

Aging as an Engine of Innovation, Business Development, and Job Creation in North Carolina



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OVERVIEW

- Leveraging The Silver Tsunami
- Key Drivers
- NC Demographic Highlights
- BIG Opportunities
- Discussion

Number of Elderly, As a Percent of Population

Country	2000	2040
United States	16.3	26.0
Australia	16.6	30.1
Canada	17.0	33.3
United Kingdom	20.8	33.9
France	20.6	35.0
Netherlands	18.5	36.6
Belgium	22.2	36.1
Germany	23.5	37.4
Sweden	22.8	37.5
Japan	23.9	44.7
Spain	22.0	45.5
Italy	24.4	46.2

Key Drivers

- **Changes in Longevity**
- **Declining Fertility**
- **Aging of Boomer Cohort**
- **Gen X & Gen Y Crisis**
- **Medical Care Cost Advantage**
- **NC as a retirement destination**
- **Significant Aging in Place**

U.S. LIFE EXPECTANCY AT BIRTH

YEAR

AGE

1900

47.3

1930

59.7

1960

69.7

1997

76.5

2007

77.9

2010

78.3

2030

101.0

TOTAL FERTILITY RATES FOR U.S. WOMEN BY RACE/ETHNICITY, 2012

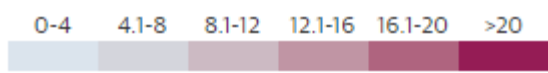
Race/Ethnicity	Total Fertility Rate
All Races	1.88
Hispanic	2.18
Non-Hispanic White	1.76
Blacks	1.90
Asian	1.77
Native American	1.35

U.S. POPULATION CHANGE BY AGE, 2000-2010

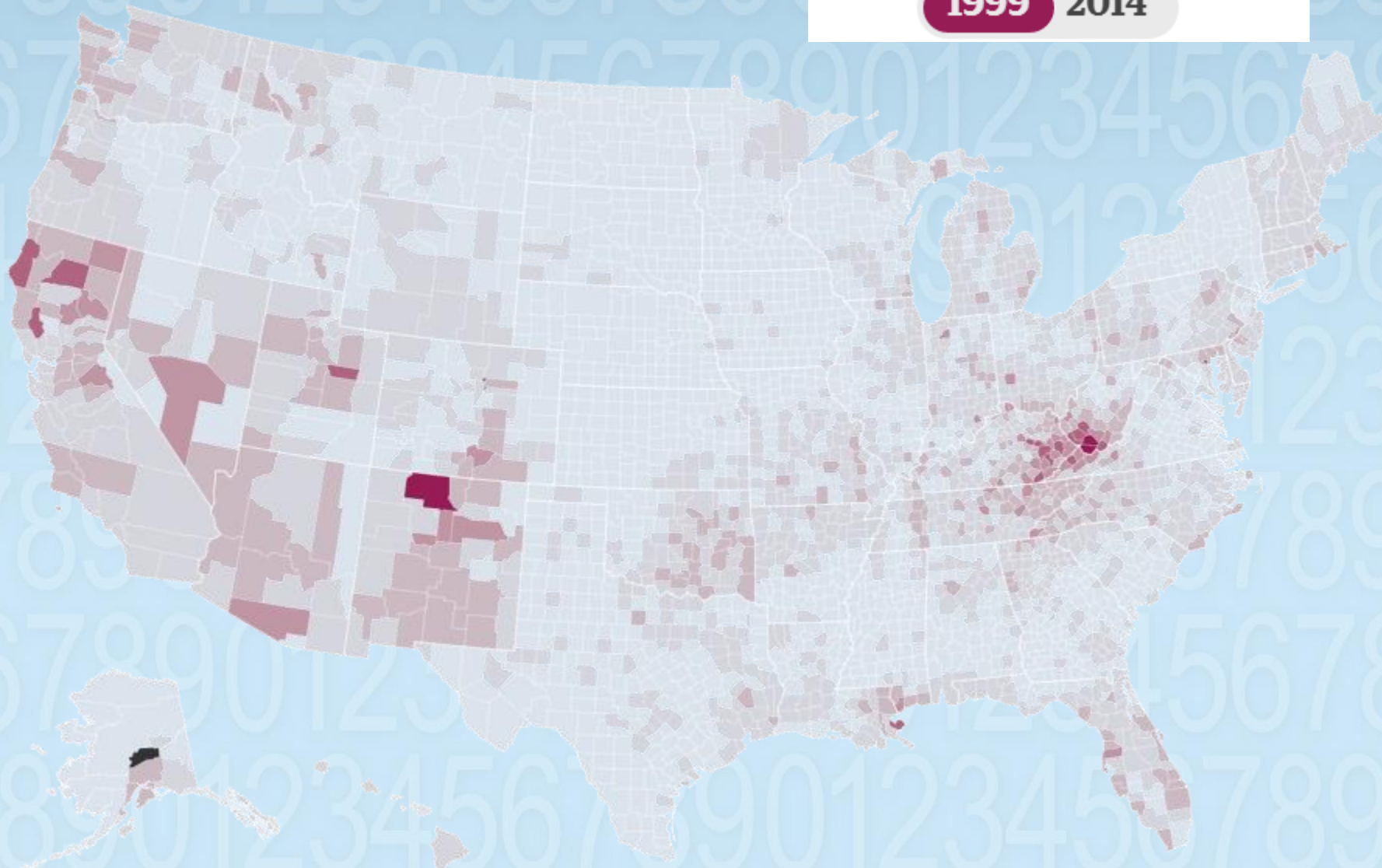
Age	2010	Absolute Change 2000 - 2010	Percentage Change 2000 - 2010
<25	104,853,555	5,416,289	5.4%
25-44	82,134,554	-2,905,697	-3.4%
45-64	81,489,445	19,536,809	31.5%
65+	40,267,984	5,276,231	15.1%
TOTAL	308,745,538	27,323,632	9.7%

The Drug Overdose Crisis in 1999

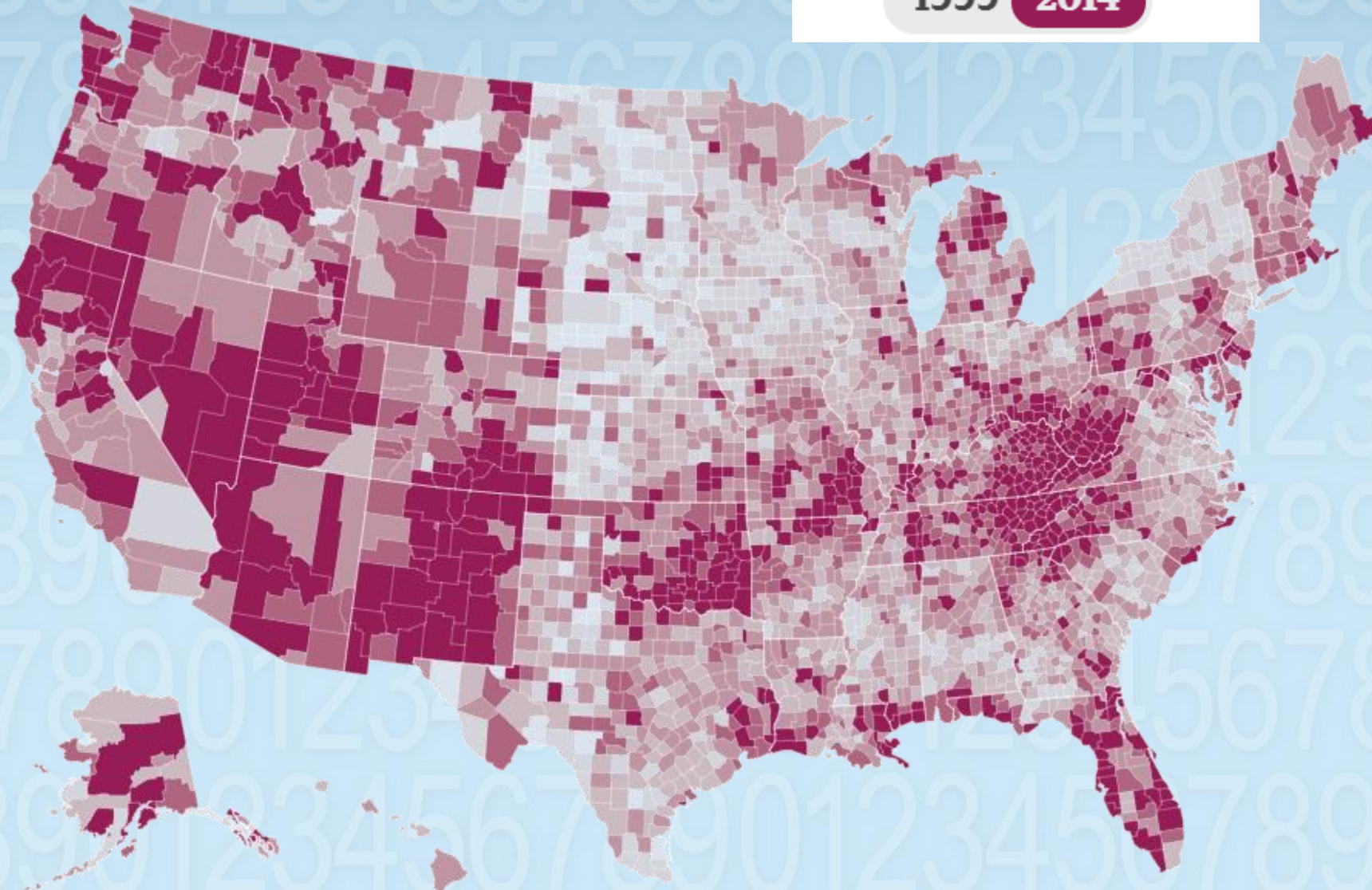
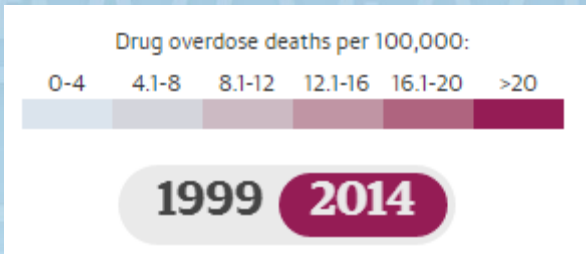
Drug overdose deaths per 100,000:



