

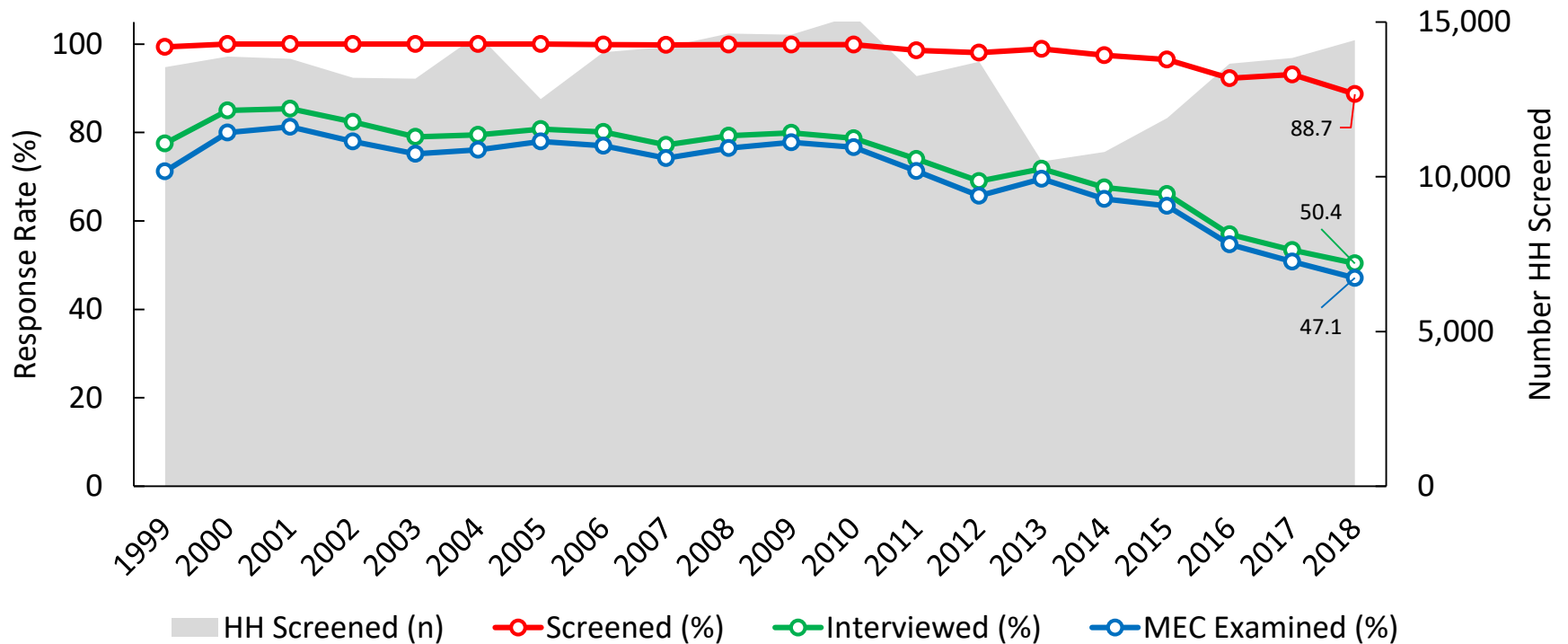


Nonresponse Bias Analyses for the National Health and Nutrition Examination Survey (NHANES)

Board of Scientific Counselors

September 5th 2019

Trends in Response Rates: NHANES 1999–2018



Approaches to Assess Nonresponse Bias (*Groves 2006*)

Five approaches:

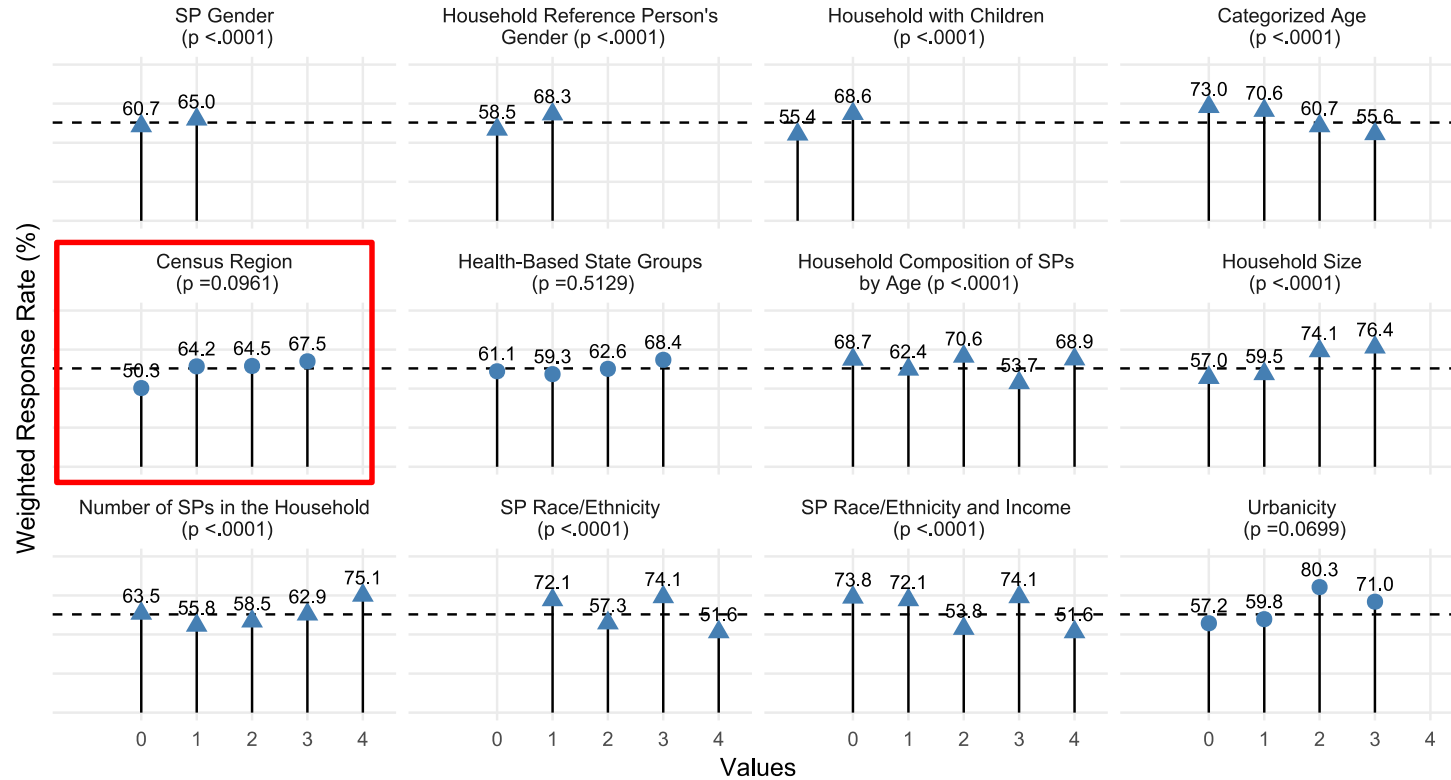
1. RR comparisons across subgroups
2. Comparisons to similar estimates from other sources
3. Studying variations within existing survey
4. Contrasting alternative post-survey adjustments for nonresponse
5. Using sampling frame data or supplemental matched data **Coming in 2019**

Approaches to Assess Nonresponse Bias (*Groves 2006*)

Five approaches:

1. RR comparisons across subgroups
 - a) Bivariate analyses: examine differences in response status between groups
 - b) Classification Trees: evaluate the relationship between response status and multiple auxiliary variables
2. Comparisons to similar estimates from other sources
3. Studying variations within existing survey
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RR Comparisons Across Subgroups: NHANES 2015-2016



