

# Racial/Ethnic Group Differences in Response Rate to a Mail Invitation to Participate in a Lifestyle Intervention Trial to Prevent Cognitive Decline (U.S. POINTER Trial)



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## Background

- Public and private funding agencies are increasingly promoting policies and methods to increase diversity in AD trials.<sup>1</sup> Identifying effective and efficient methods to increase diversity in AD trials will accelerate achievement of this policy objective.
- The U.S. Study to Protect Brain Health through Lifestyle Intervention to Reduce Risk (U.S. POINTER) trial sponsored by the Alzheimer's Association established a recruitment target of 23% representation of racial-ethnic minority groups.<sup>2</sup>
- Baylor College of Medicine Department of Neurology, in partnership with the Kelsey Research Foundation (KRF), in Houston, Texas, served as one of five U.S. POINTER trial sites.
- Primary care patient populations of Baylor and KRF Principal were the principal recruitment source for the Houston site.

## Objective

To identify the demographic predictors of response rate to a mailed recruitment letter inviting participation in a multi-modal lifestyle intervention trial to protect cognition in ethnically and racially diverse individuals ages 60-79 with sub-optimal control of cardiovascular risk factors.

## Methods

- Potentially eligible patients were identified through Baylor and KRF electronic medical records (EMRs).
- Patients received a recruitment letter with instructions to access a web site to begin the screening process.
- Age, sex, and racial-ethnic group identification obtained from the EMR.
- Individual socioeconomic status variables not available in the EMR; estimated using Area Deprivation Index (ADI).
  - ADI is a validated index reflecting education, employment, income, and housing, aggregated to the census block level.<sup>3</sup>
  - Values range from 1 to 100, with lower values indicating less disadvantage.
  - Quartiles of ADI computed for analysis.
- Recruitment occurred over a 2½ -year period. Seasonal or Covid-related response variation controlled with a variable reflecting 6-month intervals.
- "Response" defined as an individual accessing the U.S. POINTER web site to provide preliminary screening information.
- Response rates across racial-ethnic groups and ADI percentiles compared using descriptive statistics. Logistic regression modeling used to assess the independent effects of race-ethnicity and ADI on response rates, adjusting for age, sex, clinic system, and recruitment period.