1999 2014



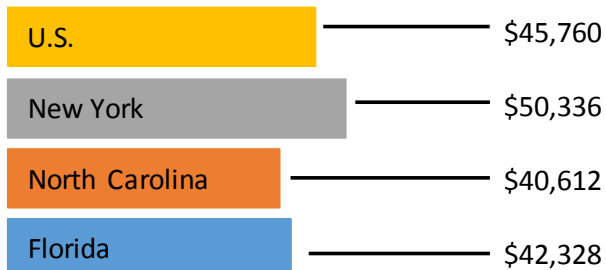
The Drug Overdose Crisis in 2014



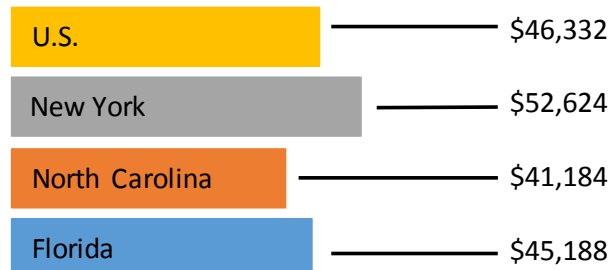
Annual Cost of Care, 2016

HOME HEALTH CARE

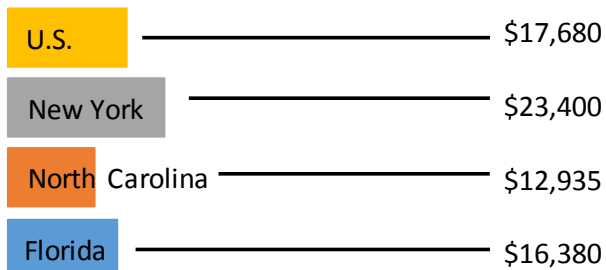
Homemaker Services



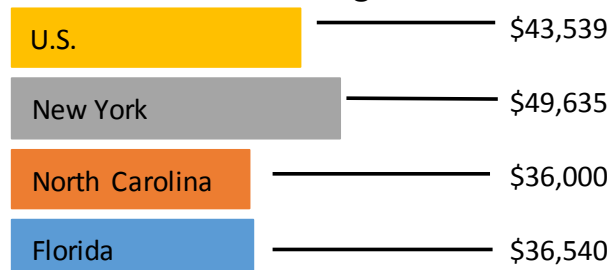
Home Health Aide



Adult Day Health Care

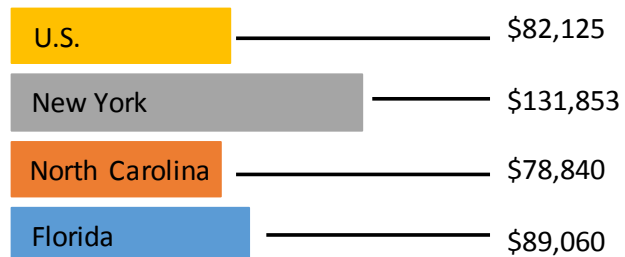


Assisted Living Facilities

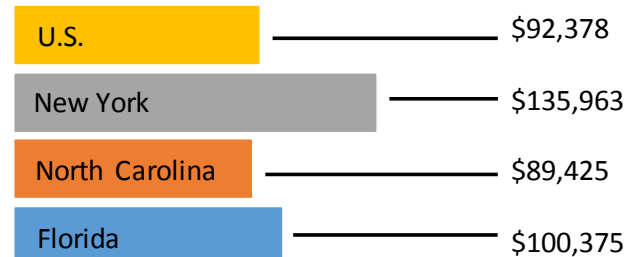


NURSING HOME CARE

Semi-Private

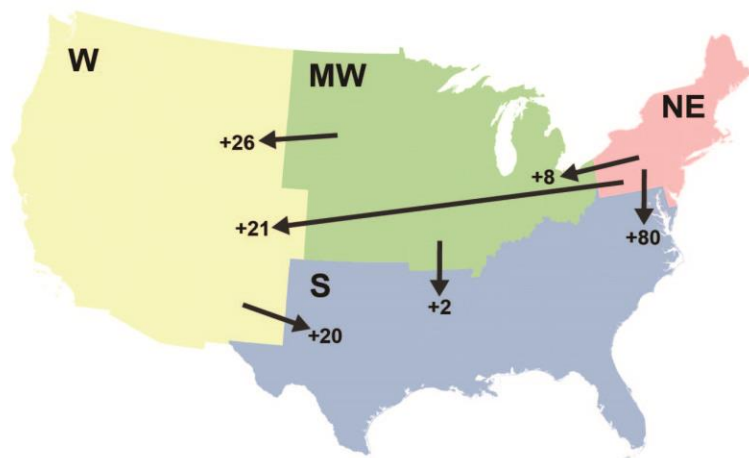


Private

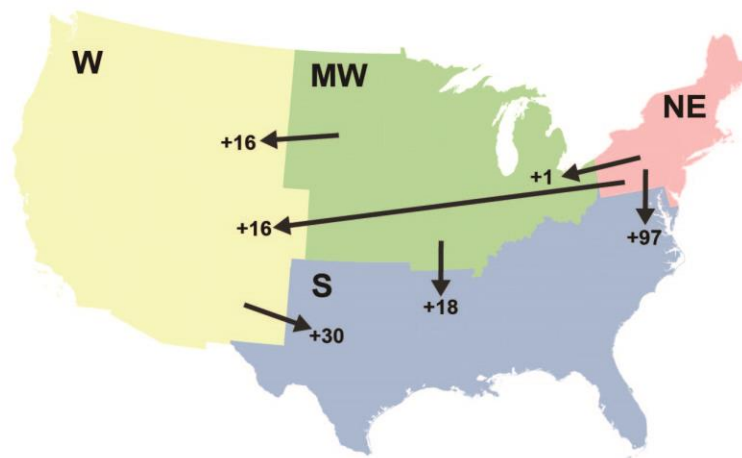


Source: Genworth 2016 Cost of Care Survey

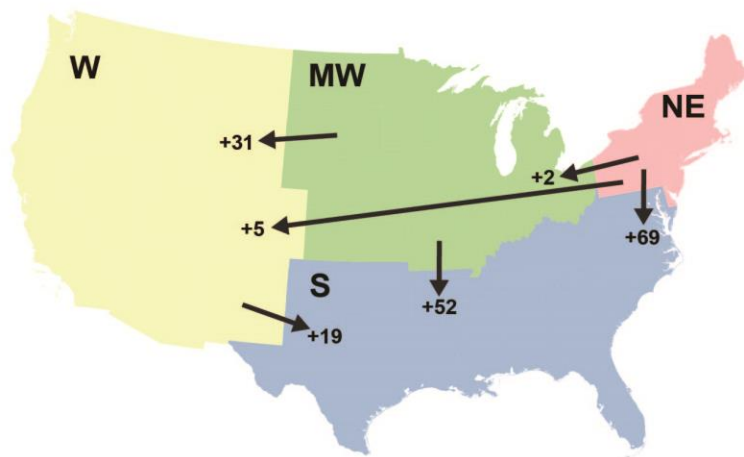
Net Regional Migration Flows of Elderly Populations



