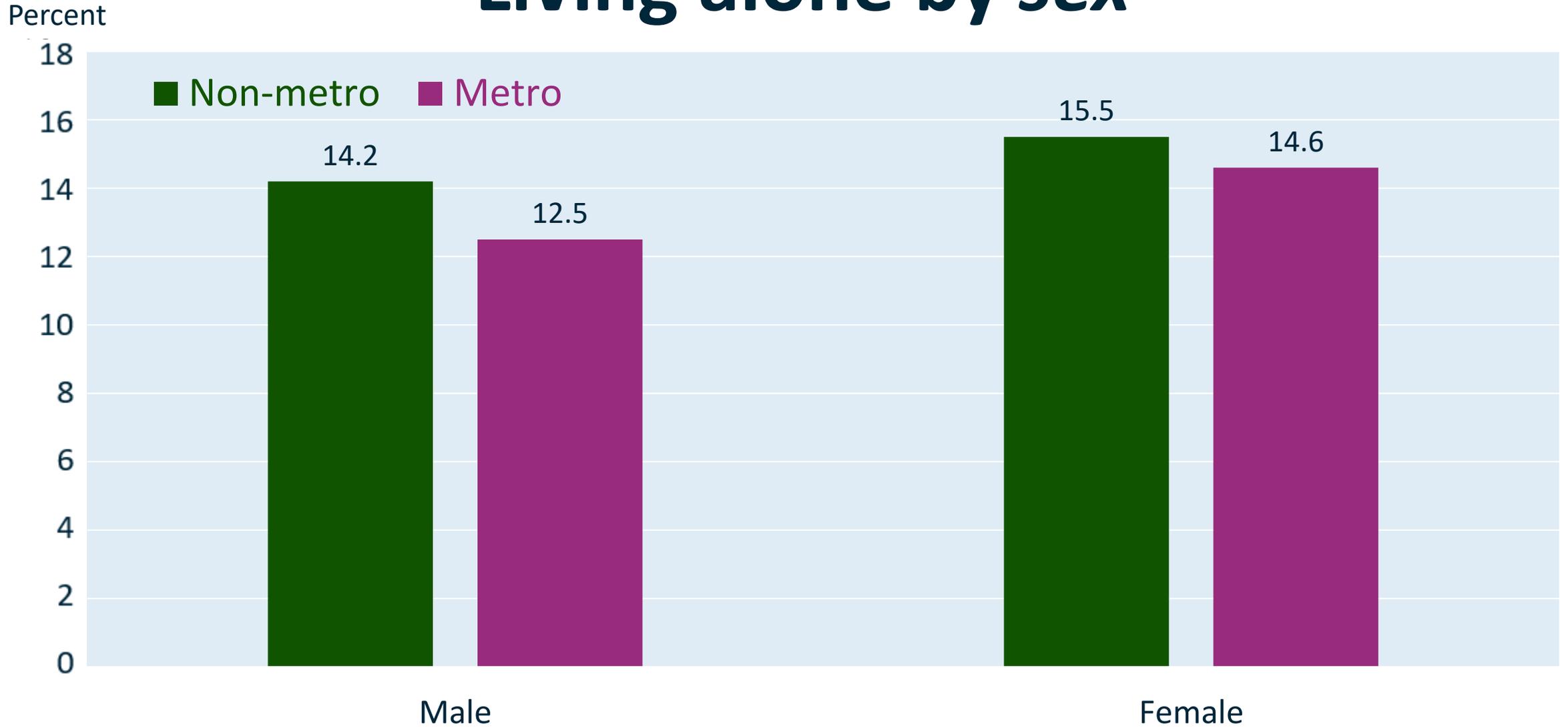
All adults in households  
2014-2018 ACS PUMS, IPUMS USA