Figure 1

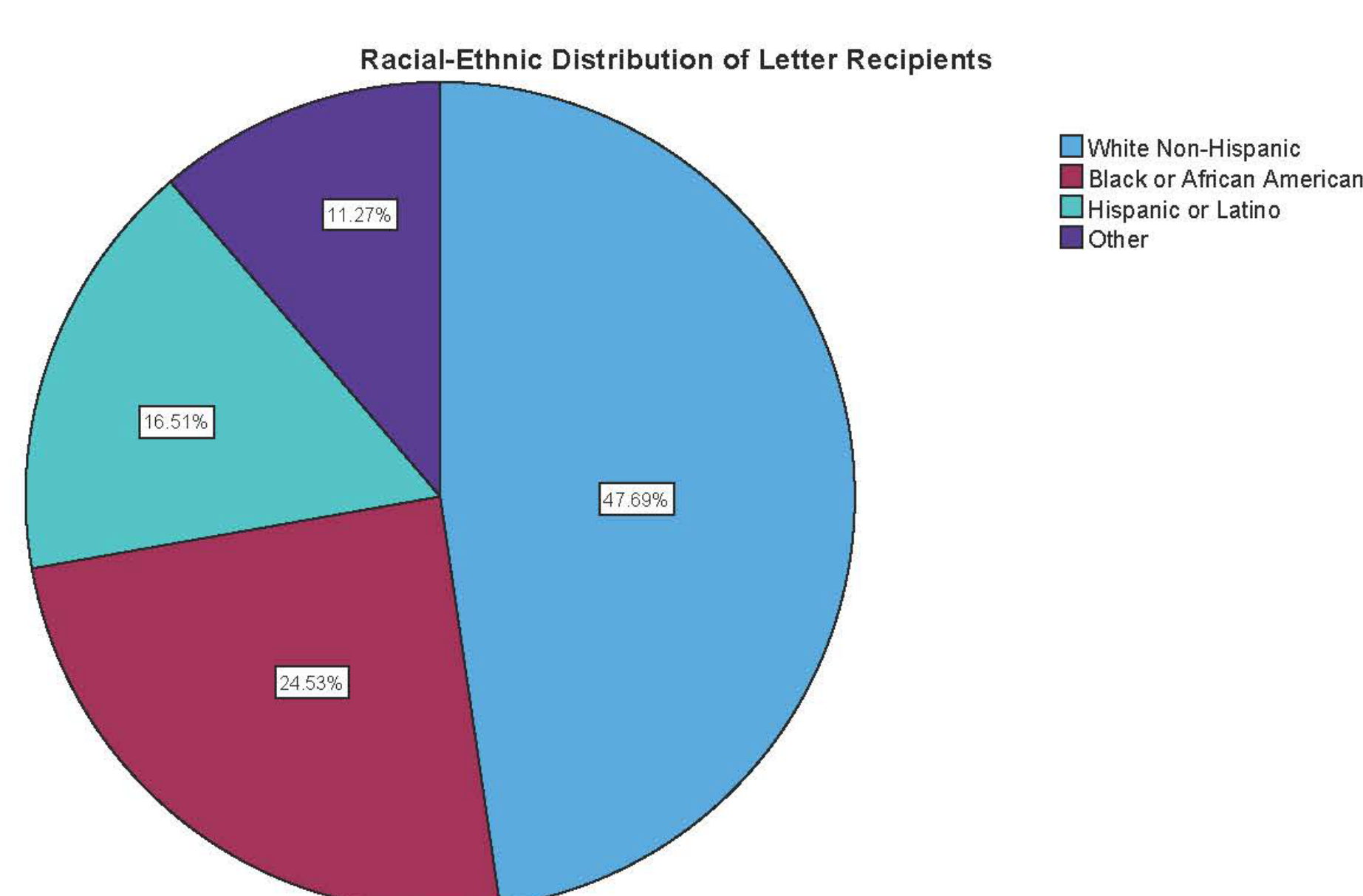
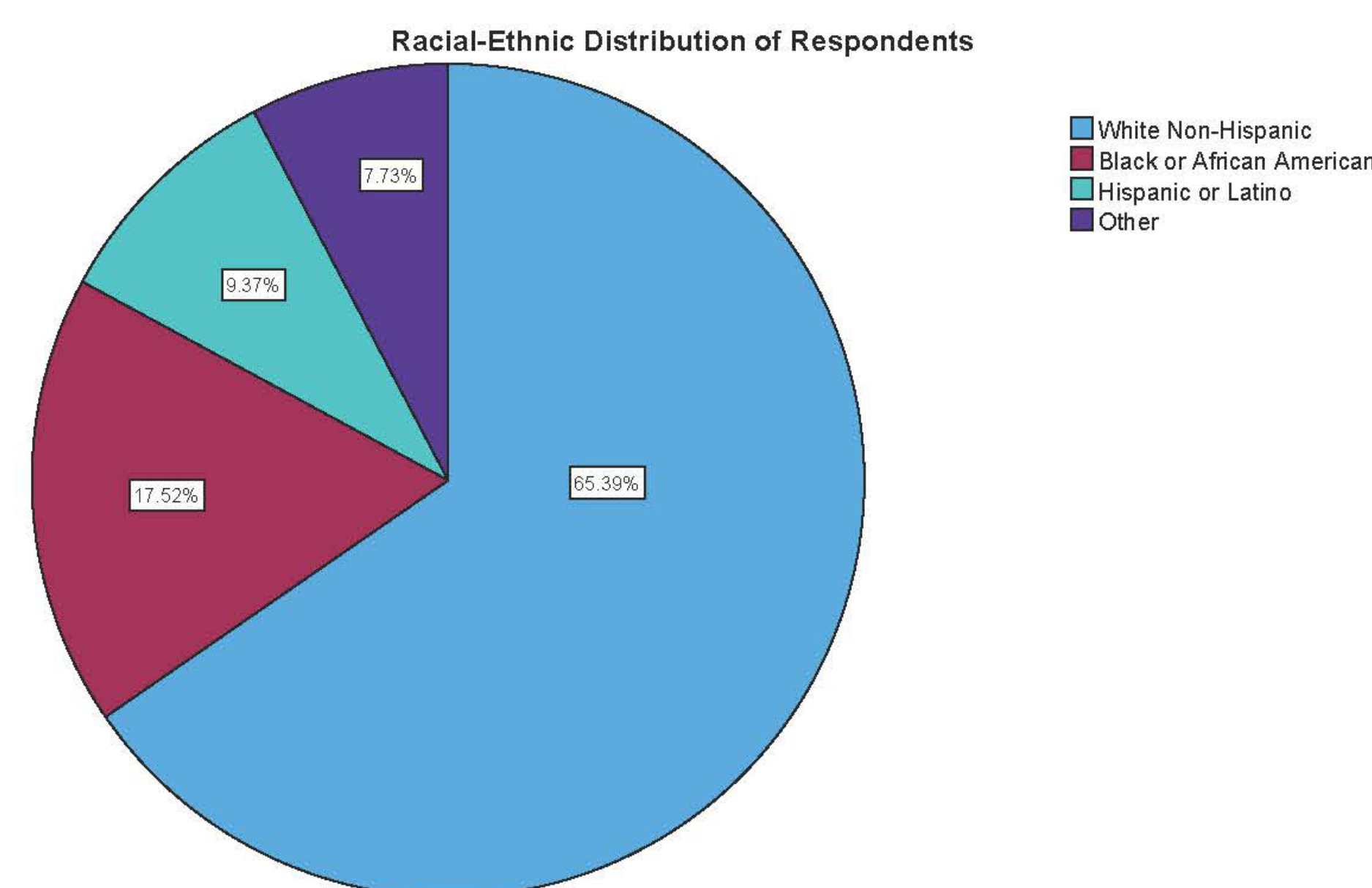


