**Social Determinants of Health Measures – Please Comment**

The PhenX (consensus measures for **Phen**otypes and e**X**posures) Toolkit (www.phenxtoolkit.org) provides investigators with access to well-established, low burden, standardized measures to incorporate into new or existing biomedical studies involving human subjects. The goal of the Toolkit is to encourage use of common measures to help researchers effectively collaborate and share data.

**The Social Determinants of Health (SDOH) Working Group (WG) requests your feedback on the measurement protocols shown below. Your feedback will help guide decisions about the measurement protocols to be included in a new Social Determinants of Health supplement in the PhenX Toolkit.** The PhenX Toolkit already includes a number of protocols that are relevant to SDOH, a complete list of which is here [SDOH Protocols for Review](https://www.phenx.org/node/478).

Co-Chairs Barbara Entwisle, PhD, University of North Carolina at Chapel Hill, and Alicia Fernandez, MD, University of California at San Francisco, thank you on behalf of the PhenX SDOH Working Group.

**To provide feedback, for each measure in the table below, put a Y in the third column if the measure is useful or an N if the measure is not useful. You may also respond with general comments. Please email your response to** ***feedback@phenx.org*****by February 5, 2020.** (Collected responses are confidential. E-mail addresses are not shared or used for any other purpose.)

To review measure details, please click this link: [SDOH Protocols for Review](https://www.phenx.org/node/478)

