



# Place and Brain Health Equity

Congressional Districts &  
Alzheimer's Prevalence Among  
Communities of Color

Congresswoman  
Linda Sanchez  
(CA-38)



**UsAgainstAlzheimer's**

Congressman  
Steven Horsford  
(NV-04)

**UsAgainstAlzheimer's**



Jason Resendez  
UsAgainstAlzheimer's



**UsAgainstAlzheimer's**

By 2030, nearly **40%** of Americans living with Alzheimer's will be Latino or African American\*

**UsAgainstAlzheimer's**

\*Aranda, Maria P., Vega, William A., Richardson, Jason R., Resendez, Jason. (2019). Priorities for Optimizing Brain Health Interventions Across the Life Course in Socially Disadvantaged Groups. Florida International University and UsAgainstAlzheimer's.





## Health Disparities & Comorbidities for Alzheimer's

### AMONG BLACK AMERICANS

44% More Likely to have a stroke

23% More Likely to be obese

25% More Likely to die from heart disease

72% More Likely to be diabetic

**2X AS LIKELY**  
TO HAVE ALZHEIMER'S

### AMONG LATINOS

10% More Likely to have a stroke

24% More Likely to be obese

22% More Likely to have poorly controlled blood pressure

63% More Likely to be diabetic

**1.5X AS LIKELY**  
TO HAVE ALZHEIMER'S

# Why Place Matters to Brain Health?

**The New York Times**

## Living in Poverty May Increase Alzheimer's Risk

People living in the poorest neighborhoods had the highest risk for brain changes typical of Alzheimer's disease.

**ScienceDaily**<sup>®</sup>

Your source for the latest research news

### Your neighborhood may affect your brain health

Study finds evidence of more brain aging in people living in disadvantaged areas

*Date:* April 19, 2021

*Source:* American Academy of Neurology

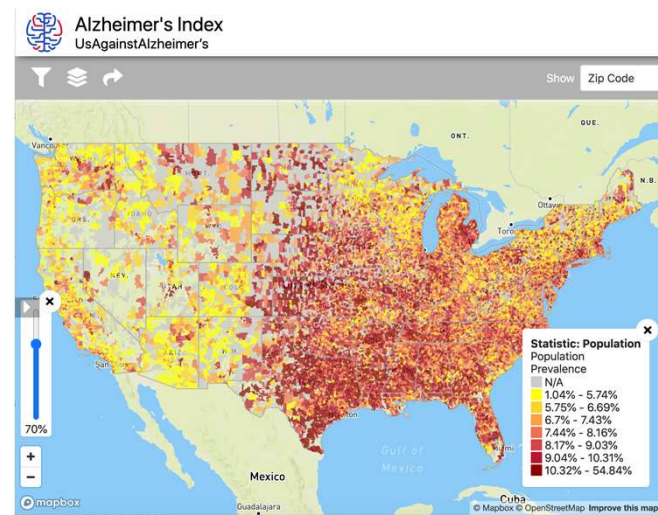
*Summary:* Middle-age and older people living in more disadvantaged neighborhoods -- areas with higher poverty levels and fewer educational and employment opportunities--had more brain shrinkage on brain scans and showed faster decline on cognitive tests than people living in neighborhoods with fewer disadvantages, according to a new study.

# From Data to Action

**UsAgainstAlzheimer's**, in partnership with the **National Minority Quality Forum (NMQF)**, launched the **National Alzheimer's Disease Index™ (NADEX)** — a new public health tool that aggregates Medicare data and enables users to visualize ADRD healthcare data to spot disparities.

With the **Urban Institute**, we used the NADEX to:

- 1.) Identify the top 25 counties most impacted by ADRD among Black and Latino Americans in the traditional Medicare program
- 2.) Explore the social determinants of health present in these counties.





# Findings



**USAgainstAlzheimer's**



# Systemic Inequities

Deep inequities in the social determinants of health exist in congressional districts highly impacted by Alzheimer's among Latino and Black communities.

PERCENTAGE OF FAMILIES LIVING IN POVERTY



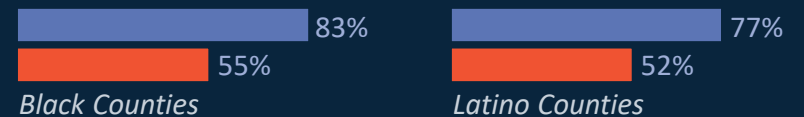
MEDIAN HOUSEHOLD INCOME



INDIVIDUALS UNDER THE AGE OF 65 WITHOUT HEALTH INSURANCE



INDIVIDUALS WITH ACCESS TO EXERCISE OPPORTUNITIES



■ Highest ADRD Prevalence      ■ Lowest Prevalence

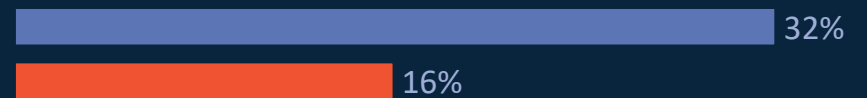


## Systemic Inequities

Low levels of educational attainment are uniform across all county groupings highly impacted by ADRD.