2000-2005

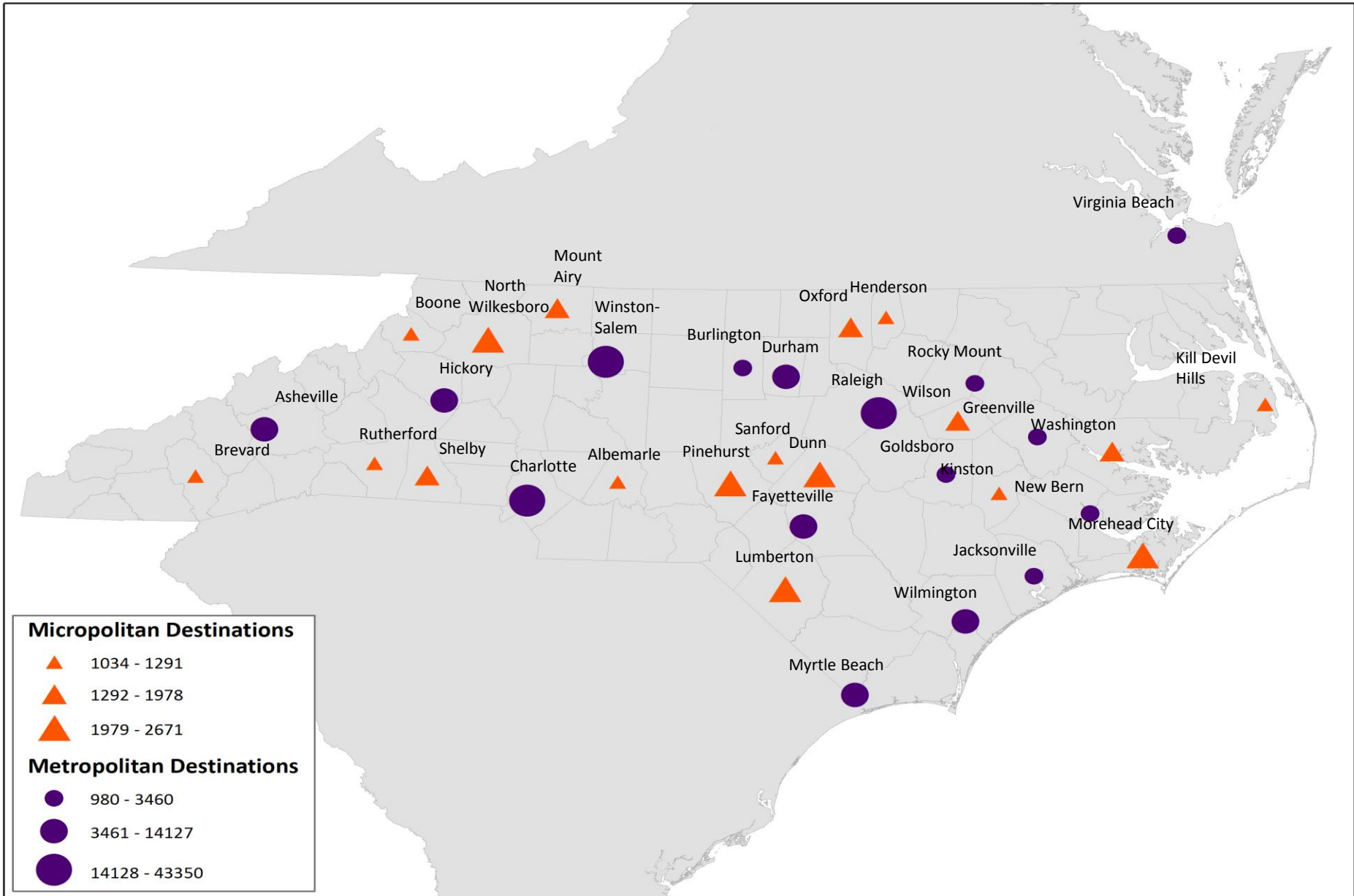


2005-2010

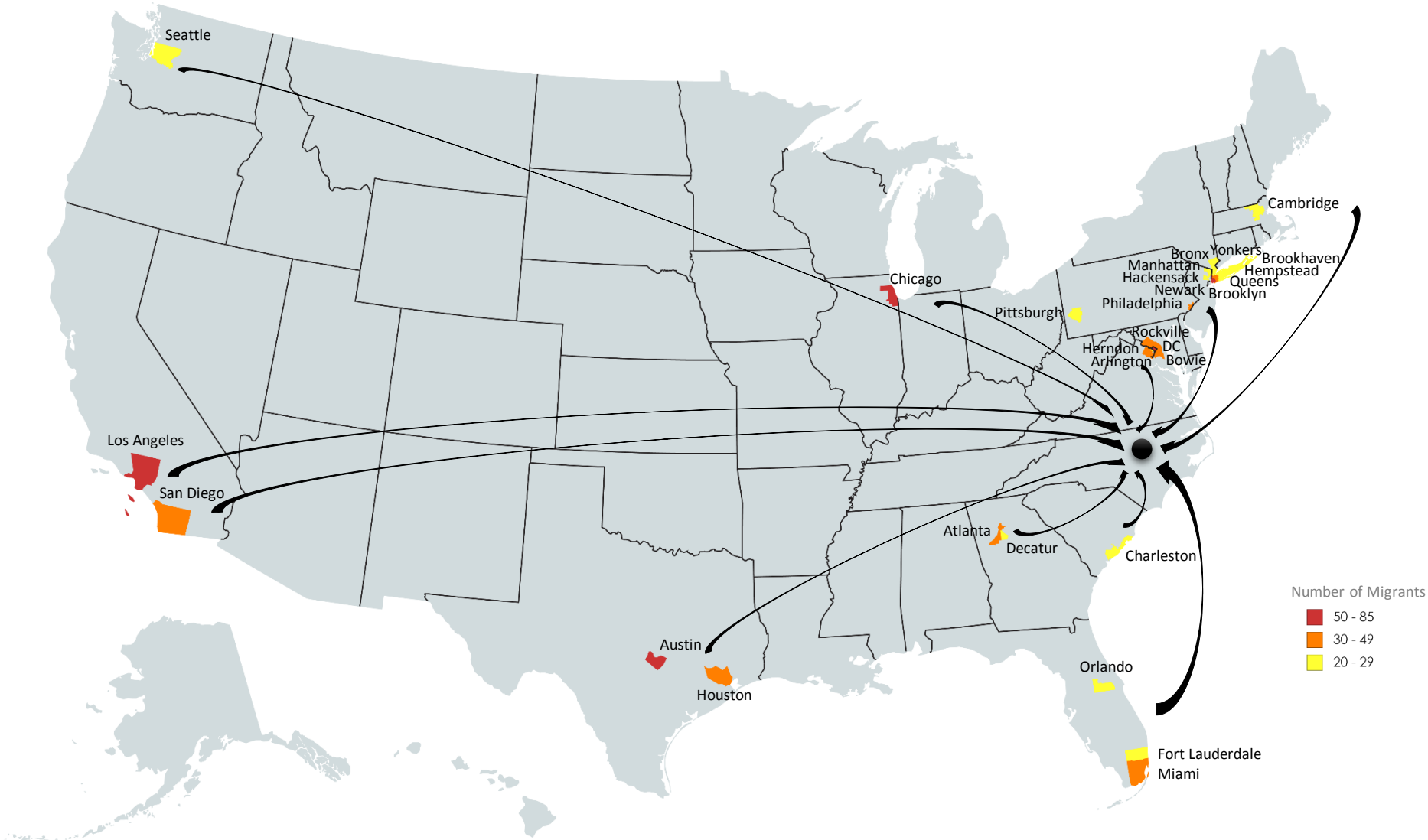


2010-2015

Metropolitan and Micropolitan Elderly Population Growth, 2010-2015

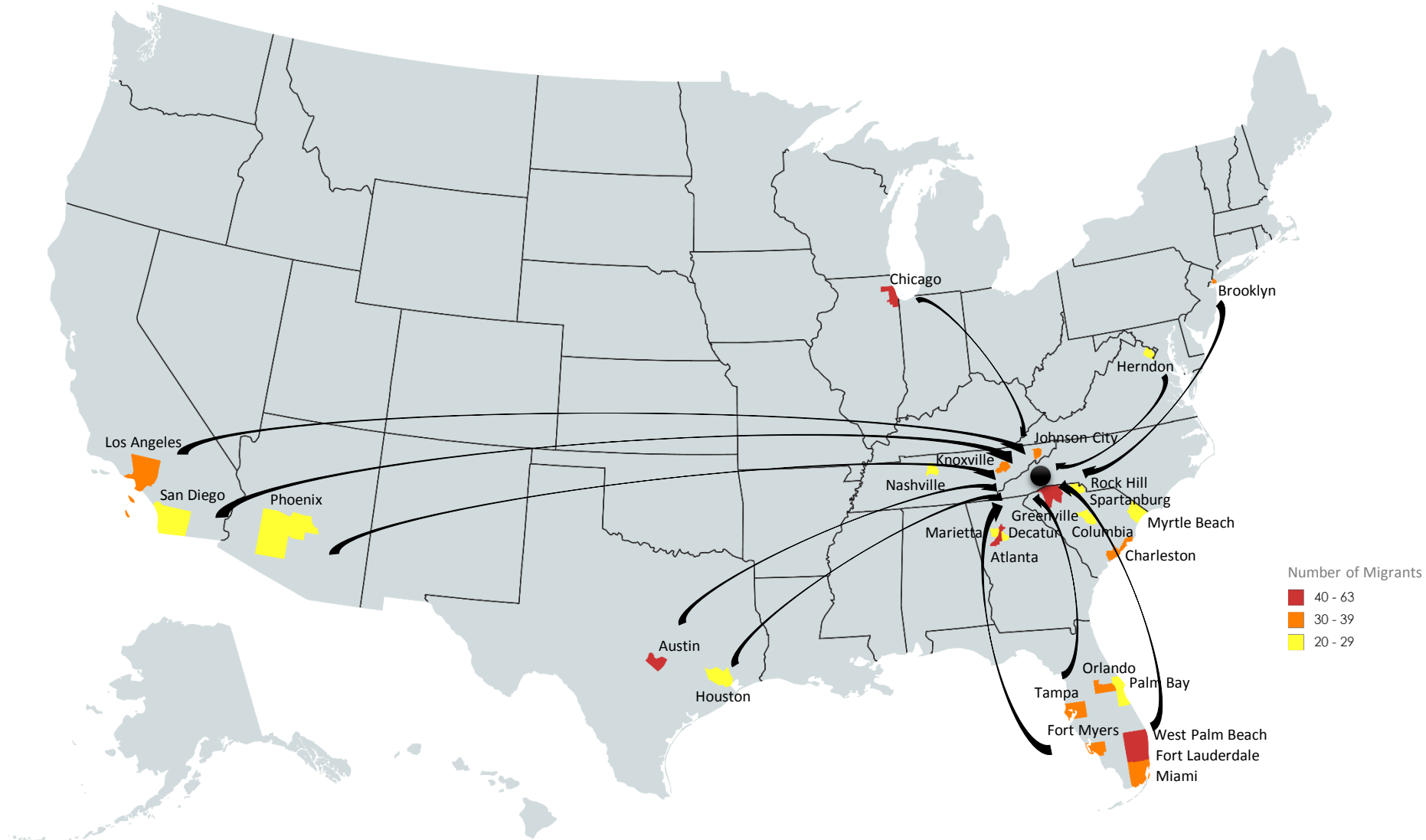


Durham County, NC In Migration Fields, 2014-2015



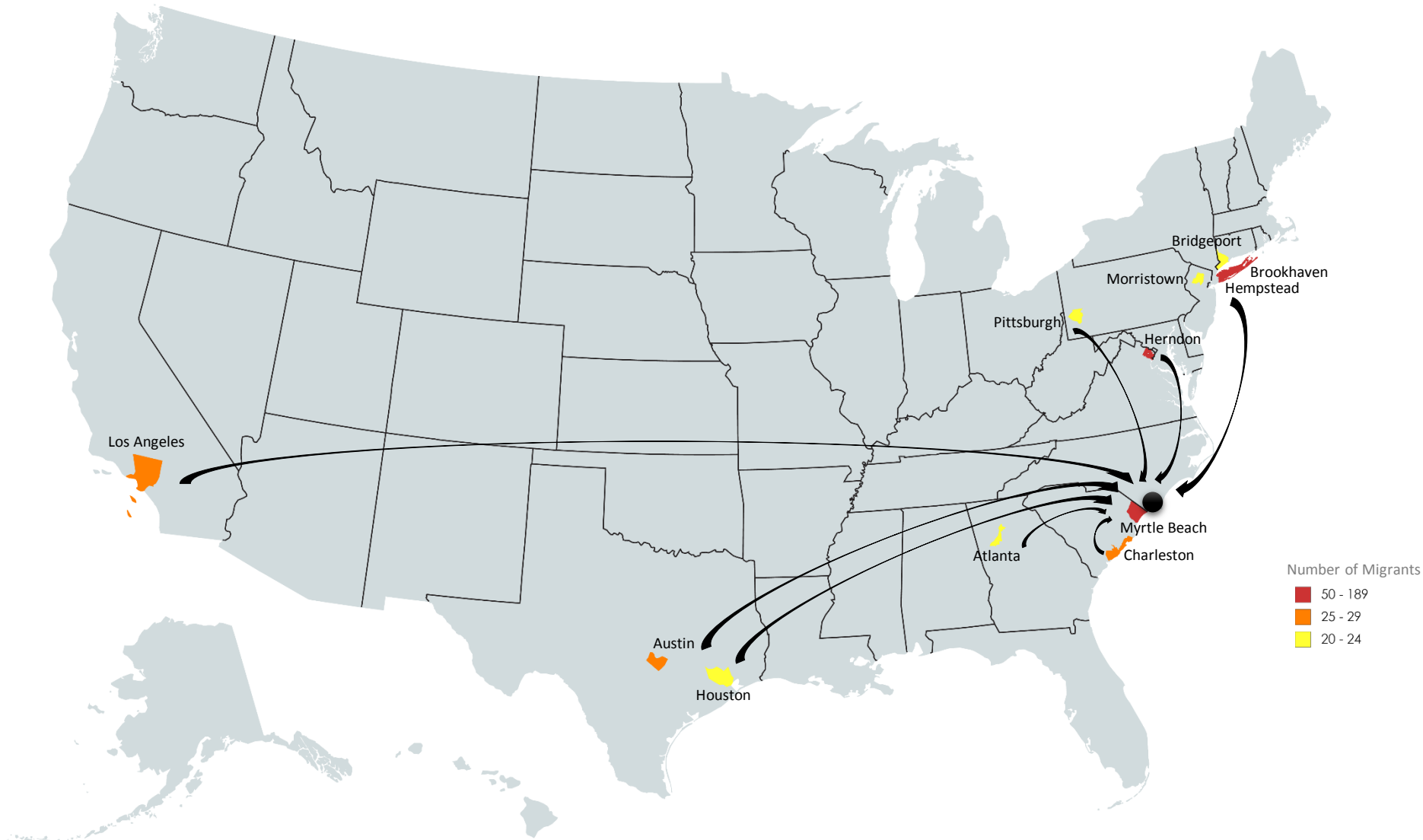
Source: IRS Migration File

Buncombe County, NC In Migration Fields, 2014-2015



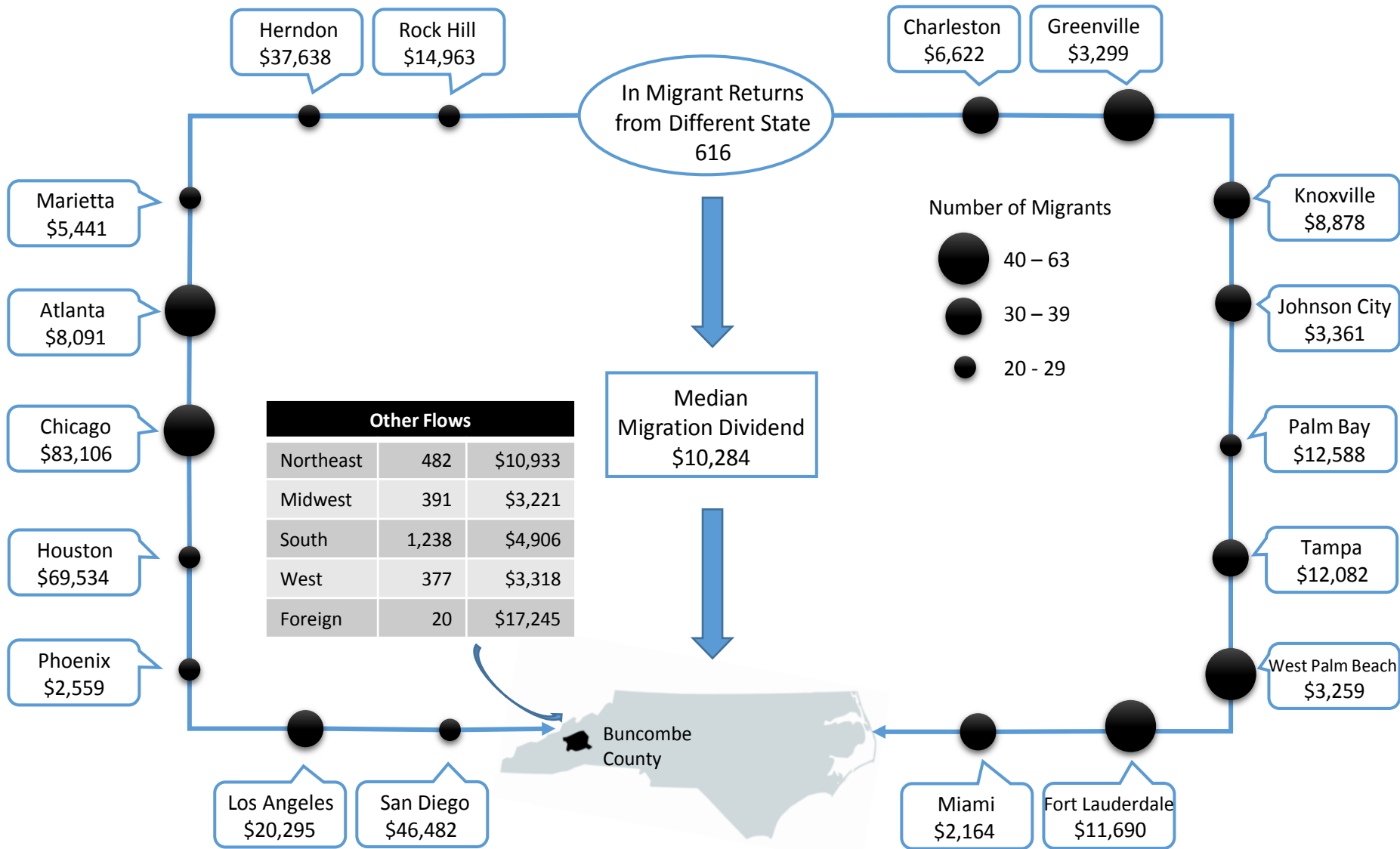
Source: IRS Migration File

New Hanover & Brunswick Counties, NC In Migration Fields, 2014-2015



Source: IRS Migration File

Geographic Origins of Migration Dividends Buncombe County, NC, 2014-2015*



*Compared to Non-migrant Per Capita AGI (\$30,612) in 2015.

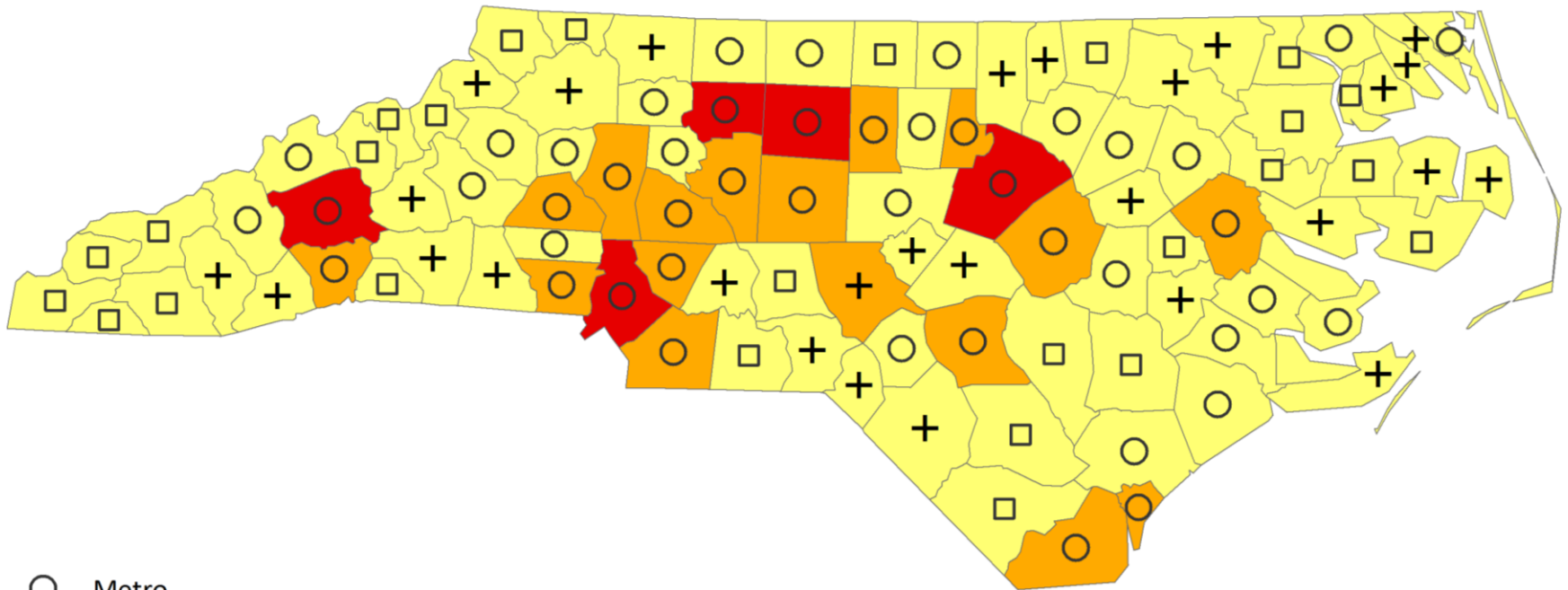
North Carolina Older Adults

Demographic Highlights

Absolute and Percent Population Change by Age, 2000-2010

Age	United States	North Carolina
All Ages	27,323,632 (9.7%)	1,486,170 (18.5%)
<25	5,416,292 (5.4%)	449,385 (16.2%)
25-44	-2,905,697 (-3.4%)	73,209 (2.9%)
45-64	19,536,809 (31.5%)	698,545 (38.6%)
65+	5,276,231 (15.1%)	265,031 (27.3%)

