



United States Department of Agriculture

Examining Response Fatigue and Non-cooperation in the National Household Food Acquisition and Purchase Survey (FoodAPS)

Consumer Expenditure Survey
Survey Methods Symposium
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Acknowledgements and Disclaimer

- Co-authors Brady T. West, Mengyao Hu, and Garrett Gremel (University of Michigan)
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- The views expressed are those of the authors and should not be attributed to the Economic Research Service or the U.S. Department of Agriculture.



What's the issue?

- FoodAPS is a diary survey designed to collect data on all food acquisitions by household members over a 7-day period.
 - “Acquisition” is an event in which food is purchased or otherwise acquired
- Potential for non-reporting of food acquisitions in FoodAPS by household members
 - Refuse to participate on given day or entire week
 - Report some but not all food events on a given day
 - Report some but not all food items for a given event



Today's focus

- Potential for non-reporting of food acquisitions in FoodAPS by household members

– Refuse to participate on given day or entire week (at person level)

- Report some but not all food events on given day
- Report some but not all food items for a given event



Research questions

- How often did members refuse to participate?
- Who refused to participate?
- Was there variation in the rate of refusals over data collection week?
 - Any evidence of response fatigue?



Data source?

- Survey paradata from FoodAPS
- But first, need to understand overall structure of data collection in FoodAPS



Data collection in FoodAPS

- **Primary respondent (PR)** identified as the person “who does most of the grocery shopping or who is the main meal planner”
- 2 in-person interviews
- All members 11 or more years old track their food acquisitions
- PR gathers info and calls survey center 3 times during week



Overview of planned data collection week

Mon	Tues	Wed	Thu	Fri	Sat	Sun	Mon	Tue
0	1	2	3	4	5	6	7	8

Members track food acquisitions in booklets and with scanner



PR calls to report



PR calls to report



PR calls to report

Screeener

Initial Interview and training

Final Interview

Feedback Survey



Phone calls provide paradata

- For each household member on each day, whether status was:
 - Acquired food (confirmed yes)
 - Did not acquire food (confirmed no)
 - Refused to provide info (refused)
 - PR didn't know (unconfirmed)
- 14,317 members → 100,219 person-days

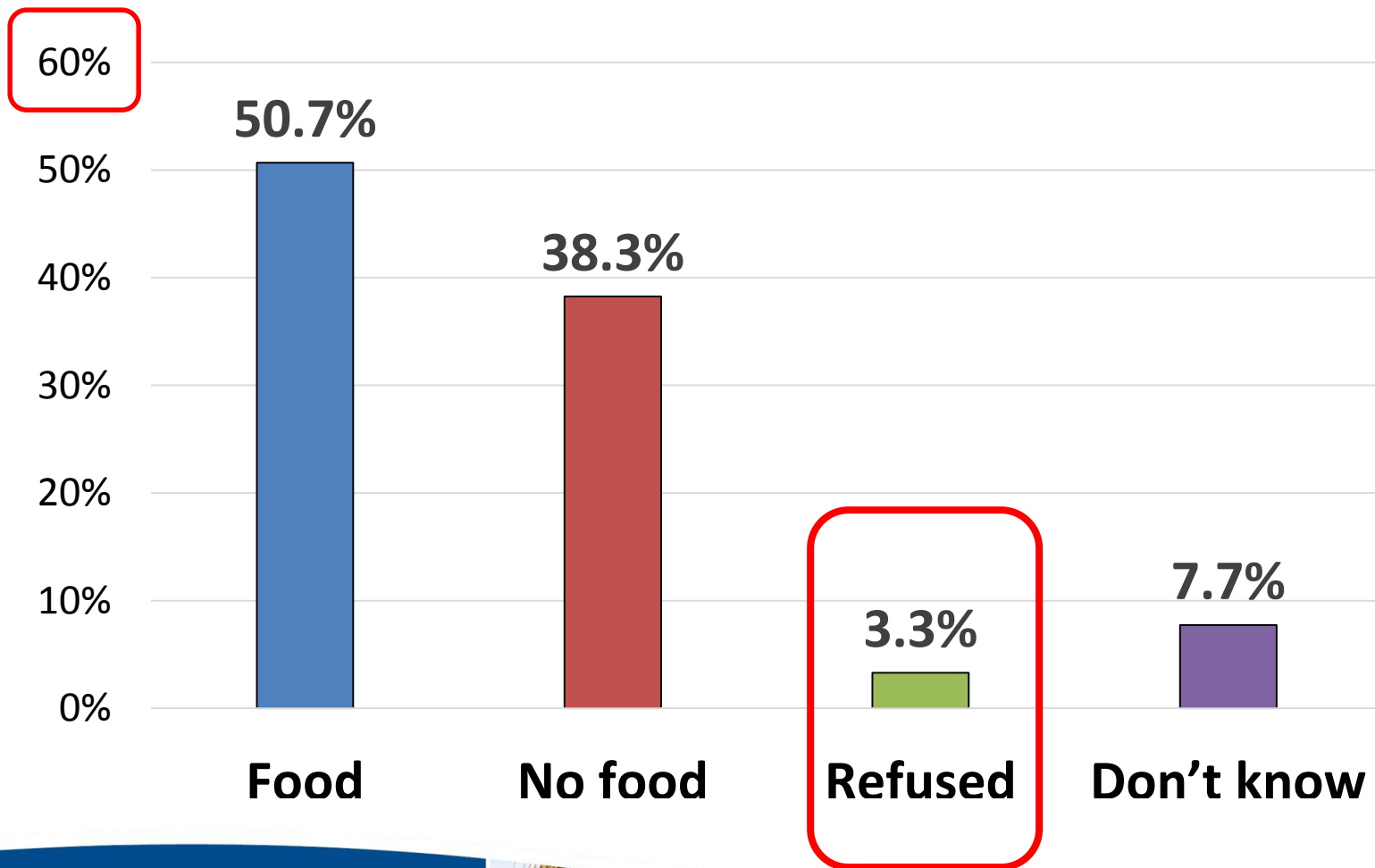


Results

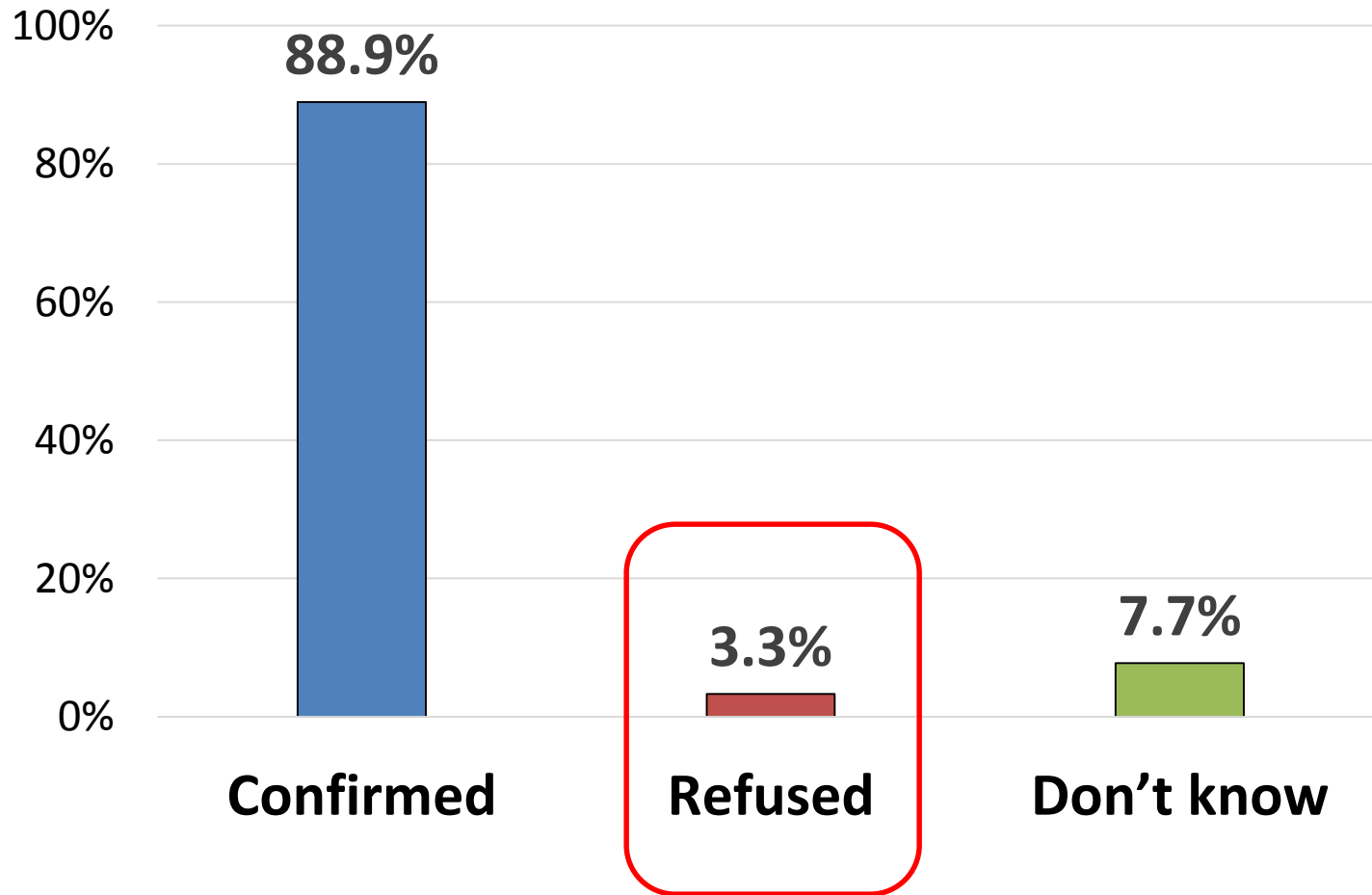
- How often do members refuse to participate?
- Who refuses?
- Is there variation over data collection week (response fatigue)?



