



Race/Ethnicity, Preventive Care and Employment Among Adults with Intellectual and Developmental Disabilities



Agenda

- Research Questions
- Data source
- Preventive Health Care
 - Methods, Measures and Sample
 - Findings
 - Conclusions
 - Limitations
- Employment
 - Methods, Measures and Sample
 - Findings
 - Conclusions
 - Limitations



Research Questions

- Do NCI data demonstrate differences by race/ethnicity in use of preventive healthcare?
- Do NCI data demonstrate differences by race/ethnicity in employment?



WHAT IS NATIONAL CORE INDICATORS (NCI)?

- Multi-state collaboration of state DD agencies
- Measures performance of public systems for people with intellectual and developmental disabilities
- Assesses performance in several areas, including: employment, community inclusion, choice, rights, and health and safety
- Launched in 1997 in 13 participating states
- Supported by participating states
- NASDDDS – HSRI Collaboration



39 states, the District of Columbia and 22 sub-state regions

■ State contract awarded in 2013-14 through AIDD funding

OH*- Also includes the Mid-East Ohio Regional Council



WHAT IS NCI?

- Adult Consumer Survey
 - ✓ In-person conversation with a sample of adults receiving services to gather information about their experiences
 - ✓ Keyed to important person-centered outcomes that measure system-level indicators related to: employment, choice, relationships, case management, inclusion, health, etc.
- Adult Family, Child Family, and Family/Guardian Surveys
Mail surveys – separate sample from Adult Consumer Survey
- Other NCI state level data: Mortality, Staff Stability



Data Source:

Adult Consumer Survey

- Standardized, face-to-face interview with a sample of individuals receiving services
 - Background Information
 - Section I (no proxies allowed)
 - Section II (proxies allowed)
- No pre-screening procedures
- Conducted with adults only (18 and over) receiving at least one service in addition to case management
- Section I and Section II together take 50 minutes (on average)



**Do NCI data demonstrate
differences by race/ethnicity
in use of preventive
healthcare?**

Methods, Measures and Sample:

- **2011-2012** data collection cycle of the Adult Consumer Survey
- **Background Information section:** demographics, residence, health, and employment information. Generally collected from records by case managers.
- 19 states, one regional council
(AL, AR, AZ, CT, GA, HI, IL, KY, LA, MA, ME, MI, MO, NC, NJ, NY, OH, PA, SC and the Mid-East Ohio Regional Council)
- Total N: 12,236 individuals



Methods, Measures and Sample:

Race/Ethnicity

- Source: two items from Background Section
 - Ethnicity (Hispanic, or non-Hispanic)
 - Race (American Indian or Alaska Native, Asian, Black or African American, Pacific Islander, White, or Other race not listed)
- Items combined to create: Race/Ethnicity
 - White, Non-Hispanic
 - African American, Non-Hispanic
 - Hispanic
- Other race/ethnic categories too small for analysis



Methods, Measures and Sample: Preventive Care

- Person has a primary care doctor:
 - No
 - Yes
- Last complete annual physical exam (routine):
 - In the past year
 - One year ago or more
- Last dentist visit:
 - In the past year
 - One year ago or more
- Last eye exam/vision screening
 - In the past year
 - One year ago or more



Methods, Measures and Sample:

Preventive Care

- Last hearing test:
 - Within the past 5 years
 - 5 years ago or more (or never)
- Flu vaccination in the past 12 months:
 - Yes
 - No
- Ever had a vaccination for pneumonia:
 - Yes
 - No
- “Don’t know” responses were excluded from these analysis – i.e. excluded from both denominator and numerator

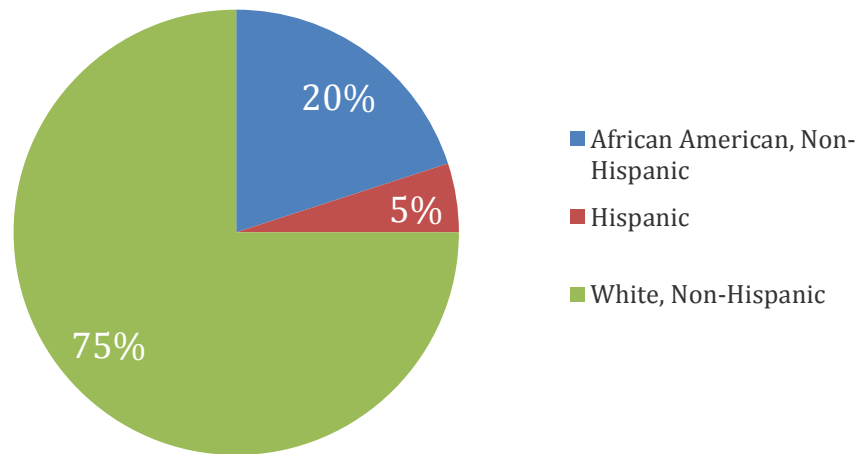


FINDINGS

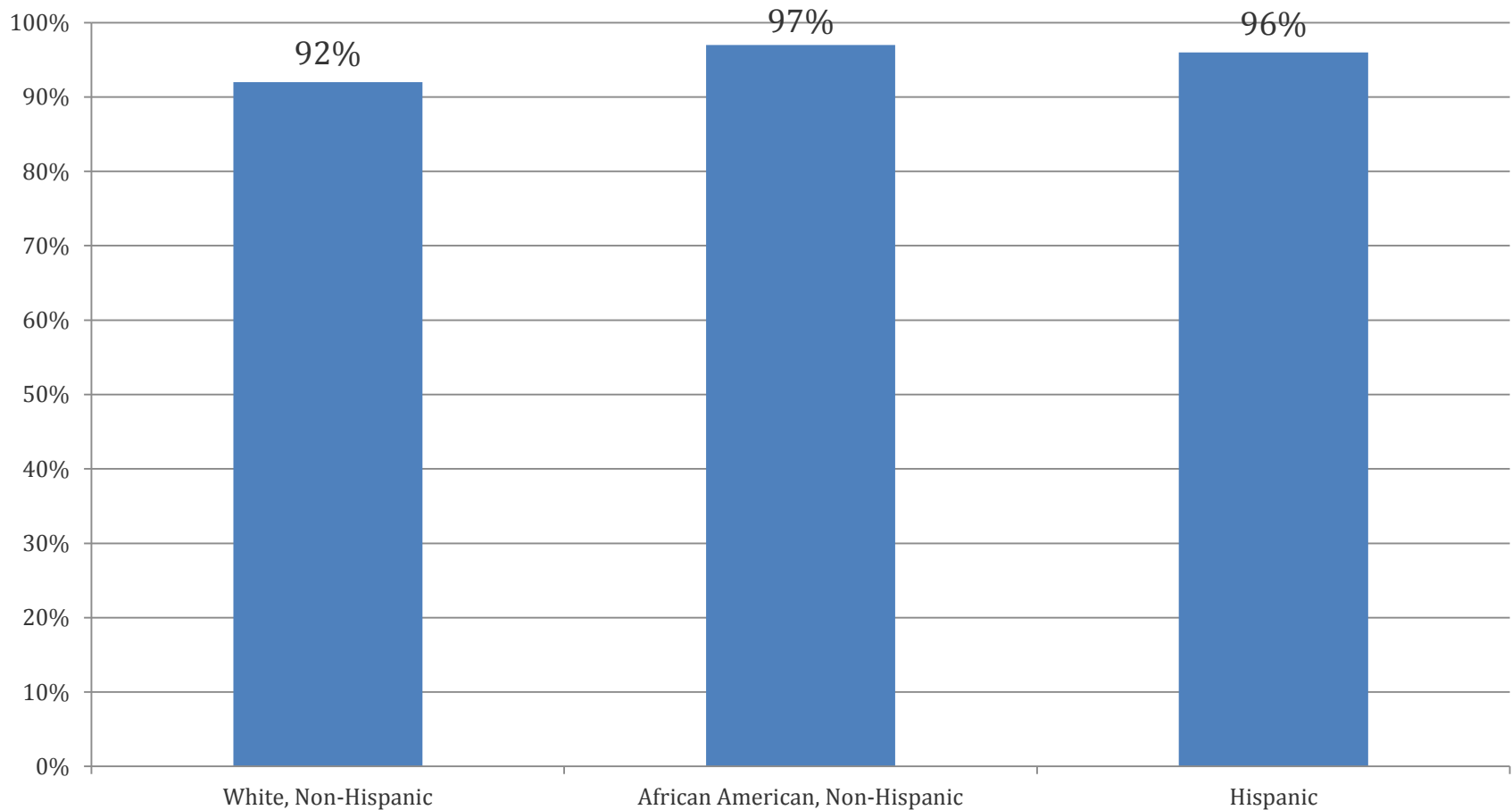


Race/Ethnicity of Sample

Race/Ethnicity	Percent of total
African American, Non-Hispanic	20 %
Hispanic	5%
White, Non-Hispanic	75%
<i>Total (N=11,199)</i>	<i>100.0%</i>