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| **Proposed PhenX Social Determinants of Health Measurement Protocols** |
| **Please Review:** | **Respond Here:** | **Comment Here:** |
| **Measure** | **Description of Measurement Protocol** | **Y/N** |  |
| **1. Access to Health Services** | This protocol includes 12 interviewer-administered questions from the National Health Interview Survey (NHIS) Adult Access to Health Care & Utilization Module. Seven questions capture usual place of care and five questions address failure to obtain medical care. |  |  |
| **2.** **Air Quality Index** | This protocol is based on extracting air quality data from the U.S. Environmental Protection Agency (EPA) AirData Air Quality Index Summary Report. This summary report displays an annual summary of Air Quality Index (AQI) values for states, counties or cities (defined by core based statistical areas (CBSA)). The AQI is determined using measured concentrations of carbon monoxide (CO), Nitrogen Dioxide (NO2), ozone (O3), particulate matter with a diameter of less than 2.5 micrometers (PM2.5), and sulfur dioxide (SO2). Standard EPA formulas convert the measured pollutant concentrations to an AQI value between 0 and 500. AQI values are associated with risk categories (e.g., Good, Moderate, Unhealthy). The pollutant with the highest AQI is reported as the overall AQI value for the day. Each row of the AQI Summary Report lists several qualitative measures (e.g., days with "good" air quality) and descriptive statistics (e.g., median AQI value, for example) for one year for one county or core based statistical area. |  |  |
| **3. Concentrated Poverty**  | The protocol is based on extracting data from the U.S. Census Bureau on variables related to the concept of "concentrated poverty". All the relevant variables are available from the 5-year American Community Survey (ACS) estimates. The variables are based on data from the last 12 months and a high poverty area is defined as having a poverty level of 40%. |  |  |
| **4. Disparate Health Care Quality** | A protocol to examine the perception of prejudice, stereotyping and discrimination in clinical encounters and experience. |  |  |
| **5. Educational Attainment- Community** | The protocol is based on extracting data from the U.S. Census Bureau related to educational attainment for a community. This protocol assesses the educational environment in which a person lives, which is a different concept than individual level educational attainment. The protocol identifies the percent of persons with a college degree living in a geographic (census) area. All the relevant variables (e.g., degree obtained) are available from the ACS 5-year estimates. ACS estimates are annually updated; current 5-year data sets range from 2009-2013 to 2013-2017. The ACS Educational Attainment table may be searched by Zone Improvement Plan (ZIP) Code area (captured by the U.S. Census Bureau as a ZIP Code Tabulation Area [ZCTA]) or other geographic information and educational information for that census tract located. |  |  |
| **6. English Proficiency**  | The respondent completes a question from the California Health Interview Survey (CHIS) asking for the respondent’s own opinion of how well he/she speaks English. |  |  |
| **7. Environmental Justice Screening and Mapping Tool** | EJSCREEN is an environmental justice mapping and screening tool that provides a nationally consistent dataset and approach for combining environmental and demographic indicators. EJSCREEN users choose a geographic area, that can be as small as a Census block; the tool then provides demographic and environmental information for that area. All of the EJSCREEN indicators are publicly-available data. EJSCREEN provides a way to display this information and includes a method for combining environmental and demographic indicators into EJ indexes. |  |  |
| **8. Food Insecurity**  | The Six-Item Standard Measure from USDA Economic Research Service is a short interviewer-administered questionnaire, modeled using information from the Community Population Survey, Bureau of Labor Statistics, and American Community Survey. |  |  |
| **9. Food Swamp**  | The presence of a food swamp is calculated using the traditional Retail Food Environment Index per county, which includes the number of fast food restaurants and convenience stores divided by the number of grocery stores and supermarkets. The number of grocery stores, fast food restaurants, and convenience stores are determined at a county-level using data from the Food Environment Atlas. |  |  |
| **10. Health Literacy**  | The Short Assessment of Health Literacy——English (SAHL-E) includes 18 interviewer-administered items designed to assess an English-speaking adult’s ability to read and understand common medical terms. The test could help health professionals estimate the adult’s health literacy level. The interviewer shows the respondent a series of laminated 4”x 5” flash cards, with each card containing a medical term printed in boldface on the top and the two association words—i.e., the key and the distracter—at the bottom. Responses are summed to achieve the total, SAHL-E score. A score less than or equal to 14 represents the cutoff point for low health literacy, or low health-related reading ability. An additional health literacy screening question, useful for surveys with space constraints, asks how confident the respondent is in completing medical forms. |  |  |
| **11. Health Numeracy** | The Numeracy Understanding in Medicine Instrument (NUMi) includes 20 items in 4 areas with 5 questions each, covering the topics of numbers, probability, statistics, and graphs. It measures basic and applied skills, such as problem solving and use of a food label. The protocol is administered via self-report questionnaire. The protocol is scored by determining total score based on categorizing scores into four levels: low, low average, high average, and high levels of numeracy as determined by score distribution within the study population. |  |  |
| **12. Job Insecurity**  | This protocol is only for use with people who are currently employed (full-time, part-time or currently with a job but not at work because of temporary illness, vacation, or strike). The interviewer asks about the respondent’s perception of how likely it is that he/she will lose the job in the next twelve months and his/her ability to find another job. |  |  |
| **13. Occupational Prestige** | This protocol includes 2 self-administered questions from the American Community Survey (ACS) that capture the respondent’s type of work most important activities. The respective occupational prestige scores can then be derived from the General Social Survey Codebook Appendix F: Occupational Classification Distributions. Prestige scores are based on a consensus perceived worthiness and range from 0- 100, with 0 being the lowest and 100 being the highest. |  |  |
| **14. Percent Unionized for Non-Agricultural Labor Force** | The protocol describes how to extract data on labor union membership, coverage, and density estimates from variables collected through the Current Population Survey. |  |  |
| **15. Race/Ethnic Residential Segregation**  | The protocol is based on extracting data from the U.S. Census Bureau on a set of variables related to the concept of residential segregation. Residential segregation describes the distribution of different race/ethnic groups across smaller areal units (e.g., census tracts) within larger areas (e.g., counties or metropolitan statistical areas [MSAs]). The Separation Index (also known as the eta squared) is one of the most commonly used race/ethnic residential segregation measures. All the relevant variables are available from the decennial censuses or the American Community Survey (ACS) 5-year estimates. Once the data are extracted, the Separation Index can be calculated. |  |  |
| **16. Social Vulnerability**  | The Social Vulnerability Index (SVI) provides specific socially and spatially relevant information to help public health officials and local planners better prepare communities to respond to emergency events such as severe weather, floods, disease outbreaks, or chemical exposure.  |  |  |
| **17. Use of Technology for Health** | Health Information National Trends Survey (HINTS) collects data about use of cancer-related online information. The Health Information National Trends Survey (HINTS) is a nationally representative survey which has been administered every few years by the National Cancer Institute (NCI) since 2003. The HINTS target population is adults aged 18 or older in the civilian non-institutionalized population of the United States. The survey is administered over the course of four years, which completed in 2018. The survey may be administered via self-report questionnaire. |  |  |
| **18. Household Wealth** | The interviewer asks the respondent about his or her family’s wealth and active savings, a point-in-time “stock” of the household’s financial assets. One person per family is interviewed biennially.  |  |  |

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