How often do members refuse to participate?



Collapsed distribution



To address questions of who and week-day effects...

- Model member reporting status
 - Multinomial logistic regression
 - Confirmed (reference), refused, unconfirmed



Covariates

- Sex, age, education, race, marital status, income, BMI, completed Meals & Snacks form
- Relationship to PR
- Household size, days since last SNAP issuance
- Self-reported financial condition, frequency of bill review, frequency of paying bills on time

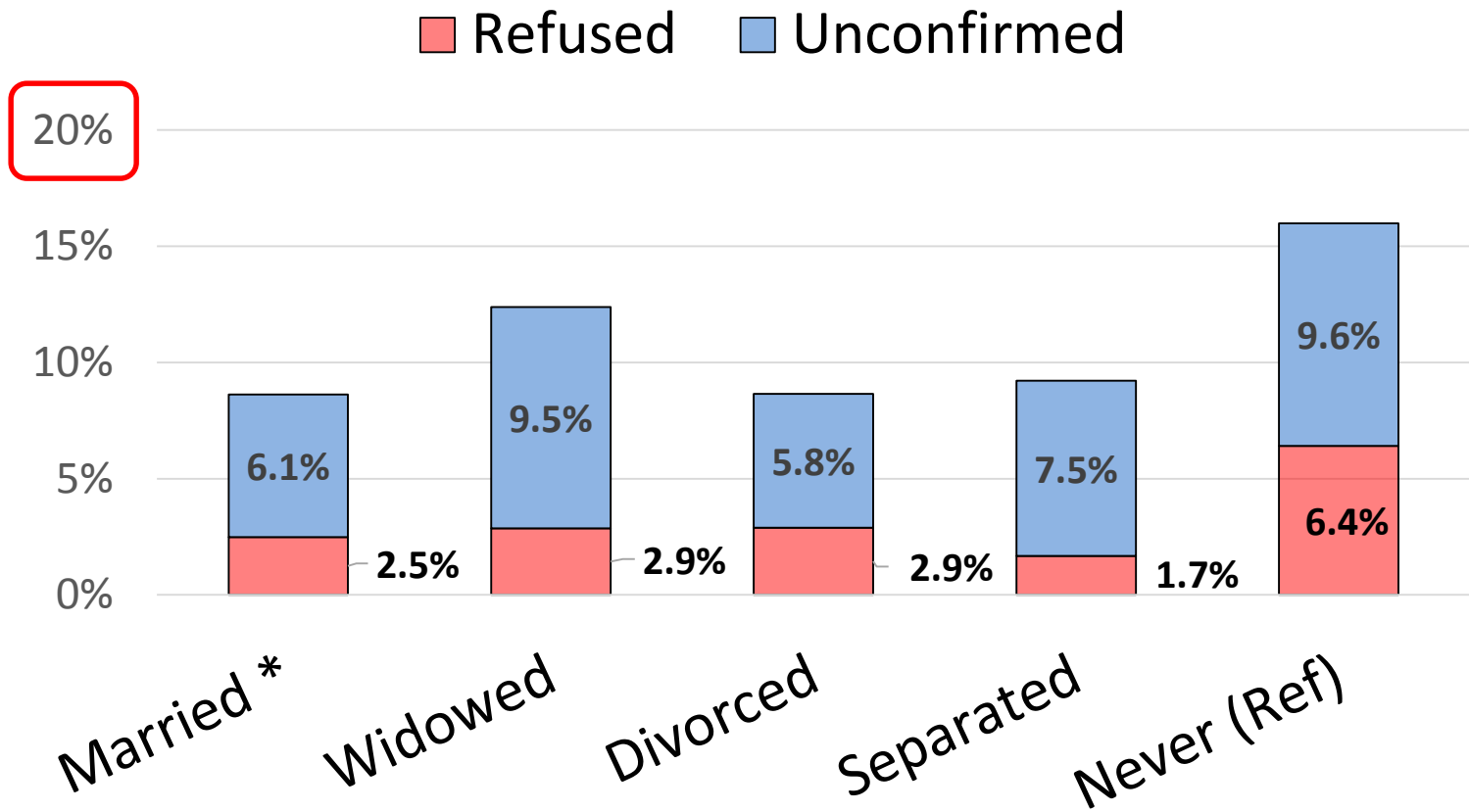


Paradata covariates

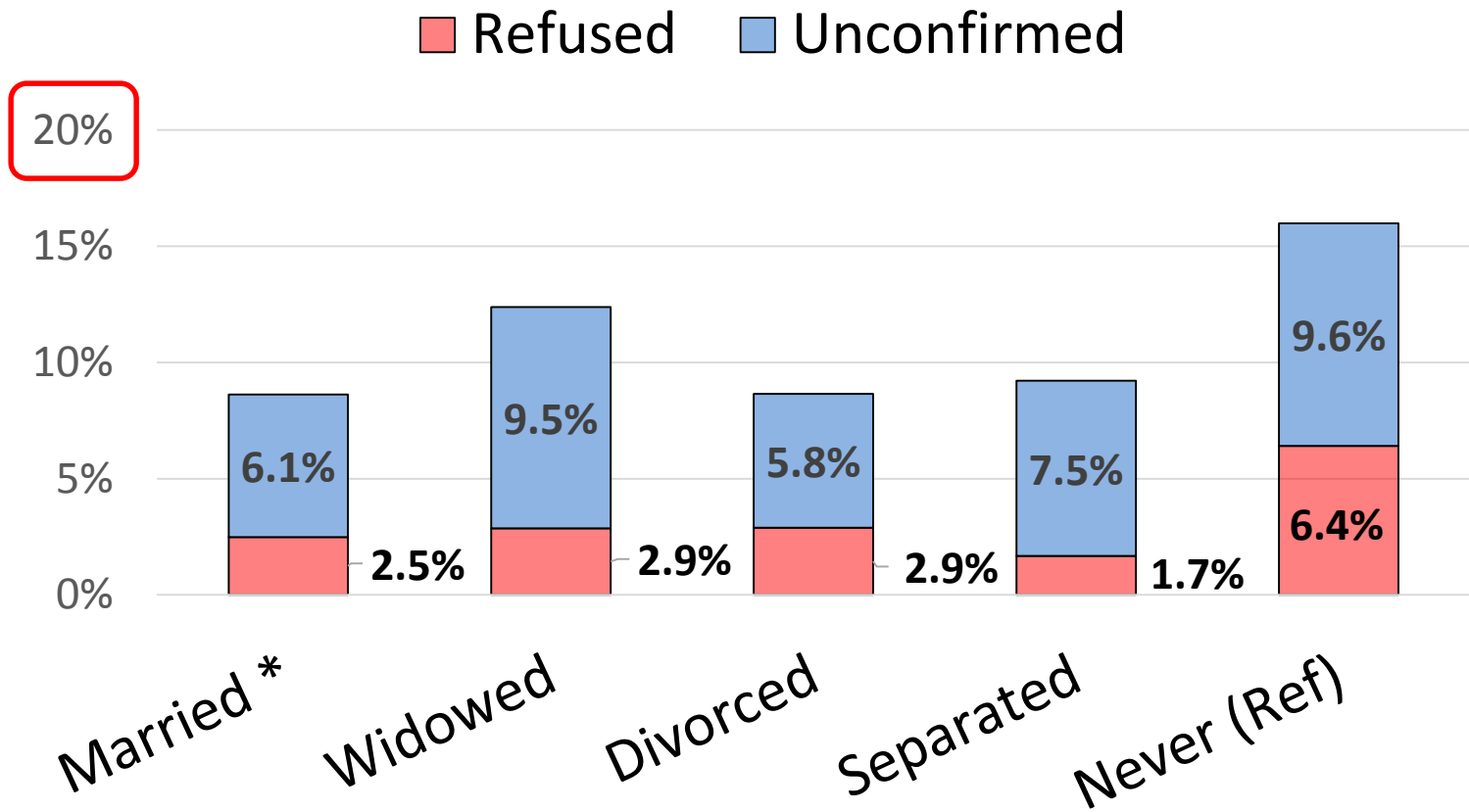
- Difficulty to get members to participate, ease of keeping track of foods
- Numbers of inbound and outbound calls
- Start-date cohort (day of week)
- Fielding day (continuous and centered as 0-6)
- Interaction of start-date and fielding day