PERCENTAGE OF ADULT THAT HAVE A BACHELOR'S DEGREE

### *Black Counties*



### *Latino Counties*



### *Non-Latino White Counties*



■ Highest ADRD Prevalence

■ Lowest Prevalence

## SDOH & DEMENTIA

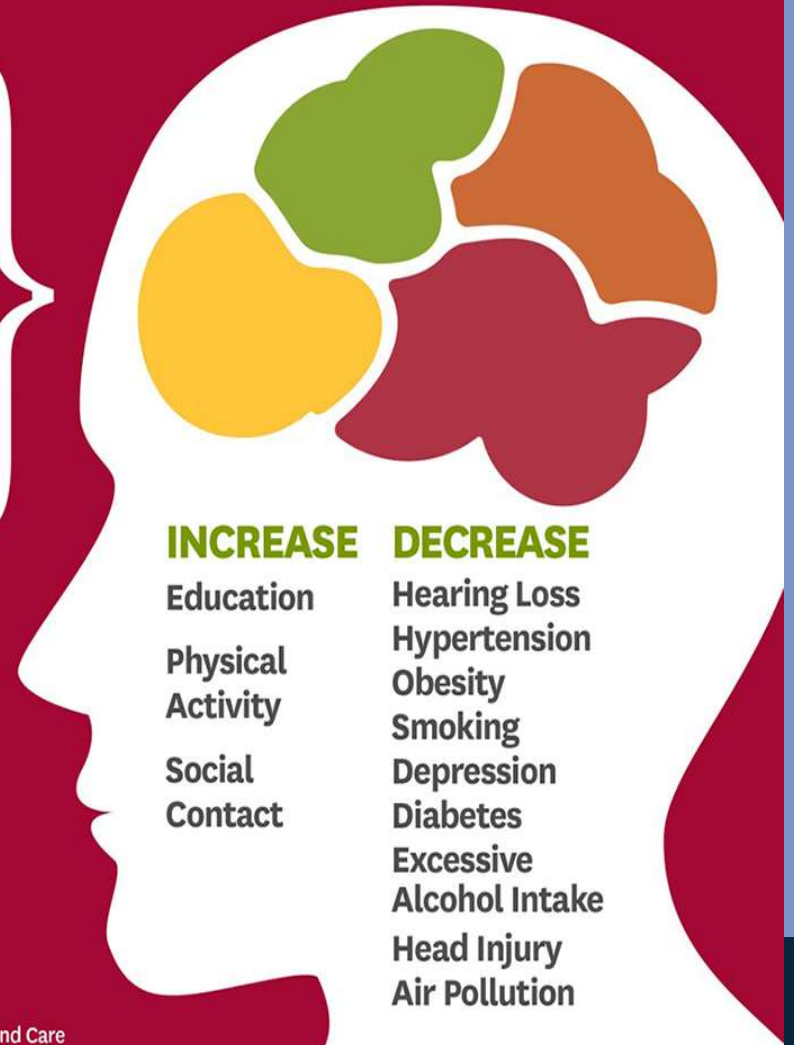
**40%**

of dementia cases  
could be prevented  
by addressing these  
lifestyle factors

Keck Medicine  
of USC

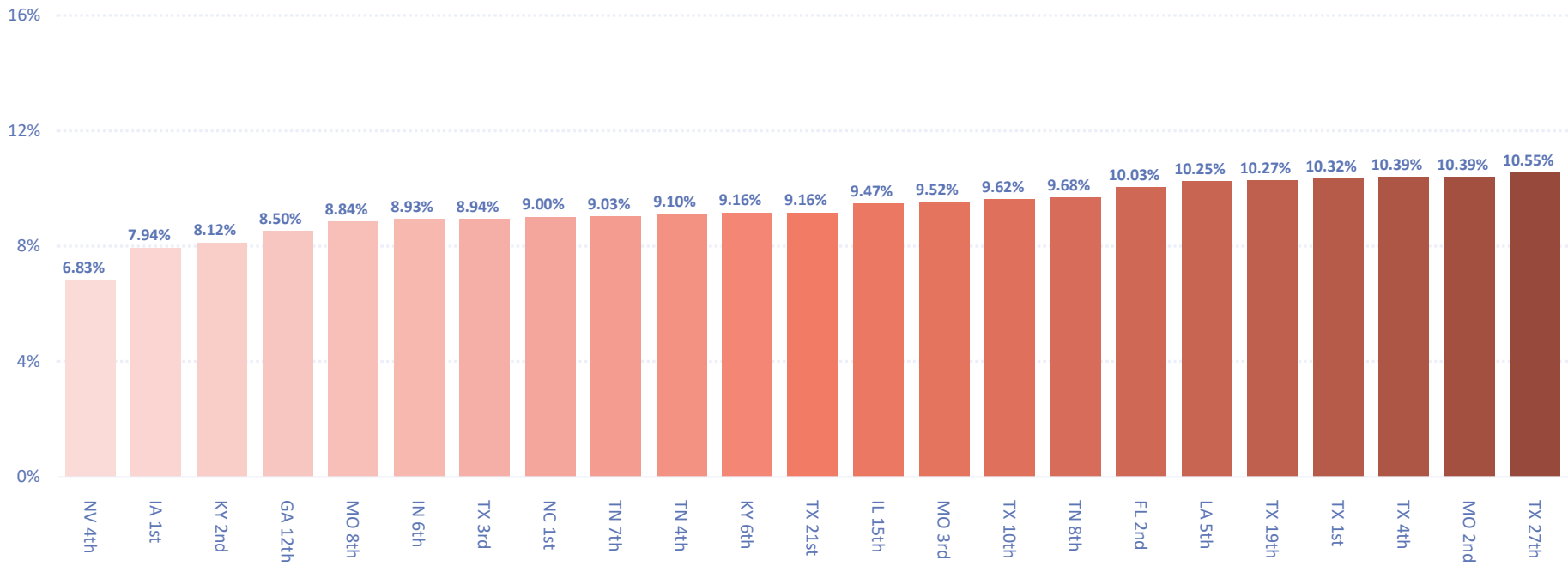
BEYOND EXCEPTIONAL MEDICINE™

Source: Lancet Commission on Dementia Prevention and Care



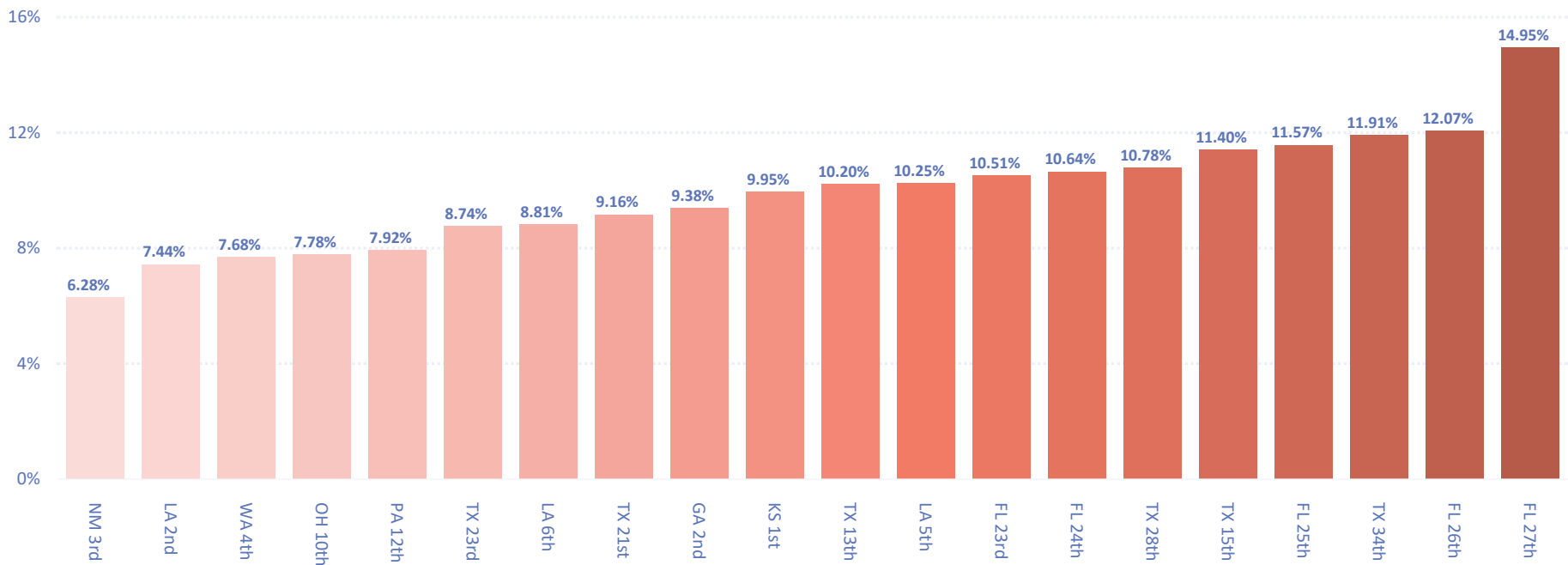
# The Districts

Districts that Represent the Top 25 Counties with the Highest ADRD Prevalence Among *Black Americans*



# The Districts

Districts that Represent the Top 25 Counties with the Highest ADRD Prevalence Among *Latino Americans*



# The Districts

## CONGRESSIONAL HOT SPOTS BY THE NUMBERS

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Number of Districts*	41
Total Number of People Living with ADRD**	347,610
Total Medicare Costs Spent on Beneficiaries living with ADRD**	\$8.5 billion
Average ADRD District Prevalence in 2016**	9.50%
Average Percentage of District Medicare Dollars Spent on Beneficiaries living with ADRD	26%

\*Number of Districts That Represent the 25 Counties with the Highest Rates of ADRD Among Blacks and Latinos, Medicare Fee for Service, 2016

\*\*Medicare Fee for Service, 2016

## Dr. Karen Hacker, MD, MPH

Director of the CDC's National Center for  
Chronic Disease Prevention and Health  
Promotion (NCCDPHP)



**UsAgainstAlzheimer's**



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Assistant Professor of Nursing, University of  
Pennsylvania

**UsAgainstAlzheimer's**



NewCourtland Center  
*for Transitions and Health*

UNIVERSITY of PENNSYLVANIA  
SCHOOL of NURSING



# ***Tiempo Juntos por Nuestra Salud*** **(Time Together for Our Health)**

**A Physical Activity Intervention to Promote Cognitive Health,  
Cardiovascular Health and Sleep in Older Latinos with MCI**

***Adriana Perez, PhD, CRNP, ANP-BC, FAAN, FGSA***

Assistant Professor of Nursing  
Senior Fellow, Leonard Davis Institute of Health Economics  
NewCourtland Center for Transitions and Health  
Population Studies Center | Population Aging Research Center  
University of Pennsylvania, School of Nursing

