

Effect of Sampling Design and Data Collection Method on Prevalence Rates, Associations, and Estimates of Change over Time

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Outline

- Mode as an influence on coverage, nonresponse, and measurement error
- Analytic methods
- Examples
 - Estimates of means
 - Associations
 - Trends
- Some suggestions on when differences should be expected
- Discussion

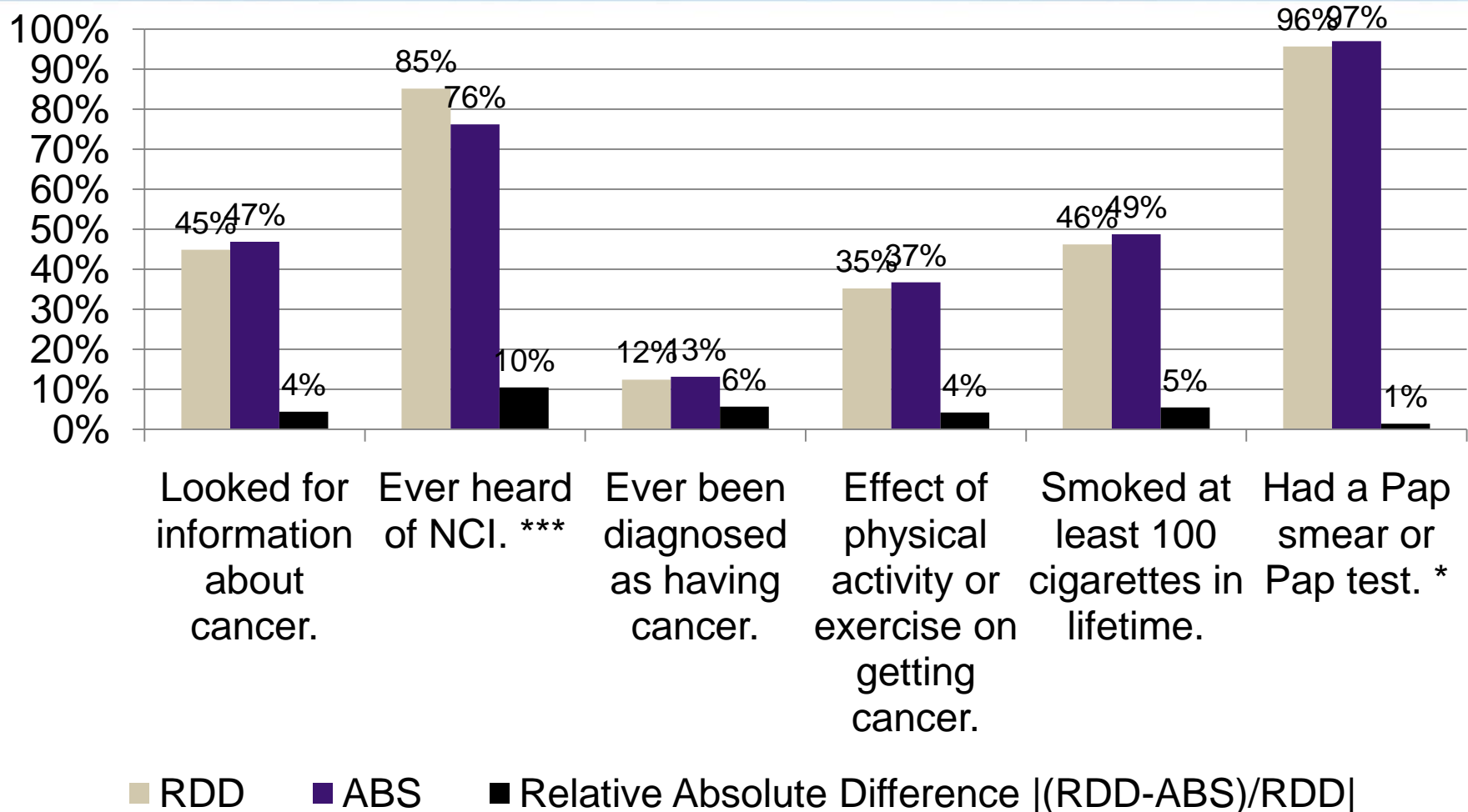
Telephone RDD and mail ABS: Differences from Mode and Frame