Who refuses to participate? ... by marital status

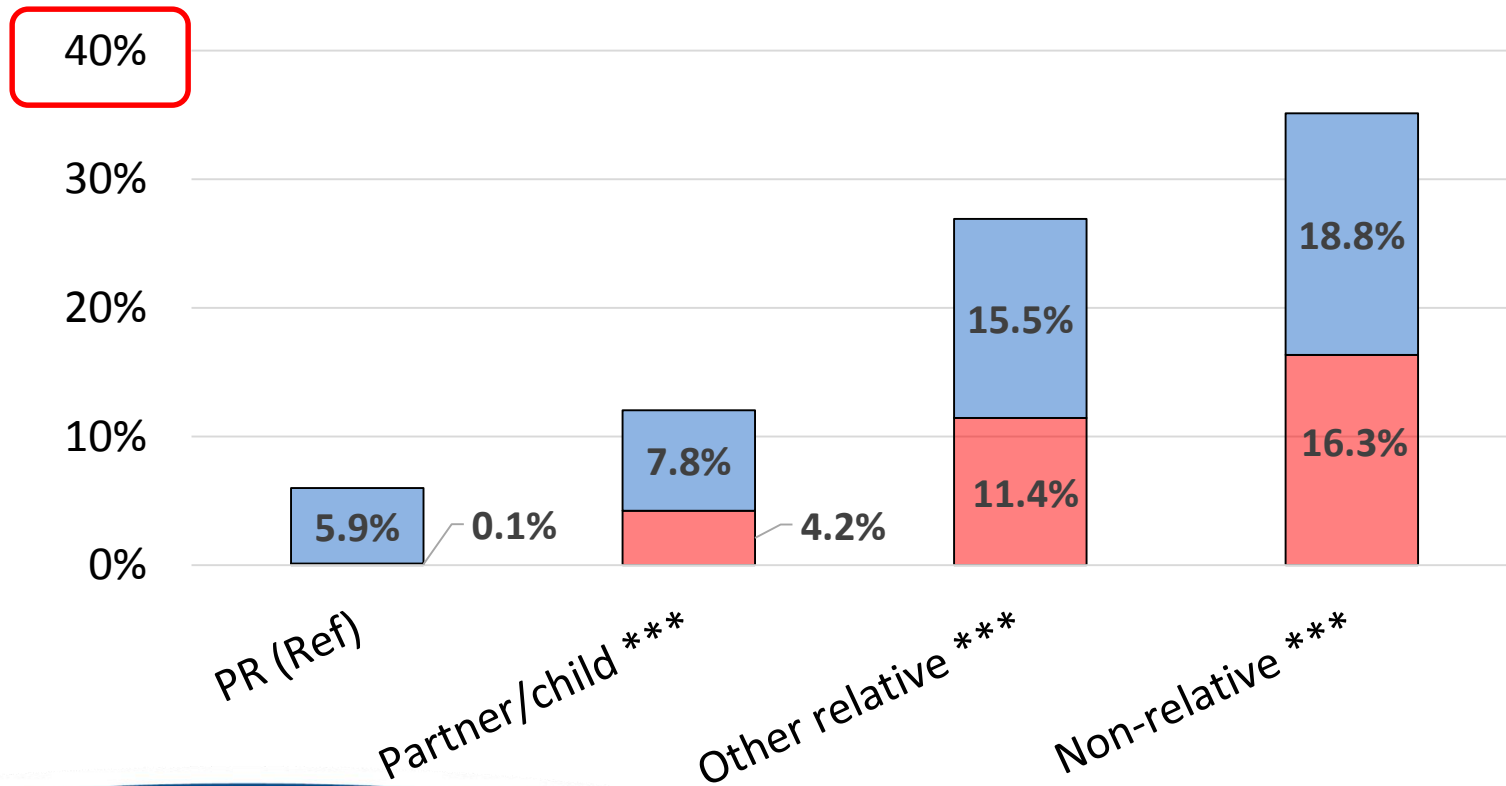


Who refuses to participate? ... by marital status



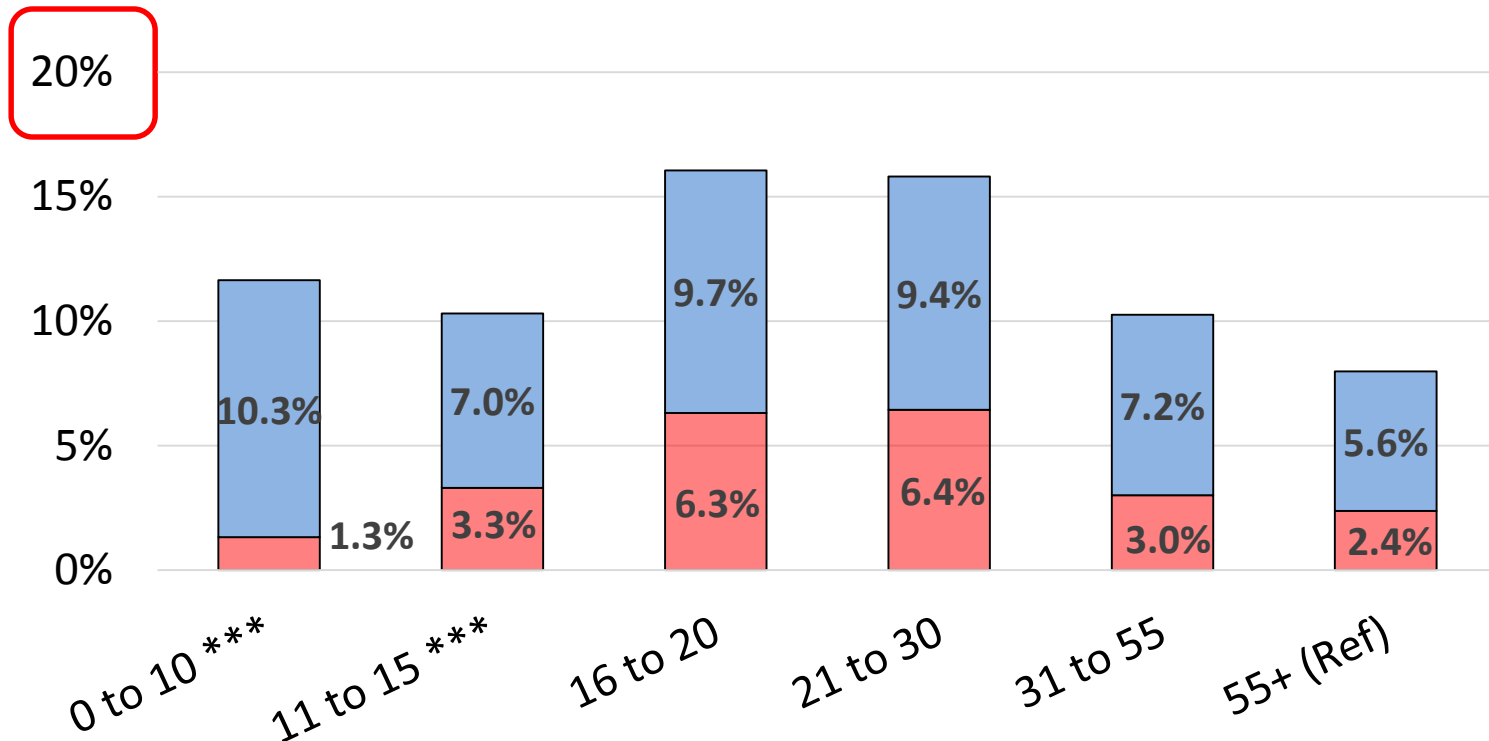
Who refuses to participate? ... by relation to PR