# Living alone by *marital status*



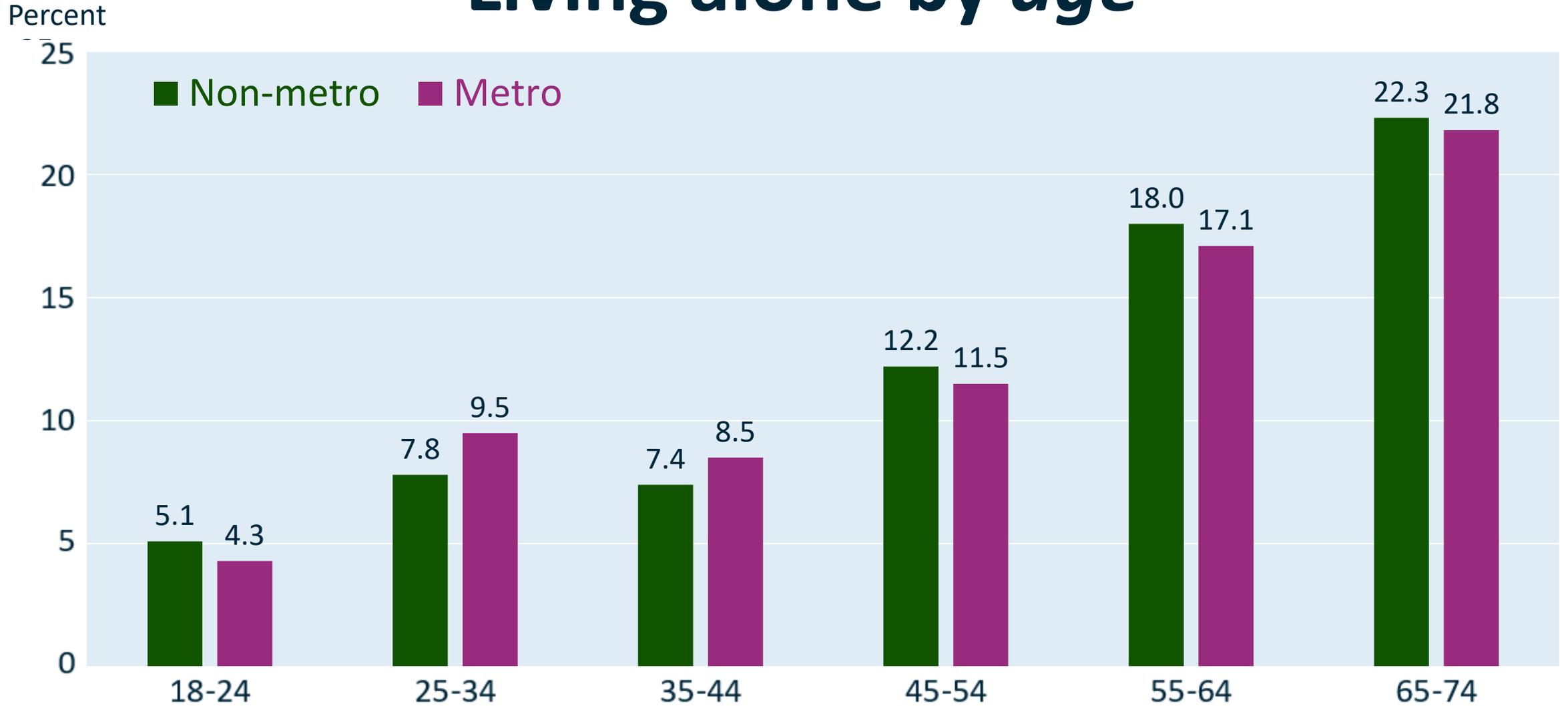
2014-2018 ACS PUMS, IPUMS USA

# Living alone by sex



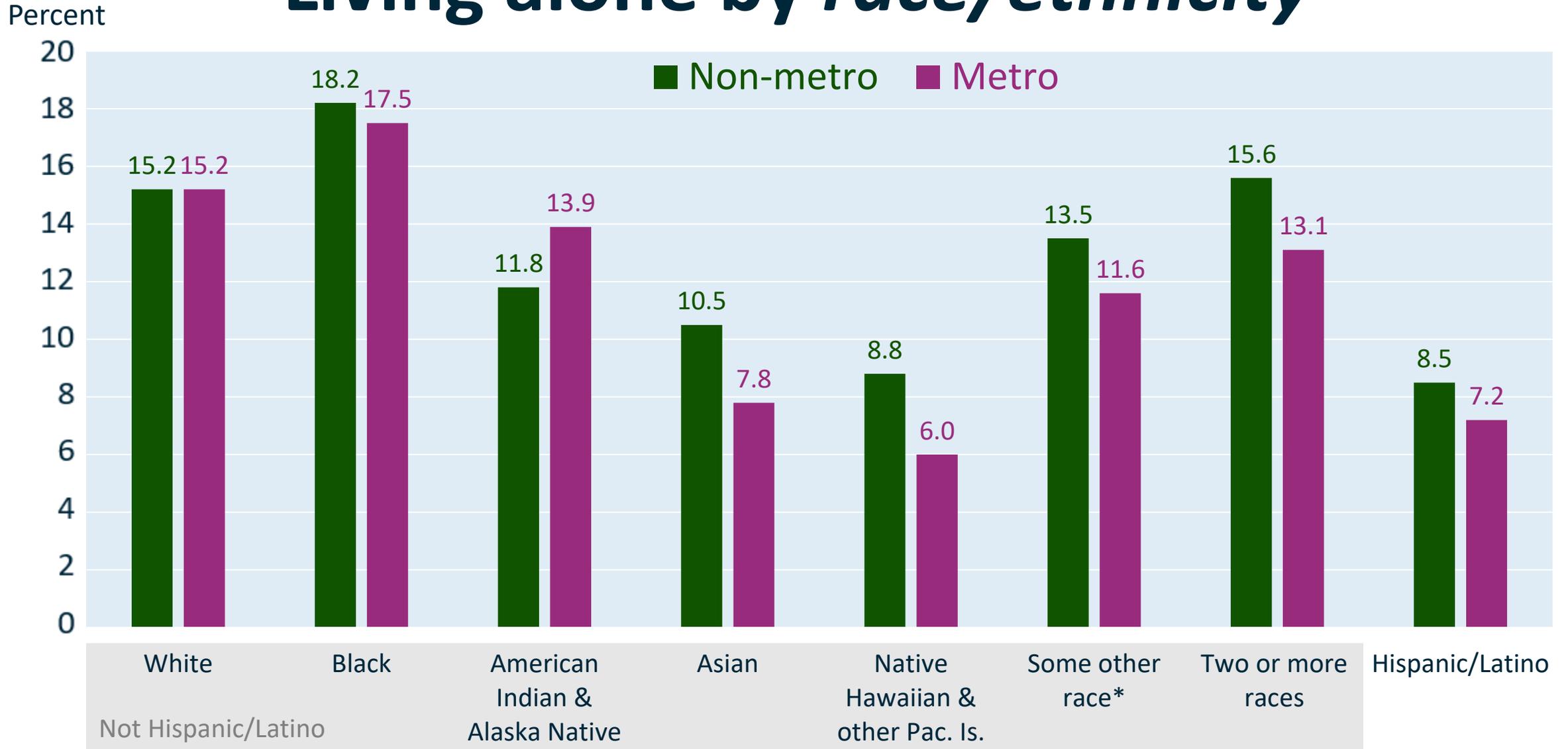
2014-2018 ACS PUMS, IPUMS USA