## RESEARCH TEAM



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**Norma B. Coe, PhD**  
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**Marianna Olave**  
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**Subhash Aryal, PhD**  
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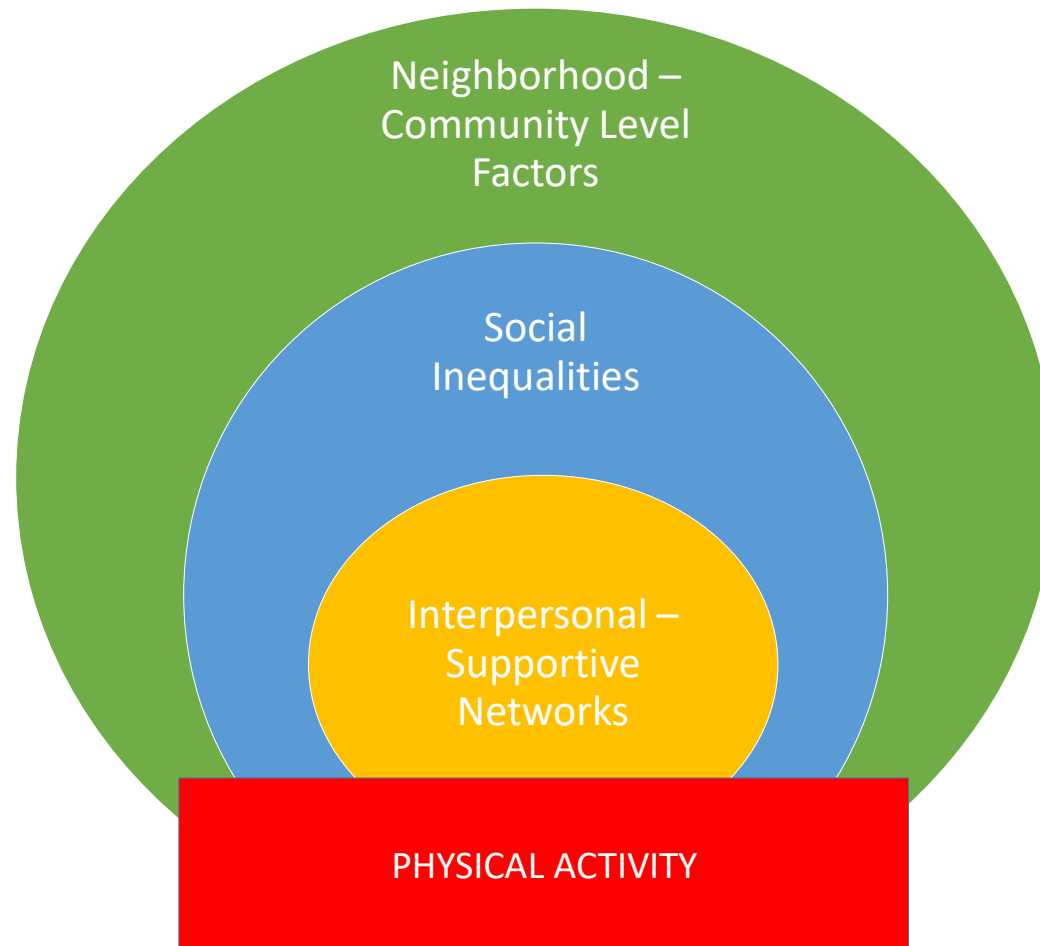
**Roy H. Hamilton, MD, MS, FAAN, FANA**  
Safety Officer

**Grant Source: National Institutes of Health, National Institute on Aging  
R01AG070351-01 (2021-2024)**

# OPPORTUNITY FOR DEMENTIA RISK MODIFICATION: IN LATINX ELDERS

- **Physical inactivity:** public health priority for Latinx older adults with mild cognitive impairment (MCI)
  - MCI increases the risk of developing Alzheimer's Disease (AD) and related dementias (ADRD)
  - Physical activity (PA): enhances cognition
    - Improves sleep
    - Reduces cardiovascular disease (CVD)
    - Affects neurocognitive function
- **Latinx community:** one of the most sedentary of older racial/ethnic groups; experience significant multi-level barriers to PA
- Opportunity to focus on **prevention/risk modification through PA**, as most cost-effective vs. treatment.

