Associations of Demographic, Socioeconomic, and Cognitive Characteristics With Mobile Health Access: the Multi-Ethnic Study of Atherosclerosis (MESA)

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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 dividends 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% (=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.