Absolute Number of Elderly by County, NC, 2015



○ Metro

+ Micro

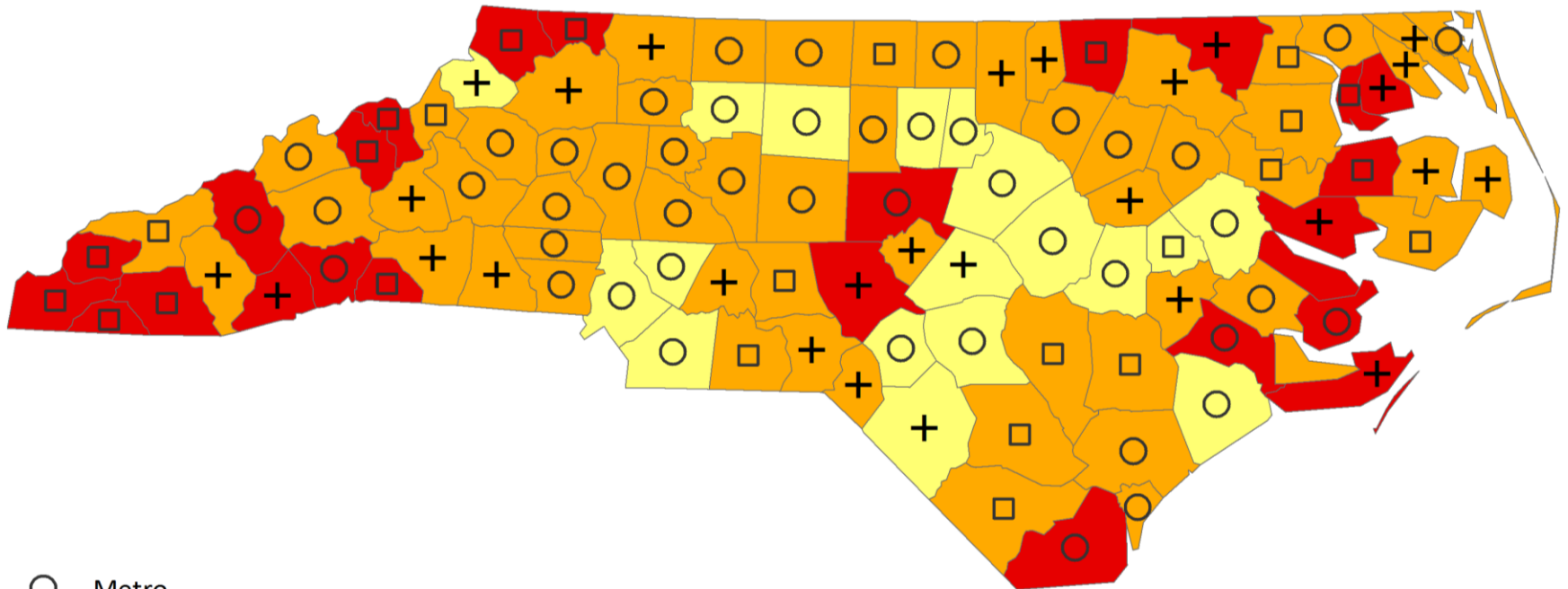
□ Rural

Primary Elderly Concentration (43138 - 96111)

Secondary Elderly Concentration (19105 - 33937)

Tertiary Elderly Concentration (804 - 17343)

Percent Elderly by County, NC, 2015



○ Metro

+ Micro

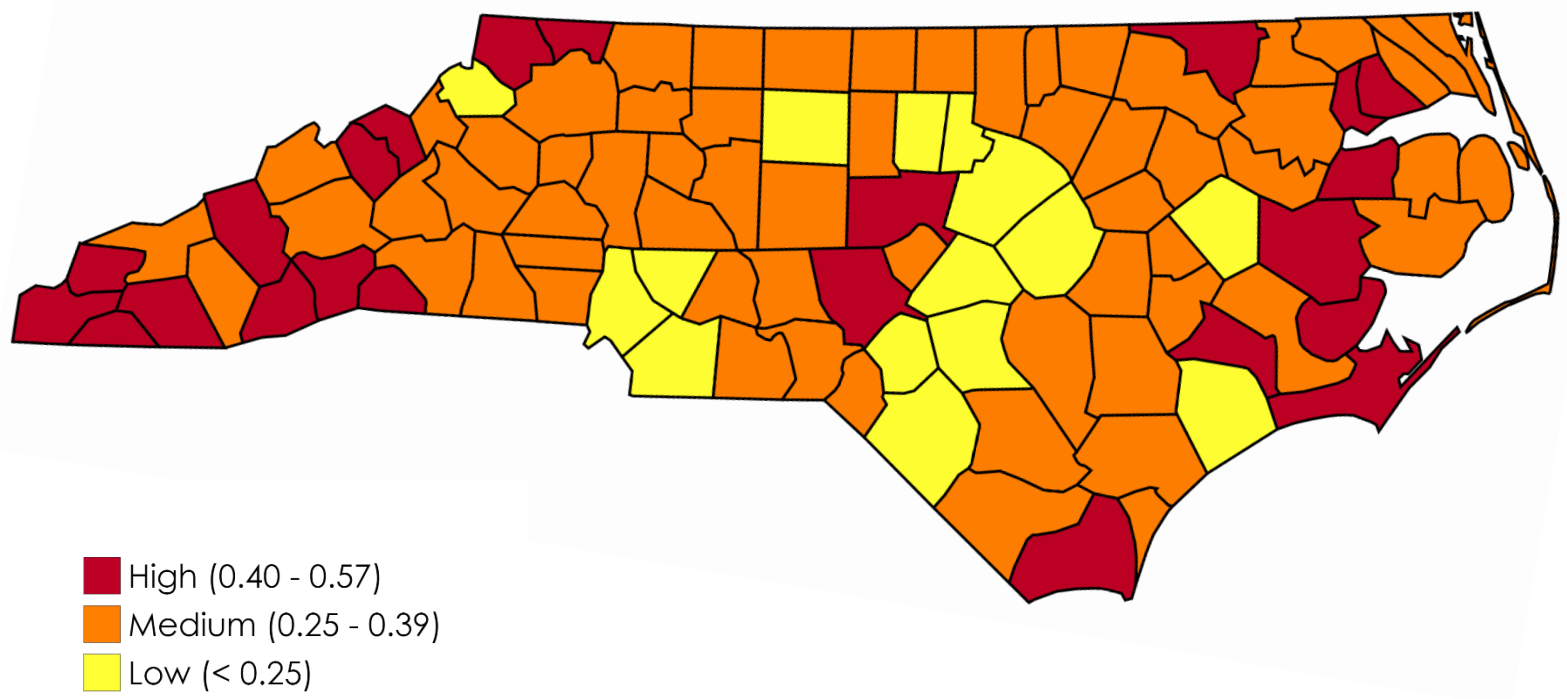
□ Rural

High (>20%)

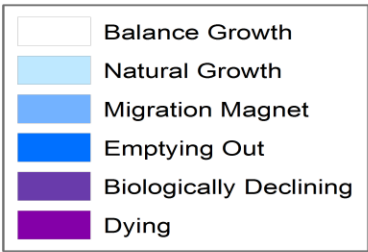
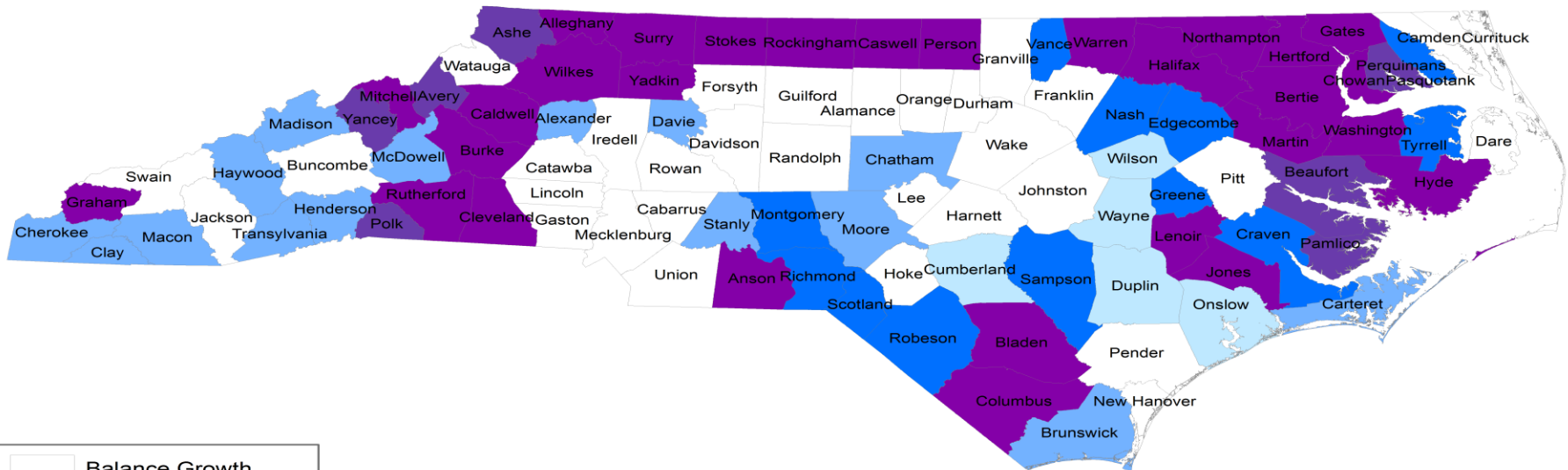
Above Average (14% - 20%)

Below Average (<14%)