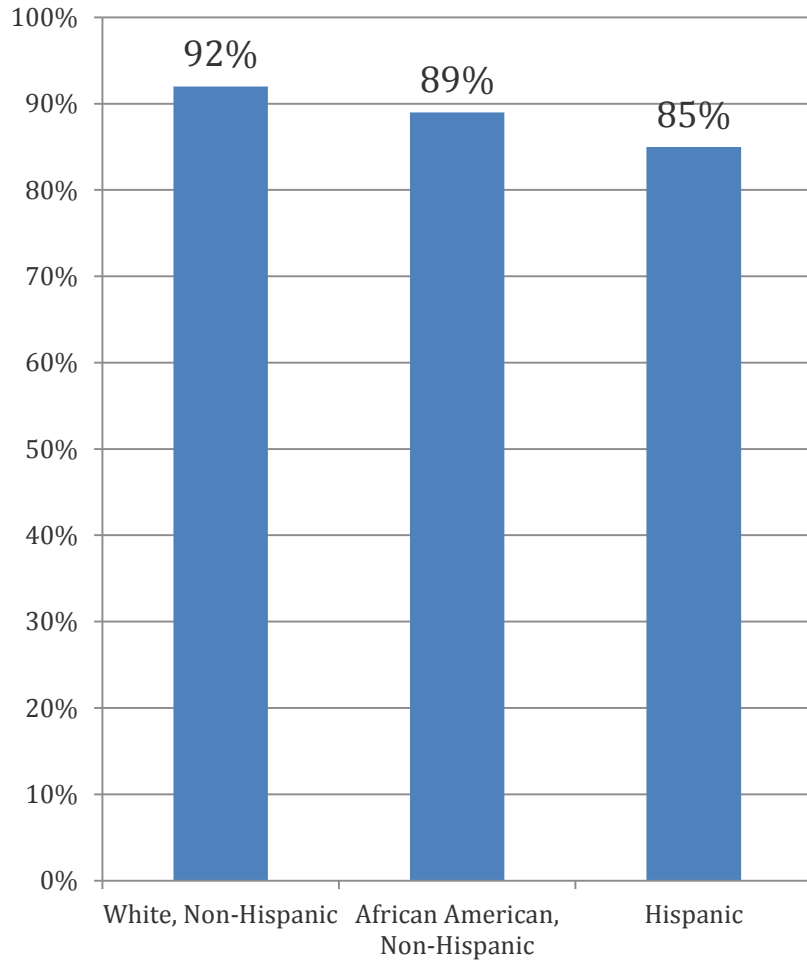


Preventive Care: Primary Care Doctor ($p < .001$)

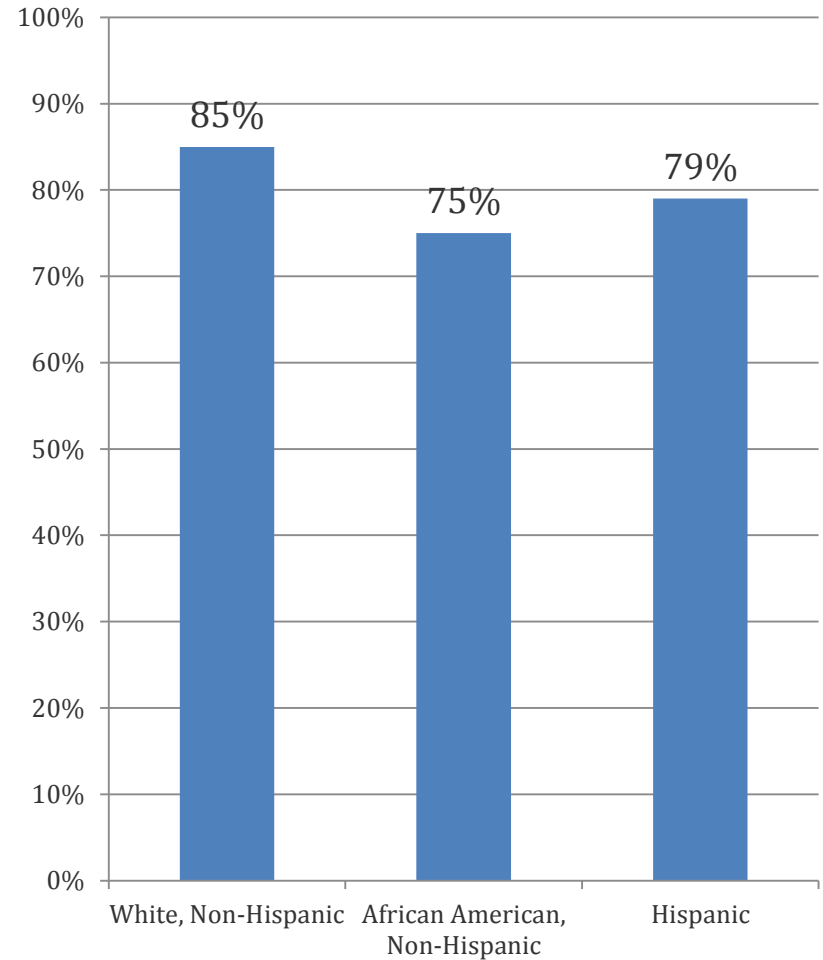


Preventive Care:

Physical Exam in Past Year ($p < .001$)

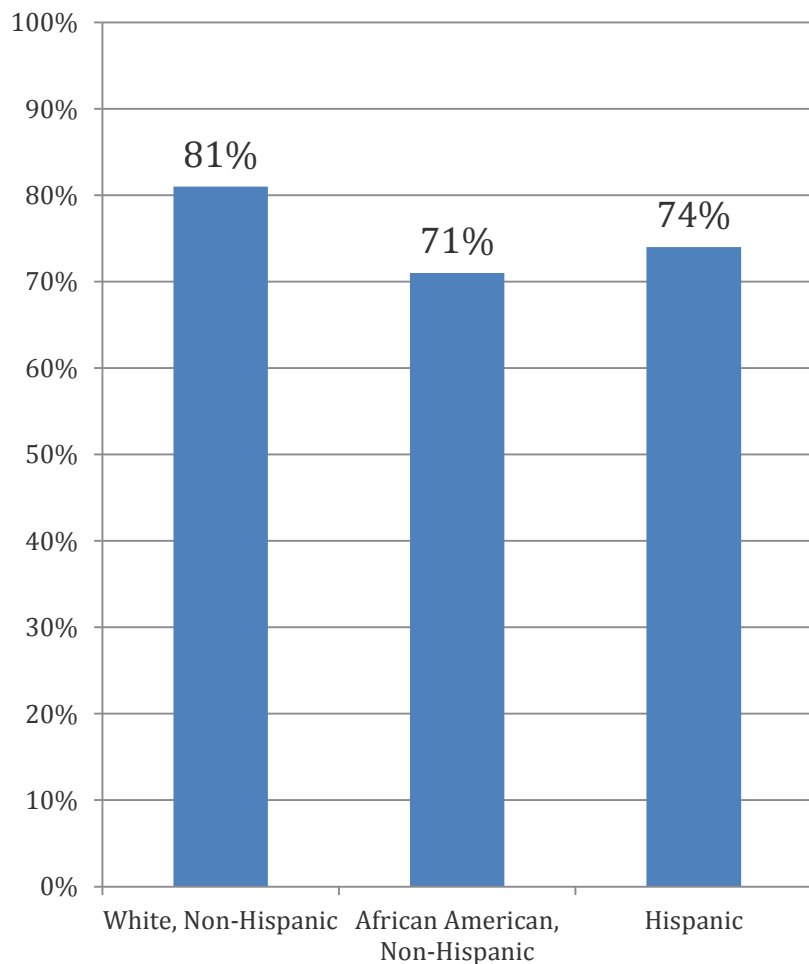


Dentist Visit in Past Year ($p < .001$)

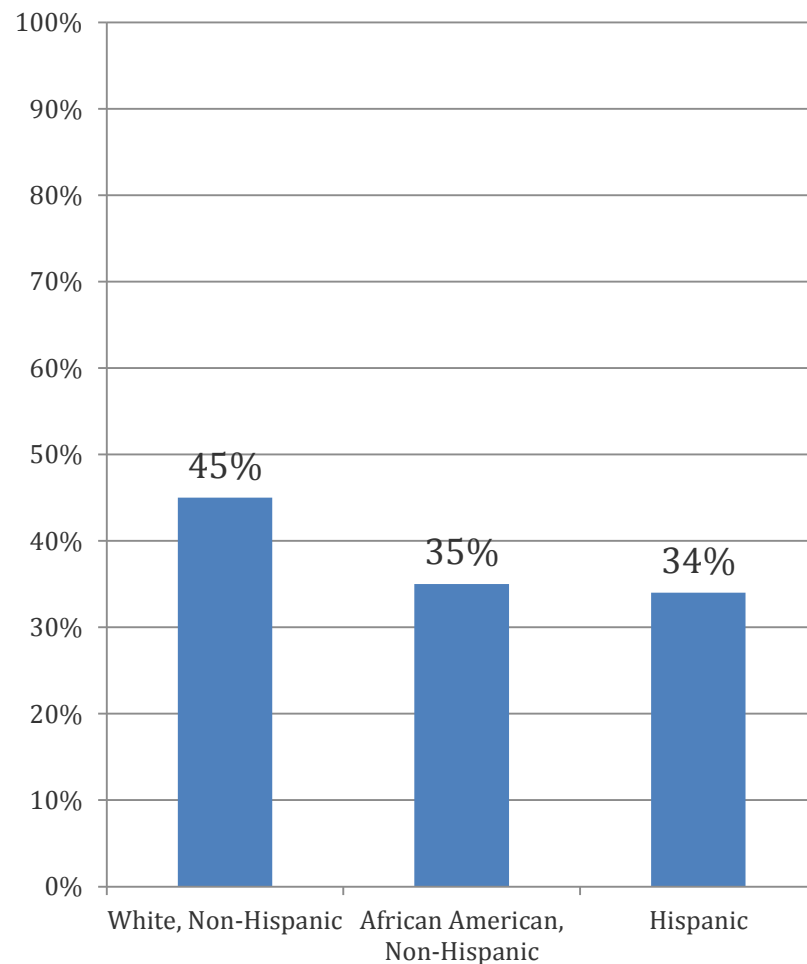


Preventive Care:

Flu vaccine in past year ($p < .001$)

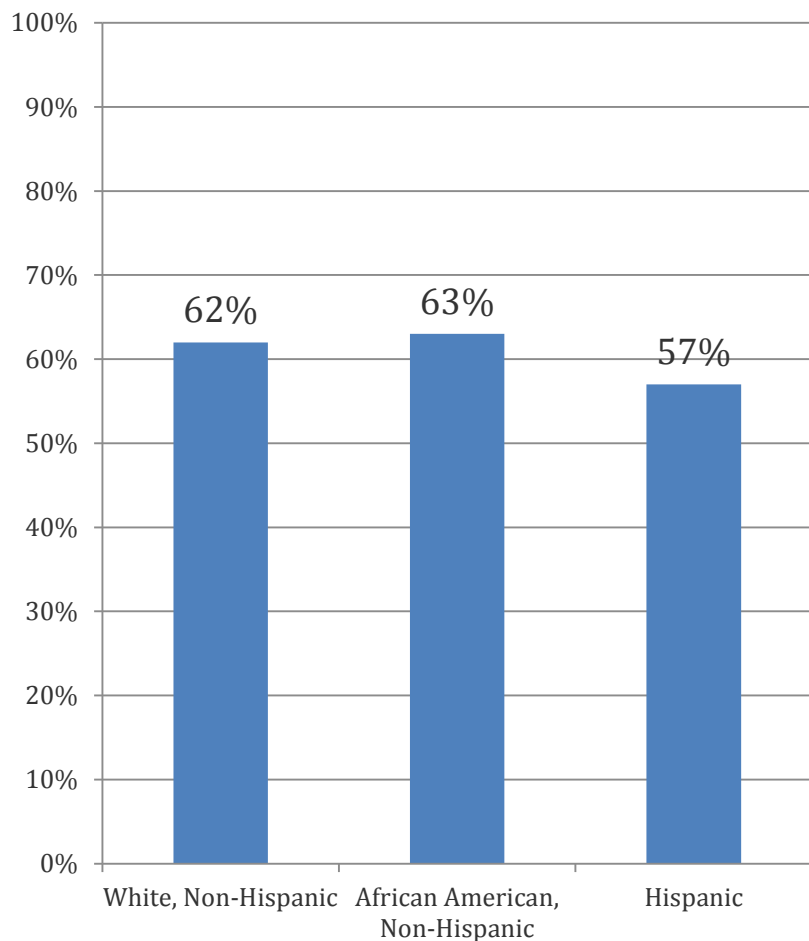


Ever had pneumonia vaccine ($p < .001$)

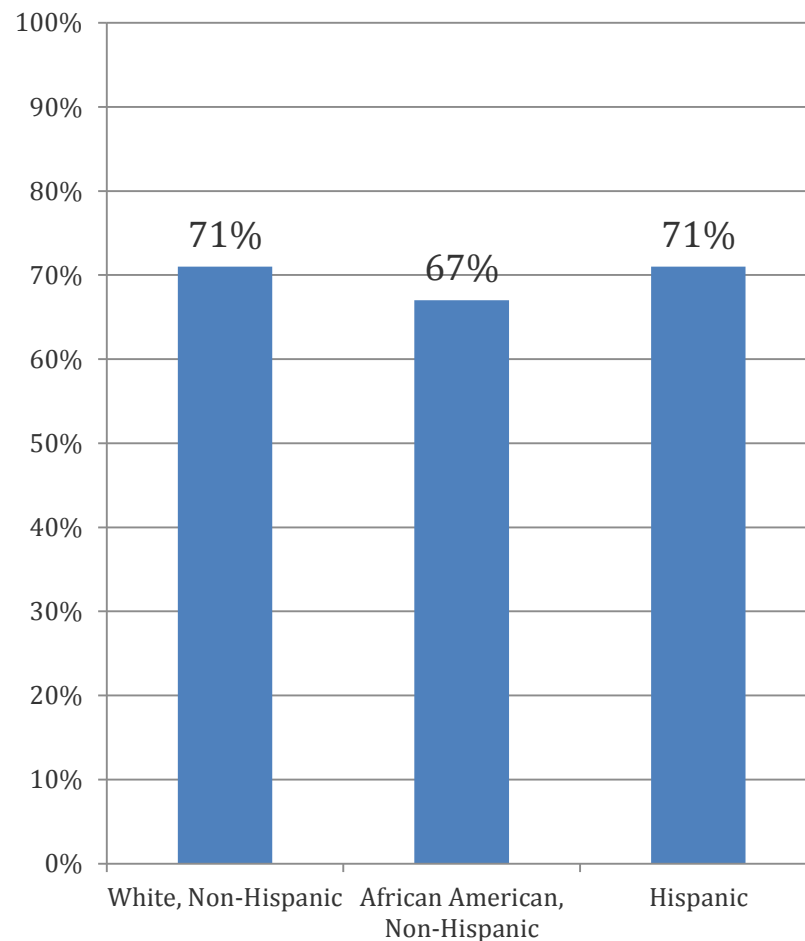


Preventive Care:

Eye Exam/Vision Screening in Past Year ($p = .09$)



Hearing Test in Past Five Years ($p < .05$)



Small Area Variation

- Rates of health care use vary over well-defined geographic areas.
- Significant variation has been shown to exist in the rates of hospitalization for diagnoses such as:
 - chronic obstructive lung disease,
 - pneumonia,
 - hypertension,
 - surgical procedures.
- Potential sources of variation include differences in underlying morbidity, access to care, physician judgment, quality of care delivered, patient demand for services, and random variation, etc.
- Need to control for State of residence.

Parchman, M. (1995) Small area variation analysis: A tool for primary care research. *Family Medicine Journal*. 27(4): 272-6



Preventive Care:

Simple binary logistic regression (odds ratios)

Controlling for state only (coefficients for state not shown)

	Primary care doc	Phys exam	Dental exam	Vision screen	Hear test	Flu vacc	Pneum vacc
White, Non-Hispanic	ref	ref	ref	ref	ref	ref	ref
African American, Non-Hispanic	1.28	0.70*	0.57*	1.12	1.01	0.61*	0.72*
Hispanic	1.33	0.62*	0.72	0.87	0.96	0.65*	0.67*

* p<.01



Controlling for State of Residence...

- African American, Non-Hispanic respondents are significantly less likely than White, Non-Hispanic respondents to have:
 - Had a physical exam in the past year
 - Had a dental exam in the past year
 - Had a flu vaccine in the past year
 - Ever had a pneumonia vaccine
- Hispanic respondents are significantly less likely than White, Non-Hispanic respondents to have:
 - Had a physical exam in the past year
 - Had a flu vaccine in the past year
 - Ever had a pneumonia vaccine



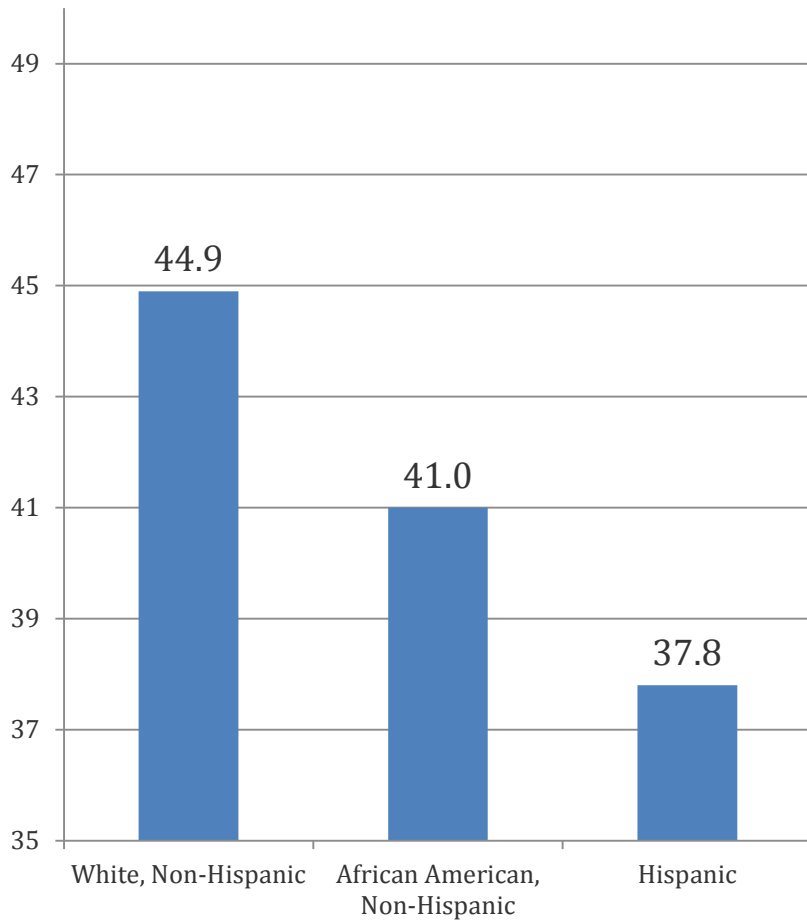
BUT...