# Living alone by *age*



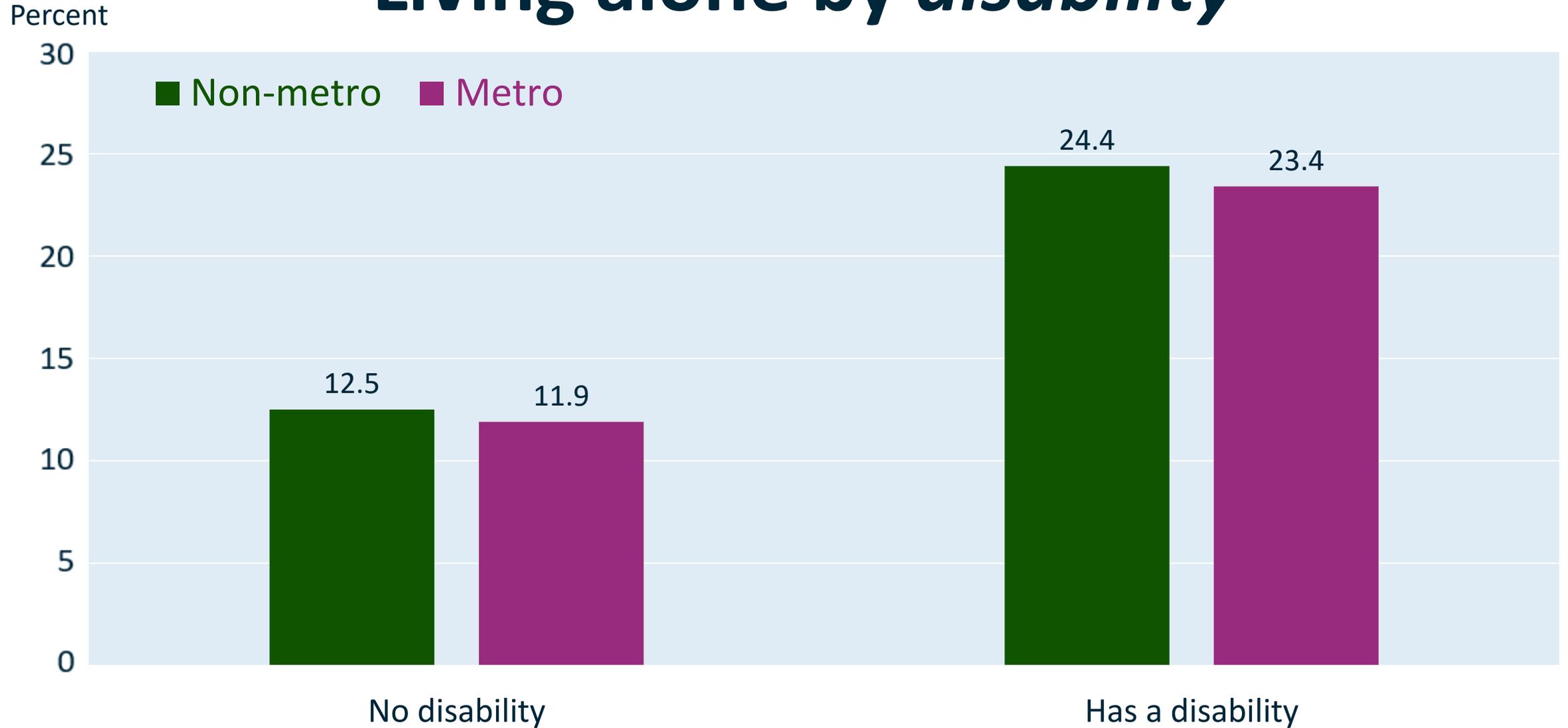
2014-2018 ACS PUMS, IPUMS USA

# Living alone by *race/ethnicity*



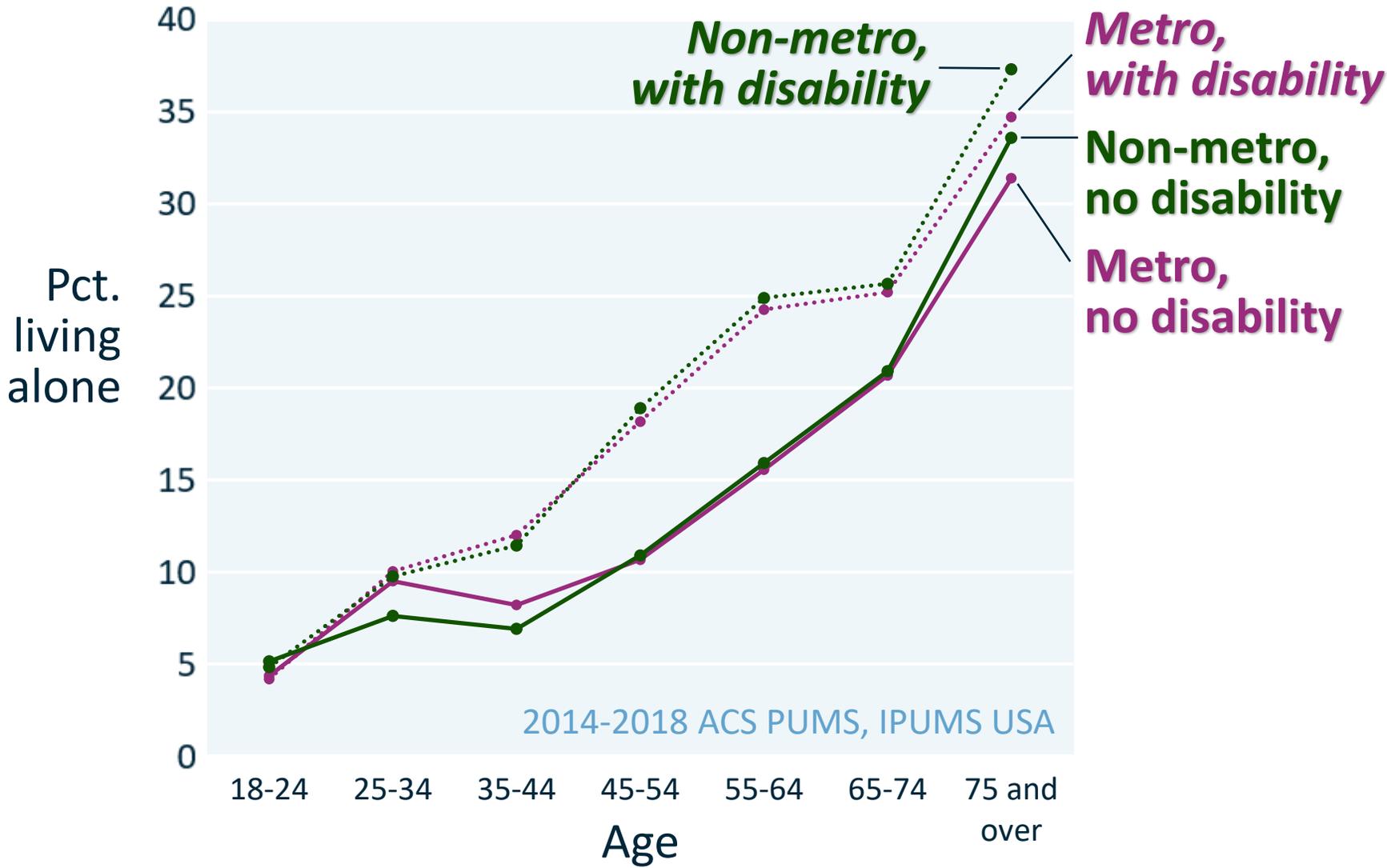