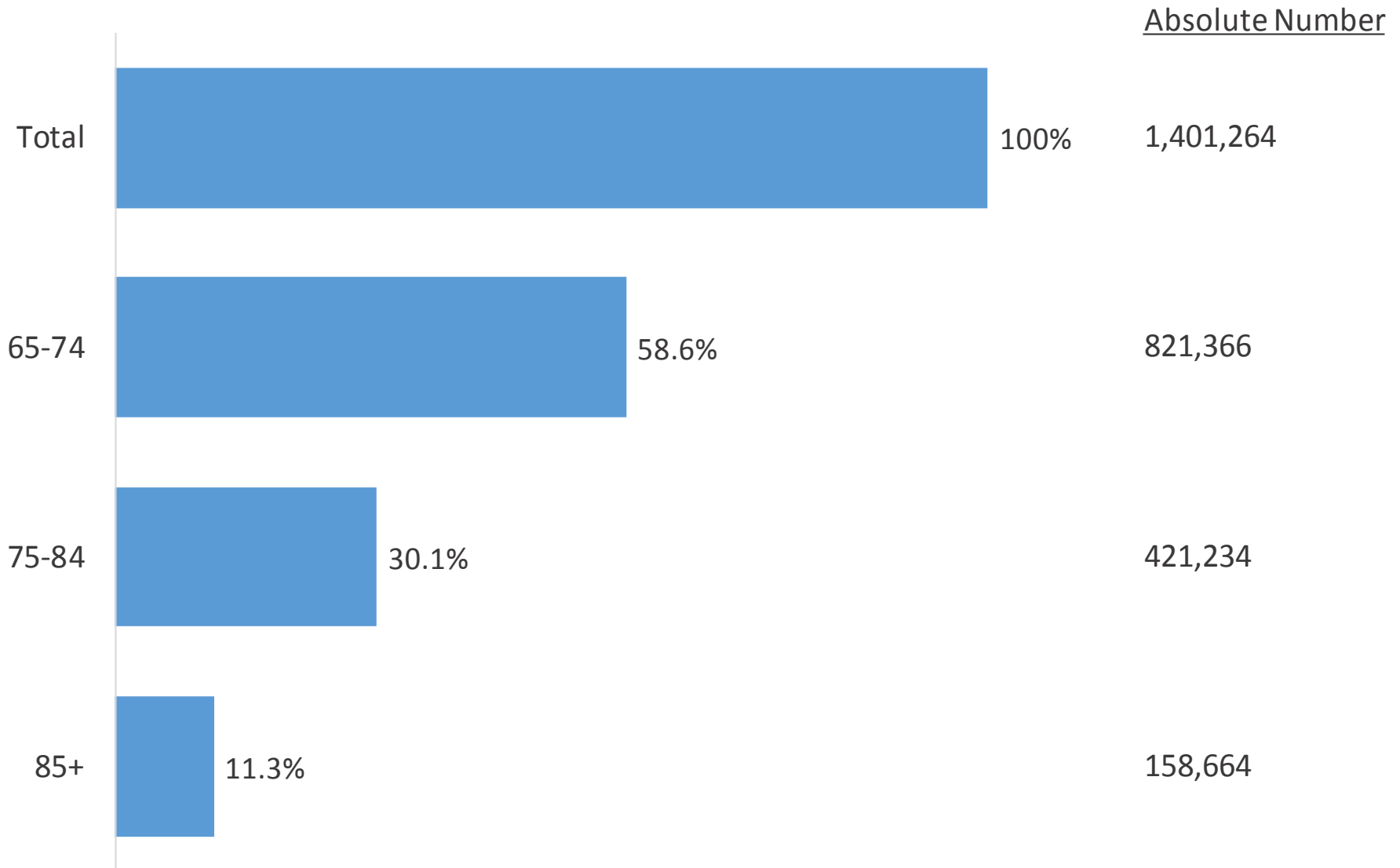
Old Age Dependency Ratios by County, NC, 2016