■ Refused
 ■ Unconfirmed



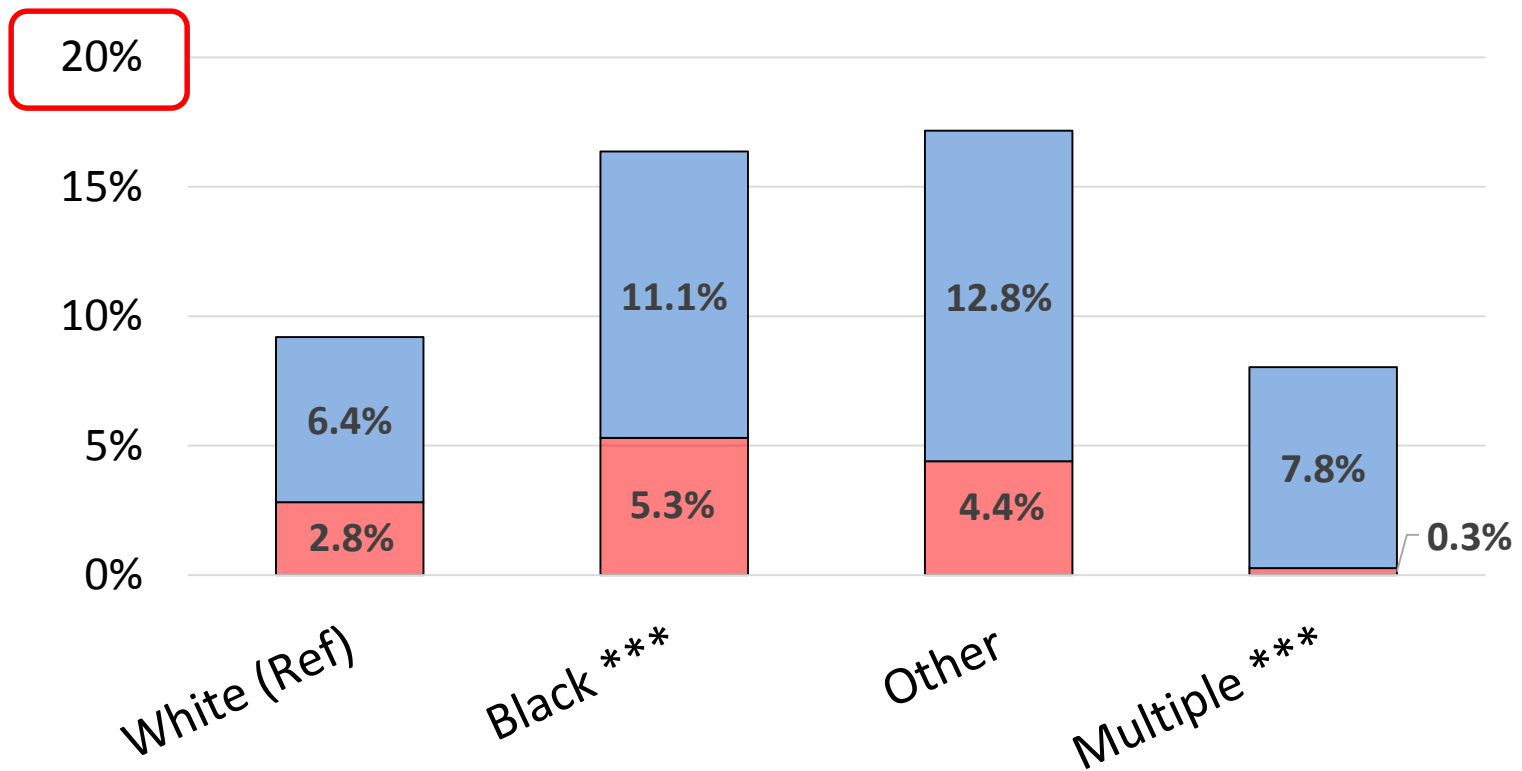
Who refuses to participate? ... by age group

