

# Beyond Response Rates: Assessing the Impact of Participation in Research Today

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# Importance of Participation

- Achieving adequate participation is critical to ensuring that research estimates can be accurately projected to the larger population of interest
  - Minimize the potential for “bias” in estimates
- “Bias” occurs when the attitudes, beliefs & behaviors of interest among those who participate differ substantially from those who do not participate

# Difficulties in Assessing the Quality of Participation Levels

- Often lack “gold standard” population estimates for non-demographic characteristics (i.e., attitudes, beliefs & behaviors)
  - Makes comparisons difficult
- Incomplete sample frames (getting more difficult to draw good, cost-effective samples)
  - Leads to systematic exclusion of a portion of the population
- We have traditionally come to rely on only one metric – response rates – to evaluate quality of participation
  - Insufficient in today’s research environment

# Limits of Response Rates as the Key (Often Only) Indicator of Quality

- Many ways to calculate RR
  - American Association for Public Opinion Research and others do provide guidance
- Only applies to homes/units covered by the sampling frame
  - Does not include those NOT covered by the sample frame (i.e., does not reflect coverage bias)
  - Term is nearly meaningless when there is no sampling frame
- Growing body of research shows tenuous (at best) relationship between “level of nonresponse” and “non-response bias”
  - Bias is what we are truly concerned about
- Emphasis on just improving overall response rates can actually increase potential for bias
  - Bias can increase if techniques used to improve response rates exaggerate the differences between those who participate and those who do not

**Participation Bias = *Level of non-participation* x *Differences between participants & non-participants on measures of interest***

## Pieces of the Complex Picture

- To more accurately assess the quality and potential impact of non-participation, we need to focus on three areas:
  - (1) Coverage of the starting sample frame: who is included, who is excluded from the outset (i.e., has zero chance of being included)
  - (2) Level of participation among those included: response rates provide this for the portion of sample covered by the sample frame
  - (3) Distribution of attitudes, beliefs & behaviors of interest across participants and non-participants

# “Balanced Participation”

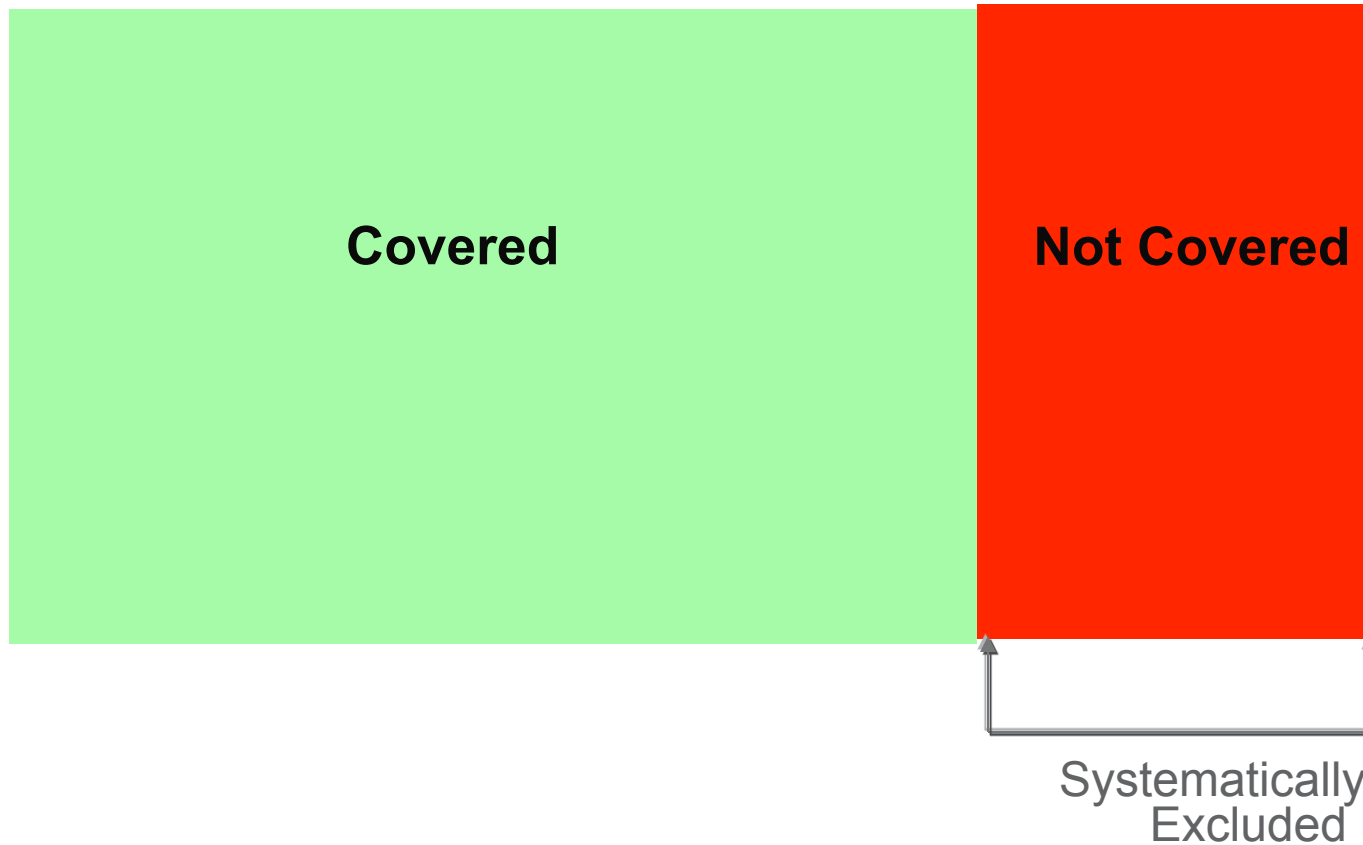
- Goal should not be to simply improve overall participation by any means necessary
  - Can result in increased bias
- Rather pursue a two-step strategy:
  - Step 1: Minimize differences between participants and non-participants on measures of interest (i.e., achieve balance)
  - Step 2: Increase response proportionally so as not to upset this balance (i.e., don't widen differences between participants and non-participants)