2014-2018 ACS PUMS, IPUMS USA

# Living alone by *disability*



2014-2018 ACS PUMS, IPUMS USA

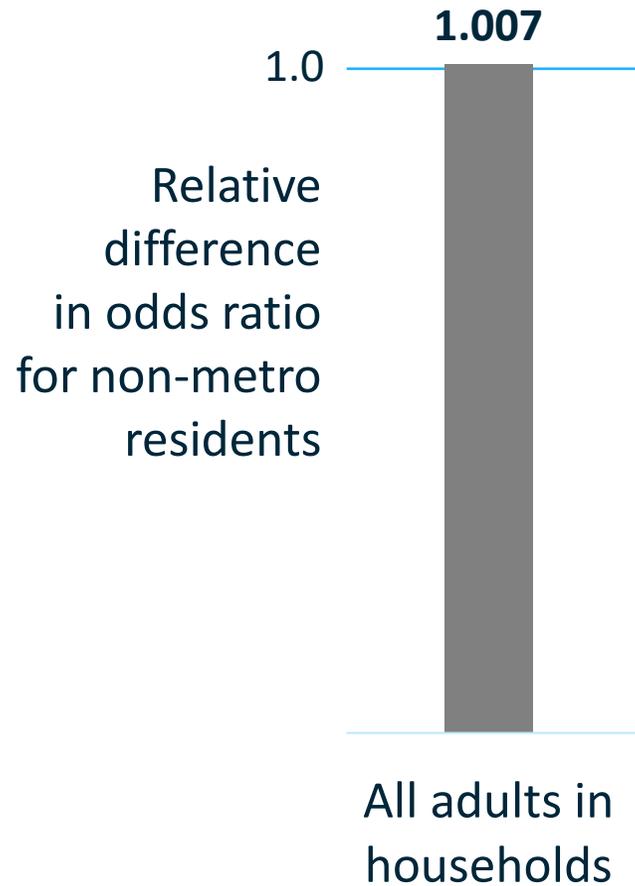
# Living alone by age, disability, & metro status