Refused Unconfirmed



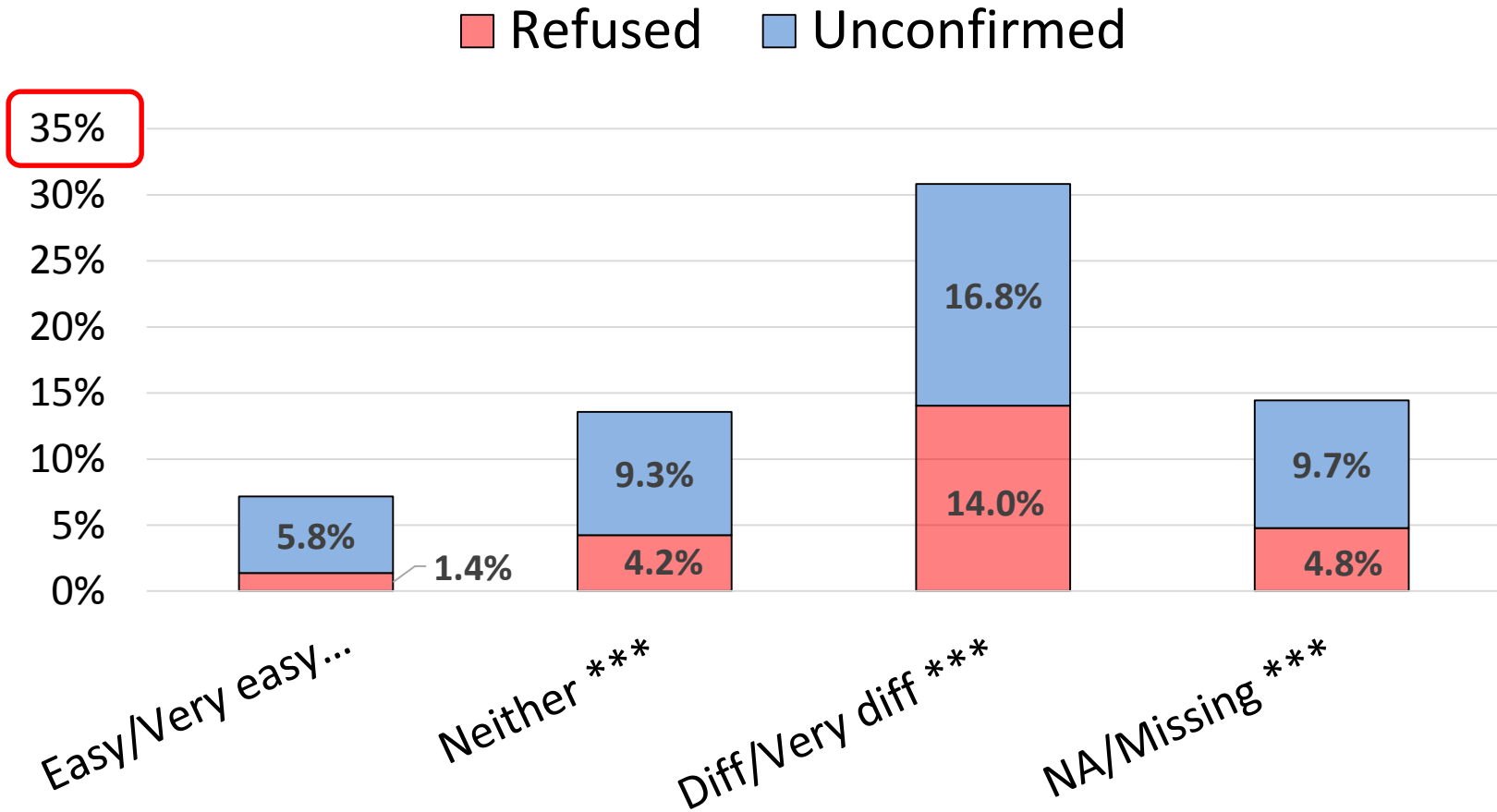
Who refuses to participate? ... by race

Refused Unconfirmed



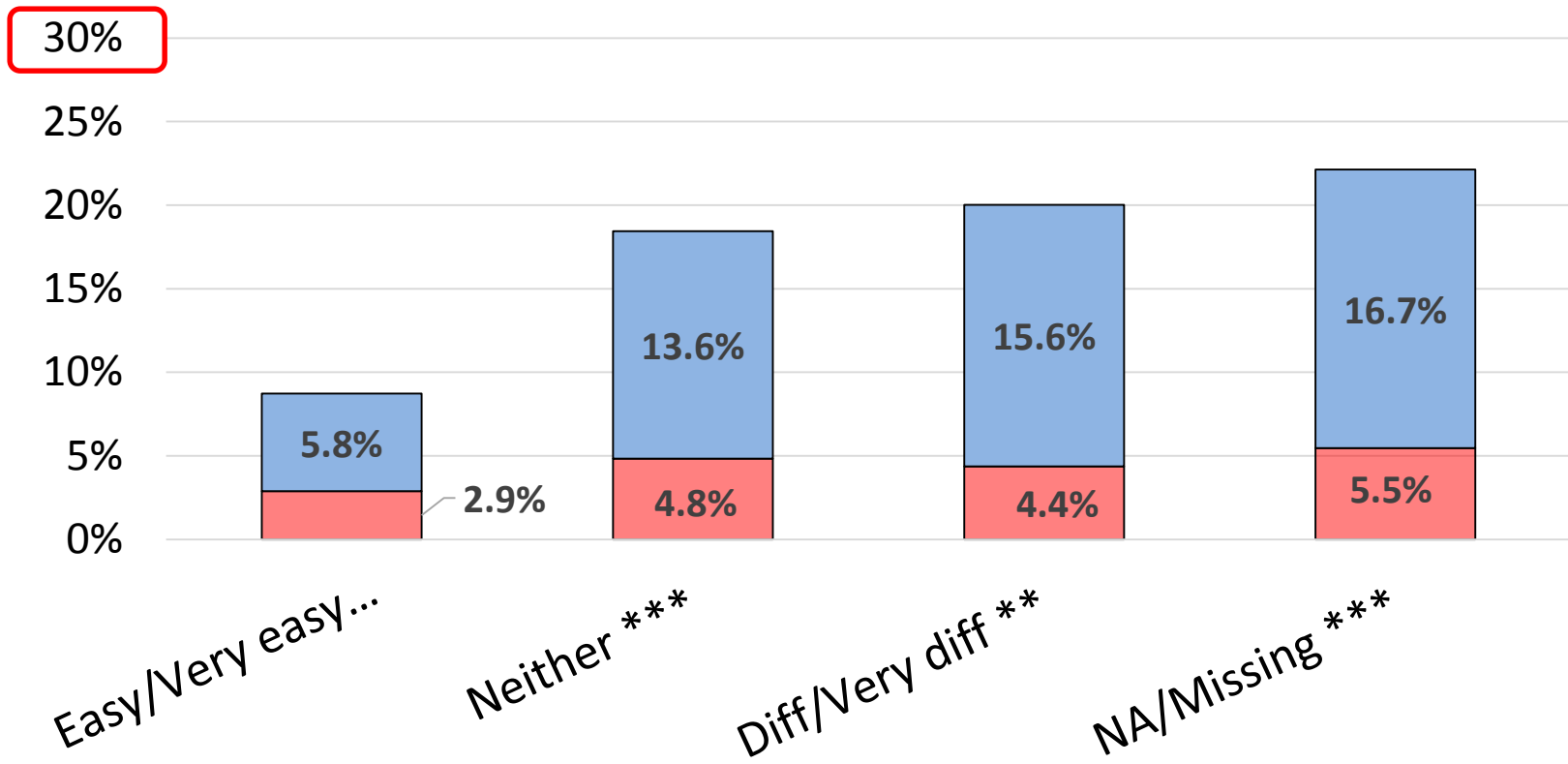
Who refuses to participate?