- Differences may be due to other demographic characteristics.
- The following demographic variables were tested and found to be significantly different among the three racial/ethnic categories:
 - Age
 - Gender
 - Individual's primary language
 - Individual's primary means of expression
 - Level of intellectual disability
 - Mobility
 - Other diagnoses (in addition to ID/DD)
 - Residence type

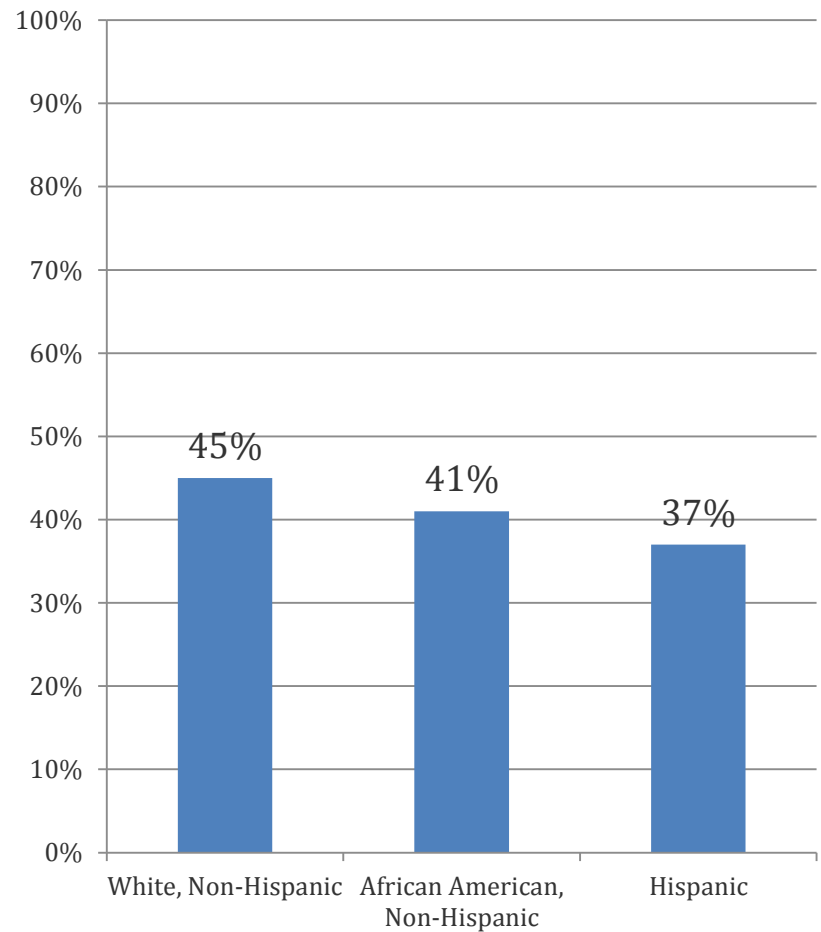


Demographic Differences:

Average Age ($p < .01$)

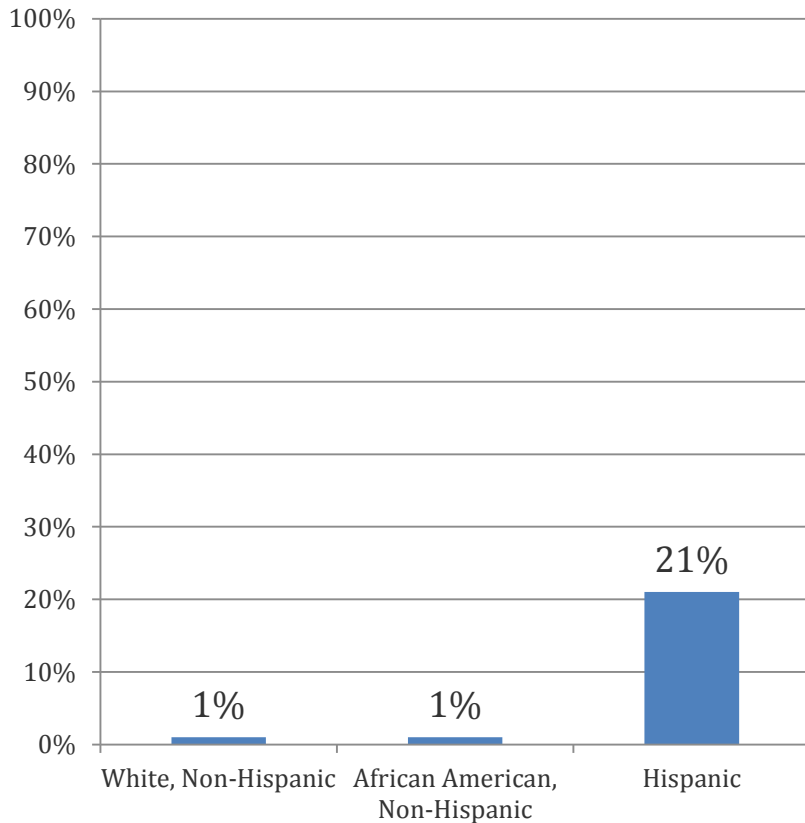


Gender, FEMALE ($p < .01$)

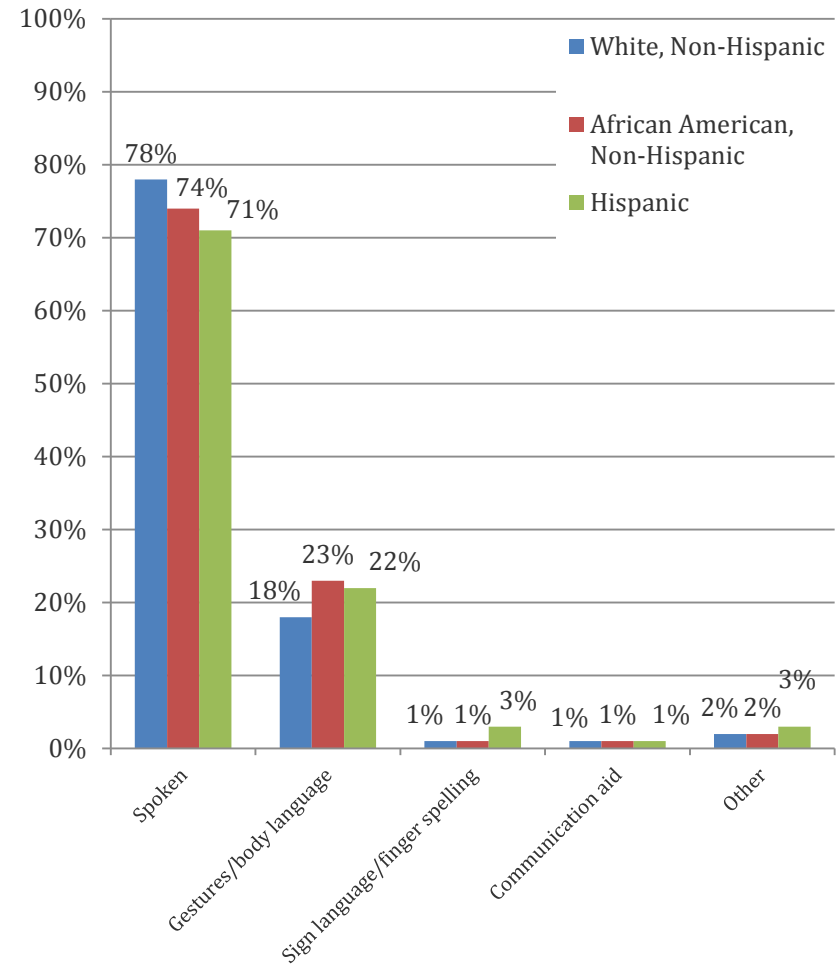


Demographic Differences:

Primary language – NON-ENGLISH ($p < .01$)

