

Attachment 5b
2022 Q3 NHIS Proposed New Content
Concepts Measured, Duplication, and Proposed Uses of Data

Questions are being added to quarter 3 (Q3) of the 2022 NHIS to inform NCHS's ongoing efforts to evaluate the quality of data collected from probability-based online survey panels. New content includes questions on internet access, the use of health information technology, and civic engagement.

Internet Access – Sample Adult

Concepts to be Measured

- Access to the internet (ACCSSINT_A)
- Access to the internet from your home (ACCSHOM_A)

Duplication and Previous NHIS

- These questions are currently on the American Community Survey

Proposed Use of the Data

- The first question (ACCSSINT_A) will be used to screen adults in or out of the second question on Internet access at home (ACCSHOM_A) and three health information technology (HIT) questions (see next section). The second question gets at ease of access. We anticipate that adults who have access to the Internet, but not at home, are more likely to be under-represented in online survey panels than adults who have access at home. Research has shown, for example, that when offline households are provided Internet-enabled devices, they still participate at lower rates in web panel surveys than their online counterparts (Blom et al., 2016; Cornesse and Schaurer, 2021; Lenheer and Scherpenzeel, 2013).
- From a health perspective, access to the Internet is increasingly considered a social determinant of health (Early and Fernandez, 2021). It is essential for obtaining home-based telemedicine, promoting health literacy, and public health prevention and surveillance efforts (Benda et al., 2020; Early and Fernandez, 2021). Additionally, research has found Internet users in lower-income communities to be less likely to report feeling lonely, to score higher in terms of mental wellbeing, and more likely to be physically active (Kearns and Whitley, 2019). Similar impacts of Internet use have emerged in studies of older adults and adults with disability (Duplaga and Szulc, 2019; Khalaila and Vitman-Schorr, 2018).
- We hypothesize that a question on Internet access at home will be valuable for calibrating RANDS weights because 1) we expect RANDS to overestimate, relative to the NHIS, the percentage of adults with access to the Internet at home, and 2) we expect the Internet at home question to be associated with health outcomes of interest on NHIS and RANDS.

Health Information Technology (HIT) – Sample Adult

Concepts to be Measured

- Past 12 months, use internet to look for health or medical information (HITLOOK_A)
- Past 12 months, use internet to communicate with a doctor or doctor's office. (HITCOMM_A)
- Past 12 months, use internet to look up medical test results (HITTEST_A)

Duplication and Previous NHIS

- Similar questions are currently on the Health Information National Trends Survey (HINTS)
- HITLOOK was previously fielded on the NHIS in 2009

Proposed Use of the Data

- These three questions get at the most common use of HIT by the US population. Several studies have found significant age group differences in the use of the internet for health-related activities. For example, adults aged 65 and over are less likely to use HIT compared to their younger counterparts (Atkinson et al. 2009; Choi 2011; Gandrakota et al. 2021). Also, women, non-Hispanic white persons, persons with higher income have been found to be more likely to have used the Internet for health information (Cohen and Adams, 2022). Over the past decade, HIT use has increased nationally, however greater use is also noted among higher educated adults (Gandrakota et al. 2021).
- We hypothesize that the HIT questions will be useful for calibrating RANDS weights because 1) we expect RANDS to overestimate, relative to the NHIS, the percentage of adults using HIT, and 2) we expect the HIT questions to be associated with health outcomes of interest on NHIS and RANDS.
- These questions will also enable substantive analyses of HIT utilization, but that is not the primary reason for their inclusion on NHIS at this time.

Civic Engagement – Sample Adult

Concepts to be Measured

- Past 12 months, spend any time volunteering for any organization or association (CEVOLUN1_A)
 - Some people don't think of activities they do infrequently or for children's schools or youth organizations as volunteer activities. Past 12 months, done any of these volunteer activities (CEVOLUN2_A):

- Past 12 months, attend a public meeting, such as a zoning or school board meeting, that discussed a local issue (CEMMETNG)
- Voting in the last local elections, such as for mayor, councilmembers, or school board (CEVOTELC_A)

Duplication and Previous NHIS

- These questions are currently on or adapted from the Current Population Survey

Proposed Use of the Data

- Research on sample composition biases in web panels has shown greater civic engagement to be associated with higher panel participation. For example, both registered voters and actual voters have been found to be over-represented in web panel surveys (Bottoni and Fitzgerald, 2021; Chandler et al., 2019; Scherpenzeel and Bethlehem, 2018). In addition, a growing literature is making connections between civic engagement and physical and mental health. Higher levels of civic engagement, as measured by voter participation, volunteering, and community organizing, have been linked to higher levels of well-being and self-reported physical health as well as lower levels of chronic disease and depression (Danso, 2017; Nelson et al., 2019; Stopka et al., 2022).
- We hypothesize that questions on civic engagement will produce useful variables for calibrating RANDS weights because 1) we expect RANDS to overestimate, relative to the NHIS, the percentage of adults who engage in civic behaviors, and 2) we expect the civic engagement questions to be associated with health outcomes of interest on NHIS and RANDS. In addition, the inclusion of these questions on the NHIS will allow researchers to further explore the links between civic engagement and a variety of health outcomes.
- These questions will also enable data users to create prevalence estimates of civic engagement, but that is not the primary reason for their inclusion on NHIS.

