

Reshmi J. S. Patel¹, Jie Ding PhD², Francoise A. Marvel MD², Rongzi Shan MD³, Timothy B. Plante MD MHS⁴, Michael J. Blaha MD MPH², Wendy S. Post MD MS*², Seth S. Martin MD MHS*²

(1) Johns Hopkins University Krieger School of Arts and Sciences, Baltimore, MD; (2) Ciccarone Center for the Prevention of Cardiovascular Disease, Johns Hopkins University School of Medicine, Baltimore, MD; (3) David Geffen School of Medicine at UCLA, Los Angeles, CA; (4) Department of Medicine, Larner College of Medicine at the University of Vermont, Burlington, VT; *These authors contributed equally.

BACKGROUND

- Mobile health (mHealth) has an emerging role in cardiovascular disease (CVD) prevention.
- There is rising concern about inequities in access to mHealth technologies.
- This study evaluated possible divides in mHealth access by demographic, socioeconomic, and cognitive characteristics.

METHODS

- mHealth access was assessed from telephone follow-up surveys in 2019-2020 from participants in MESA aged 62-102 years at the time of the survey and free of CVD at baseline (2000-2002).
- Multivariable logistic regression modeling assessed associations of mHealth access measures with age, sex, race/ethnicity, education level, family income, health insurance status, and Cognitive Abilities Screening Instrument (CASI) score.

RESULTS

- Among 2795 adults, 63% (n=1756) reported having internet access, 65% (n=1828) owned a computing device, and 9% (n=248) owned a fitness tracker.
- There were lower odds of all mHealth access measures with older age and lower income and higher odds with higher CASI score. Men had higher odds of internet access and computing device ownership but lower odds of fitness tracker ownership. For internet access and computing device ownership, lower odds were seen with Hispanic race/ethnicity and lower education level. For internet access, lower odds were seen with Black race/ethnicity and non-HMO/private health insurance. Chinese race/ethnicity had lower odds of internet access but higher odds of computing device ownership.

DISCUSSION

- Among older age adults, mHealth access measures varied by major demographic, socioeconomic, and cognitive characteristics, suggesting a digital divide.
- When developing mHealth interventions, individual access barriers should be considered.

Within a cohort of older adults, participants who were older, of racial/ethnic minority groups, had lower socioeconomic status, or had lower cognitive function generally experienced lower mHealth access.

Future mHealth interventions should consider individual barriers to access.

Directing patients to low-cost broadband programs or providing loaner smart devices with prepaid data plans and directing individuals with lower cognitive function to devices designed for older adults may alleviate certain disparities.

Both patients and insurance companies may benefit from integration of fitness trackers into insurance plans.