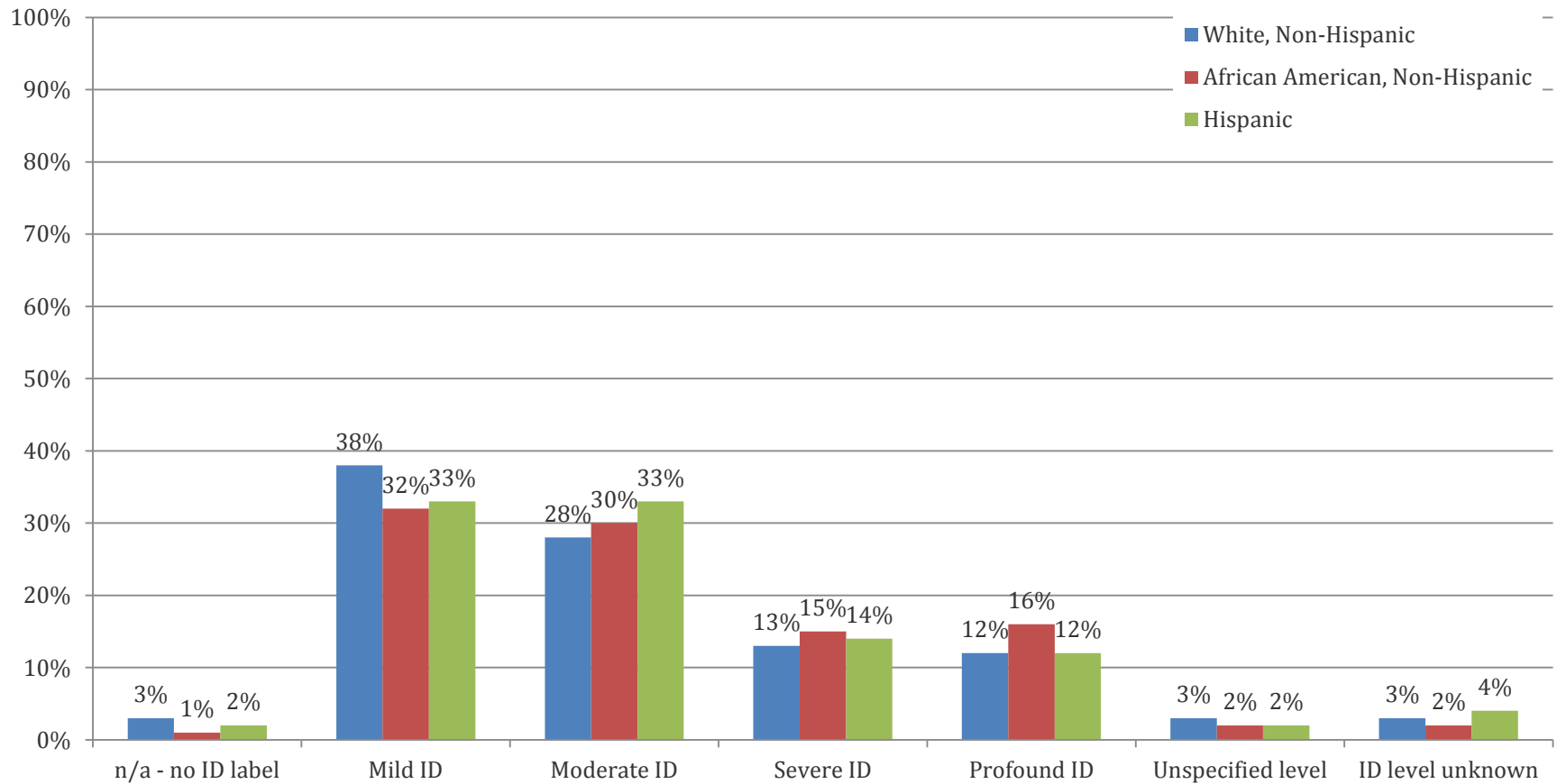


Primary means of expression ($p < .01$)



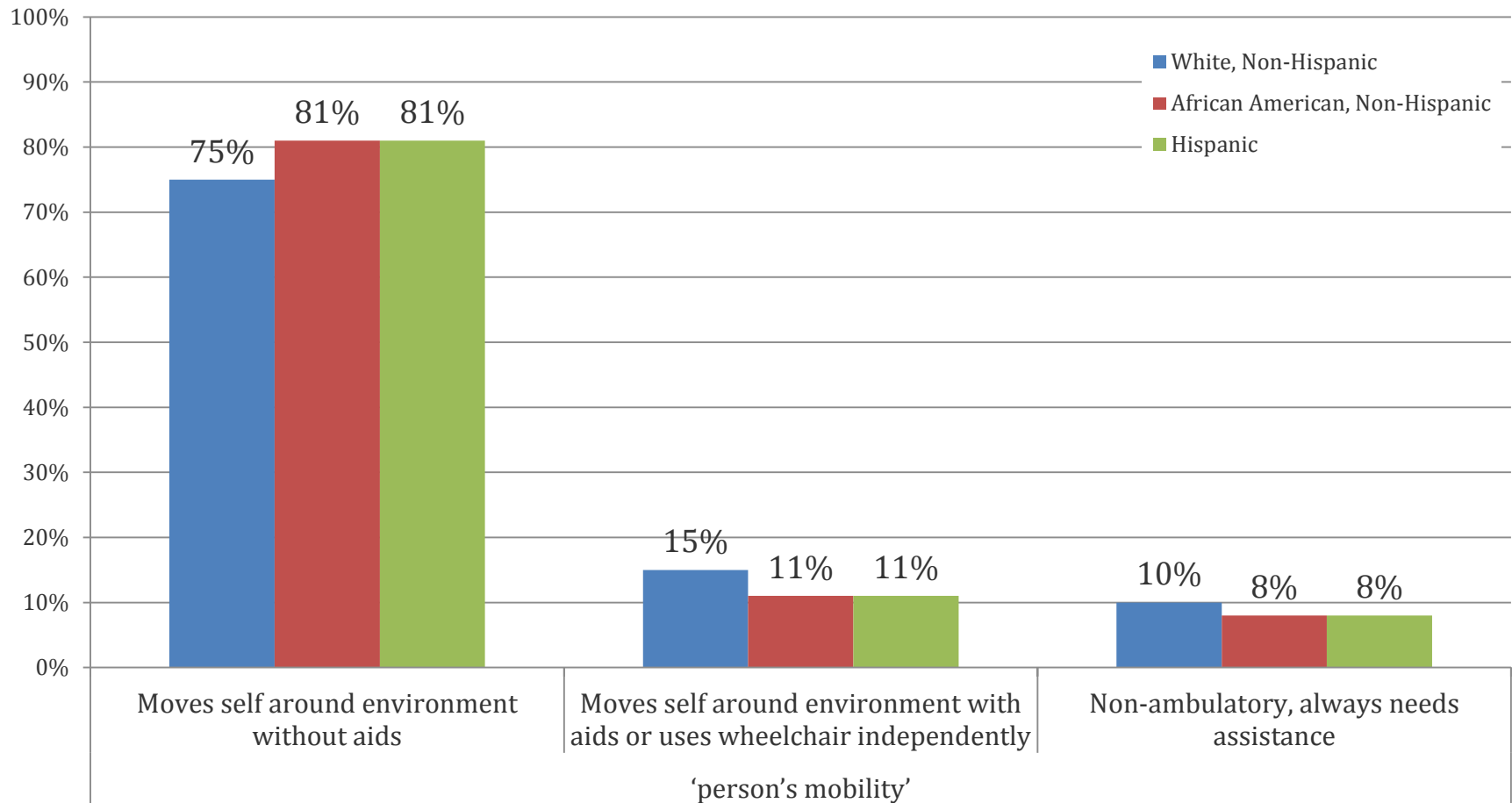
Demographic Differences:

Level of Intellectual Disability ($p < .01$)