# Ideally: Include all eligible households

← **All Households** →

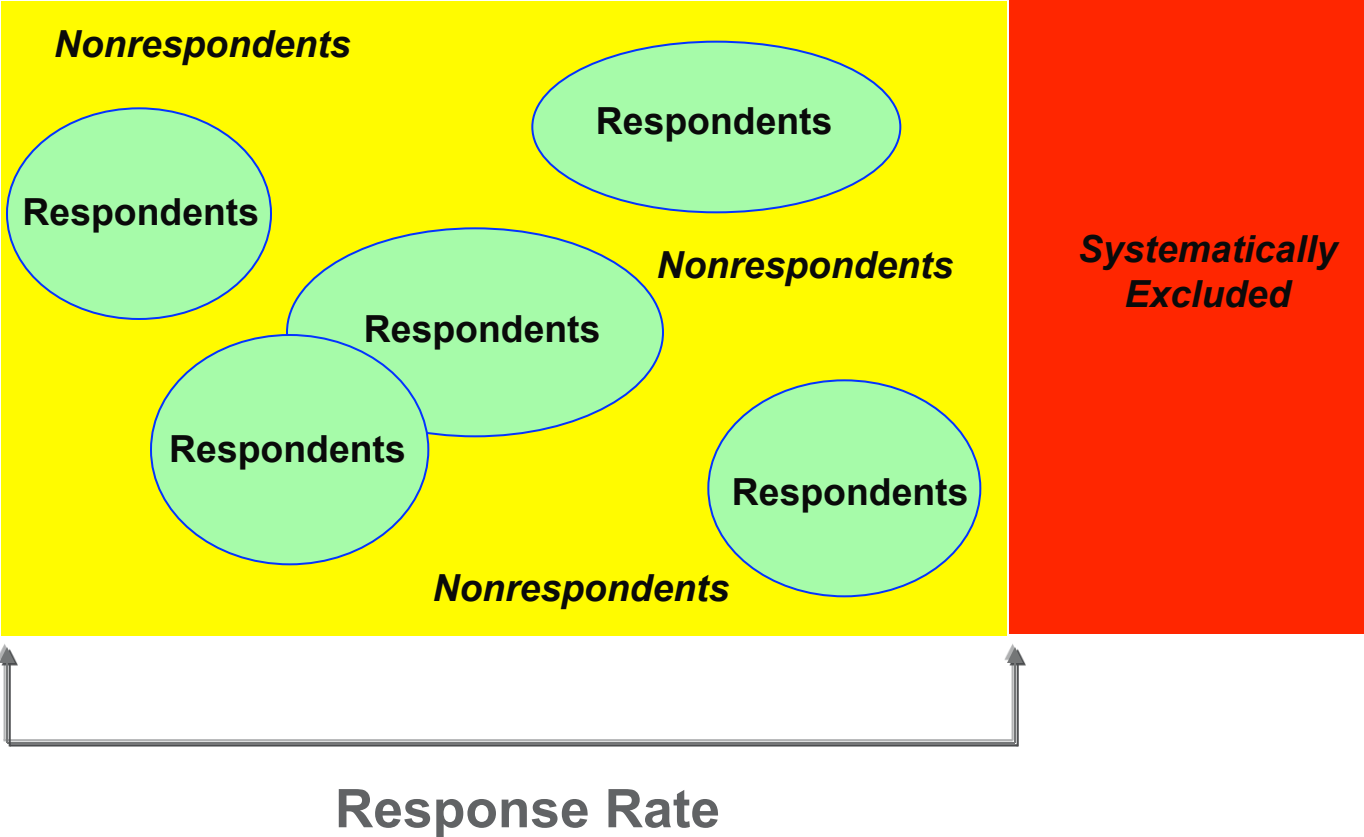


# Problem: Undercoverage with Some Sample