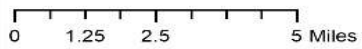
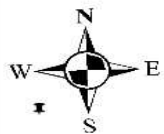
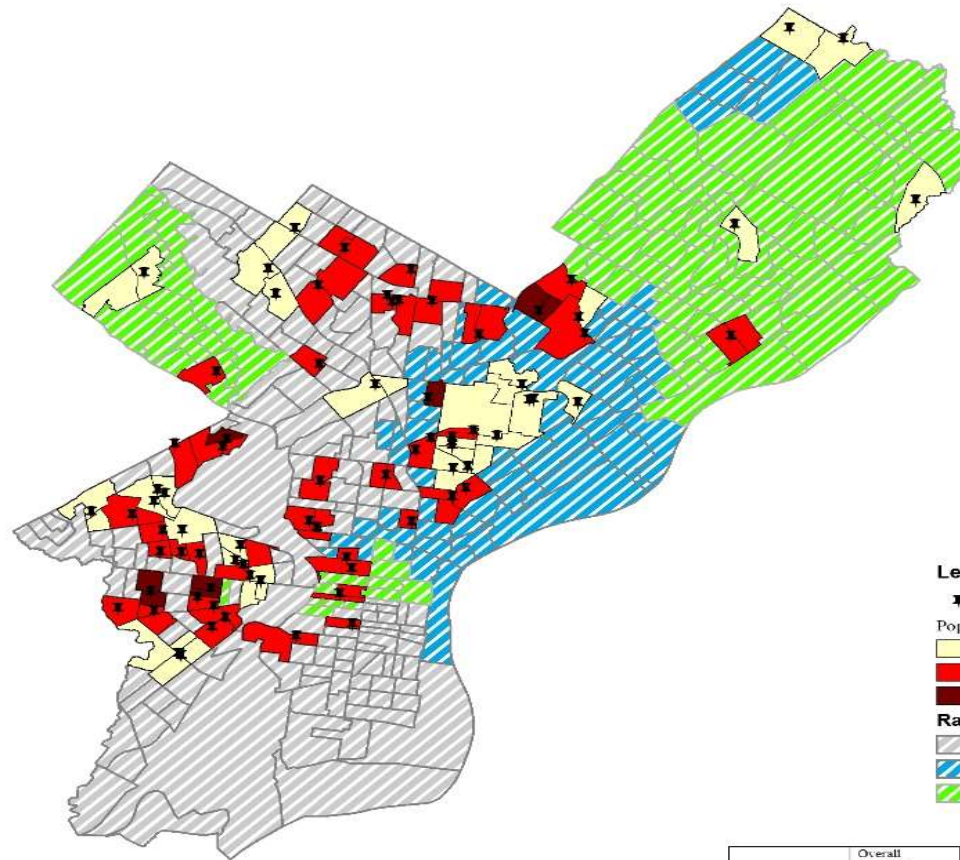
# SOCIAL DETERMINANTS OF PHYSICAL ACTIVITY



# DATA DRIVEN COMMUNITY-BASED APPROACH

- Preliminary research in partnership with community organizations serving Latinx elders
  - Community-based focus groups
    - **Memory health rated as important for Latinx elders and their families**
    - High interest in research participation opportunities
    - Limited physical activity programs available in Spanish
    - Neighborhood safety concerns for walking
  - Geographic Information Systems (GIS) Mapping – community level factors
    - Low-income, low-resourced neighborhoods
    - Higher neighborhood-level crime rates compared to White, non-Latinx elders
    - However, distance to green space highlight opportunities to promote group walking

## Location of Subjects by Population Density, Philadelphia, PA



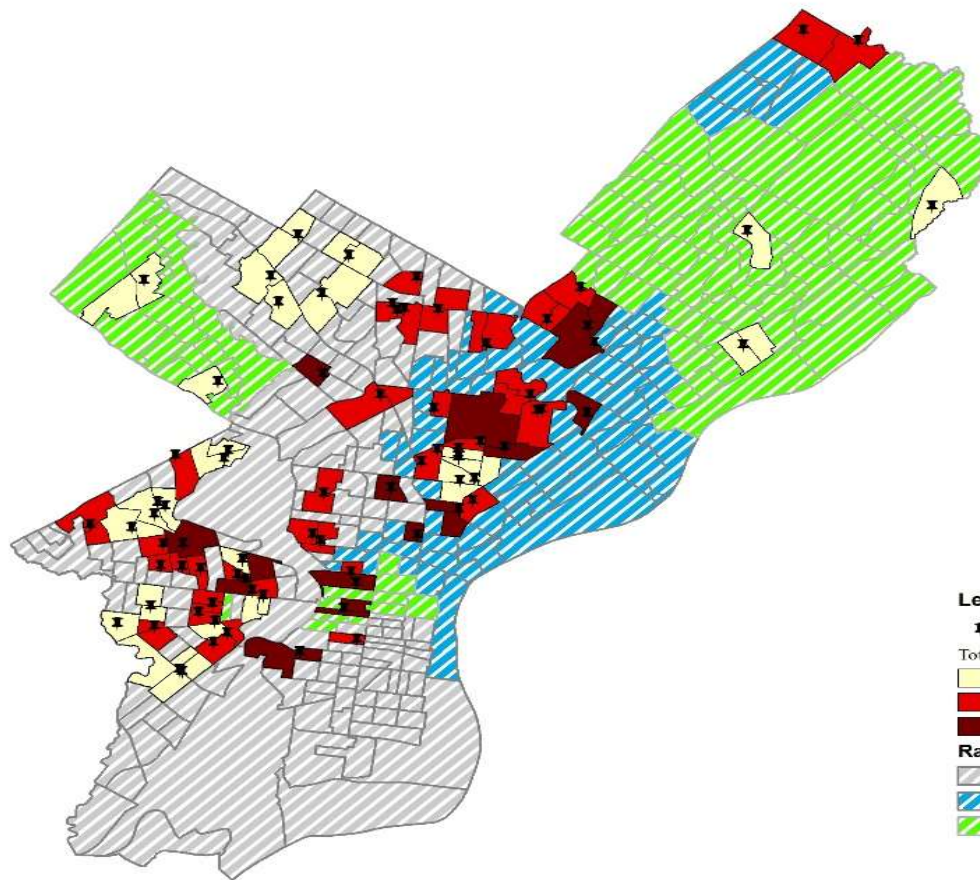
Source: Census Tract 2010  
 Author: Augustine Boateng (boateng@upenn.edu)