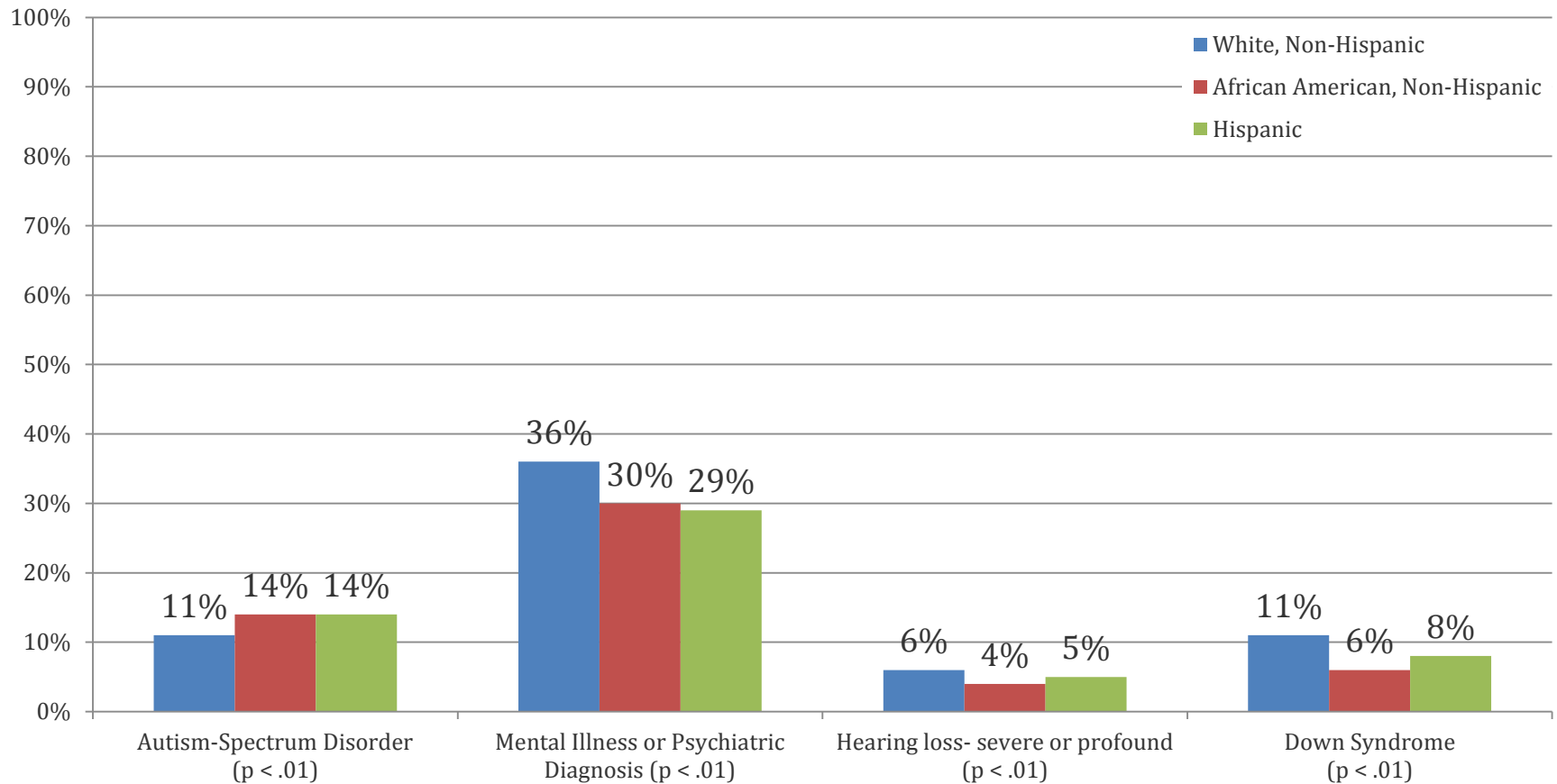
Demographic Differences:

Mobility level ($p < .01$)



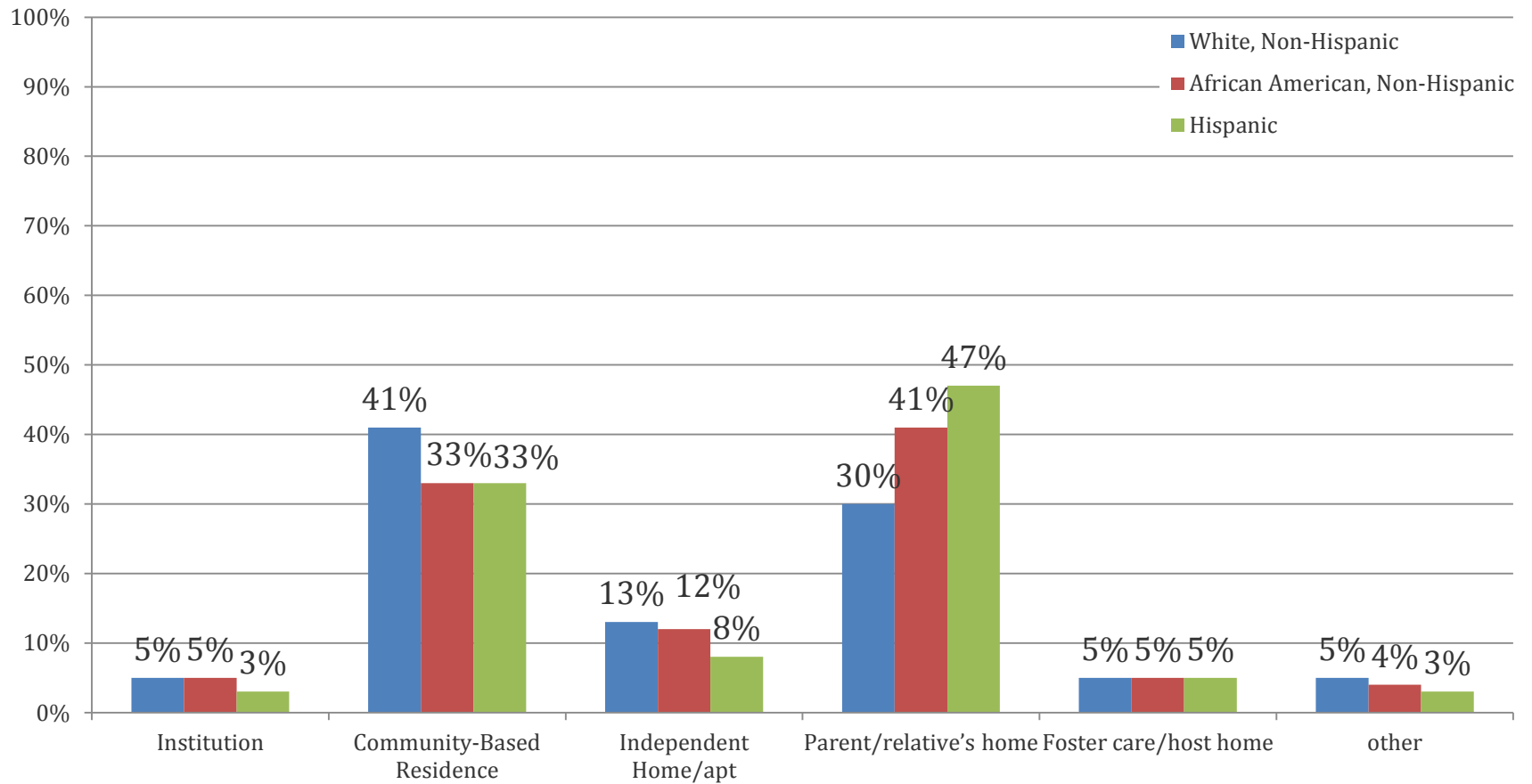
Demographic Differences:

Other diagnoses



Demographic Differences:

Residence Type ($p < .01$)



We see.....

- There are significant differences in demographic characteristics amongst individuals of differing races/ethnicities.
 - Could those differences be influencing the racial and ethnic disparities we see in preventive healthcare use?
- Logistic regression to control for these demographic differences.



Logistic Regression Results

		Primary care doc	Phys exam	Dental exam	Vision screen	Hear test	Flu vacc	Pneum vacc
State		***	***	***	***	***	***	***
Race								
	White, Non-Hispanic	ref	ref	ref	ref	ref	ref	ref
	African American, Non-Hispanic	1.6	0.82	0.60*	1.25*	1.14	0.68*	0.83
	Hispanic	0.9	0.95	0.86	1.22	1.55	0.8	0.9
Age		1.01	1.01*	0.99*	1	1	1.03*	1.04*
Gender: Female		0.81	1.06	1.02	1.06	0.97	1.18	1.05
Primary Language: Not English		1.33	0.37*	0.52*	0.7	0.58	0.87	1.04
Level of ID								
	Level ID: No ID	1.03	1.46	1.07	1	0.97	0.53*	1.07
	Level ID: Mild ID	0.64	1.11	0.84	1.12	0.84	0.68	0.78
	Level ID: Moderate ID	0.67	1.15	0.89	0.97	0.89	0.8	0.87
	Level ID: Severe ID	0.45	1.34	0.8	0.82	0.93	0.81	1.09
	Level ID: Profound ID	Ref	Ref	Ref	Ref	Ref	Ref	Ref
Other diagnosis: ASD		1.09	1.37	1.2	1.14	0.98	1.09	0.89
Other diagnosis: Mental Ill		0.72	1.03	1.14	1.09	1.21	1.19	1.21
Other diagnosis: Hearing loss		0.97	1.96	1.09	1.23	3.25*	1.11	1.19
Other diagnosis: Down		1.89	1.12	1.02	1.23	1.76*	1.23	1.21
Residence Type								
	Residence Type: Institution	ref	ref	ref	ref	ref	ref	ref
	Residence Type: Community Based Resid	1.03	0.78	0.47*	0.96	0.37*	0.42*	0.79
	Residence Type: Independent home/apt	0.85	0.28*	0.15*	0.57*	0.17*	0.17*	0.60*
	Residence Type: Parent/relative's home	0.89	0.21*	0.11*	0.40*	0.11*	0.14*	0.60*
	Residence Type: Foster care/Host home	0.85	0.45	0.24*	0.77	0.20*	0.22*	0.74
	Residence Type: other	1.45	0.46	0.35*	0.98	0.25*	0.39*	0.89
Mobility								
	Mobility: Moves self without aids	0.81	0.83	1.26	1.48*	1.2	0.61*	0.43*
	Mobility: Moves self with aids	1.13	0.9	1.11	1.22	1.21	0.88	0.71
	Mobility: Non-Ambulatory	ref	ref	ref	ref	ref	ref	ref
Expression: Spoken		1.18	0.75	0.95	1.09	1.2	1.06	0.74*
Support for behav. problems		1.46	1.06	1.05	0.93	1.1	1.14	1.16

* $p < .01$



Controlling for State & Demographics...