Figure 1. Flow diagram to select eligible cohort for analysis

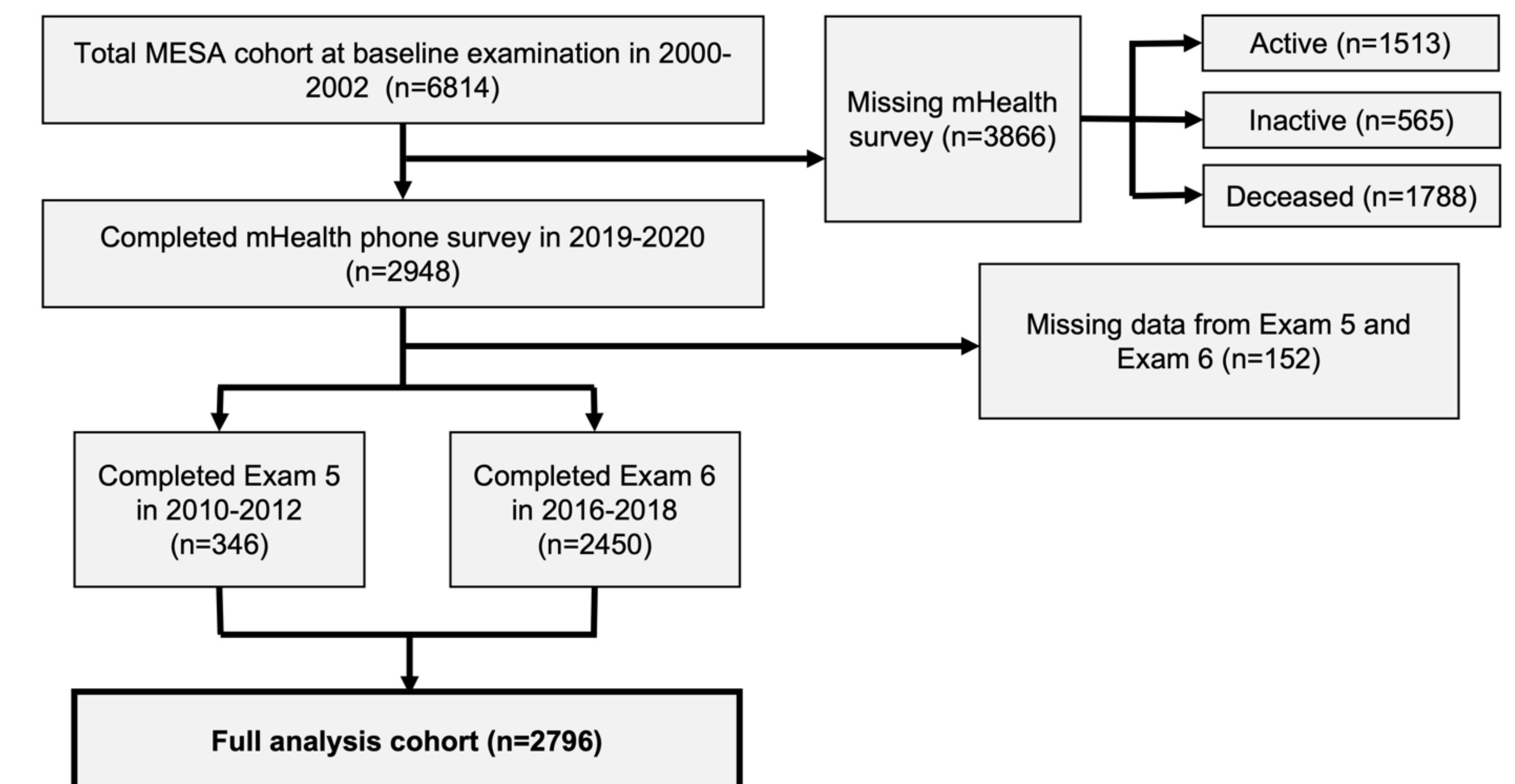


Figure 2. Multivariable Logistic Regression Model for Association Between mHealth Outcomes and Demographic, Socioeconomic, Cognitive Characteristics

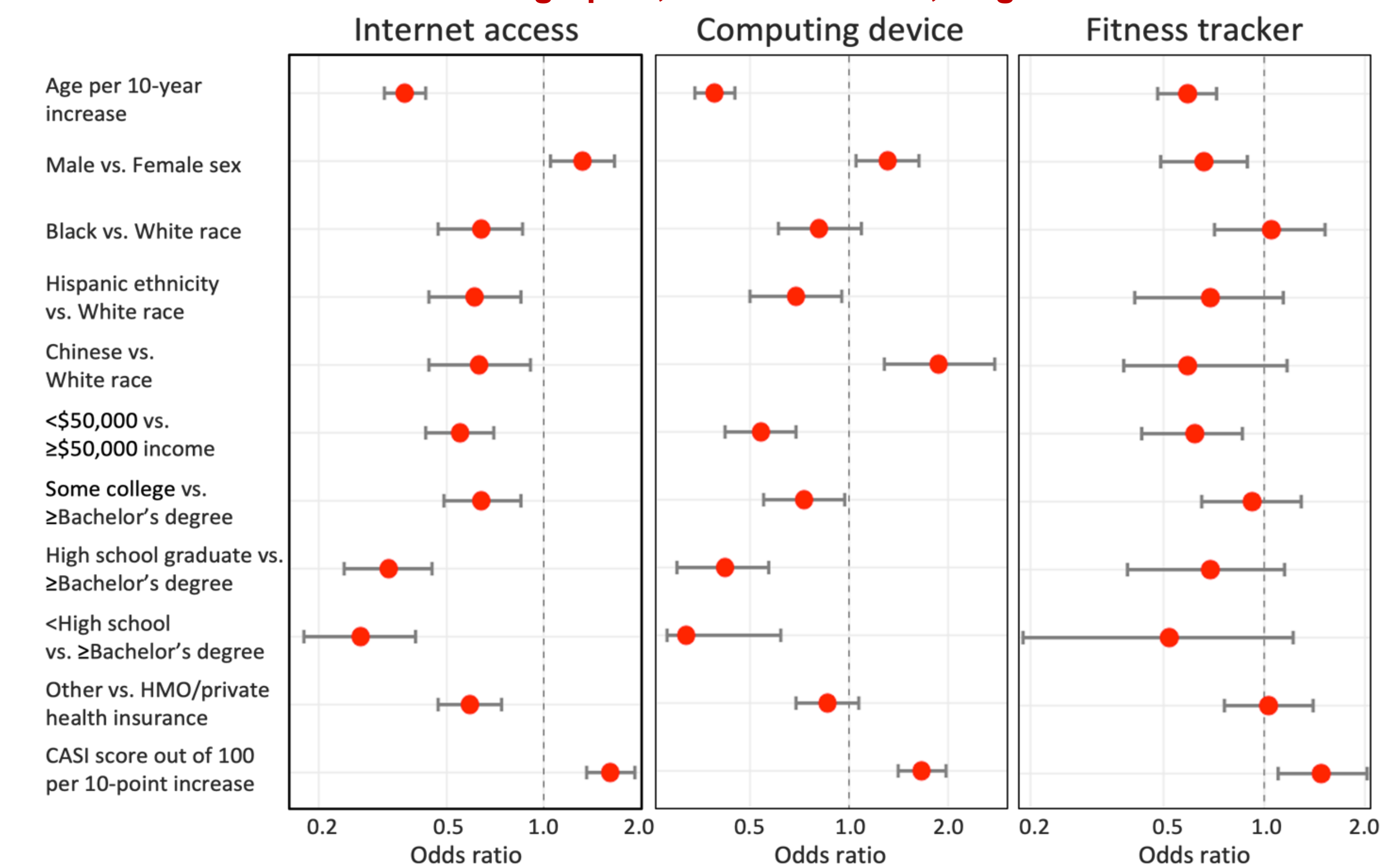


Table 1. Implications of Study Results

Finding	Considerations
Fitness tracker divide	Integration of wearable fitness trackers into insurance plans
Racial/ethnic disparities	Further investigation into the cause of lower mHealth access for racial/ethnic minority participants relative to White participants in the same SES bracket
Health insurance disparities	Existing low-cost broadband programs or loaner smart devices with prepaid data plans
Cognitive ability disparities	Devices designed for older adults and individuals with lower cognitive function

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ACKNOWLEDGEMENTS

This work is funded by the Krieger School of Arts and Sciences Woodrow Wilson Fellowship. MESA is funded by contracts 75N92020D00001 through 75N92020D00007, N01-HC-95159 through N01-HC-95169, and HHSN2682015000031 from the National Heart, Lung, and Blood Institute, and by grants UL1-TR-000040, UL1-TR-001079, and UL1-TR-001420 from the National Center for Advancing Translational Sciences (NCATS).