Significant? ● No ▲ Yes

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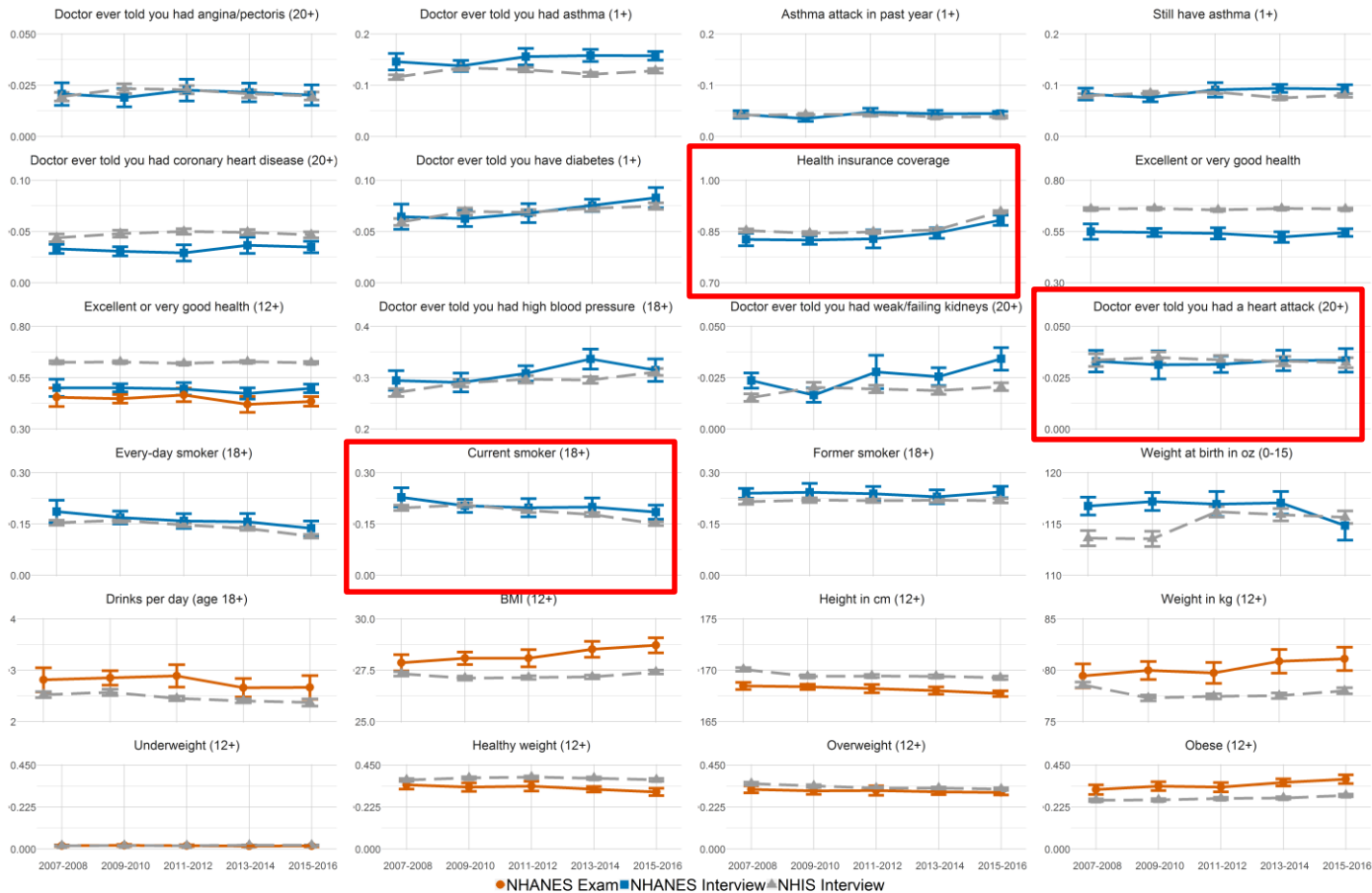
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Comparisons to Similar Estimates From Other Sources

Figure legend:

- National Health Interview Survey (NHIS)
- NHANES interview
- NHANES exam



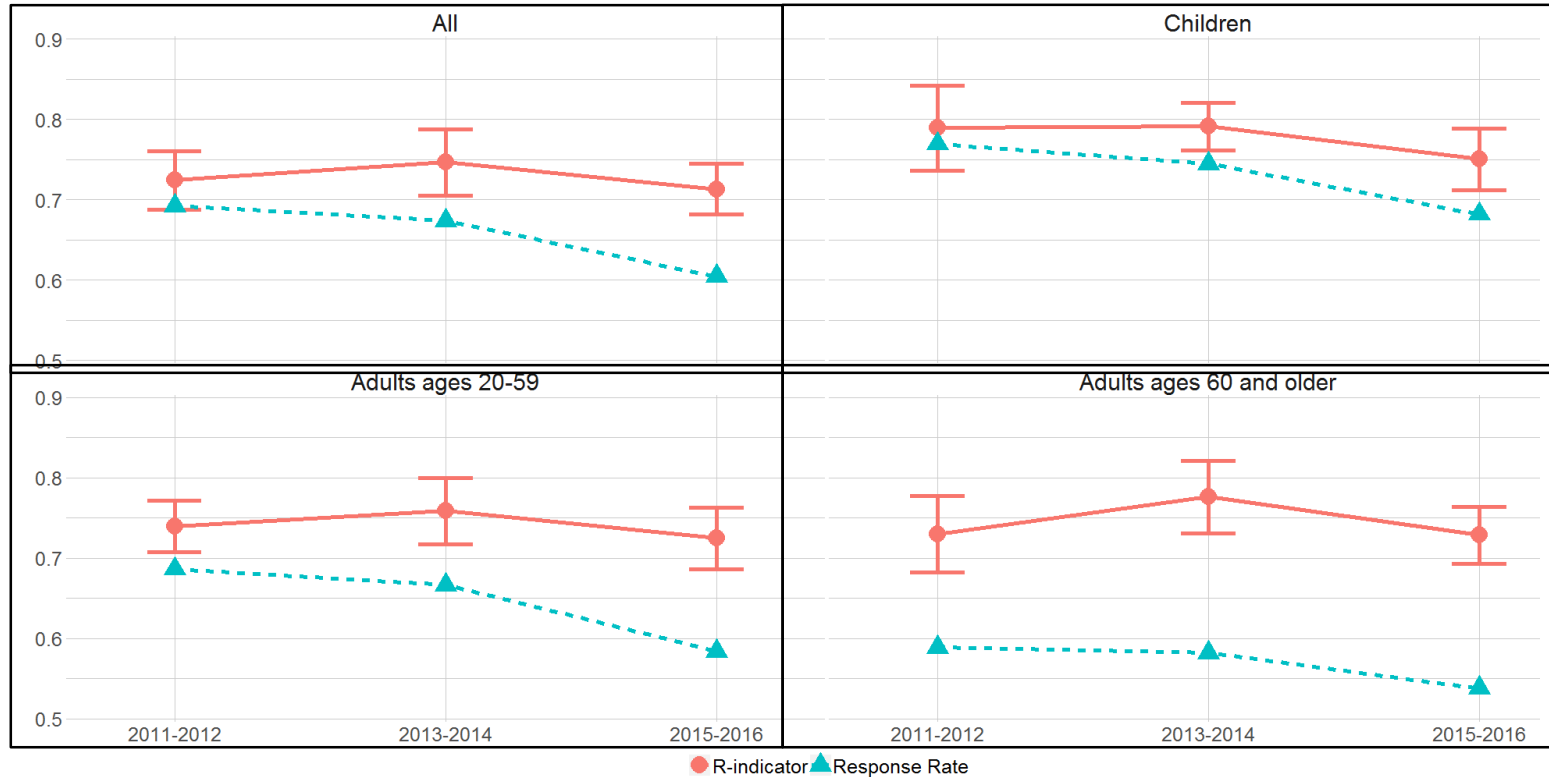
Approaches to Assess Nonresponse Bias (*Groves 2006*)

Five approaches:

1. RR comparisons across subgroups
2. Comparisons to similar estimates from other sources
3. Studying variations within existing survey
 - a) R-indicator analysis
 - b) Comparisons between easy versus hard to enroll respondents
 - c) Range of bias analyses
4. Contrasting alternative post-survey adjustments for nonresponse
5. Using sampling frame data or supplemental matched data

Studying variations within existing survey

Weighted Response Rates and R-indicators by Survey Year



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NHANES Screener NRB Module

- Health-related questions added to the screener in 2019 to help with NRB adjustments
 - General health status
 - Currently taking medications and how many
 - Diabetes
 - Hypertension