### Legend

- ✱ Residents
- Population Density
  - 1729 - 13740
  - 13750 - 34000
  - 34010 - 59410
- Race
  - Black or African American
  - Hispanic or Latino
  - White

	Overall (N=123)	Hispanic (N=34)	Black/African American (N=61)	White (N=26)	P-Value
Population Density					0.0001
n	118	34	61	23	
Mean	18340.6	22457.7	19430.4	9364.3	
SD	11265.3	12124.6	9941.0	10820.8	

## Location of Subjects by Annual Crime Index, Philadelphia, PA



**Legend**

✦ Residents

Total Crime Index

16 - 110

111 - 211

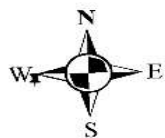
212 - 504

**Race**

Black or African American

Hispanic or Latino

White



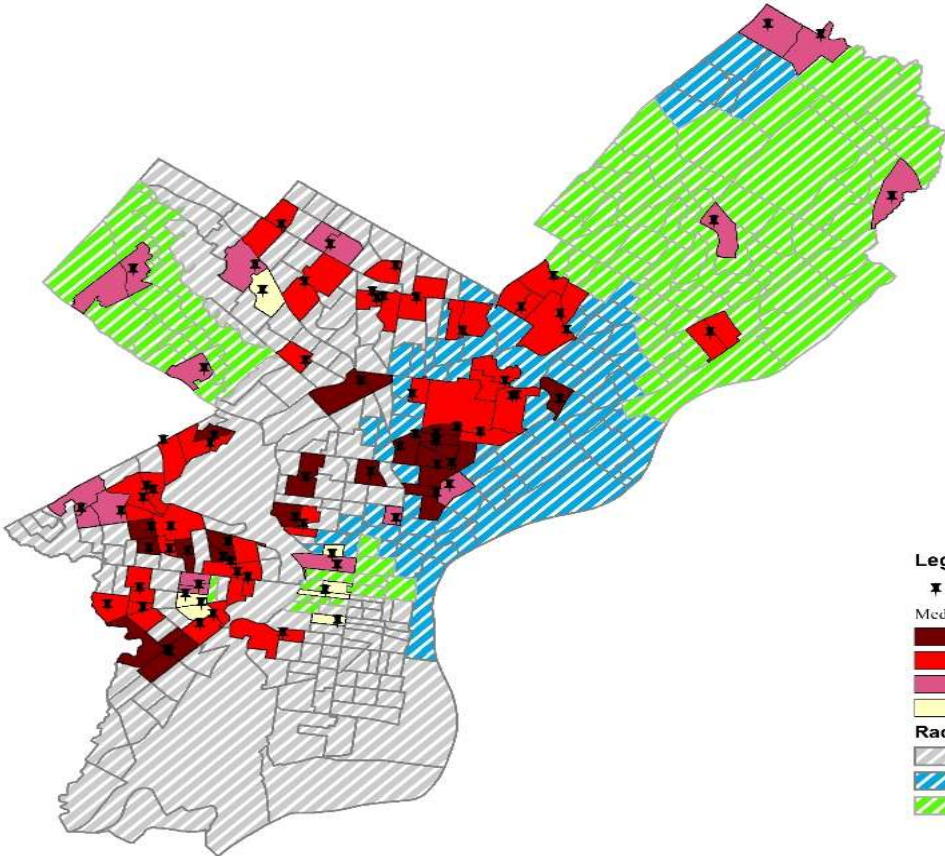
0 1.25 2.5 5 Miles

Source: Census Tract 2010  
 Author: Augustine Boateng (boateng@upenn.edu)

	Overall (N=123)	Hispanic (N=34)	Black/African American (N=63)	White (N=26)	P-Value
Total Crime Index					<.0001
n	113	34	51	23	
Mean	159	186	168	96	
SD	95	69	83	130	



### Location of Subjects by Median Housing Value, Philadelphia, PA



0 1.25 2.5 5 Miles

Source: Census Tract 2010  
 Author: Augustine Boateng (boateng@upenn.edu)

**Legend**

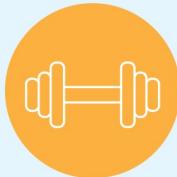
- ✱ Residents
- Median Housing Value
  - < 61000
  - 62000 - 160000
  - 170000 - 290000
  - 300000 - 570000
- Race
  - ▨ Black or African American
  - ▨ Hispanic or Latino
  - ▨ White

	Overall (N=123)	Hispanic (N=34)	Black/African American (N=63)	White (N=26)	P-Value
Median Home Value					<.0001
n	111	33	57	21	
Mean	171517	96009	165982	305195	
SD	132431	80364	118785	135560	

*Tiempo Juntos*  
Study Aims

Calculate intervention costs and compare to healthcare utilization

Effects on primary outcome (physical activity)



CV health and sleep quality effect on cognitive function

Effects on secondary outcomes (CV health, sleep and cognitive function)

Theoretical mediators effect on PA (intrapersonal, interpersonal, community)

# Study Contact:

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Senior Fellow, Leonard Davis Institute of Health Economics