Typology of North Carolina Counties, 2016



NC Elderly Population by Age



NC Elderly Population by Gender

Absolute Number

All

100%

1,401,264

Male

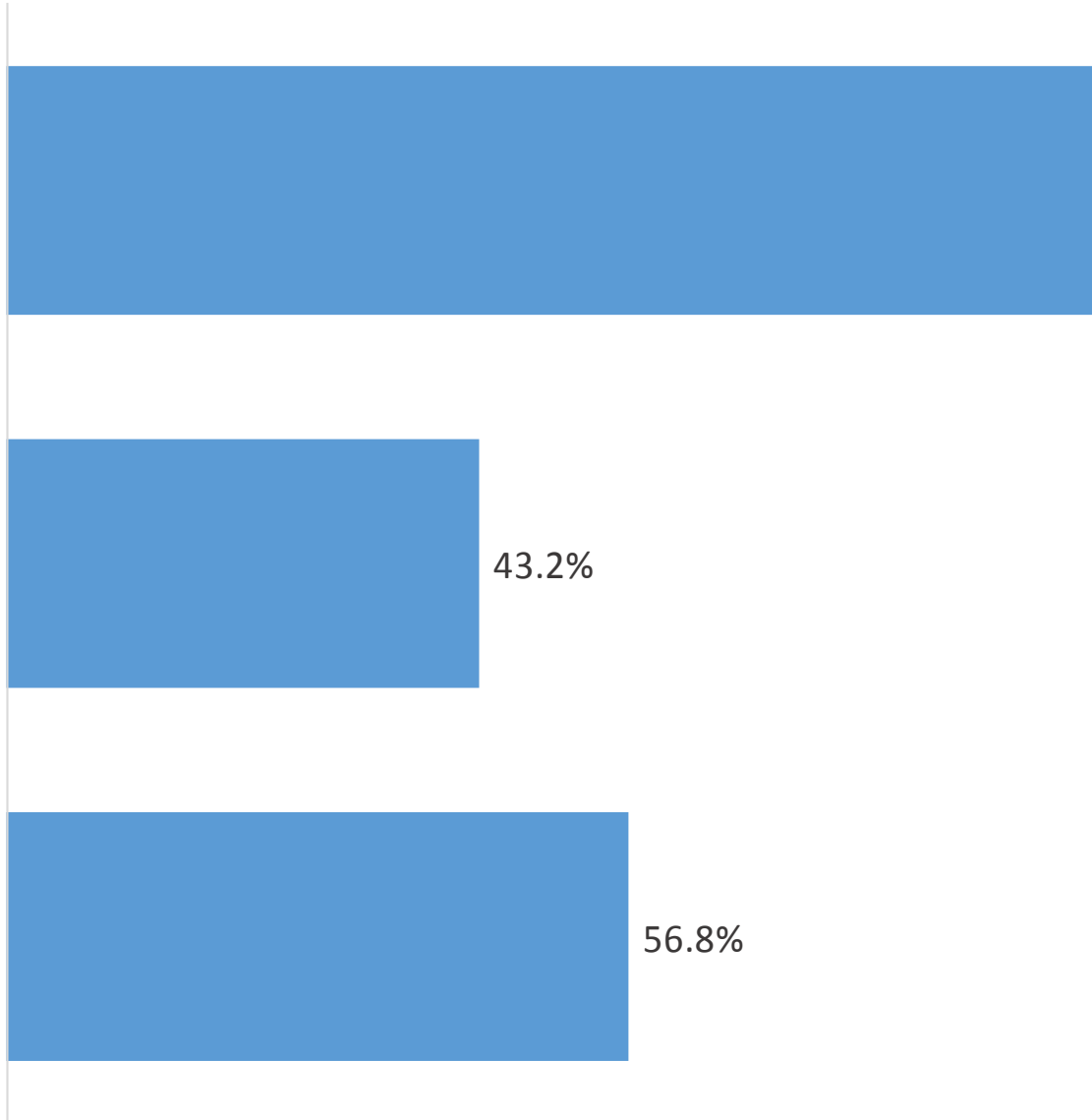
43.2%

604,881

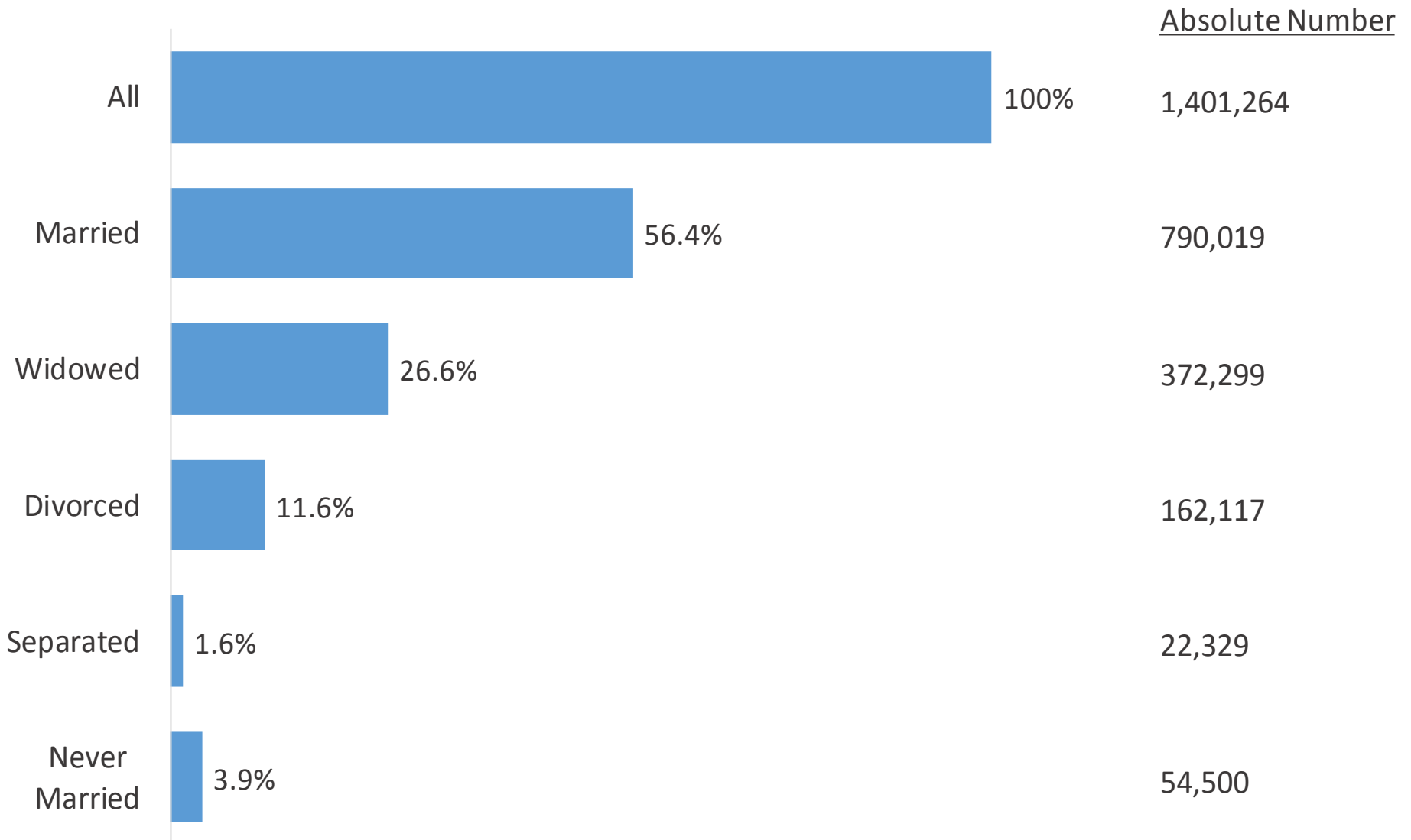
Female

56.8%

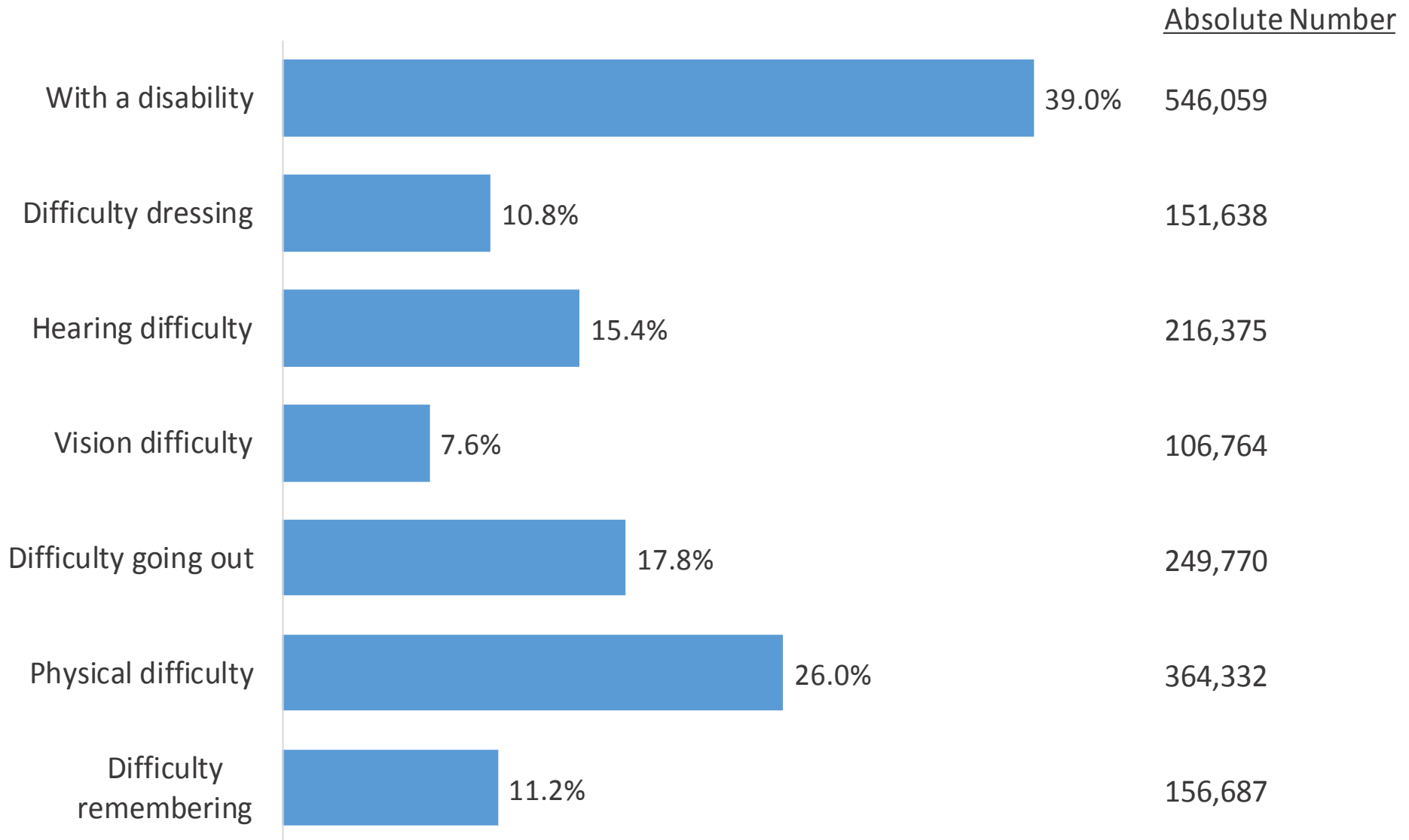
796,383



NC Elderly Population by Marital Status

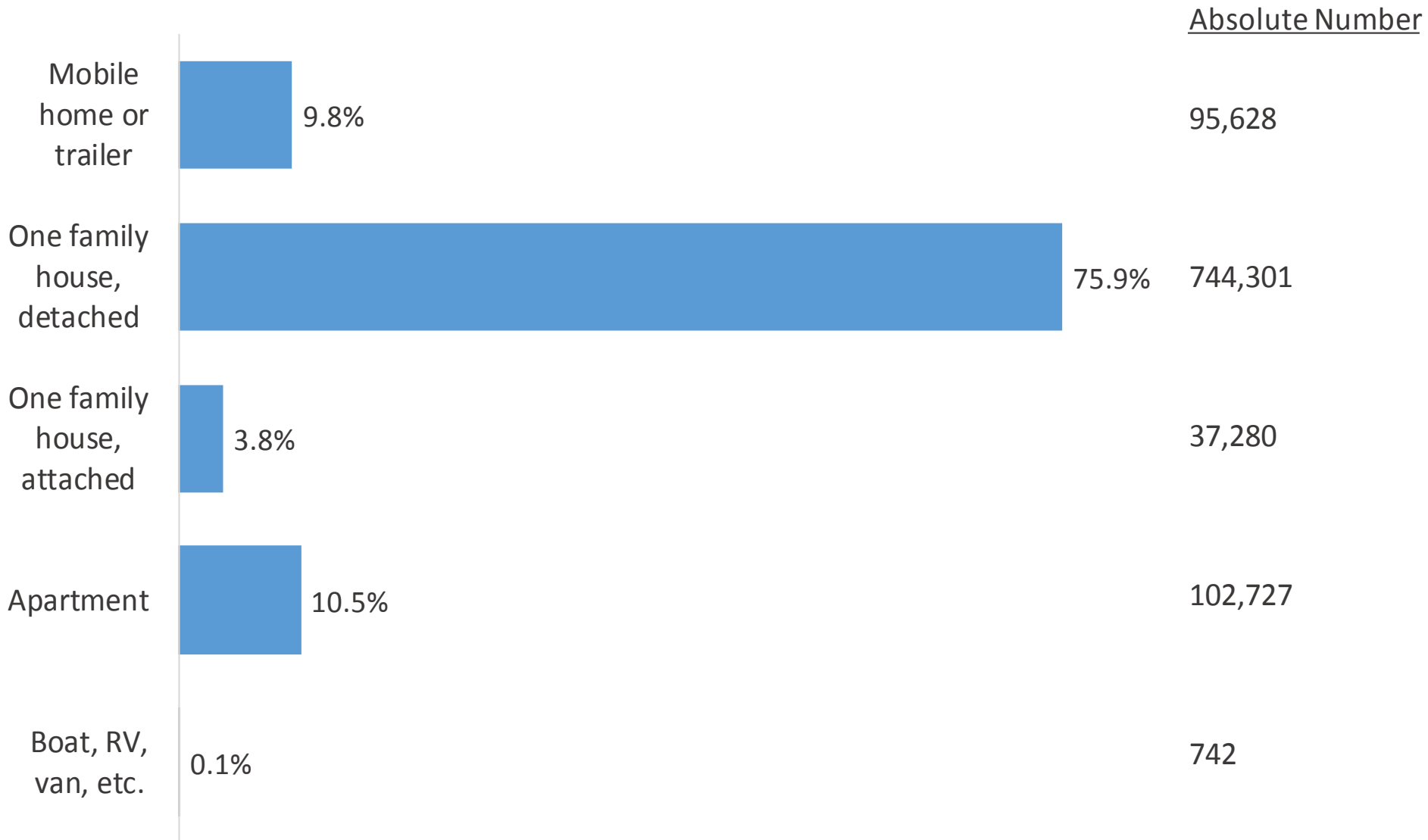


NC Elderly Population by Mobility Constraints



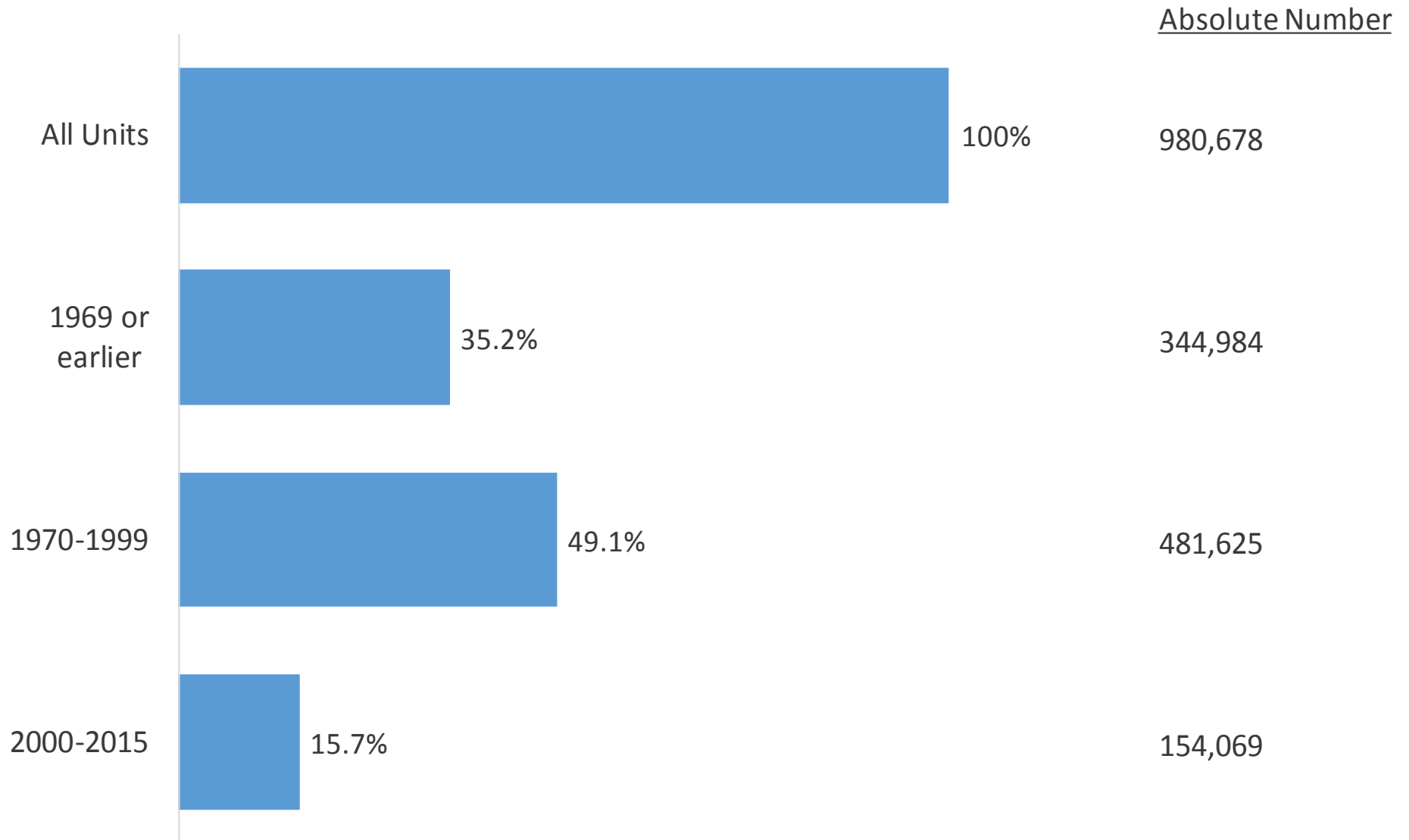
Housing of the NC Elderly Population

Number of Units by Type of Building



Housing of the NC Elderly Population

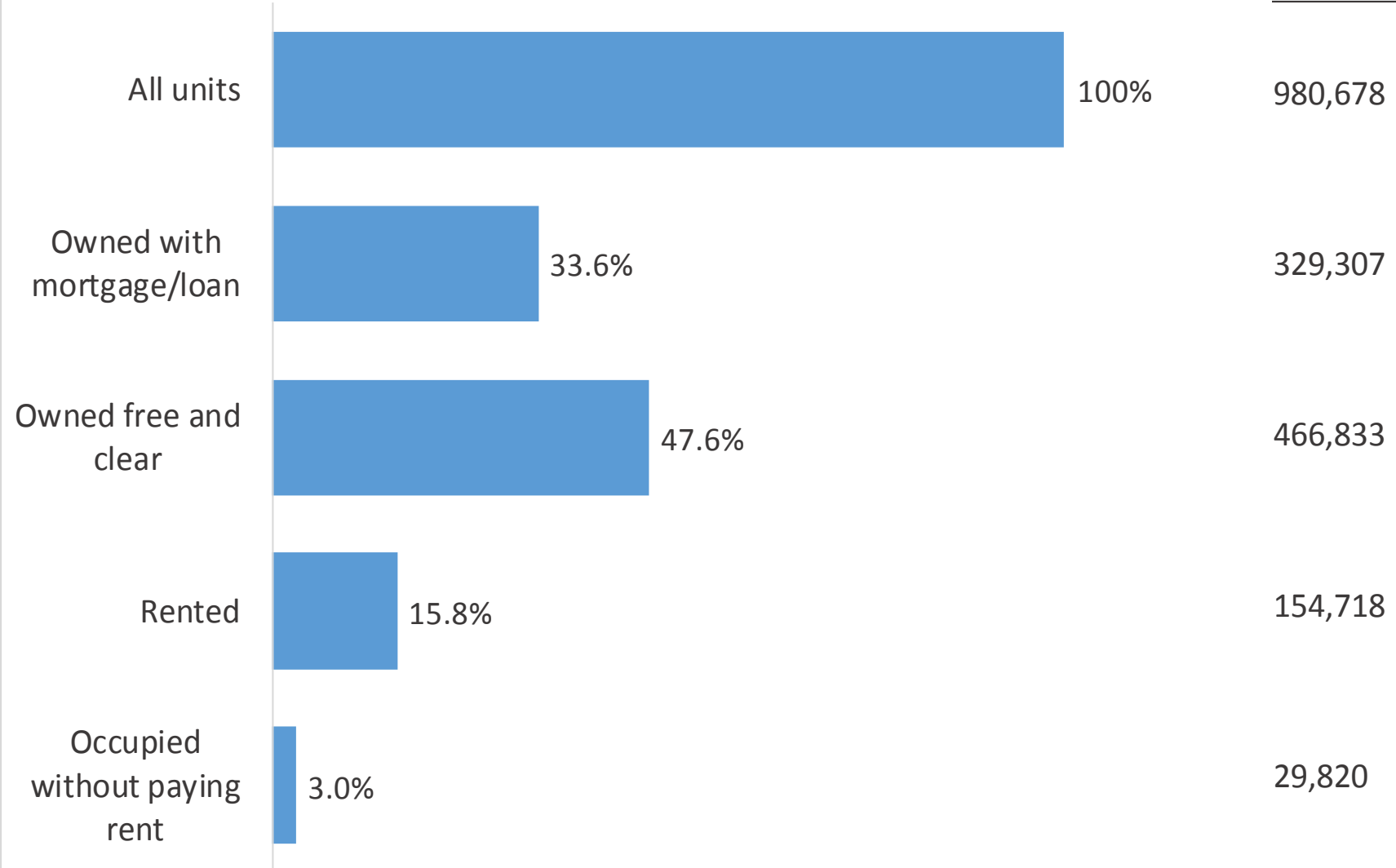
Number of Units by Year Structure Built



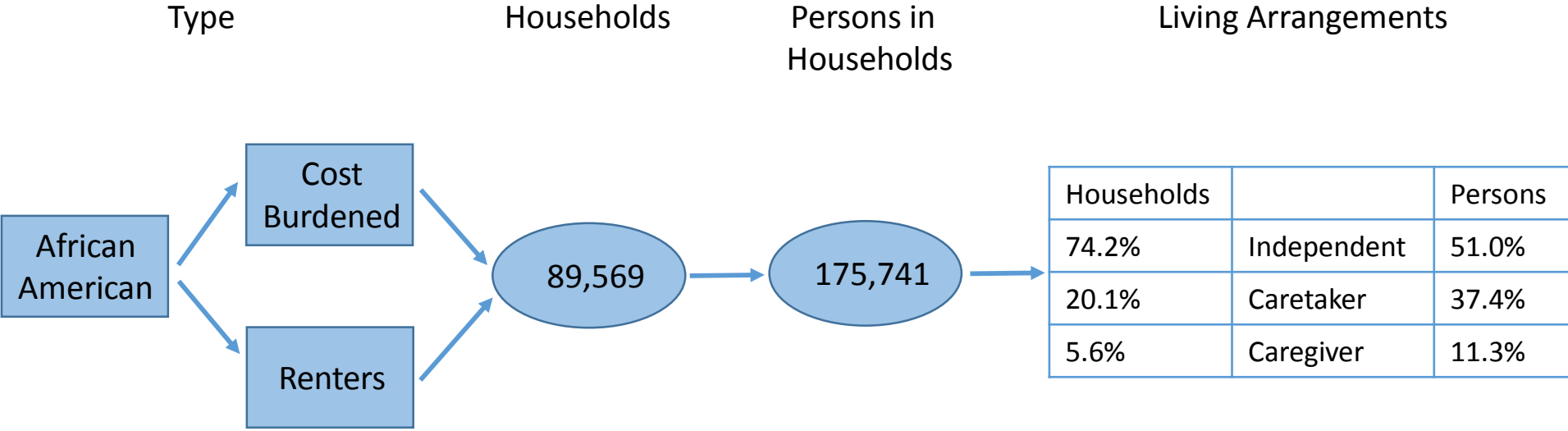
Housing of the NC Elderly Population

Number of Units by Tenure

Absolute Number



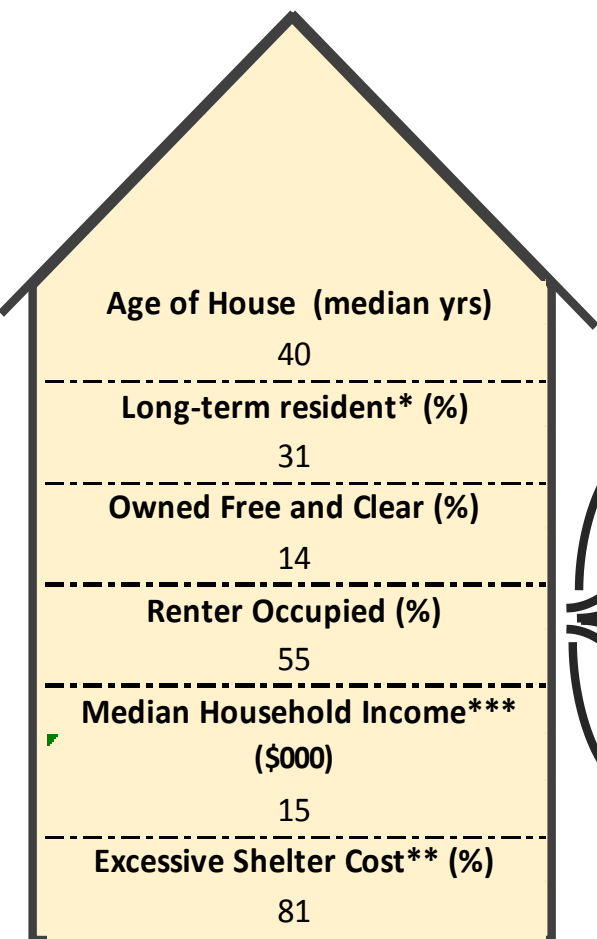
Households with Greatest Barriers to Aging in Place, North Carolina, 2011-2015



Source: American Community Survey, PUMS, 2011-2015

Vulnerable Older Adults in Independent Living Arrangements

Number of Households: 66,496
Population in Households: 89,637



	White (%)	Median Age	Female (%)	Disability Count	Personal Income*** (\$000)	Medical Insurance (%)	Medicaid Coverage (%)
Householder (74%)	0	71	62	1.0	13	98	33
Spouse (15%)	0	68	62	0.8	12	98	18
Other Relative (3.2%)	0	53	54	0.7	6	79	38
Sibling (2.2%)	0	67	41	1.3	10	86	44
Non-Family (1.7%)	0	61	34	0.9	10	88	58
Partner (1.3%)	0	66	59	0.7	10	81	36
Roomer (2.1%)	0	65	43	1.2	9	88	52

Data source: ACS, PUMS, 2011-2015

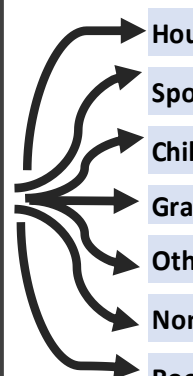
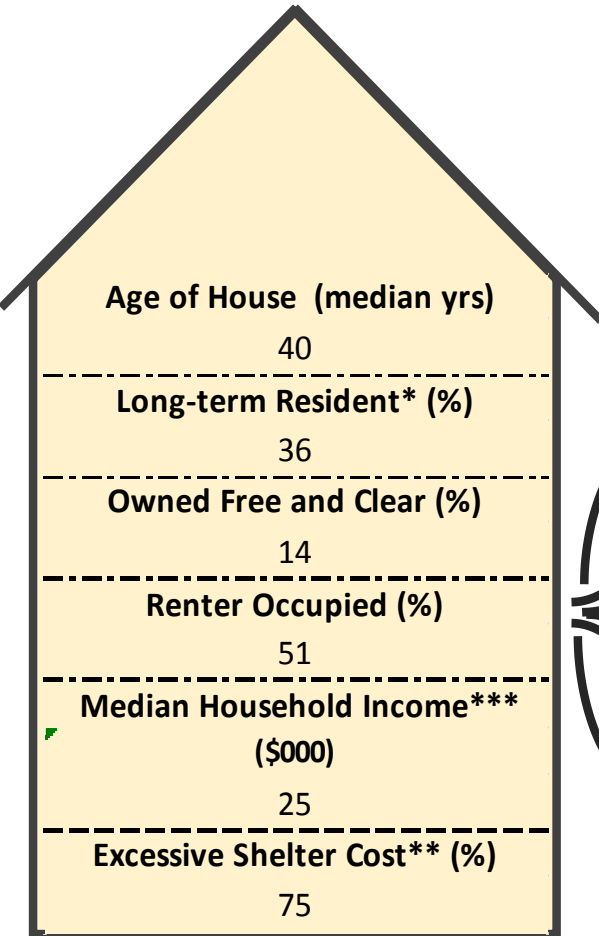
*Lived in house 20+ years

**More than 30% of household income spent on selected monthly owner costs

***2015 dollars

Vulnerable Older Adults in Caretaker Living Arrangements

Number of Households: 18,026
Population in Households: 65,770



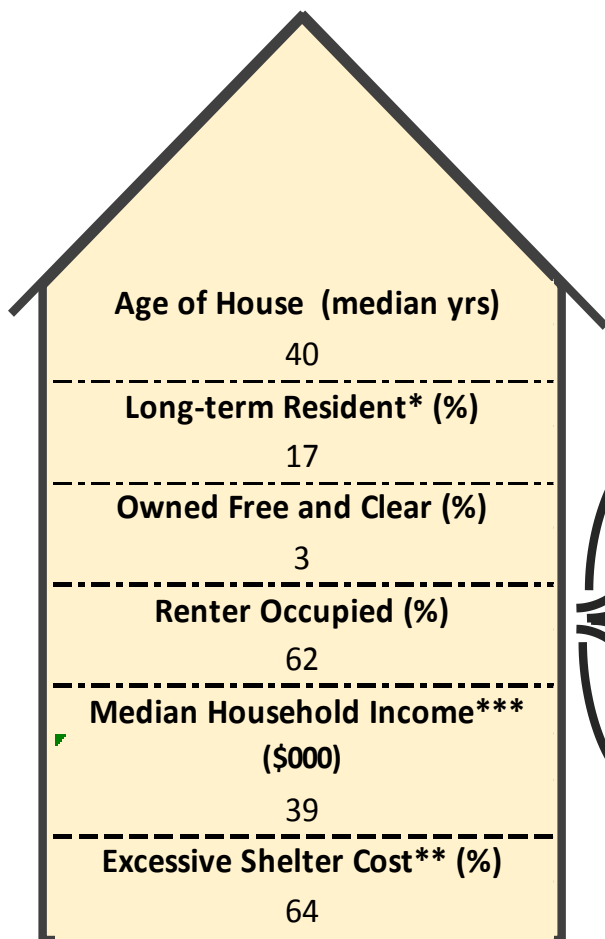
	White (%)	Median Age	Female (%)	Disability Count	Personal Income*** (\$000)	Medical Insurance (%)	Medicaid Coverage (%)
Householder (27%)	0	70	75	1.1	13	98	3
Spouse (7.3%)	0	67	59	1.0	12	94	2
Child (34%)	0	45	46	0.6	6	65	3
Grandchild (25%)	0	18	47	0.2	0	73	5
Other Relative (3.1%)	0	23	62	0.7	0.5	89	6
Non-Family (0.7%)	0	44	45	1.0	8	73	4
Roomer (0.5%)	0	64	38	0.9	8	61	3

Data source: ACS, PUMS, 2011-2015

*Lived in house 20+ years
**More than 30% of household income spent on selected monthly owner costs
***2015 dollars

Vulnerable Older Adults in Caregiver Living Arrangements

Number of Households: 5,047
Population in Households: 19,839



	White (%)	Median Age	Female (%)	Disability Count	Personal Income*** (\$000)	Medical Insurance (%)	Medicaid Coverage (%)
Householder (25%)	0	50	69	0.4	19	77	20
Spouse (5.1%)	0	53	55	0.1	12	78	10