- Race/ethnicity is still a significant predictor for :
 - Has had dentist visit in past year
 - African American, Non-Hispanic respondents are significantly less likely to have had a dentist visit in the past year
 - Has had eye exam in past year
 - African American, Non-Hispanic respondents are significantly more likely than White, Non-Hispanic respondents to have had an eye exam in the past year
 - Has had flu vaccine in past year
 - African American, Non-Hispanic respondents are significantly less likely than White, Non-Hispanic respondents to have had a flu vaccine in the past year
- Controlling for other demographic factors, race/ethnicity is no longer a significant predictor for:
 - Has primary care doctor
 - Has had physical exam in past year
 - Has had hearing test in the past five years
 - Has ever had pneumonia vaccine



Conclusions:

- There are apparent differences in likelihood of receiving preventive care by race/ethnicity
 - White, Non-Hispanic respondents less likely to have a primary care doc
 - White, Non-Hispanic respondents more likely to have had a physical exam, a dental exam, a flu vaccination and/or a pneumonia vaccination
- Adults with IDD of different racial/ethnic backgrounds also differ in other demographic factors
 - Where they live (both type of residence and state of residence)
 - Their age
 - Their means of expression
 - Their language
 - Their level of ID
 - Other diagnoses
 - Their level of mobility
- It is crucial to control for these demographic factors.



Conclusions:

- After controlling for demographics and state:
 - Many differences observed in descriptive analyses are no longer significant.
- However, some differences remain:
- Race/ethnicity is still a significant predictor for :
 - Has had dentist visit in past year
 - African American, Non-Hispanic respondents are significantly less likely to have had a dentist visit in the past year
 - Has had eye exam in past year
 - African American, Non-Hispanic respondents are significantly more likely than White, Non-Hispanic respondents to have had an eye exam in the past year
 - Has had flu vaccine in past year
 - African American, Non-Hispanic respondents are significantly less likely than White, Non-Hispanic respondents to have had a flu vaccine in the past year



Conclusions:

- State in which individual resides is a highly significant predictor of receipt of all preventive care variables.
- Residence type is strongly related to use of preventive care.
- Speaking a language other than English has a negative effect on receipt of a physical exam in the past year and receipt of a dental exam in the past year
- Individuals with less mobility are significantly more likely than those who are self-mobile (without using aids) to have been vaccinated against the flu and pneumonia. However, individuals who move themselves without aids are significantly more likely to have had a vision screening in the past year.
- Age is significantly related to receipt of physical exam, dentist visit and flu and pneumonia vaccines.



**Do NCI data demonstrate
differences by race/ethnicity
in employment?**

Methods, Measures and Sample:

- **2011-2012** data collection cycle
- **Background Information section:** demographics, residence, health, and employment information. Generally collected from records by case managers.
- **Section I: Face-to-face interview:** Satisfaction and preferences
- 19 states, one regional council
(AL, AR, AZ, CT, GA, HI, IL, KY, LA, MA, ME, MI, MO, NC, NJ, NY, OH, PA, SC and the Mid-East Ohio Regional Council)
- Total N: 12,236 individuals



Methods, Measures and Sample:

Race/Ethnicity

- Source: two items from Background Section
 - Ethnicity (Hispanic, or non-Hispanic)
 - Race (American Indian or Alaska Native, Asian, Black or African American, Pacific Islander, White, or Other race not listed)
- Items combined to create: Race/Ethnicity
 - White, Non-Hispanic
 - African American, Non-Hispanic
 - Hispanic
- Other race/ethnic categories too small for analysis



Methods, Measures and Sample: Employment

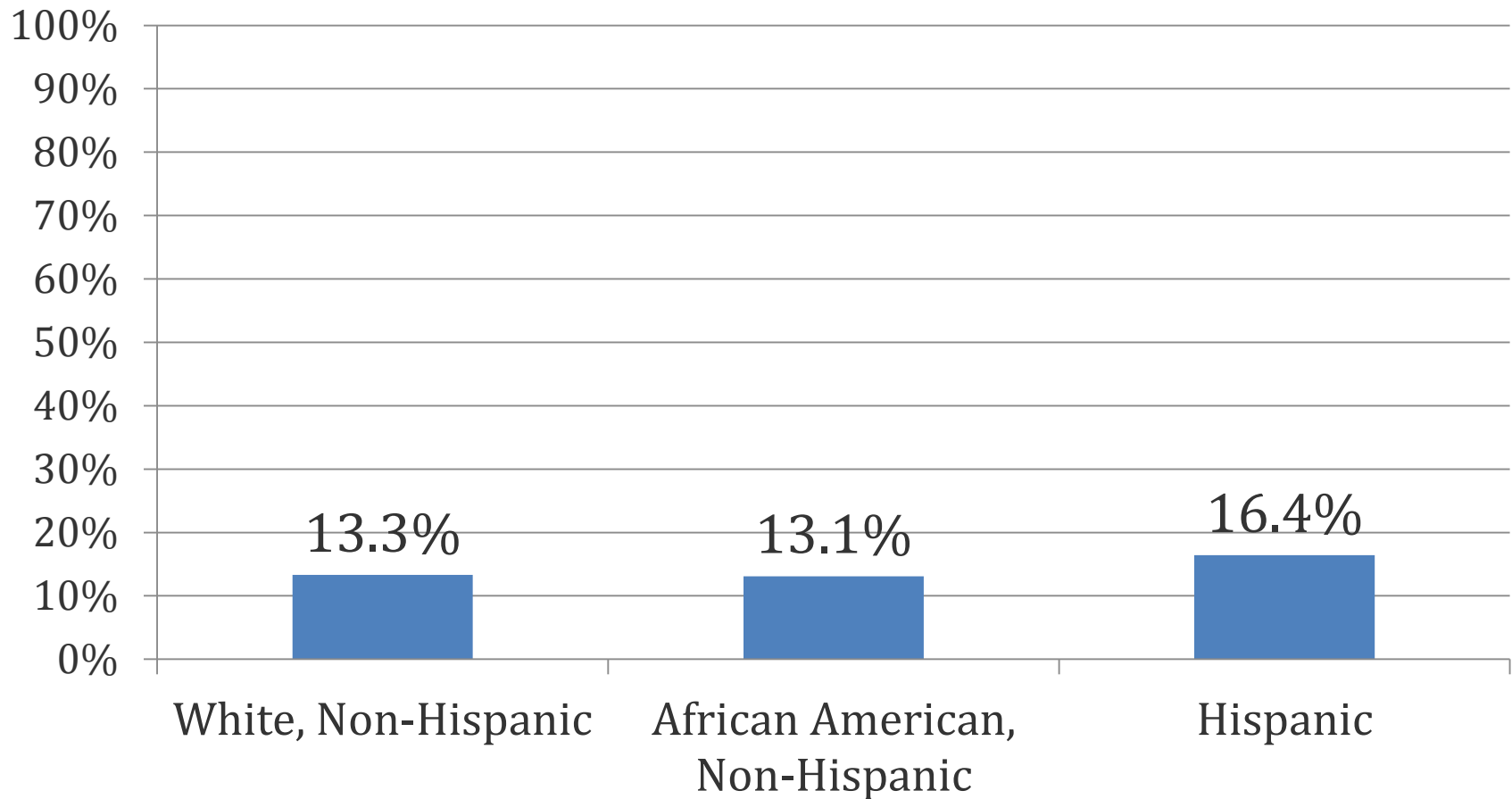
- Person has paid job in the community:
 - No
 - Yes
- Person does not have a paid job in the community, but would like one:
 - No
 - Yes
- Person has paid job in the community but would like to work somewhere else:
 - No
 - Yes
- Hours worked and hourly wages
 - Continuous