Figure 2



## Results

- Of 104,993 patient names and addresses identified, 101,651 (97%) could be matched to the ADI index (misspelled addresses or individuals changing addresses).
- Racial-ethnic group distribution of letter recipients was 48% non-Hispanic white (NHW), 25% Black/African American (AA), 17% Hispanic, 11% Other (Figure 1).
- Overall response rate was 2.4% and varied significantly across all demographic variables (Table 1).
- Overall, 35% of responses were from racial-ethnic minority groups (Figure 2).

Variable	Response Rate (%)	p-value
Overall Response Rate	2.4% (n=2,402/101,651)	
Age in Years (Respondents vs. Non-respondents)	68.20/67.63	<.001
Sex		<.001
• Male	2.1%	
• Female	2.6%	
Racial and Ethnic Identification (%)		<.001
• White	3.3%	
• Black/African American	1.7%	
• Hispanic	1.4%	
• Other	1.6%	
ADI Quartiles		<.001
• 1 (lowest deprivation)	3.1%	
• 2	2.7%	
• 3	2.1%	
• 4	1.4%	
Mailout Period		<.001
• Aug 2020-Jan2021 (32,279)	2.5%	
• Feb 2021-Jul 2021 (12,174)	2.5%	
• Aug 2021-Jan2022 (10,019)	2.5%	
• Feb 2022-Jul 2022 (23,290)	2.2%	
• Aug 2022-Feb 2023 (23,880)	2.2%	
Clinic System		<.001
• BCM	3.0%	
• KRF	2.0%	

- ADI distribution was strongly associated with race-ethnicity (Figure 3).
- In logistic regression analysis, all demographic variables were independently and significantly associated with response rate. Figures 4 and 5 present adjusted response probabilities for race-ethnicity and ADI. There were no significant ethnic group by ADI interactions in response rates.