Child (22%)	0	16	42	0.2	0	82	48
Grandchild (2.1%)	0	10	56	0.0	0	78	78
Parent (35%)	0	76	81	1.9	10	97	45
Sibling (4.8%)	0	48	46	0.4	18	53	10
Other Relative (3.8%)	0	21	38	0.3	0.3	80	37

Data source: ACS, PUMS, 2011-2015

*Lived in house 20+ years

**More than 30% of household income spent on selected monthly owner costs

***2015 dollars

Business Implications

Aging as an Economic Driver

The BIG Opportunity I

The Aging Boomer Market

**A \$15 Trillion Prize
Globally**

Bloomberg BusinessWeek

The Silver Shopper

“You’d have to be an idiot to turn your back on this humongous growth market”

Jody Holtzman

AARP

**Boomers will redefine what
it means to be old**

Remember

- “The majority of Baby Boomers work and play little different from those in their 40s. They’re not obsessing over arthritis, incontinence, and dementia.”

Boomers Defined

- More are working past 65
- More likely to purchase a car today than other generations.
- Watch significantly more TV than Millennials.
- More than half are on Facebook
- Major consumers of Apple's products

Boomers Defined Cont'd.

- AARP has started an over 50 model search.
- Amazon.com has launched a website dedicated to customers over 50.
- 63% of Americans plan to work during retirement.

The Aging Consumer Paradox

- Seniors don't like to be singled out and reminded that they are old.
- The company that does a great job of making products for seniors takes great pains not to make products for seniors.

The Big Opportunity II

Encore Entrepreneurship

Fifty is the New 20

- One quarter of 44-70+ population interested in becoming entrepreneurs.
- Americans 55-64 start new business ventures at a higher rate than any other group, including 20 somethings.
- 23% of new entrepreneurs were age 55-64 in 2010, up from 14% in 1996.

Fifty is the New 20 Cont'd

- 50% of businesses started by 50+ entrepreneurs still operating 5 years later.
- Encore Entrepreneurs alleged to have:
Double E-SP: Experience, Expertise,
Seasoned Judgement & Proven
Performance.

Pathways to Encore Entrepreneurship

- Great Recession
- Economic Globalization & Emergence of “GiG” Economy
- Unfulfilled Dreams
- Unanticipated Crises
- Caregiver & Childcare Responsibilities
- Affordable Care Act
- Boredom

Desire to Have Social Impact

- Social Services 37%
- Poverty Alleviation 28%
- At Risk Youth 24%
- Economic Development 24%
- Health Care 24%
- The Environment 19%
- Human Rights/Social Justice 18%

The BIG Opportunity III

- How do we help seniors age gracefully in their homes and their communities?
- That is, how to help them age in place and keep them out of hospital emergency rooms, expensive nursing homes, and long term care facilities?
- What role can digital technologies play in healthy aging?