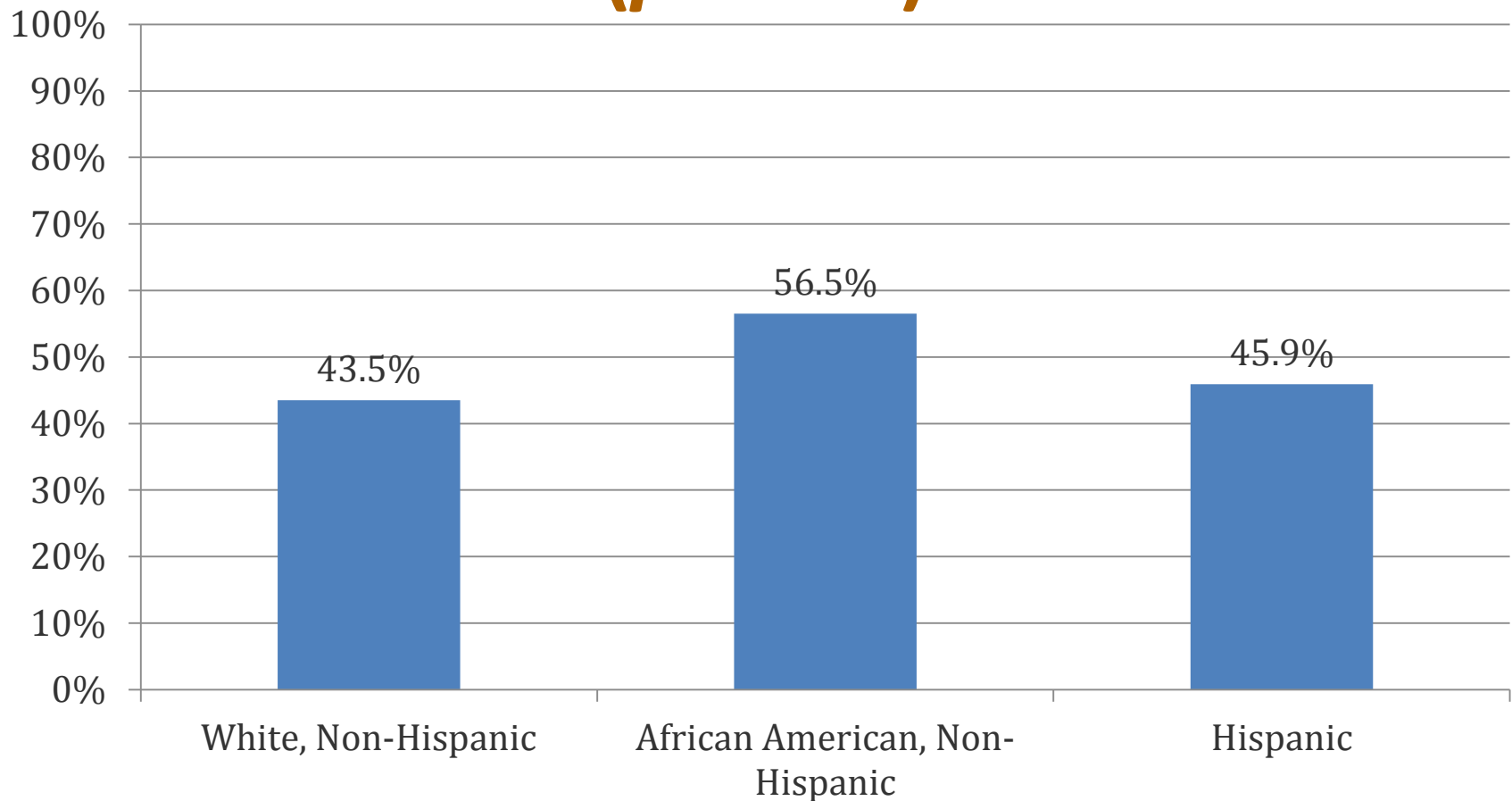
FINDINGS



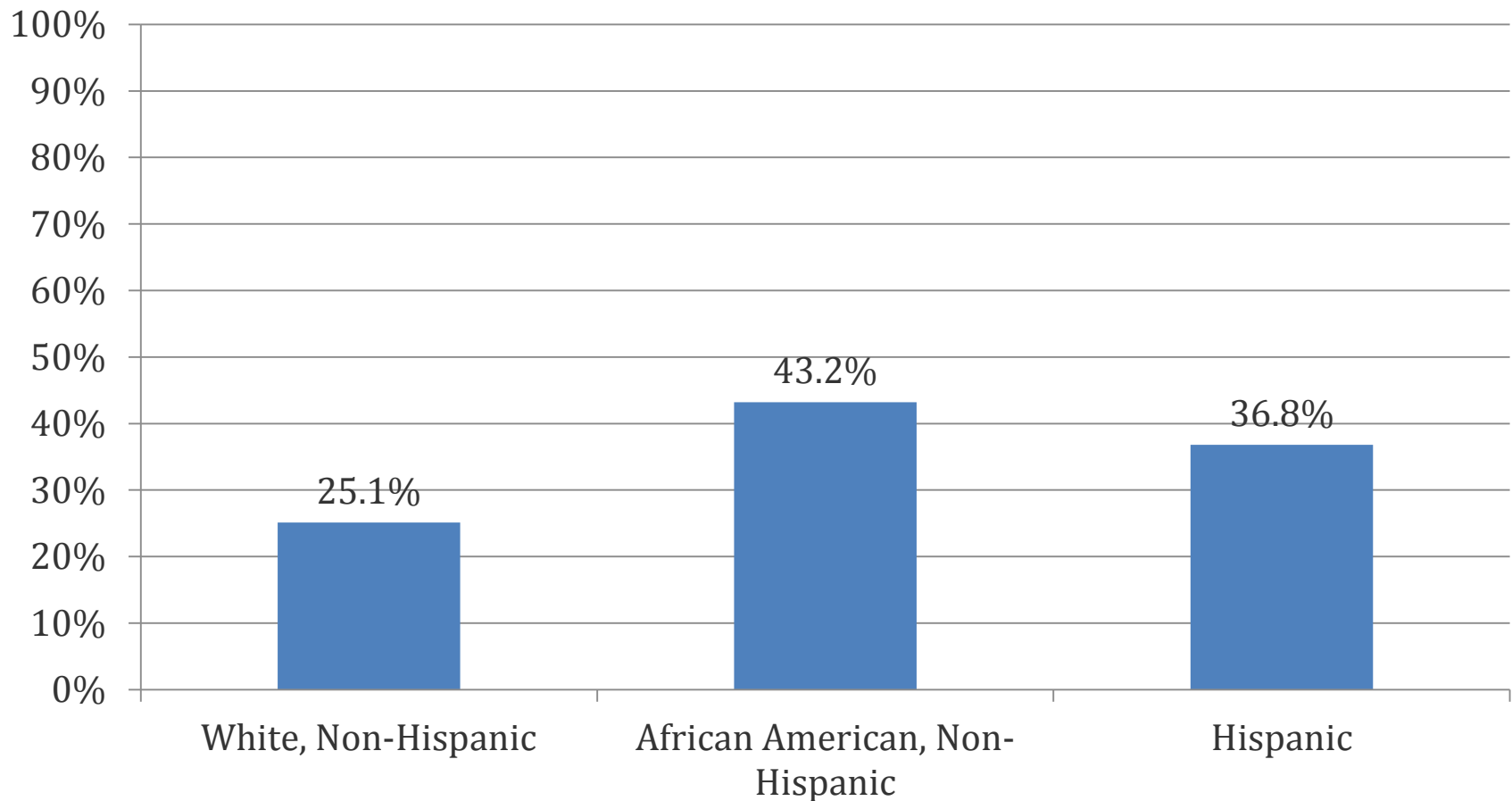
In paid community job in the past 2 weeks (*no significance*)



Doesn't Have Paid Community Job, But Wants Paid Community Job ($p < .001$)



Has Paid Community Job, Wants to Work Somewhere Else ($p < .001$)



Wages and Hours: Paid Community Jobs

	Average number of hours worked in a two week period ($p<.001$)	Average hourly wage ($p<.001$)
White, Non-Hispanic	25.86	\$7.83
African American, Non-Hispanic	28.87	\$8.60
Hispanic	36.15	\$6.64



Regressions

Controlling for state only (coefficients for state not shown)

	Not in job, would like job	Has a job, wants to work somewhere else	Hours worked in two week period	Hourly wage
White, Non-Hispanic	ref	ref	ref	ref
African American, Non-Hispanic	1.63***	2.50***	3.51	0.13
Hispanic	1.29	1.75	7.90**	-1.3

*** $p < .001$ ** $p < .01$



But remember.....

- Differences may be due to other demographic characteristics.
- The following demographic variables were tested and found to be significantly different among the three racial/ethnic categories:
 - Age
 - Gender
 - Individual's primary language
 - Individual's primary means of expression
 - Level of intellectual disability
 - Mobility
 - Other diagnoses (in addition to ID/DD)
 - Residence type



Conclusions

- After controlling for state:
 - African American, Non-Hispanic respondents are significantly more likely to want a job (if not working) and to want a different job (if working).
 - Hispanic respondents work significantly more hours than White, Non-Hispanic respondents.
- Too few degrees of freedom to control for demographic factors
- Expect results regarding the influence of race/ethnicity to be similar to the initial analyses.
- Future research should examine differences in employment among race/ethnicities.



Limitations

- “Don’t know” responses are excluded from analyses. For some health care and employment variables, the rate of “don’t know” responses are fairly high.
- Data less likely to be available in independent/family home settings – i.e. higher rates of “don’t know” responses.
- In preventive care examination, choice is not taken into account - what if person does not want to get a specific test?
- There may be other pertinent factors affecting likelihood of receipt of care and employment that were not controlled for. For example, no data available on income or SES. Previous research has shown that racial/ethnic disparities are often confounded by disparities based on SES.
- Standards regarding recommended frequency of preventive care used are for general population.
- **It’s important to continue research on these topics in order to inform the development of more targeted education and outreach.**



Contacts

- HSRI
 - Julie Bershadsky: jbershadsky@hsri.org
 - Dorothy Hiersteiner: dhiersteiner@hsri.org
- NASDDDS
 - Mary Lee Fay: MLFay@nasddds.org
- NCI website: www.nationalcoreindicators.org



NASDDDS



National Core Indicators (NCI)