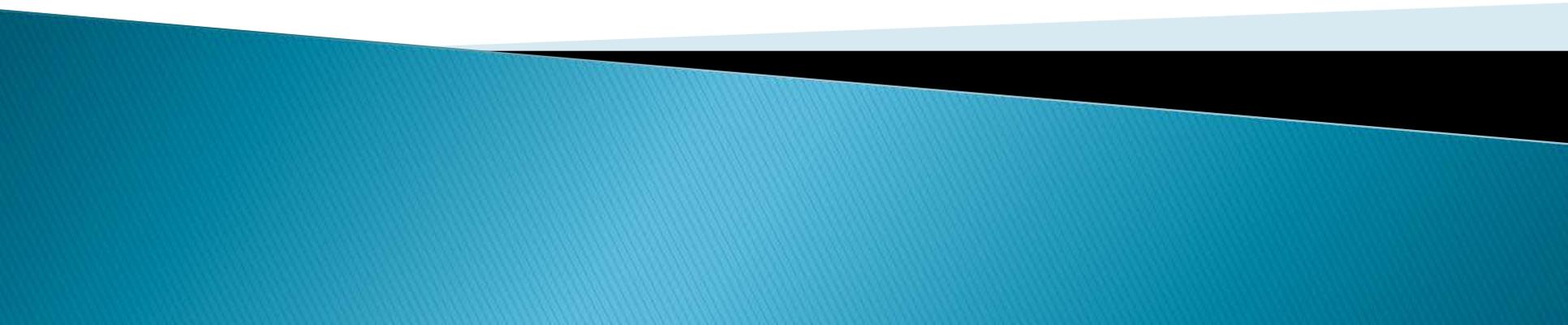


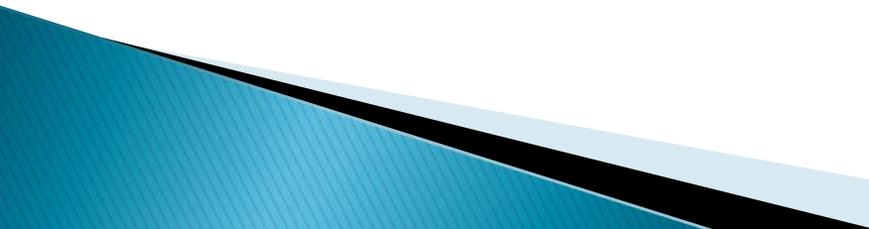
# Assessing the Potential for Standardization of Socioeconomic Status in HHS Surveys

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# Background

- ▶ The Data Standards required under the Affordable Care Act (ACA), Section 4302 were adopted in October 2011
  - ▶ ACA Section 4302 provided the Secretary with the authority to develop additional standards for data collection and analysis of health disparities
  - ▶ Section 4302 specifically referenced the American Community Survey and Current Population Survey conducted by Census regarding standards development
  - ▶ The HHS Data Council asked the National Committee on Vital and Health Statistics to consider the development of standards for socioeconomic status (SES)
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# National Committee on Vital and Health Statistics

- ▶ The Committee held meetings in March, 2012 with federal and academic experts in survey research
  - ▶ The purpose was to gain input for the Committee to provide guidance to HHS in developing standards
  - ▶ NCVHS wanted to identify the most important variables for measuring SES, and the most feasible measures to include on HHS surveys: the minimum set of questions
  - ▶ The measurement and collection of information on SES was examined across the federal survey systems
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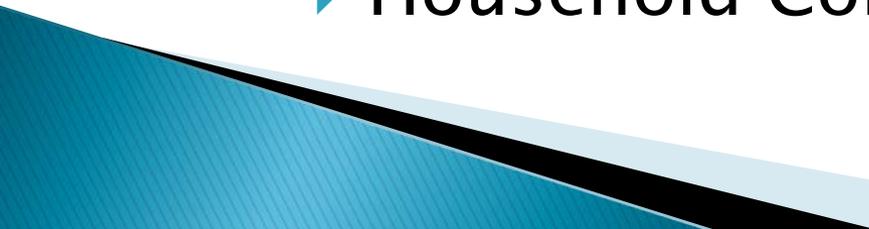
# Developing Standards for Survey Measures of SES