- Address-Based Frame
 - Improved coverage when compared to a landline RDD
- Mail method of administration
 - Cooperation decisions that are influenced by literacy, and topic interest or topic involvement
- Absence of interviewer administration
 - The interviewer as a motivating agent
 - The interviewer as a social presence

Methods

- Variables (Behavioral and Factual)
- Weighting
 - Selection & Nonresponse
 - Poststratification
- Analysis
 - Proportions
 - Means
 - Absolute Relative Difference ($|(RDD-ABS)/RDD|$)
 - Associations
 - Trends

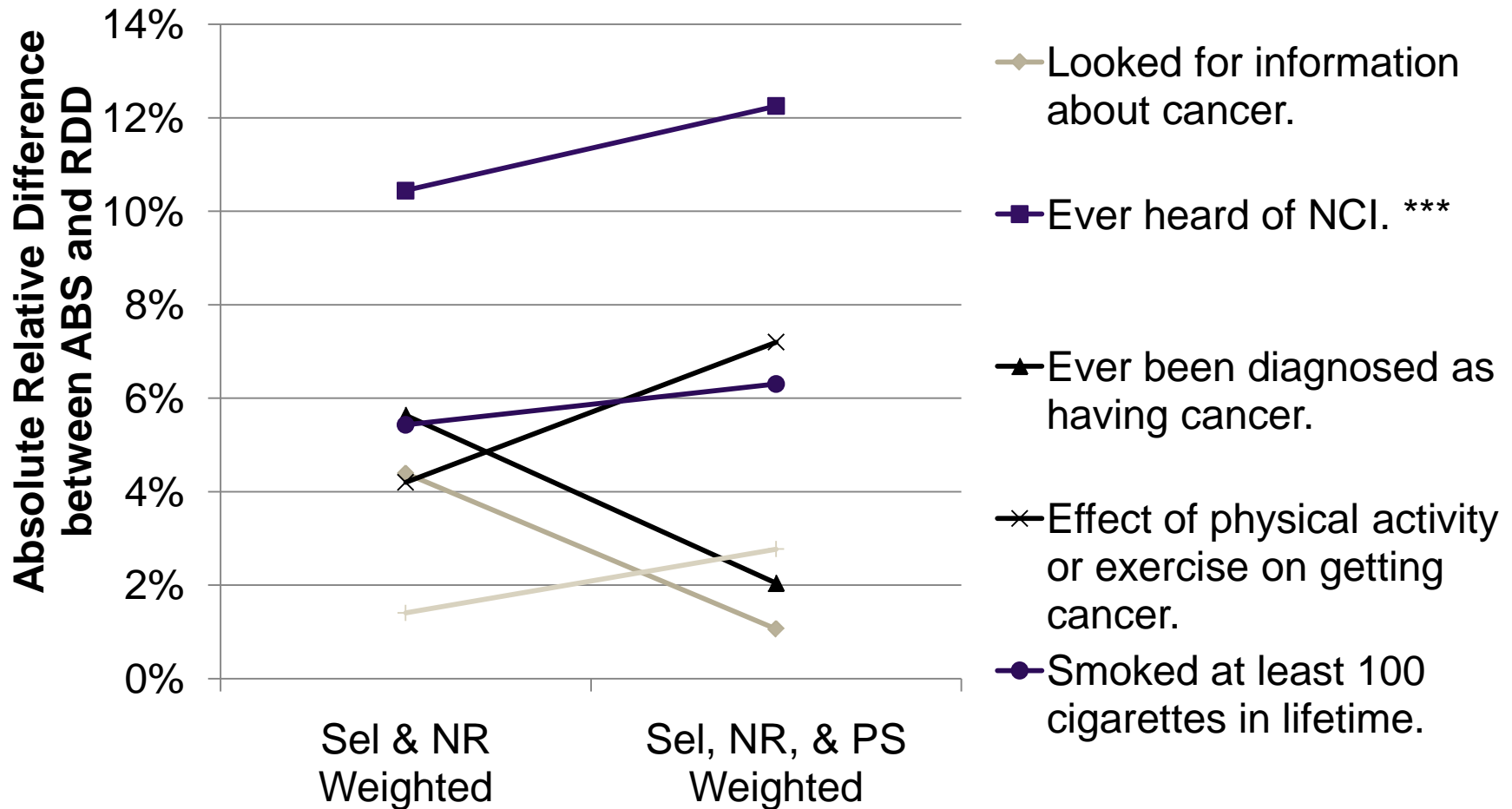
Differences in Means Using Selection and Nonresponse Weight Adjustments