# How non-metro residence affects likelihood of living alone

*Logistic regression controlling for sex, age, & disability status*

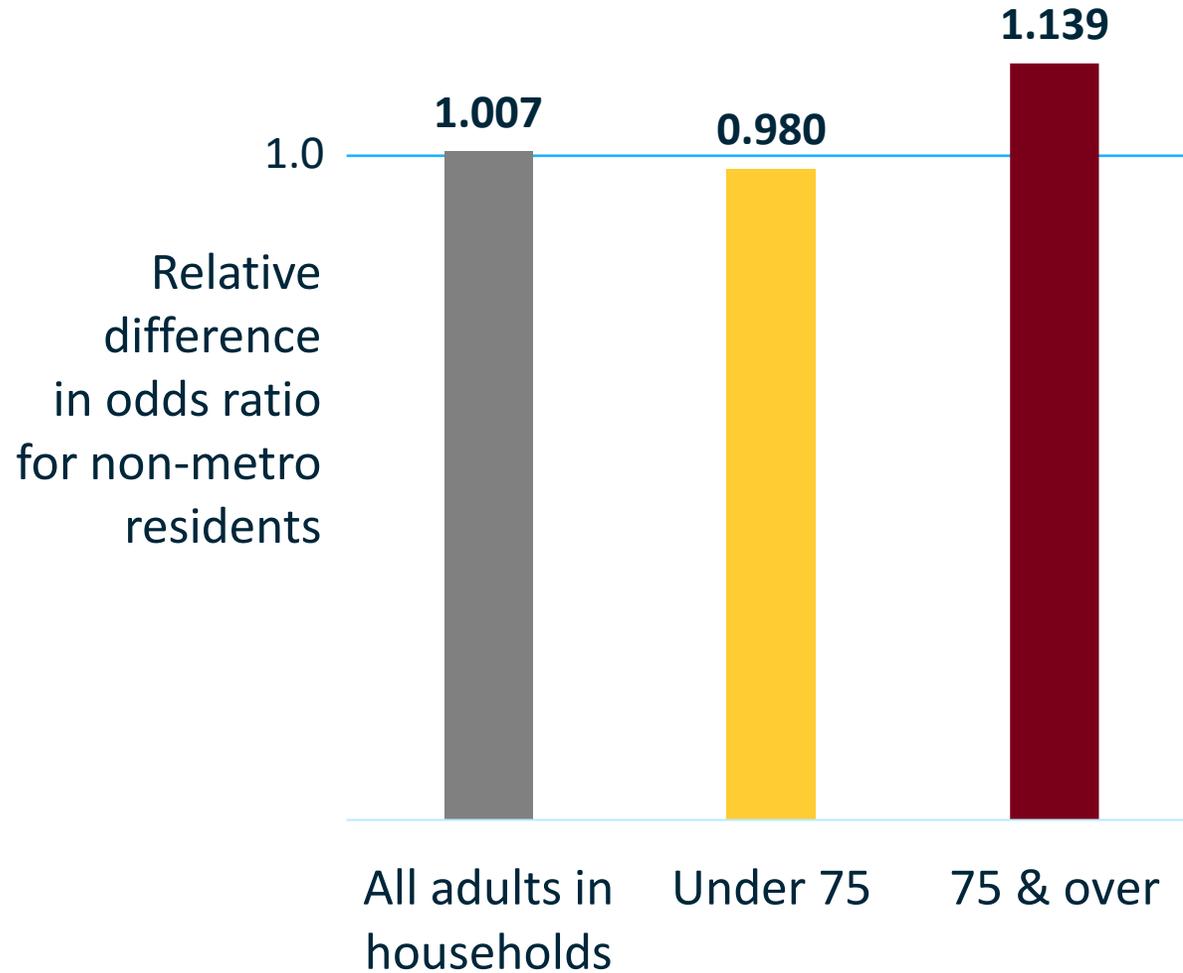
2014-2018 ACS PUMS, IPUMS USA