- ▶ How is SES defined and measured?
  - ▶ What components of SES are feasible for inclusion across surveys conducted by HHS?
  - ▶ What are the best practices for collecting SES information on national surveys?
  - ▶ What is the minimum set of variables necessary to measure SES?
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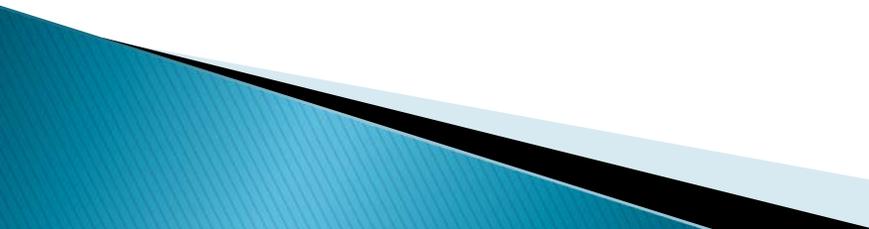
# Identifying the Components of SES

- ▶ Income
- ▶ Education
- ▶ Occupation
- ▶ Family size
- ▶ Household composition
- ▶ Wealth and assets
- ▶ Literacy
- ▶ English proficiency
- ▶ Early childhood experiences
- ▶ Measures of educational “achievement”
- ▶ Parents’ education
- ▶ Physical environment
- ▶ Neighborhood and area measures
- ▶ Measures of change in SES
- ▶ And the list goes on...

# Identifying the Minimum Set of Variables

- ▶ The Committee identified the following as most critical for the measurement of SES; these variables are well documented in relation to health and health outcomes:
    - ▶ Income
    - ▶ Education
    - ▶ Occupation
    - ▶ Family Size
    - ▶ Household Composition
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# Questions

- ▶ Is there an existing minimum standard for each of the most important variables identified for the measurement of SES?
  - ▶ What are HHS surveys currently collecting on the minimum set of variables to measure SES?
  - ▶ What do the ACS and CPS collect on the minimum set?
  - ▶ Compare HHS survey questions to the ACS, which was the model for the standards adopted under Section 4302 of the ACA
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# Process: Review of Federal Surveys

American Community Survey (ACS)

American Housing Survey (AHS)

Behavioral Risk Factor Surveillance System (BRFSS)

Current Population Survey (CPS)

Health and Retirement Study (HRS)

Medical Expenditure Panel Survey (MEPS)

Medicare Current Beneficiary Survey (MCBS)

National Health and Nutrition Examination Survey (NHANES)

National Health Interview Survey (NHIS)

National Survey of Family Growth (NSFG)

National Survey on Drug Use and Health (NSDUH)

Panel Study of Income Dynamics (PSID)

Survey of Income and Program Participation (SIPP)

# Education

- ▶ Reviewed questions and response categories used in HHS surveys, the ACS, and the CPS
  - ▶ Questions measuring education were highly comparable across the survey systems
  - ▶ The greatest differences were in the response options provided for the education question
  - ▶ The ACS and CPS questions on education do not use identical wording and do not have identical response options
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# Education: Question Wording

- ▶ **NHIS and CPS:** What is the highest **level** of school you have completed or the highest **degree** you have received?
- ▶ **NHANES:** What is the highest **grade or level** of school you have completed or the highest **degree** you have received?
- ▶ **MEPS:** As of December 31, what is the highest **grade or year** of regular school you ever completed?
- ▶ **NSDUH:** What is the highest **grade or year** of school you have completed?
- ▶ **BRFSS:** What is the highest **grade or year** of school you completed?
- ▶ **MCBS and ACS:** What is the highest **degree or level** of school you have completed?

# Education: Response Options

- ▶ ACS, NHIS, NHANES, and CPS have separate categories for 12 years of education completed and attainment of High School diploma or equivalent
- ▶ BRFSS has a single category for “Grade 12 or GED (High School Diploma)”
  
- ▶ ACS, NHIS, NHANES, and CPS have separate categories for type of degree
- ▶ BRFSS has a single category for “College: 4 years or more (college graduate)”
  
- ▶ ACS, MEPS and BRFSS do not collect information on vocational/trade/technical degrees
- ▶ NHIS, NHANES, CPS, MCBS collect information on vocational/trade/technical degrees

# Education: Example

- ▶ Study compared national estimates of overweight and obesity from BRFSS and NHANES across various socio demographic groups
- ▶ Education measure was: <HS; HS; >HS
- ▶ Comparison included detailed information on methodology regarding the measurement of overweight and obesity, but not for education
- ▶ Substantial differences (20+ percentage points) between NHANES & BRFSS estimates of overweight and obesity for HS graduates
- ▶ Conclusion: spurious relationship due to methodological issues related to the collection of overweight and obesity; authors did not consider the measure of education

# Income

- ▶ Income is a key variable for research on disparities in health, health outcomes, and access to care
- ▶ Challenging to measure and collect income data
- ▶ Numerous questions are required to obtain information on sources of income and amounts
- ▶ Measuring poverty requires more information:
  - ▶ Important to distinguish concepts of household, family, and person
  - ▶ Family level vs. person level measures
  - ▶ Poverty rate sensitive to definition of family