Frames





# Problem: Skewed Distribution of Respondents



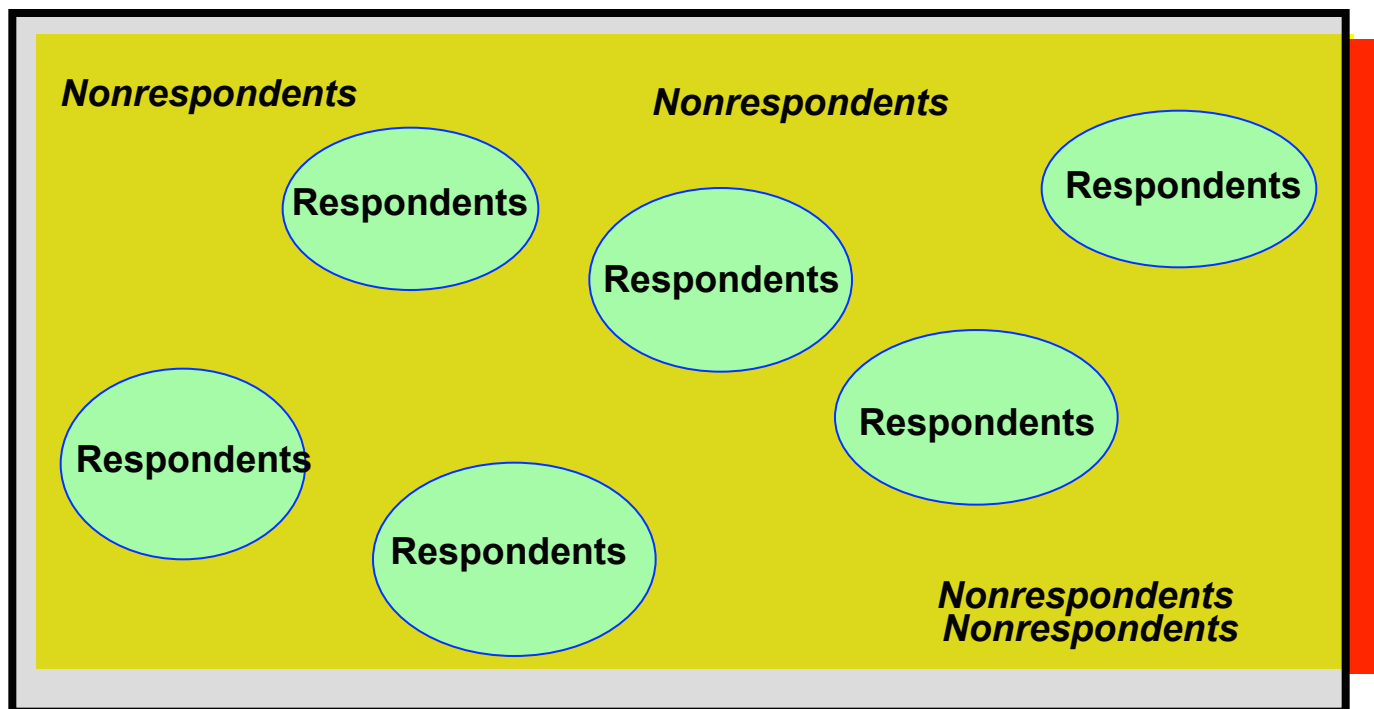
## Goal: See to Maximize Coverage at the Outset