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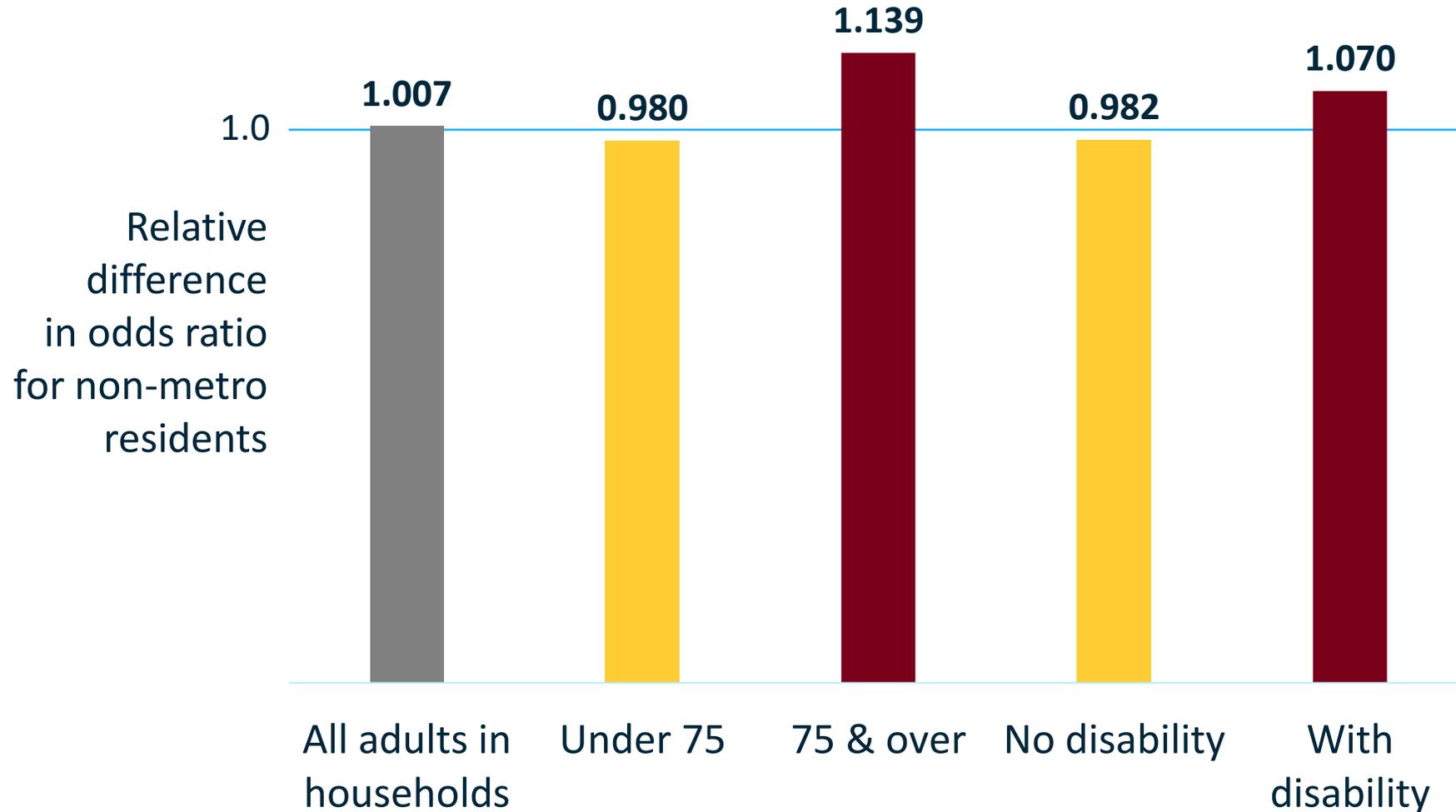
2014-2018 ACS PUMS, IPUMS USA



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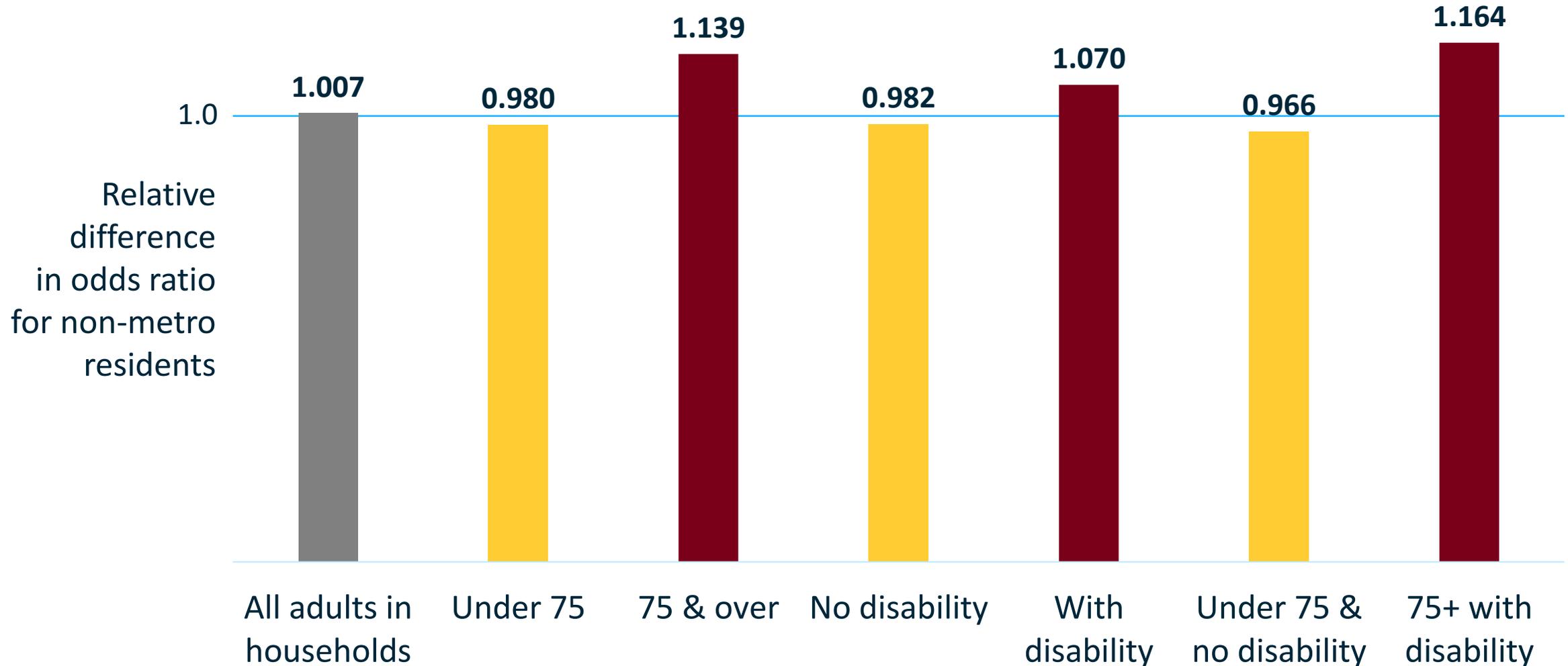
2014-2018 ACS PUMS, IPUMS USA