... by ease of getting members to participate



Who refuses to participate? ... by ease of keeping track of foods

Refused Unconfirmed

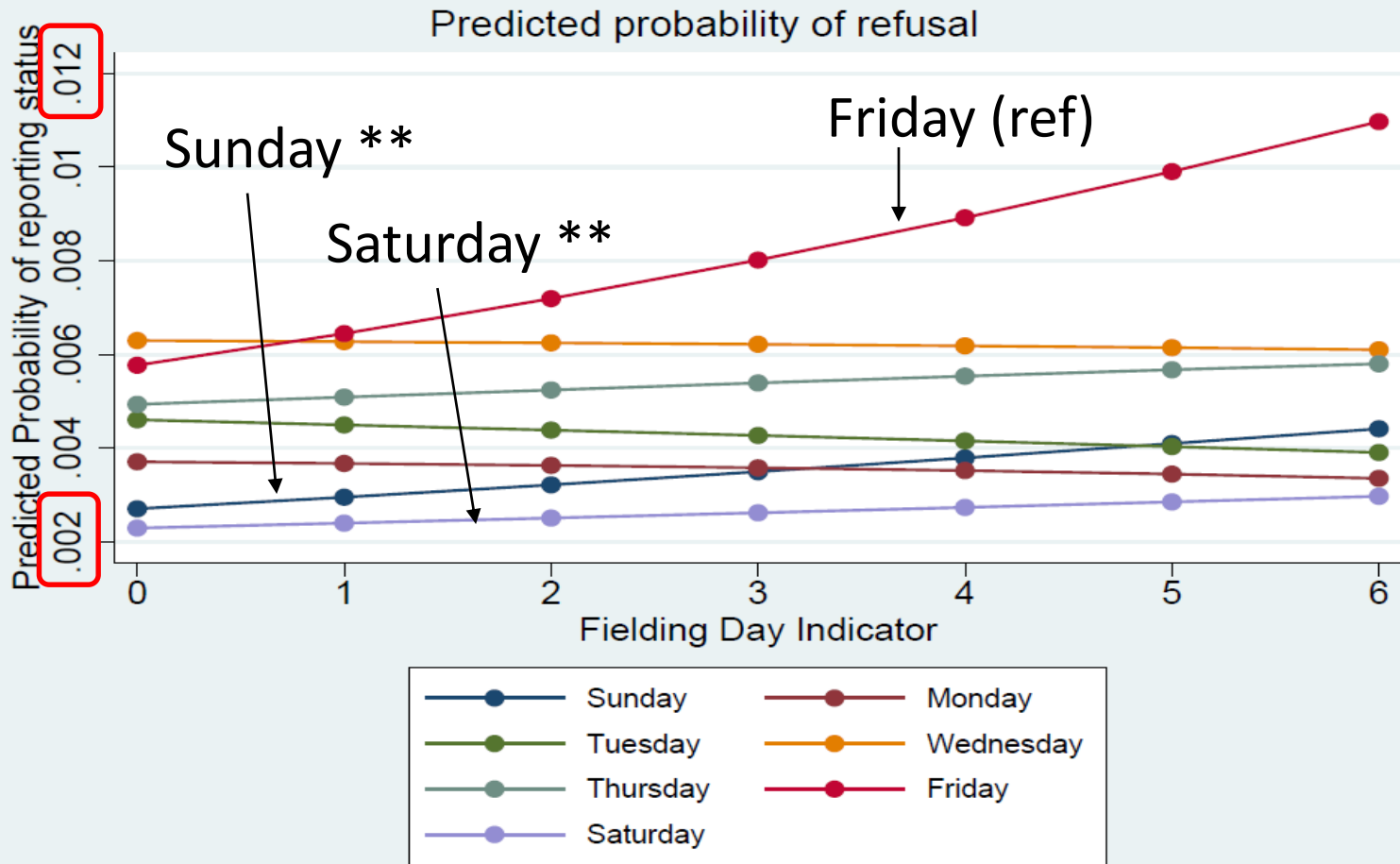


Temporal effects and response fatigue

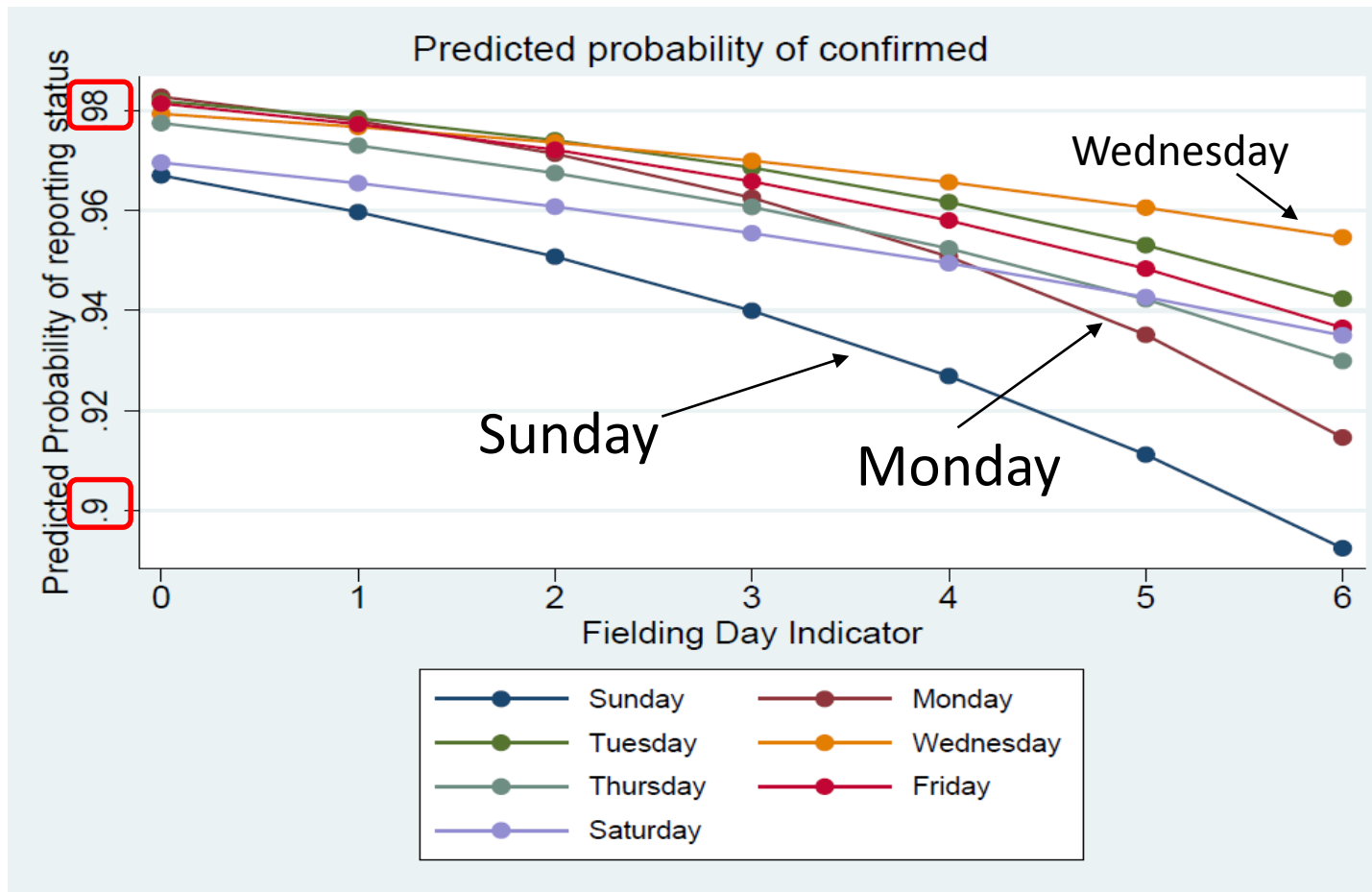
- Graphs are now predicted probabilities of reporting status by fielding day
- Covariates are:
 - Fielding day (continuous and centered),
 - Start-date (Sun, Mon,..etc), and
 - Interaction of fielding day and start-date