# Income: Comparing the ACS and CPS\*

ACS Income: 8 Questions	CPS Income: 50+ Questions
Wages/salaries	Longest job wages/salaries, other wages/salaries
Self-employment	Longest job self-employment, other self-employment, other farm self-employment
Property Income	Interest, dividends rents/royalties, estates/trusts
Social Security Income	Social Security Income
Supplemental Security Income	Supplemental Security Income
Cash Public Assistance	TANF, general assistance, other public assistance
Retirement Income	Retirement pensions, survivor pensions, disability payments/pensions
Other Income	Unemployment compensation, Workers' compensation, Veterans' payments, educational assistance, child support, alimony, financial assistance from outside the household, other income

\*Chuck Nelson, U.S. Census Bureau. Population Health Subcommittee Meeting, March 8-9, 2012

# Income Questions: Survey Reference Periods

## Reference period:

- ▶ Last calendar year:
- ▶ Past 12 months:
- ▶ Last year:
- ▶ Annual:

## Survey:

CPS, NHIS, NHANES,  
MEPS

ACS, MCBS

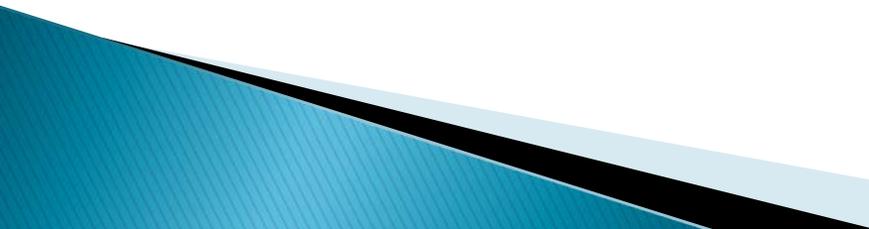
NSDUH, NSFG

BRFSS

# Income

- ▶ BRFSS: one question on total household income with 8 response categories
  - ▶ ACS: series of 8 questions, collects amounts of income by source of income per person
  - ▶ NSDUH: series of questions on sources as well as total amounts for person and combined family
  - ▶ NHANES: series of questions on sources as well as total income per person and total household income
  - ▶ NHIS: series of questions on sources as well as total personal earnings and total income/total income for all family members
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# Occupation

- ▶ Health surveys want to collect information on employment status, occupation and industry for studying the relationship to health outcomes:
    - On the job injuries
    - Long term disease onset
    - Health insurance and sick leave
  - ▶ Type of occupation & industry information needed:
    - Current as well as most recent occupation
    - Longest occupation
    - Time spent on the job
    - Workplace conditions and exposure
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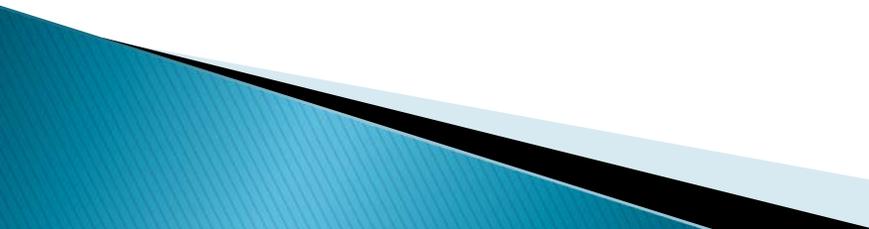
# Standards for Industry and Occupation

- ▶ Existing standard for Federal statistical agencies for industry is the North American Industry Classification System (NAICS)\*
- ▶ Existing standard for Federal statistical agencies for occupational categories is the Standard Occupational Classification (SOC) system\*\*
- ▶ Classification principles and coding guidelines assist in the assignment of codes to verbatim survey responses

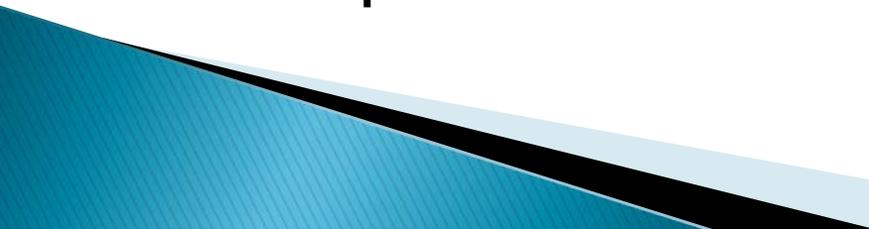
\*<http://www.census.gov/eos/www/naics/>