* Significantly different using selection and nonresponse weight at .05 level

*** Significantly different using selection and nonresponse weight at .001 level

Effect of Poststratification



* Significantly different using selection and nonresponse weight at .05 level

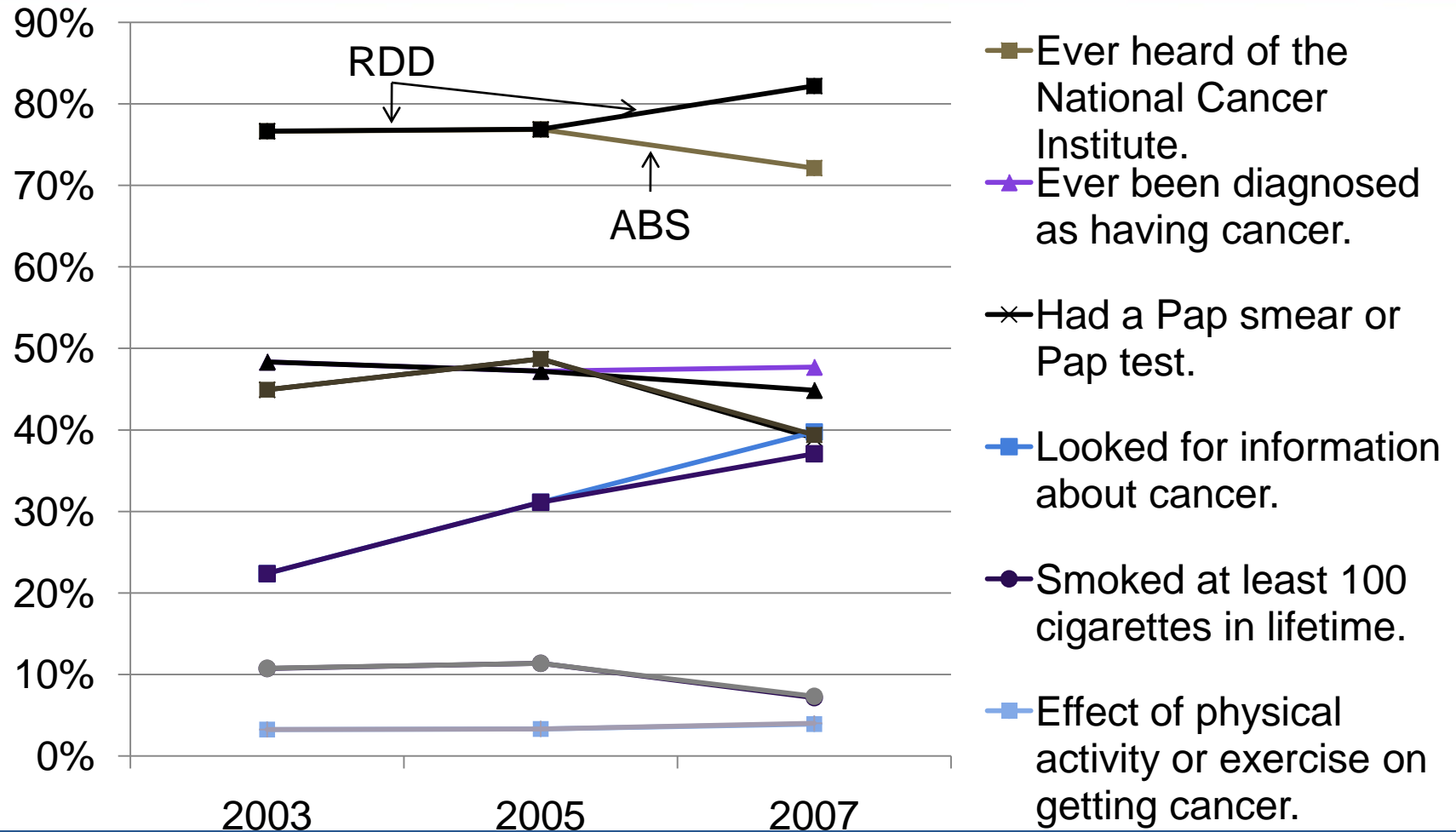
*** Significantly different using selection and nonresponse weight at .001 level

Associations (Poststratified Correlations)

- Have you ever looked at information about cancer from any source?