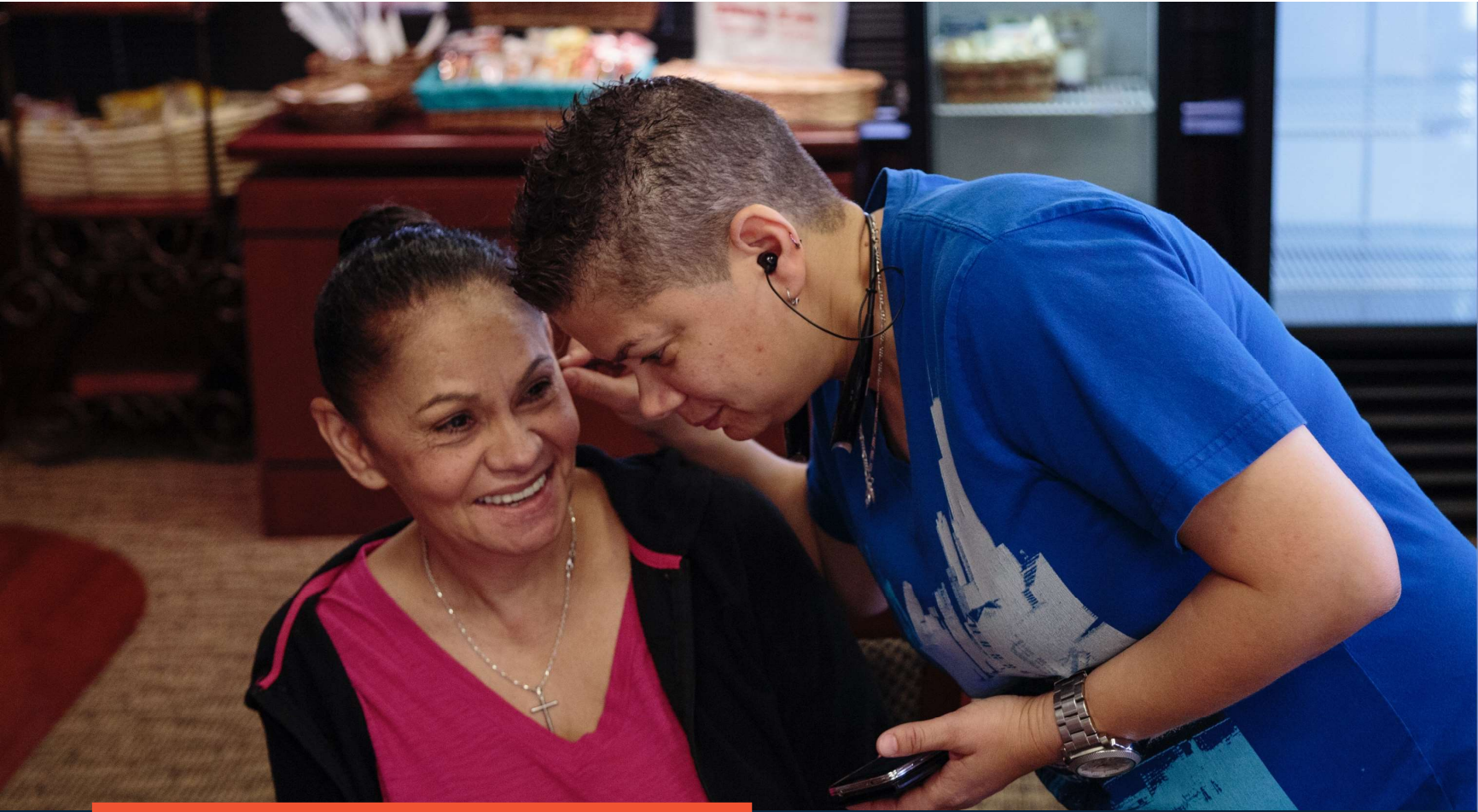
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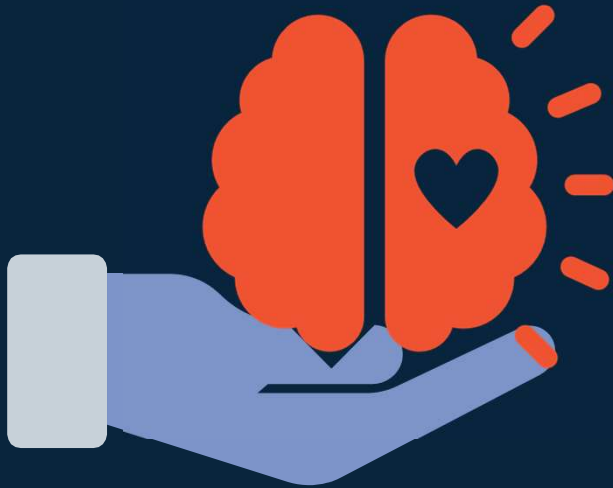




# Recommendations & Resources

**UsAgainstAlzheimer's**

## Our Policy Recommendations



**Support \$289 million** in additional **Alzheimer's research funding for the NIA** and **\$60 million for CDC's Alzheimer's Disease and Healthy Aging Program**

**Invest in economic opportunity** to reduce social inequities by passing comprehensive **paid family and medical leave**.