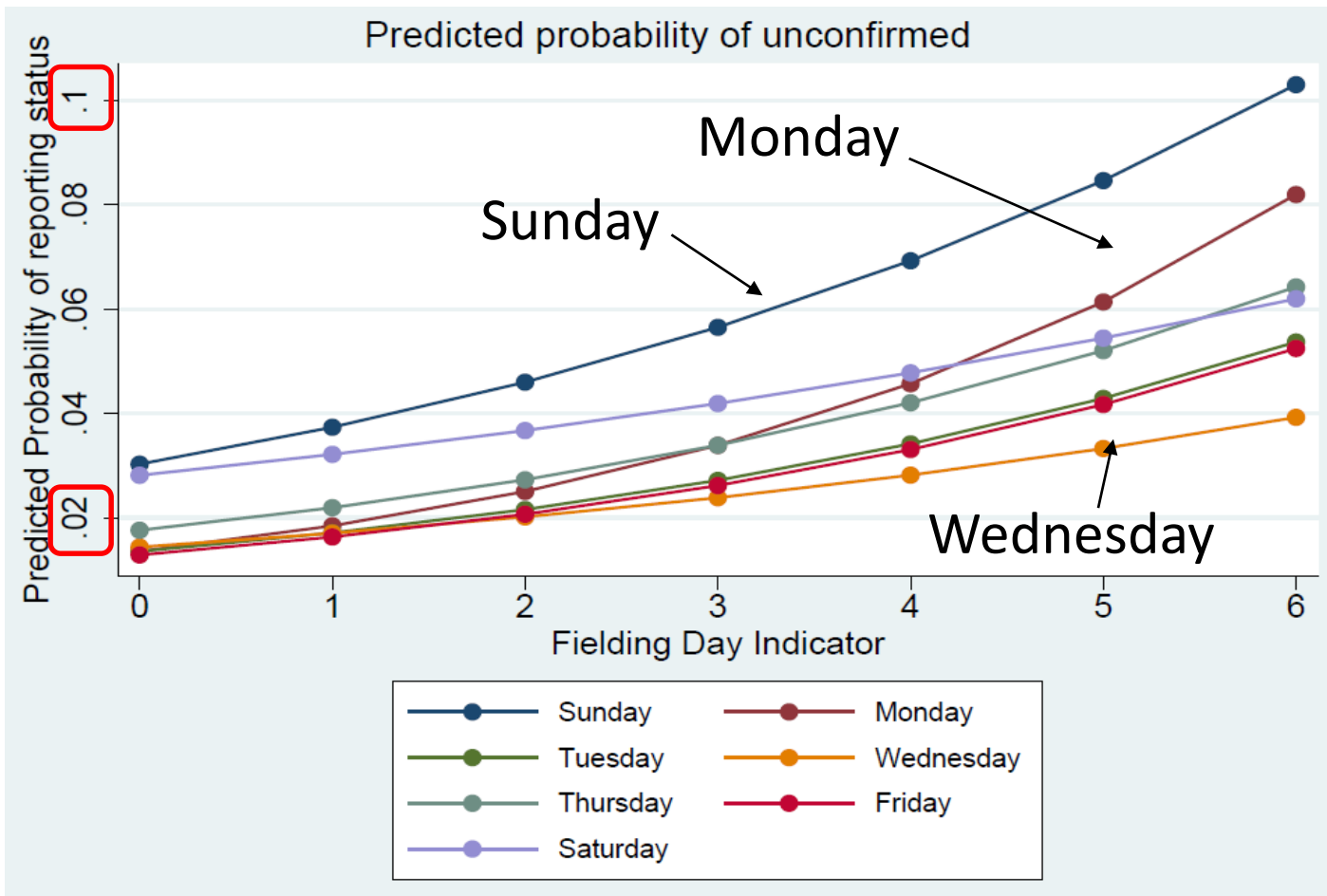
Predicted refusals by fielding day



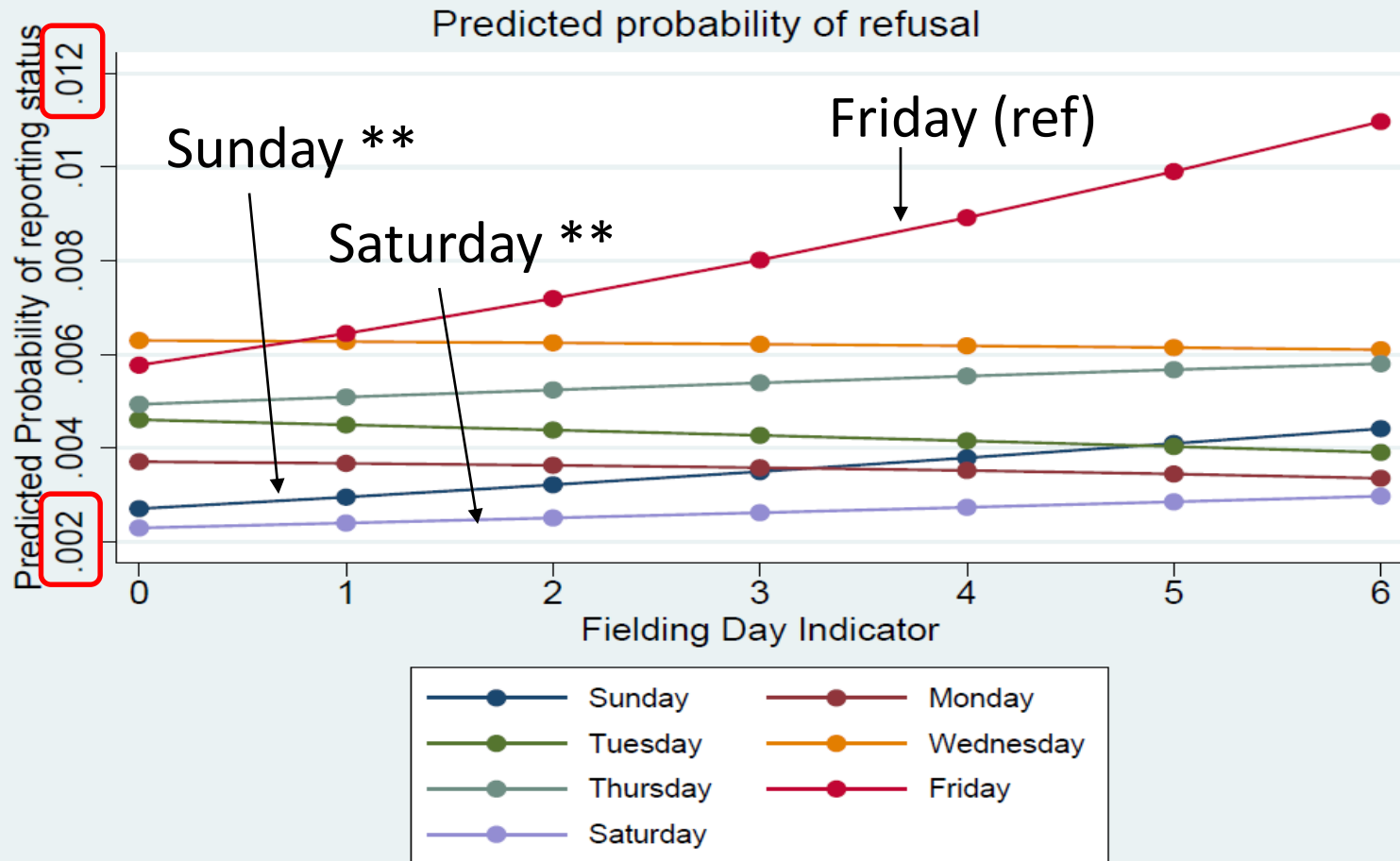
Predicted confirmeds by fielding day



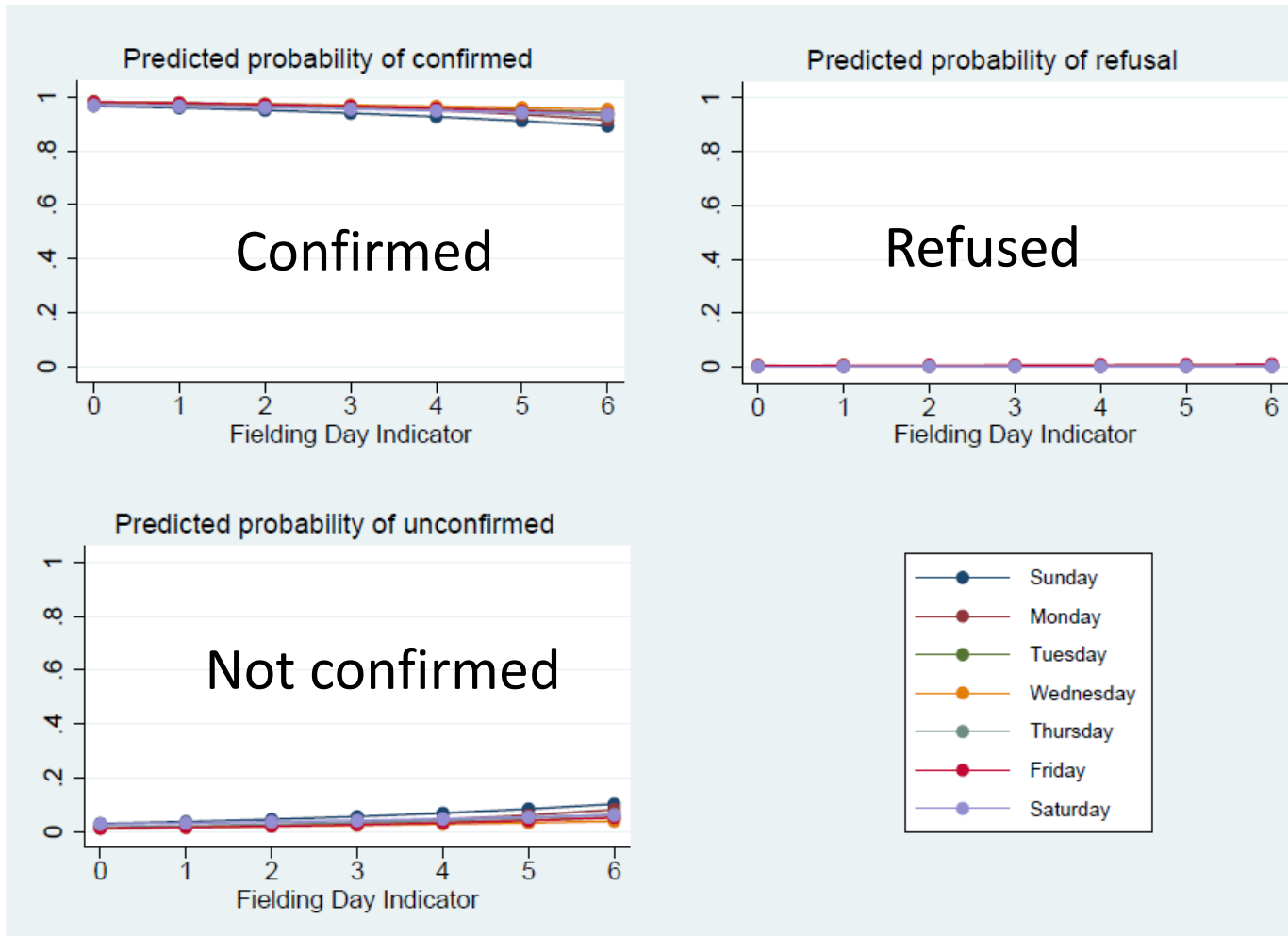
Predicted unconfirmeds by fielding day



Again, predicted refusals by fielding day



Reality check (same scale)



Recap – Variation over time?

- Some evidence of response fatigue
- But seems to be focused on those households that start data collection on a Friday, Saturday or Sunday
- Survey protocol led to many unconfirmed days of no reported acquisitions near end of week



Recap - Who most likely to refuse?

- Older teens, adults and seniors
- Never married
- African-Americans
- Non-relatives and “other” relatives of PR



Implications for Diary Surveys

- Day-by-day variation in response rates may be important and informative
- Response fatigue exists in FoodAPS, but not to a great degree
- Is there a cohort effect? Maybe, but why? Worthy of additional research.



Implications (cont)

- For next FoodAPS, need to work on reducing the unconfirmeds
- Provide extra training, reminders, or other inducements to those expected to have higher rates of non-participation.