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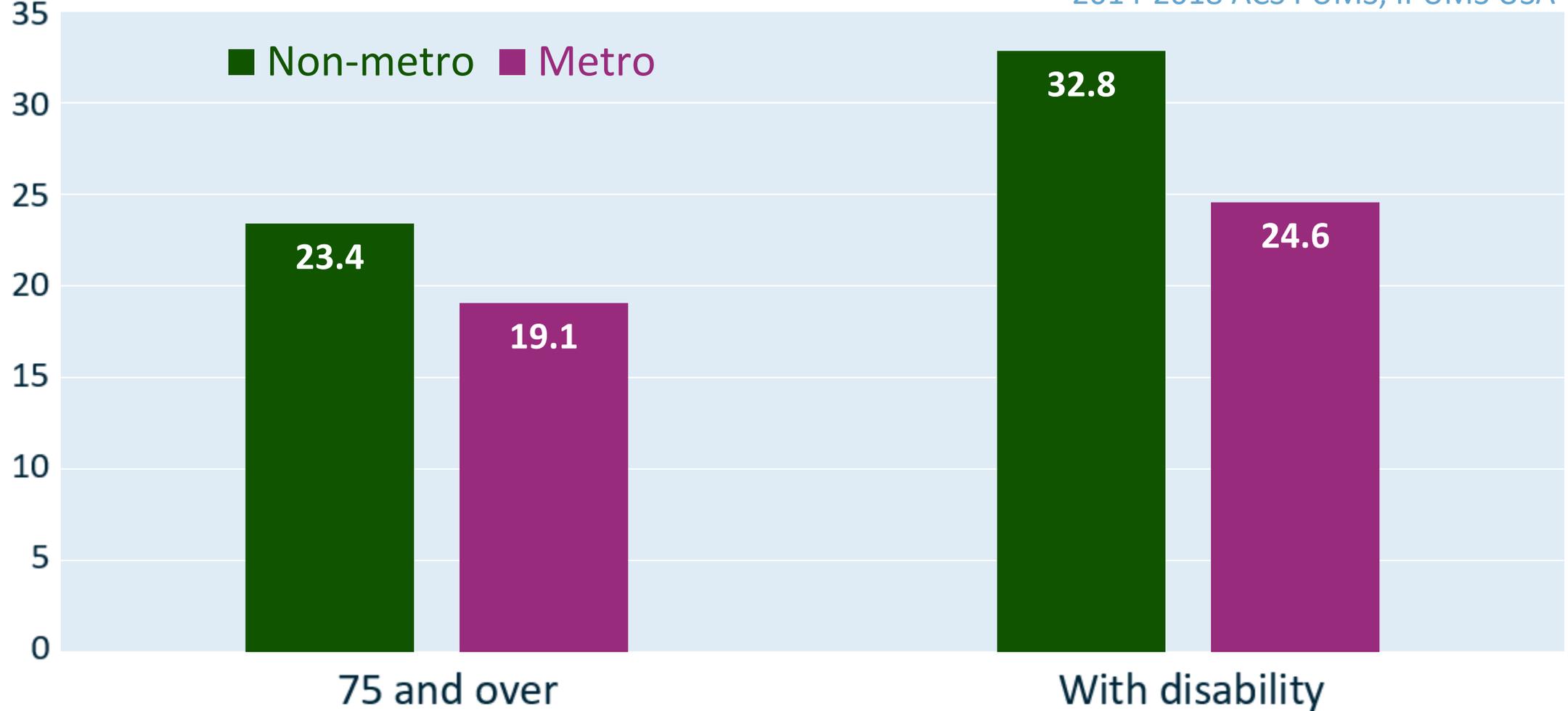
2014-2018 ACS PUMS, IPUMS USA