**Minimize Potential  
Coverage Bias**

**Need to understand the impact of non-coverage  
(systematic exclusion) within any particular study**

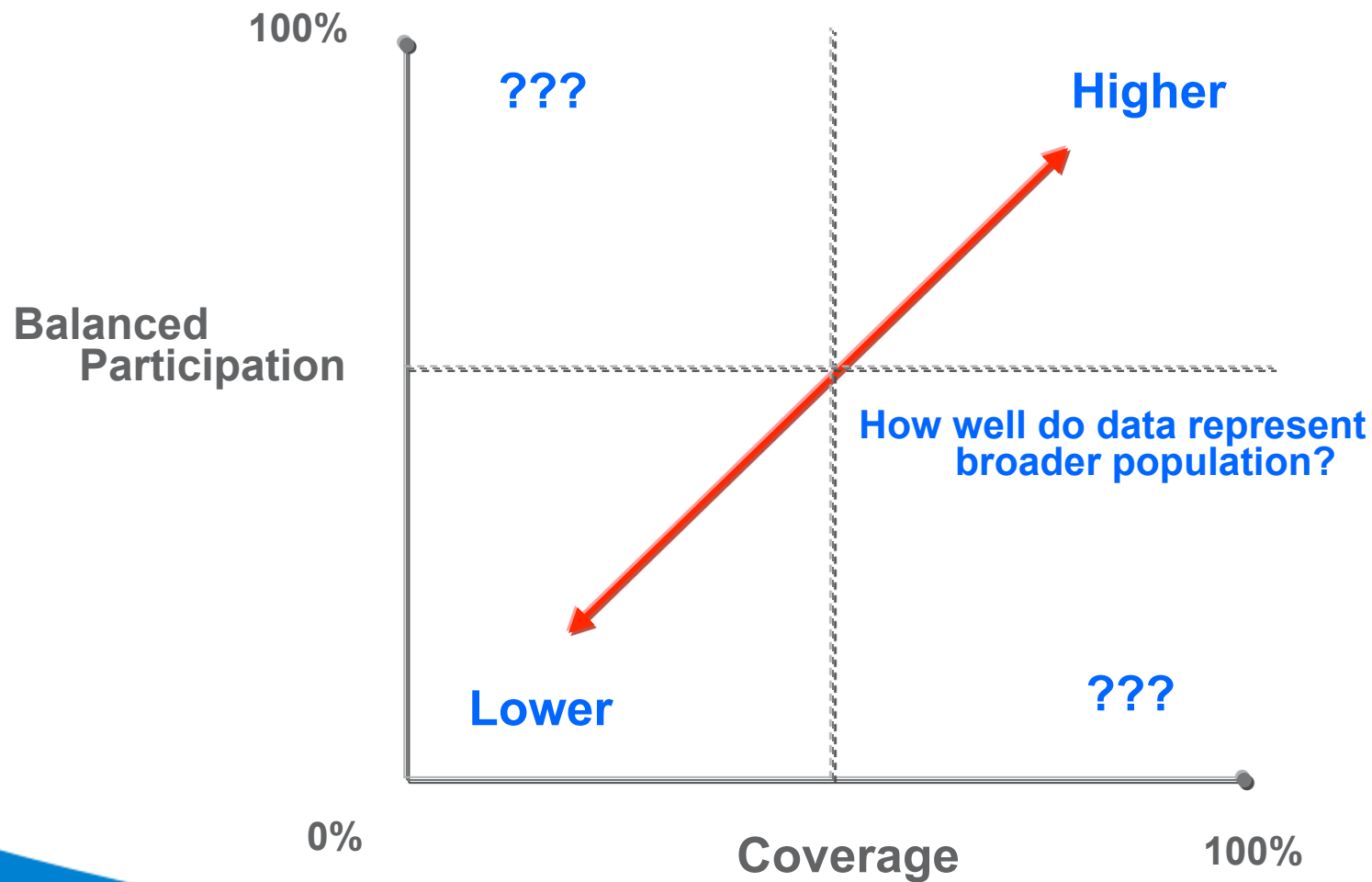
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## Goal: Seek Balanced or Proportional Participation



Increase participation – but do so proportionally across critical study attributes

# Data Quality depends on both Coverage and Balanced Participation



# Take Home Message

- Accurate assessment of the impact of non-participation is critical for true evaluation of data quality
  - How representative are the final set of respondents versus the larger population of interest
- Assessing Participation is a complex endeavor
  - Cannot (and should not) be minimized to a single, uni-dimensional measure
  - We need to develop better, more robust metrics
- Can obtain a more complete picture if we think in terms of:
  - Coverage
  - “Balanced Participation”