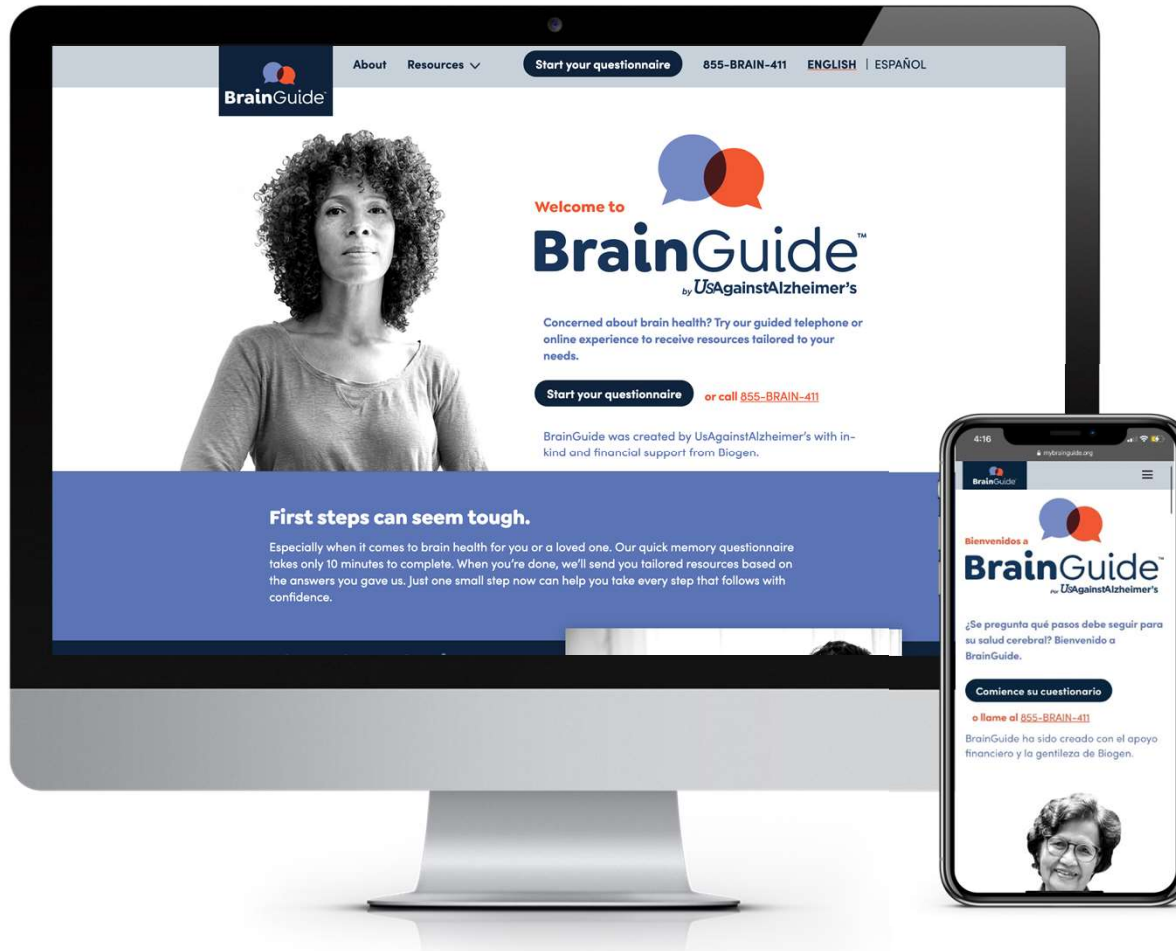
**Cosponsor the CHANGE Act (H.R. 3354 / S. 1692)** to improve **early detection** of cognitive impairment during the Medicare Annual Wellness Visit.

**Establish an ambitious national goal to prevent Alzheimer's** disease and related dementias and address disparities in early detection and diagnosis.

**UsAgainstAlzheimer'sAction**

# BrainGuide by UsAgainstAlzheimer's

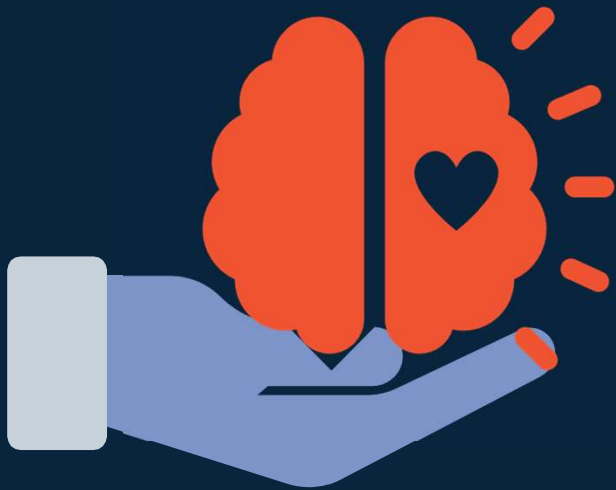
[mybrainguide.org](http://mybrainguide.org) | 855-BRAIN-411



**BrainGuide is a first-of-its-kind platform that empowers people with knowledge and resources to take the best next steps in managing their own or a loved one's brain health.**

*Available in English & Spanish*

[Visit the Site at mybrainguide.org](http://mybrainguide.org)



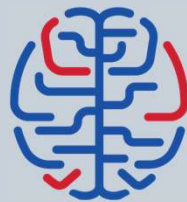
## Join Our Movement

[BrainHealthData.org/Place-And-Brain-Health-Equity](https://BrainHealthData.org/Place-And-Brain-Health-Equity)

[MyBrainGuide.org](https://MyBrainGuide.org)

# Thank You

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USAGAINSTALZHEIMER'S CENTER *for*  
BRAIN HEALTH EQUITY