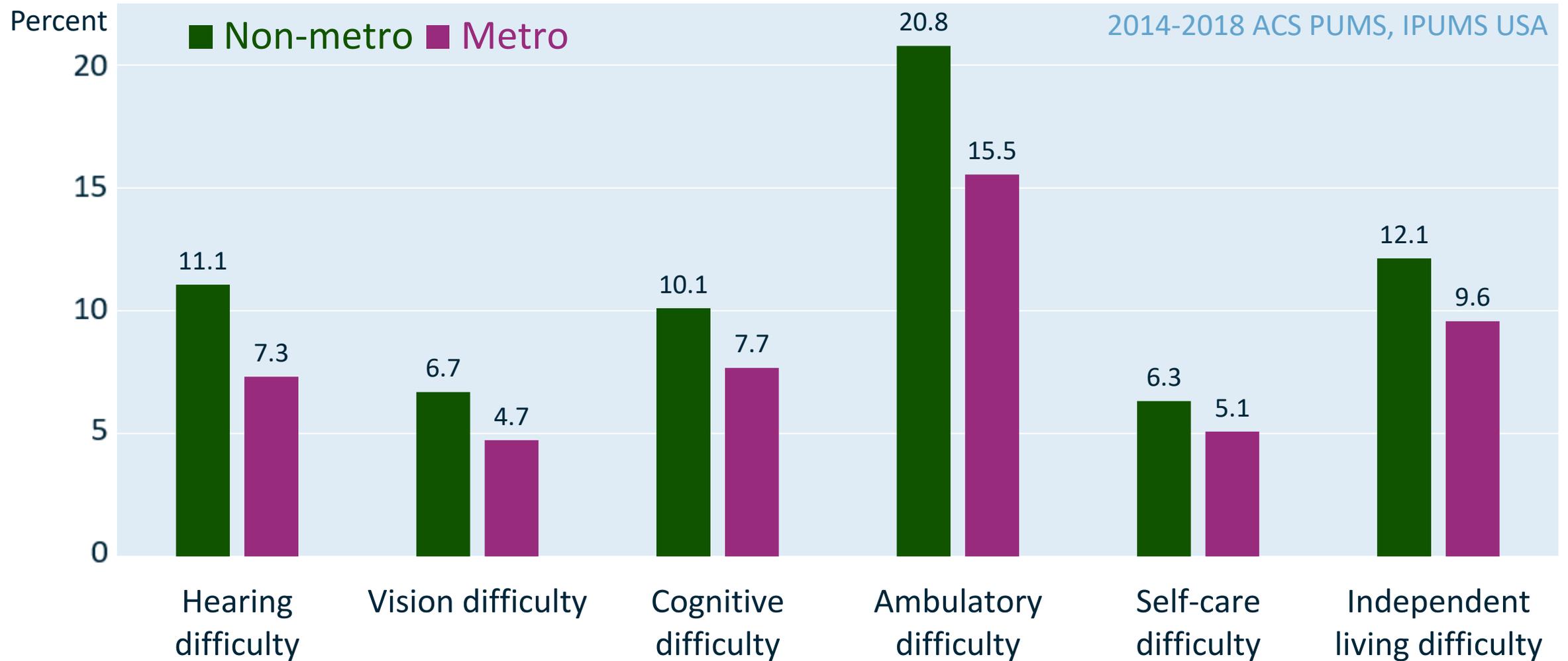
# Characteristics of adults living alone

Percent

2014-2018 ACS PUMS, IPUMS USA



# Disability types among adults living alone



# Conclusions

- More adults live alone in *non-metro* areas than in *metro* areas
  - The reverse is true for *rural* and *urban* areas:
    - Living alone increases with density, decreases with size
- Disability, old age, and non-metro residence are compounding factors in likelihood of living alone
  - Programs to support those living alone may be especially important in smaller, more remote communities

# Conclusions: Data & Methods

- Using ACS to study urban/rural disparities:
  - Tradeoffs between summary data & microdata
  - Important to consider differences between *urban/rural* & *metro/non-metro* definitions
  - IPUMS provides several options for distinguishing *urban/rural* in microdata

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[www.ruralhealthresearch.org](http://www.ruralhealthresearch.org)

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# Thank you!

[rhrc.umn.edu](http://rhrc.umn.edu) | [@UMNRHRC](https://twitter.com/UMNRHRC)

Jonathan Schroeder | [jps@umn.edu](mailto:jps@umn.edu) | [@j\\_p\\_schroeder](https://twitter.com/j_p_schroeder)

Carrie Henning-Smith | [henn0329@umn.edu](mailto:henn0329@umn.edu) | [@Carrie\\_H\\_S](https://twitter.com/Carrie_H_S)

Mariana Tuttle | [tuttl090@umn.edu](mailto:tuttl090@umn.edu) | [@story\\_tuttle](https://twitter.com/story_tuttle)