	<u>RDD</u>	<u>ABS</u>
Ever diagnosed with cancer:	.070	.169
Believe physical activity to decrease chance of cancer:	-.058	-.125

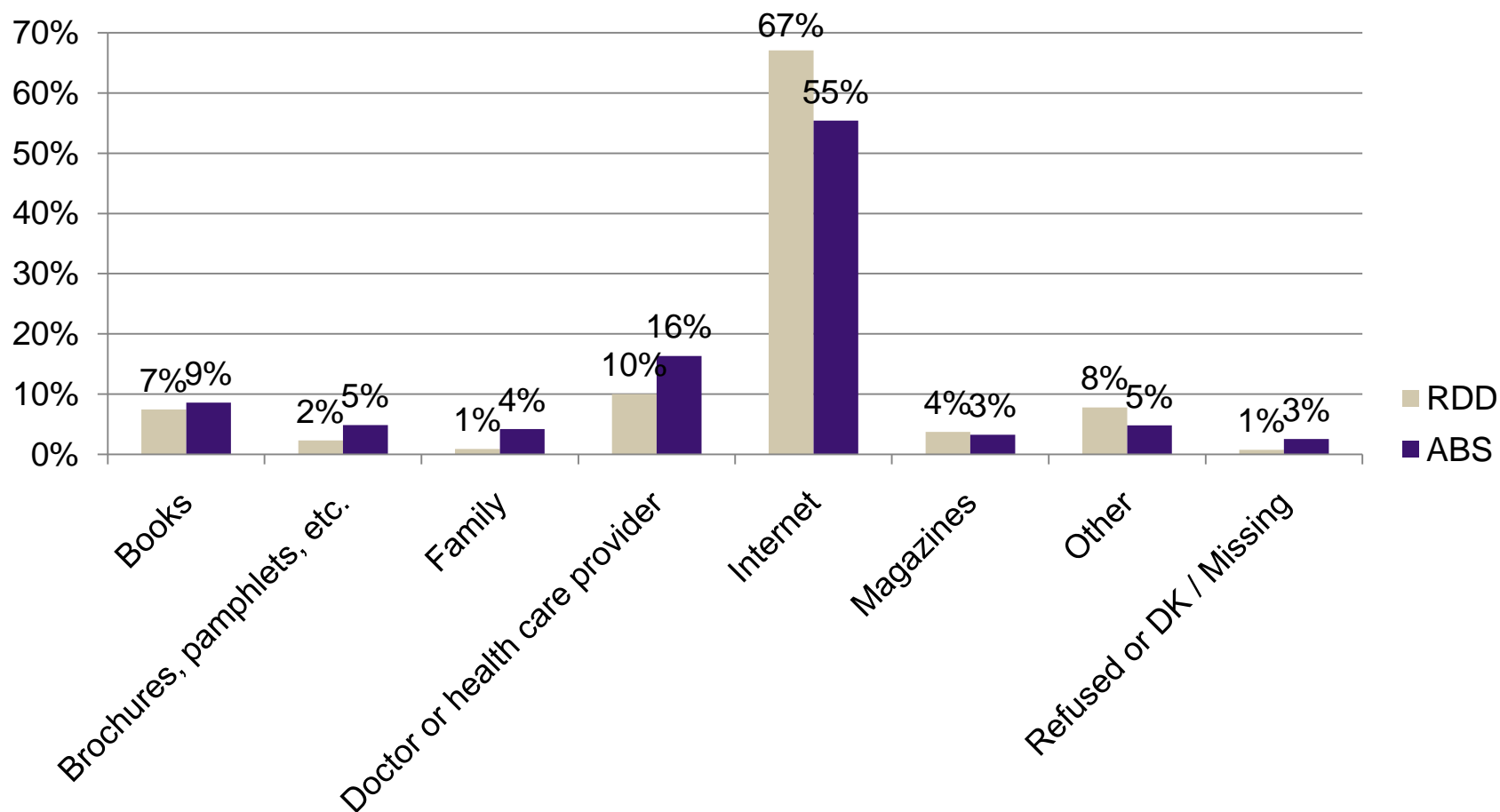
Trends over Time



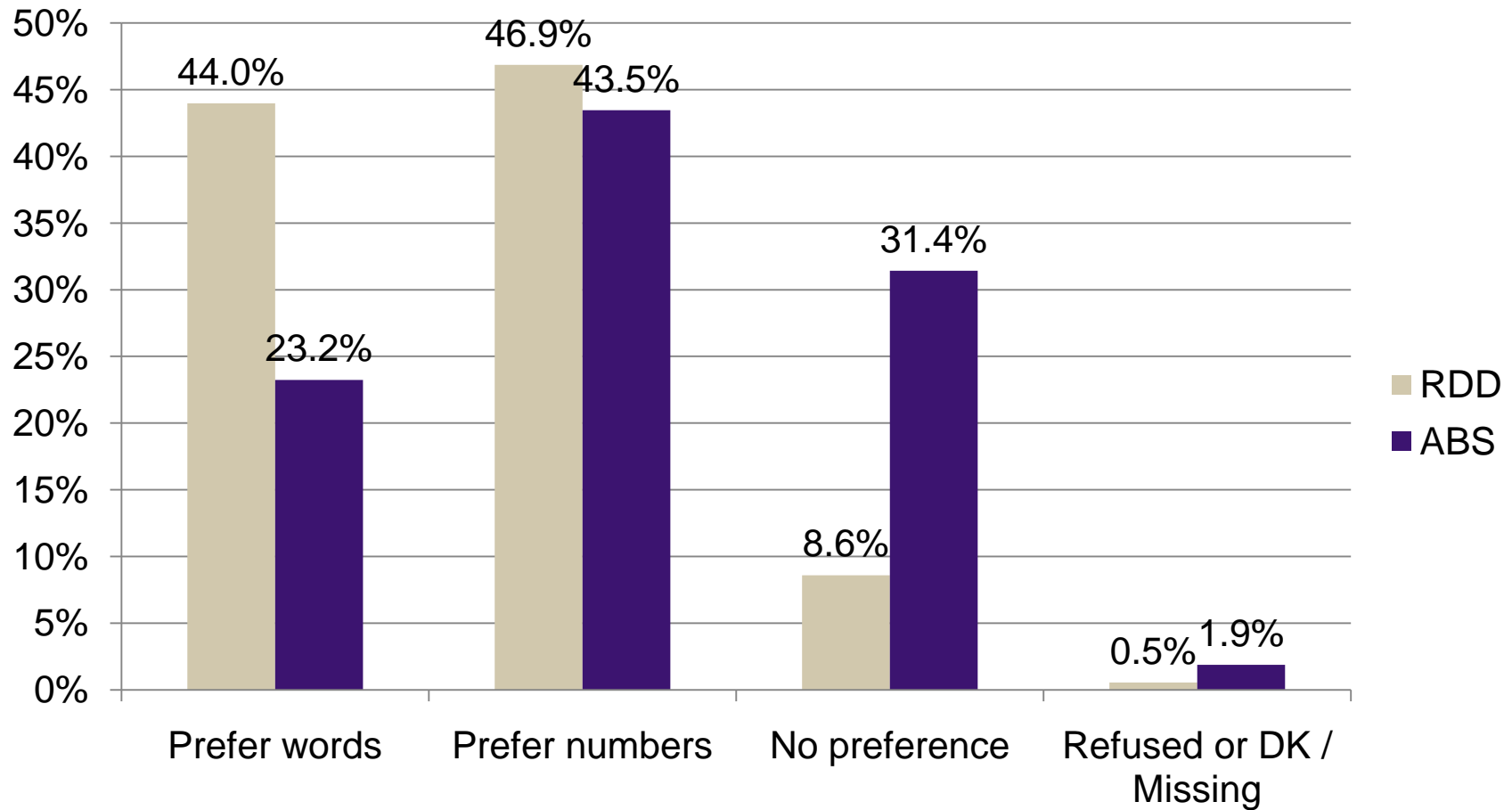
Some Thoughts on When Differences Should be Expected

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The most recent time you looked for information about health or medical topics, where did you go first?



When people tell you the chance of something happening do you prefer they use words or numbers?



Discussion

- Differences between frames and modes extend beyond estimates of means and proportions
- Trends for the selected dichotomous variables seemed relatively unaffected, but in opposite direction when they were different
- Large differences exist when variables are selected based on causes of bias
- Further research is needed on the identification of causes in order to better anticipate and ameliorate unpredictable biases in multi-frame multi-mode designs, and to select an optimum survey design

Acknowledgments and Contacts

- We thank Richard Moser from NCI and Richard Sigman from Westat for their help with providing additional data
- For questions, contact Andy Peytchev (apeytchev@rti.org)