References

Atkinson NL, Saperstein SL, Pleis J. 2009. Using the internet for health-related activities: findings from a national probability sample. *J Med Internet Res* 11(1):e4 [FREE Full text] [doi: 10.2196/jmir.1035] [Medline: 19275980]

Blom AG, Herzing JME, Cornesse C, Sakshaug JW, Krieger U, Bossert D. 2016. “Does the recruitment of offline households increase the sample representativeness of probability-based online panels? Evidence from the German Internet panel.” *Social Science Computer Review*, 35(4): 498-520. <https://doi.org/10.1177/0894439316651584>

Bottoni G and Fitzgerald R. 2021. “Establishing a baseline: Bringing innovation to the evaluation cross-national probability-based online panels.” *Survey Research Methods*, 15(2): 115-133.

Chandler J, Rosenzweig C, Moss AJ, Robinson J, and Litman L. 2019. "Online panels in social science research: Expanding sampling methods beyond Mechanical Turk." *Behavior Research Methods*, 51: 2022-2038.

Choi N 2011. Relationship Between Health Service Use and Health Information Technology Use Among Older Adults: Analysis of the US National Health Interview Survey *J Med Internet Res* 13(2):e33URL: <http://www.jmir.org/2011/2/e33/>doi: 10.2196/jmir.1753PMID: 21752784

Cohen RA, Adams PF. Use of the Internet for health information: United States, 2009. NCHS data brief, no 66. Hyattsville, MD: National Center for Health Statistics. 2011.

Cornesse C and Schaurer I. 2021. "The long-term impact of different offline population inclusion strategies in probability-based online panels: Evidence from the German Internet Panel and the GESIS Panel." *Social Science Computer Review*, 39(4): 687-704.

<https://doi.org/10.1177/0894439320984131>

Danso K. 2017. "Immigrant health disparities: Does neighborliness improve health?" *Journal of Sociology and Social Welfare*, 44(3): 75-94.

Duplaga M and Szulc K. 2019. "The association of Internet use with wellbeing, mental health and health behaviors of persons with disabilities." *International Journal of Environmental Research and Public Health*, 16(18), 3252; <https://doi.org/10.3390/ijerph16183252>

Gandrakota N, Ali MK, Shah MK 2021. Trends in Health Information Technology Use Among the US Population With and Without Cardiovascular Risk Factors, 2012-2018: Evidence From the National Health Interview Survey *JMIR Public Health Surveill* 7(9):e29990URL: <https://publichealth.jmir.org/2021/9/e29990>doi: 10.2196/29990

Kearns A and Whitley E. 2019. "Associations of Internet access with social integration, wellbeing and physical activity among adults in deprived communities: Evidence from a household survey." *BMC Public Health*, 19:860 <https://doi.org/10.1186/s12889-019-7199-x>.

Khalaila R and Vitman-Schorr A. 2018. "Internet use, social networks, loneliness, and quality of life among adults aged 50 and older: Mediating and moderating effects." *Quality of Life Research*, 27: 479-489.

Lenheer J and Scherpenzeel AC. 2013. "Does it pay off to include non-Internet households in an Internet panel?" *International Journal of Internet Science*, 8(1): 17-29.

Nelson C, Sloan J, and Chandra A. 2019. *Examining civic engagement links to health: Findings from the literature and implications for a culture of health*. Santa Monica, CA: RAND Corporation.

Scherpenzeel A and Bethlehem J. 2018. "How representative are online panels? Problems of coverage and selection and possible solutions." Pp. 105-132 in *Social and behavioral research*

and the Internet: Advances in applied methods and research strategies. Das M, Ester P, and Kaczmirek L (eds.). New York: Taylor and Francis Group, LLC.

Stopka TJ, Feng W, Corlin L, King E, Mistry J, Mansfield W, Wang Y, Levine P, and Allen JD. 2022. "Assessing equity in health, wealth, and civic engagement: A nationally representative survey, 2020." *International Journal for Equity in Health*, 21: 12.
<https://doi.org/10.1186/s12939-021-01609-w>.