Age-Related Challenges

- Mobility Limitations
- Hearing Loss
- Vision Impairments
- Mental Disorders
- Substance Abuse Issues
- Chronic Disabilities
- Economic Constraints

The Triple Whammy

- Aging Boomers Face Mortality
- Elder Care Responsibilities
- Raising Grandchildren

THE KFBS/GILLINGS ELDER CARE ECONOMY INNOVATIONS HUB

Fostering & Facilitating Success Aging in Place Ventures

- Person- Centered
- Built-Environment Centered
- Data Analytics

Scholar & Practitioner Network

- Noel Greis
- Rick Wysk
- Helen Huang
- Gregory Sawicki
- Monica Nogueira

Aging in Place Clearinghouse

- White Papers
- Policy Briefs
- Business Plans
- Workshops
- Conferences

UNC Kenan Institute of Private Enterprise

UNC Institute on Aging Center for Aging & Health Center for Health Equity

UNC Biomedical Engineering Nursing Audiology Pharmacy Social Work

University of Cambridge Newcastle University

AARP NC LeadingAge NC Carol Woods Retirement Community

MIT AgeLab Universal Design Institute Active Living by Design

Leadership Team

James Johnson Peggye Dilworth Anderson Jan Busby-Whitehead
Nancy Allbritton • Carol Brayne • Joe Coughlin • Giselle Corbie-Smith

Research and Demonstration Projects

Mobilizing Collective Ambition

Leveraging Intellectual Capital

New Venture Creation Lab

Social Innovation Fund

Digital Health Entrepreneurs

Digital Literacy

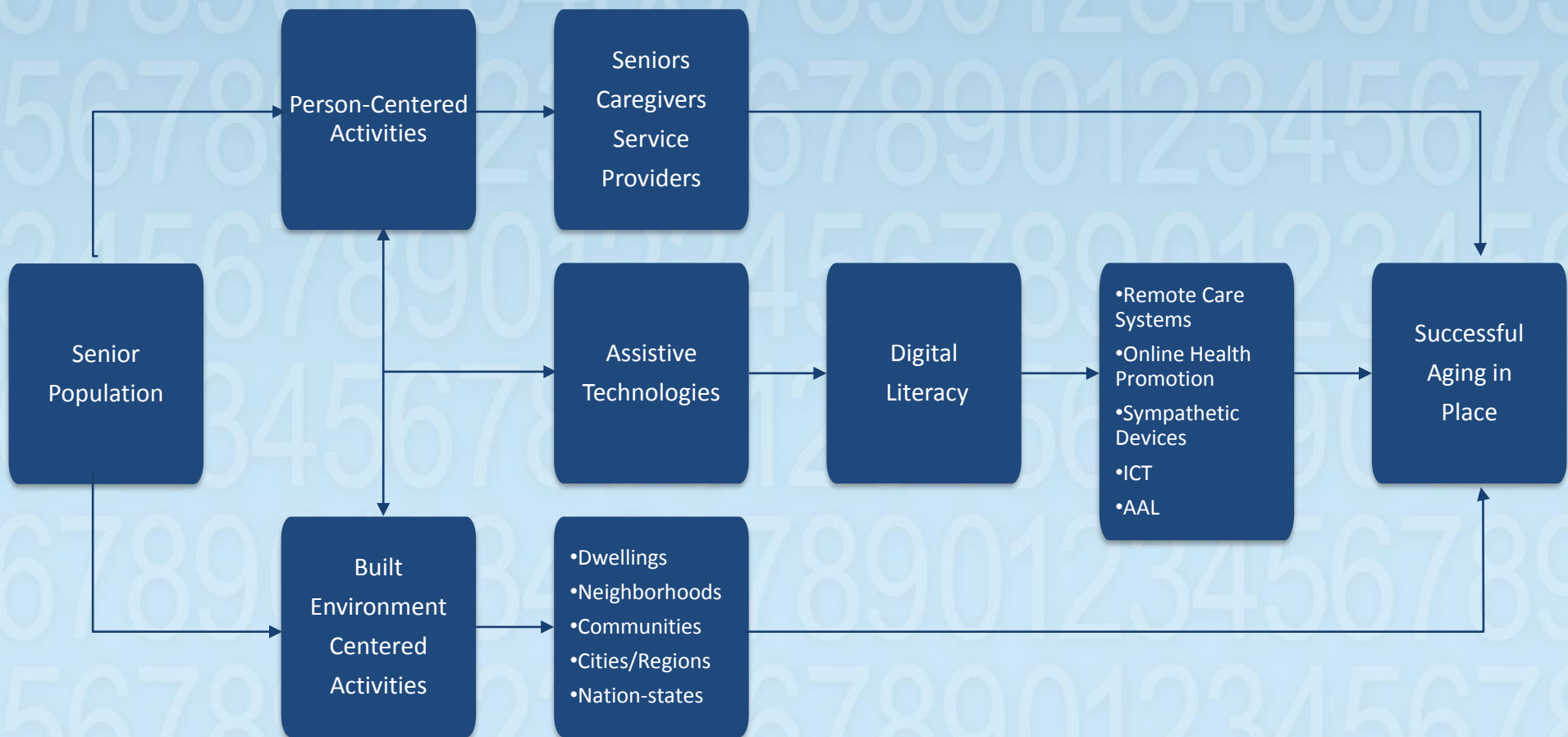
Succession Planning

Research Fellows Initiative for Emerging Scholars and Practitioners

Evaluation

Assessing Progress and Building the Research & Evidence Base

AGING IN PLACE RESEARCH FRAMEWORK



Aging in Place Housing Options

- Tandem Housing
- Accessory Dwelling Units
- Golden Girl Units
- Repurposed Church properties
- CCRCs Without Walls

Cost of Accidental Falls

In 2015, according to the CDC, “the cost for falls to Medicare alone totaled over \$31 billion. Because the U.S. population is aging, both the number of falls and the costs to treat injuries are likely to rise.”

CDC, 2016, Costs of Falls Among Older Adults,” available at <https://www.cdc.gov/homeandrecreationalafety/falls/fallcost.html>

Accidental Falls Cont'd

- Deadly falls among the elderly rose by a third between 2007 (18,000) and 2016 (30,000).
- Largest increase among the 85+ population.

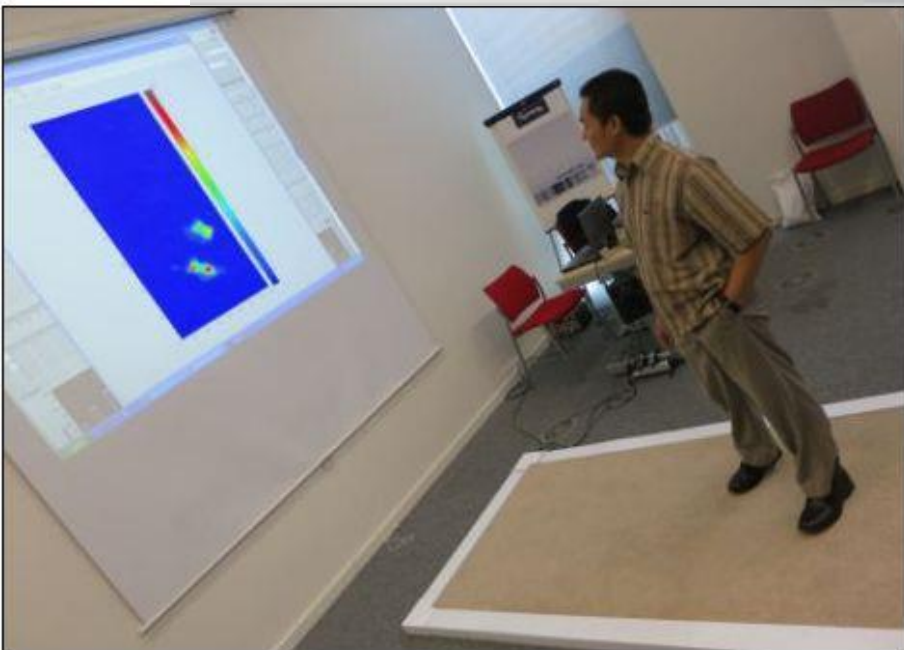
Accidental Falls Cont'd

“If deaths from falls continue at this rate, the U.S. can expect 59,000 older adult fall deaths in 2030” (CDC Report).

SMART TECHNOLOGY + BIG DATA + ANALYTICS



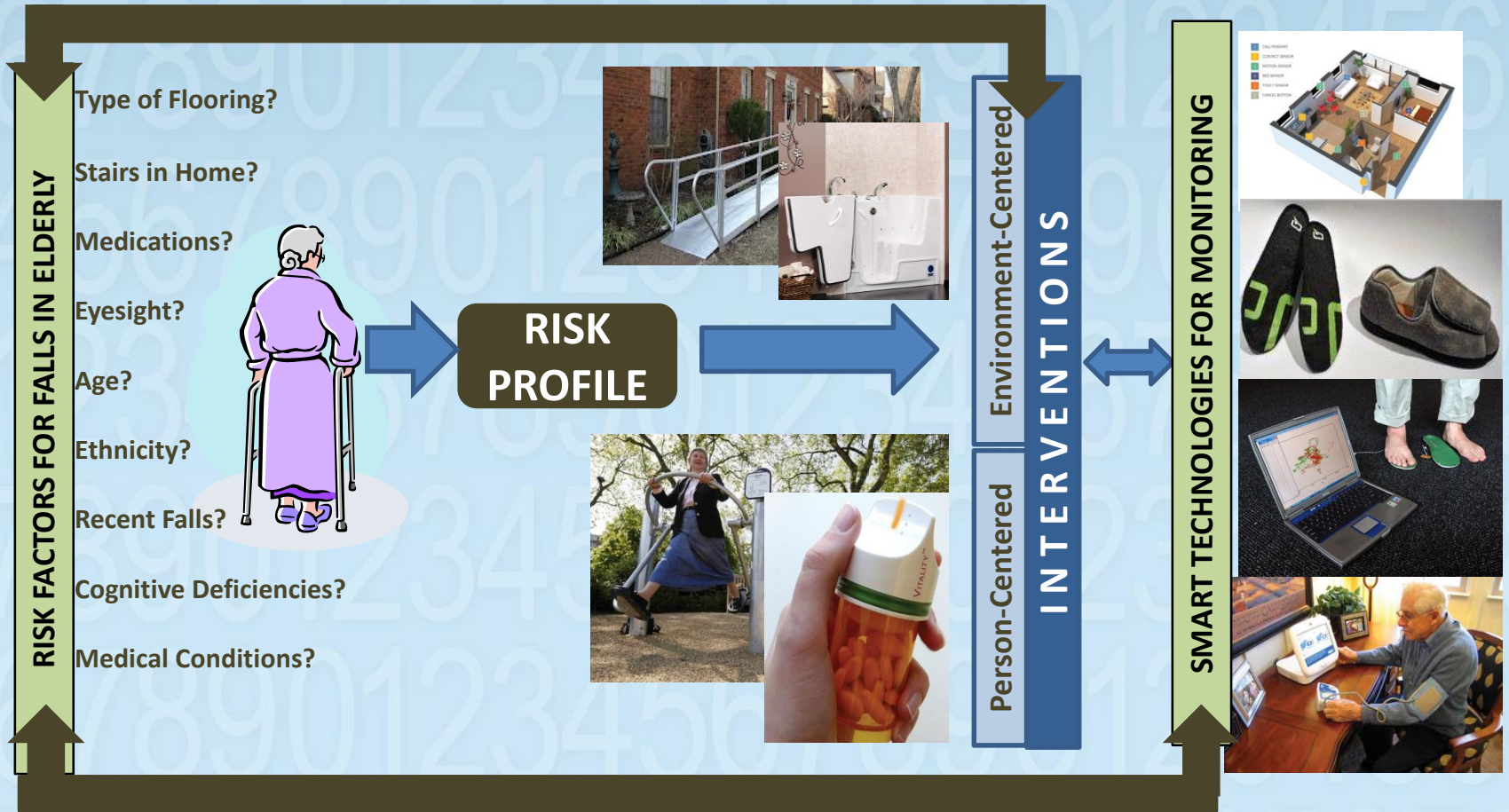
**“SMART” TECHNOLOGIES
REDUCE THE RISK OF FALLS
AND ENABLE SENIORS TO
SAFELY AGE IN PLACE**



FINDING OUT WHAT WORKS?

AN EVIDENCED-BASED FRAMEWORK TO DETERMINE THE MOST EFFICIENT ALLOCATION OF RESOURCES TO ACHIEVE THE HIGHEST REDUCTION IN FALLS

CREATE WELL-BEING BY ALIGNING INTERVENTIONS WITH RISK



MAXIMIZE THE COST EFFECTIVENESS OF INTERVENTIONS AND PREVENT FALLS

Think about Urban Design for Our Aging Population



Urban Design Principles

- Visitability of institutional settings
- Senior playgrounds & fitness parks
- Universally accessible transport systems
- Complete street ordinances
- Extended walk times at pedestrian crosswalks
- Senior friendly street signage

OPPORTUNITIES

- Cater products & labeling to emerging groups
- Design & package products with equality in mind

LABELING & PACKAGING

- Easy to Read
- Easy to Understand
- Easy to Carry
- Easy to Open
- Easy to Enjoy
- Safer to Use

DEFINITION OF EASY TO CARRY: CURRENT VS. FUTURE

Current Population

Future Grey Population

Bulky and Heavy

Minimal Unit Size and Weight

Big-sized cart, shopping cart, car trunk

Compact car, Rolling carriage

Price Sensitive

Weight Sensitive

Aesthetics Is More Important

Function Is More Important

Mostly carry with one hand

Handle with both hands



ELDERLY



THE END