Thank you!

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<http://www.ers.usda.gov/data-products/foodaps-national-household-food-acquisition-and-purchase-survey.aspx>



Extra slides, if needed



Key Characteristics of FoodAPS

- Fielded from April 2012 to January 2013
- Oversampled households participating in the Supplemental Nutrition Assistance Program (SNAP) and other low-income households
- Nationally representative, $N \approx 5,000$

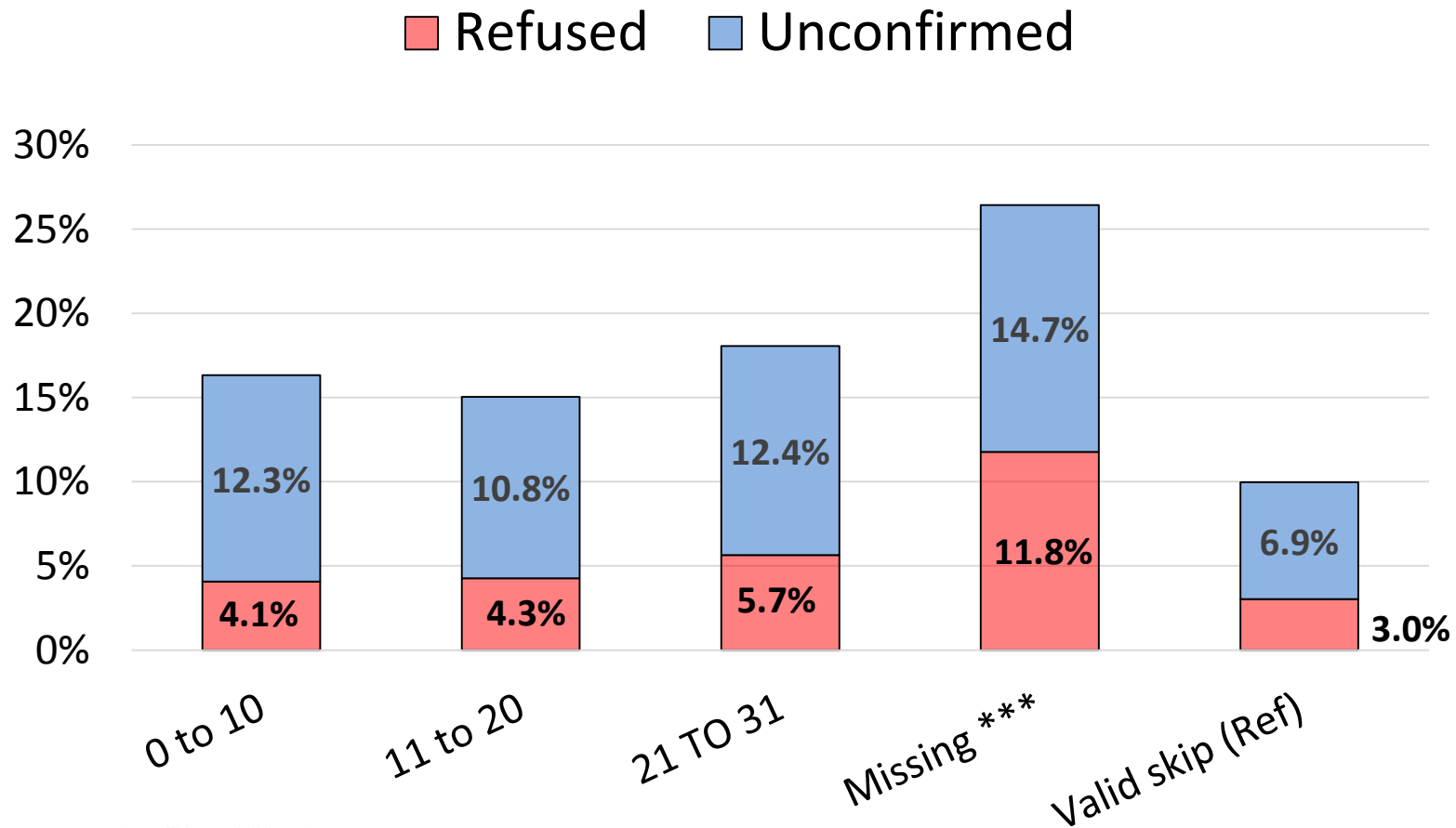


FAH vs. FAFH

- FAH
 - Groceries and other foods and drinks you brought home
- FAFH
 - Meals, snacks, and drinks you got outside your home

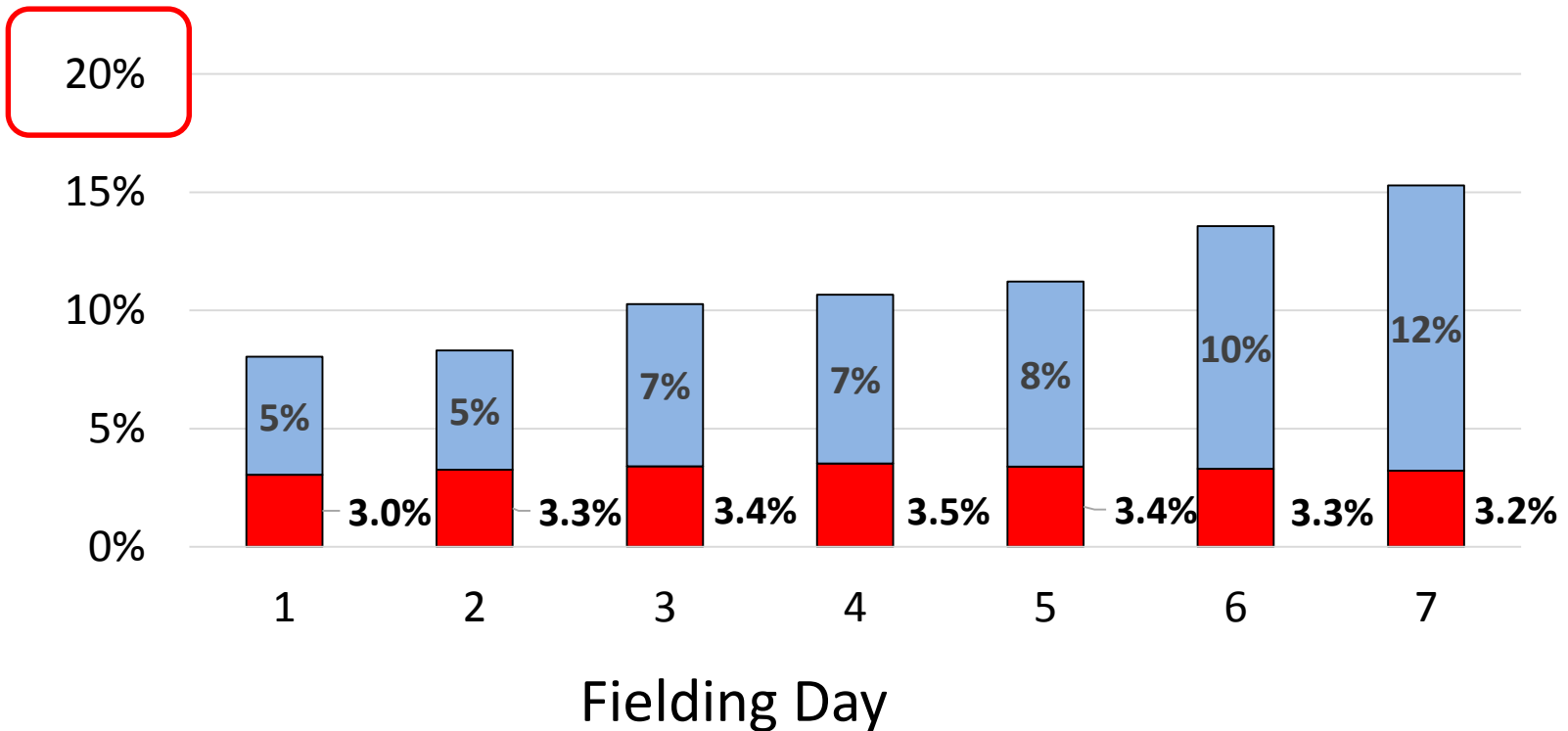


Who refuses to participate? ... by days since SNAP issuance



Status by fielding day

■ Refused ■ Unconfirmed



Who refuses to participate? ... by inbound calls