Figure 3

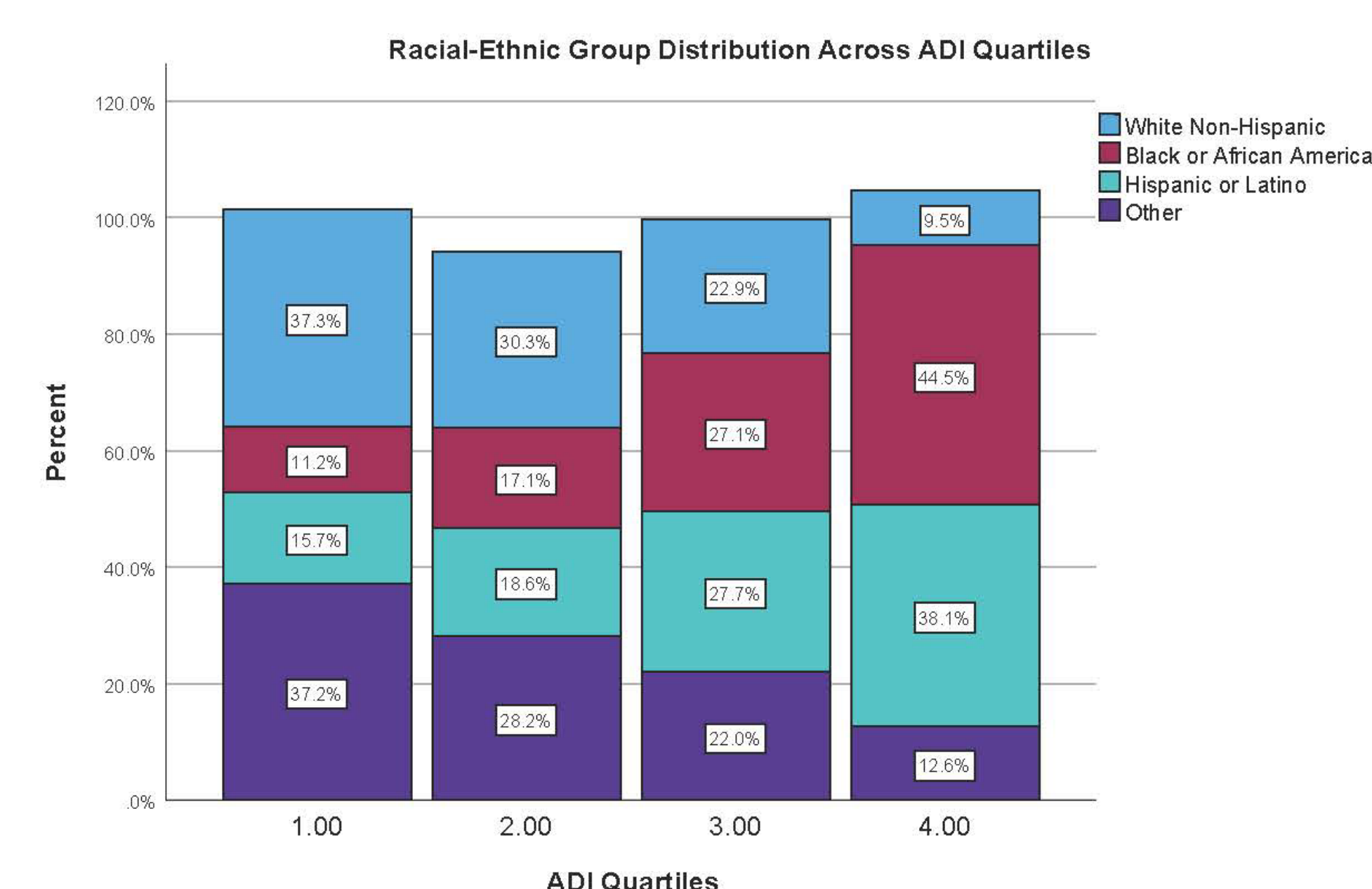


Figure 4

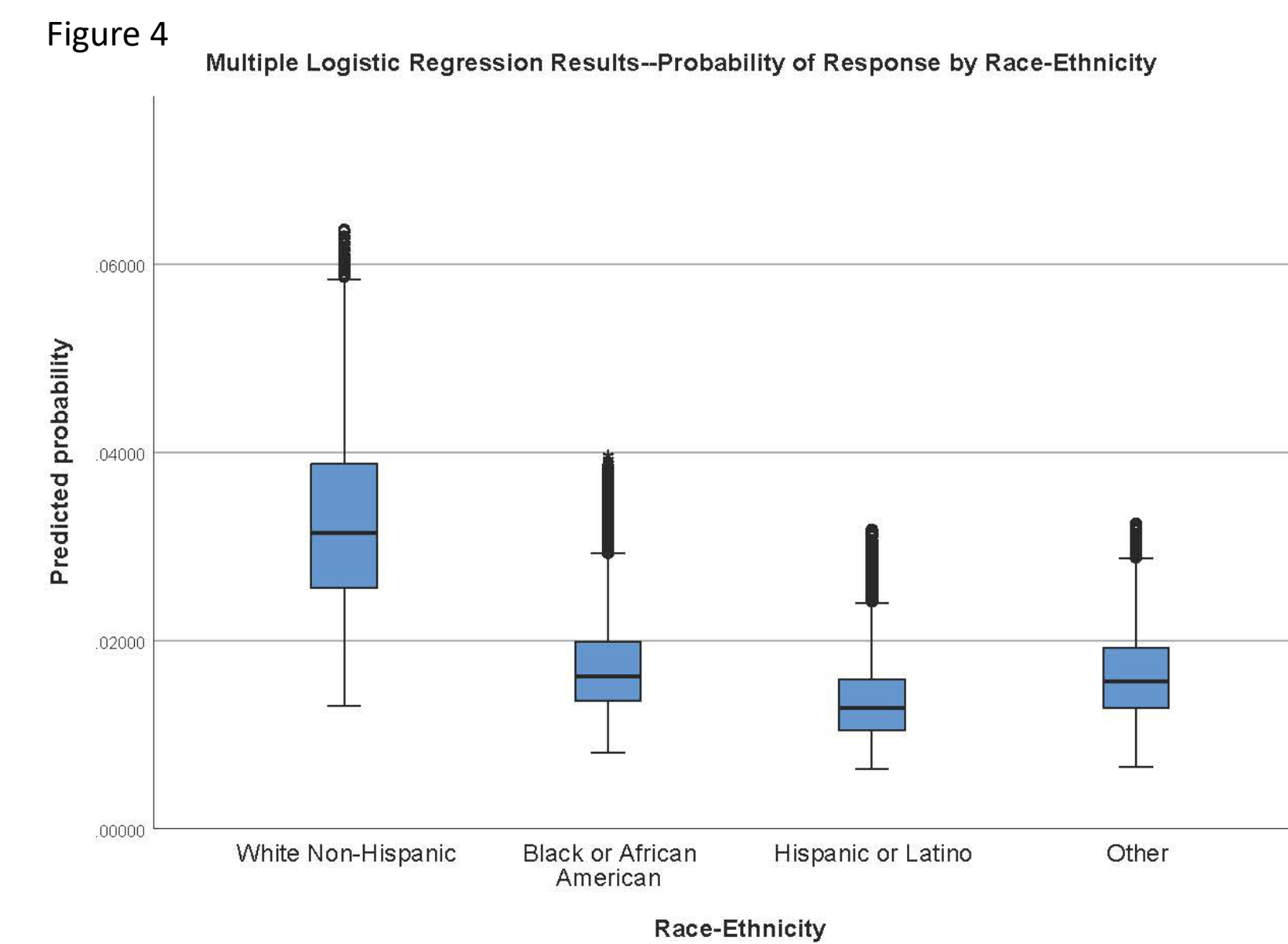
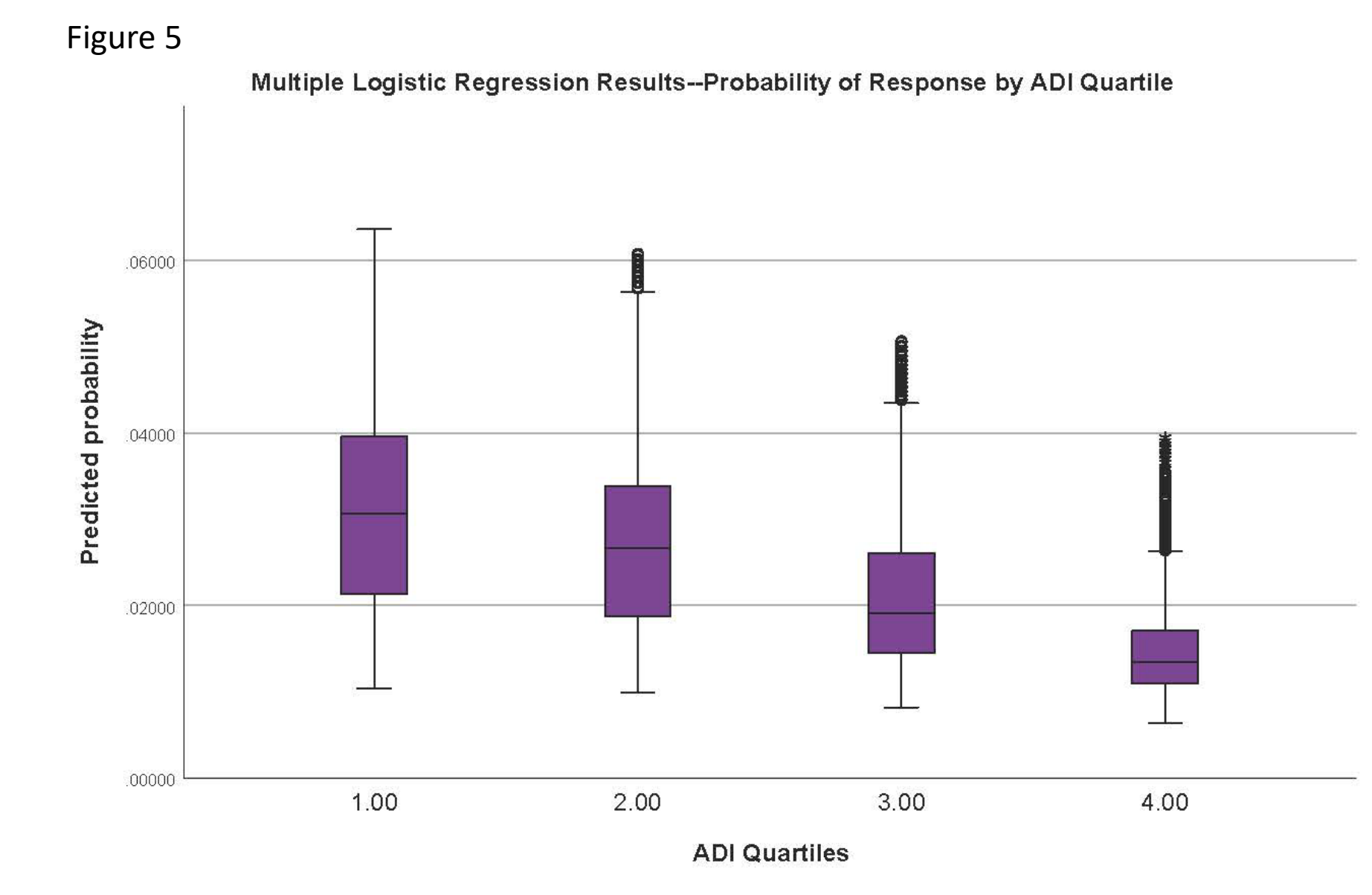


Figure 5



## Conclusions

- Using a racially and ethnically diverse mailing roster can be successfully used to recruit a study population that is both racially, ethnically and socioeconomically diverse.
- Race-ethnicity and socioeconomic factors contribute independently to response rates.
- Oversampling of some groups to achieve desired recruitment targets can compensate for variations in response rate.
- Increased yields are likely possible with culturally and linguistically tailored mailed materials.
- Additional grass roots efforts may be necessary to supplement mailed recruitment efforts if diversity targets are not met.

## References

- Franzen S, Smith JE, van den Berg E et al.: Diversity in Alzheimer's disease drug trials: The importance of eligibility criteria. *Alzheimer's & Dementia* 2022;18:810-823.
- Baker LD, Snyder HM, Espeland MA, Whitmer RA, Kivipelto M et al.: Study Design and Methods: U.S. Study to Protect Brain Health through Lifestyle Intervention to Reduce Risk (U.S. POINTER). *Alzheimer's & Dementia* (in press).
- Kind AJH, Buckingham WR: Making neighborhood disadvantage metrics accessible – the Neighborhood Atlas. *N Engl J Med* 2018;378:2456-2458.