\*\*<http://www.bls.gov/soc/>

# Occupation

- ▶ Survey measures of occupation include measures of labor force participation; reasons for not working; hours worked; longest job; multiple jobs; etc.
  - ▶ Survey questions on industry and occupation ask about kind of business or industry, kind of work, most important job activities to which standard codes applied to verbatim survey responses
  - ▶ Automated coding for Industry and Occupation is under development for computer assisted surveys
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# Occupation Questions

- ▶ ACS, CPS, NHANES, NHIS, and NSDUH have reference periods of “last week” for question on employment status
  - ▶ BRFSS has a single employment question and the reference period asks “are you currently”
  - ▶ ACS, CPS, NHANES, NHIS, MEPS and NSDUH obtain verbatim responses for questions on occupation and industry
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# Household Size and Composition

- ▶ Definition and measurement of family impacts family income and poverty estimates
  - ▶ CPS defines the family as two or more persons related by blood, marriage, or adoption for official poverty statistics
  - ▶ NHIS defines the family to include unmarried partners of the same or opposite sex, relatives of unmarried partners, and foster children.
  - ▶ MEPS uses both the CPS and the NHIS family definition but identifies CPS families within the MEPS families to post-stratify sample weights to the CPS poverty distribution.
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# Family: NHANES Example

- ▶ NHANES Family: Everyone related to each other by blood, marriage, or a marriage like relationship including partners and foster children
- ▶ Family: Individuals and groups of individuals who are related by birth, marriage or adoption. Step children, parents or siblings are included. Includes unmarried partners if they have a biological or adoptive child in common. Does not include unmarried partners who do not have a child in common, foster parents or foster children.

# Practical Reality

- ▶ Statutory authority for conducting the survey and survey purpose: health surveys are not authorized or designed to serve the same purpose as surveys of income & labor
  - ▶ The goal is to include the minimum set of questions required to produce reasonable estimates
  - ▶ Need to recognize the implications for respondent burden, costs, survey operations and procedures, mode of data collection, etc.
  - ▶ Consider supplementing survey information with other data sources to provide additional context
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# Conclusions

- ▶ The majority of national surveys conducted by HHS currently capture information on the key components of SES
  - ▶ HHS surveys vary in the number of questions, wording, and responses for these key components; but there is considerable agreement for questions on education and occupation
  - ▶ Household size and composition are often collected in HHS surveys, usually in household screening instruments; however, the definition of family may vary across surveys
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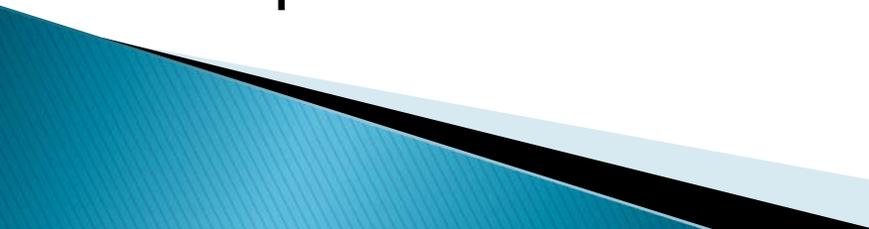
# Conclusions

- ▶ The measurement and standardization of SES is highly complex and challenging: there is no “one size fits all” for the collection of SES on national health surveys
  - ▶ There is no need for idiosyncratic differences in question wording or response categories; standardize where possible, recognize when it may not be feasible, and identify opportunities for standardization in the future
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# NCVHS Recommendations for Key Components of SES

- ▶ Education: measure in single years completed; include attainment of a high school diploma or equivalent; collect information on degree attainment
  - ▶ Occupation: need to measure both occupation and industry, and consider the ACS for additional information about work tasks and employer. Automated coding should be further developed for survey responses
  - ▶ Income: measure individual, family, and household income; include total income, earned and unearned, from specific sources
  - ▶ Family size and relationships: measure family size, household composition and relationship structure
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# NCVHS Recommendations

- ▶ HHS should undertake additional efforts in exploring the gaps in data collection and analysis for the measurement of SES on health surveys
  - ▶ Standardization efforts should focus on the key components necessary for the measurement of SES and its relationship to health
  - ▶ The Department should continue efforts in this area to improve data for population health and efforts to reduce disparities, and should leverage expertise from the federal statistical community
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Thank you  
For More Information:

Visit the NCVHS March Meeting website:  
<http://www.ncvhs.hhs.gov/120308ag.htm>

HHS Data Standards:  
<http://aspe.hhs.gov/datacncl/standards/ACA/4302/index.shtml>

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