



# The Burden of Proof: Panel Attrition and Record Usage on the Medicare Current Beneficiary Survey

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# Outline

- MCBS & Record Usage
- Research Questions
- Analysis
- Findings
- Conclusions
- Next steps

## Record Usage and Perceived Respondent Burden

- Record use may increase or reduce perceived respondent burden.
- Any extra tasks which require respondent effort may be perceived as having a higher total level of burden regardless of the effect on total interview length.
- Record keeping may be passive or active.
- Record usage may disproportionately affect certain subsamples.
- Respondents experiencing higher levels of perceived burden will be more likely to drop out of the study.



# Background

## Medicare Current Beneficiary Survey

- Longitudinal Study for Centers for Medicare and Medicaid Services currently in Round 58
- 16,000 Medicare beneficiaries in a rotating panel design
- 12 round study including baseline and exit interview over 4 years
- CAPI interview on health, health care utilization and health care expenditures designed to augment Medicare administrative data on events and payments
  - Matches costs to health care events in an effort to enumerate payers and payments.
  - Relies on respondent collection and interviewer entry of medical insurance statements from multiple sources
  - Asks respondents to voluntarily track health care utilization on a provided calendar.

## Two Forms of MCBS Record Usage: Statements & Calendars

- Respondents who collect and provide statements are asked only about amounts not accounted for by the statement material.
- Respondents who fail to provide statements are asked a longer series of questions.
- During the baseline interview, respondents receive a calendar to track medical events throughout the year.
- Respondents may make use of their own calendars, appointment books, or check registers.
- Statement usage is passive, calendar usage is active, both are voluntary

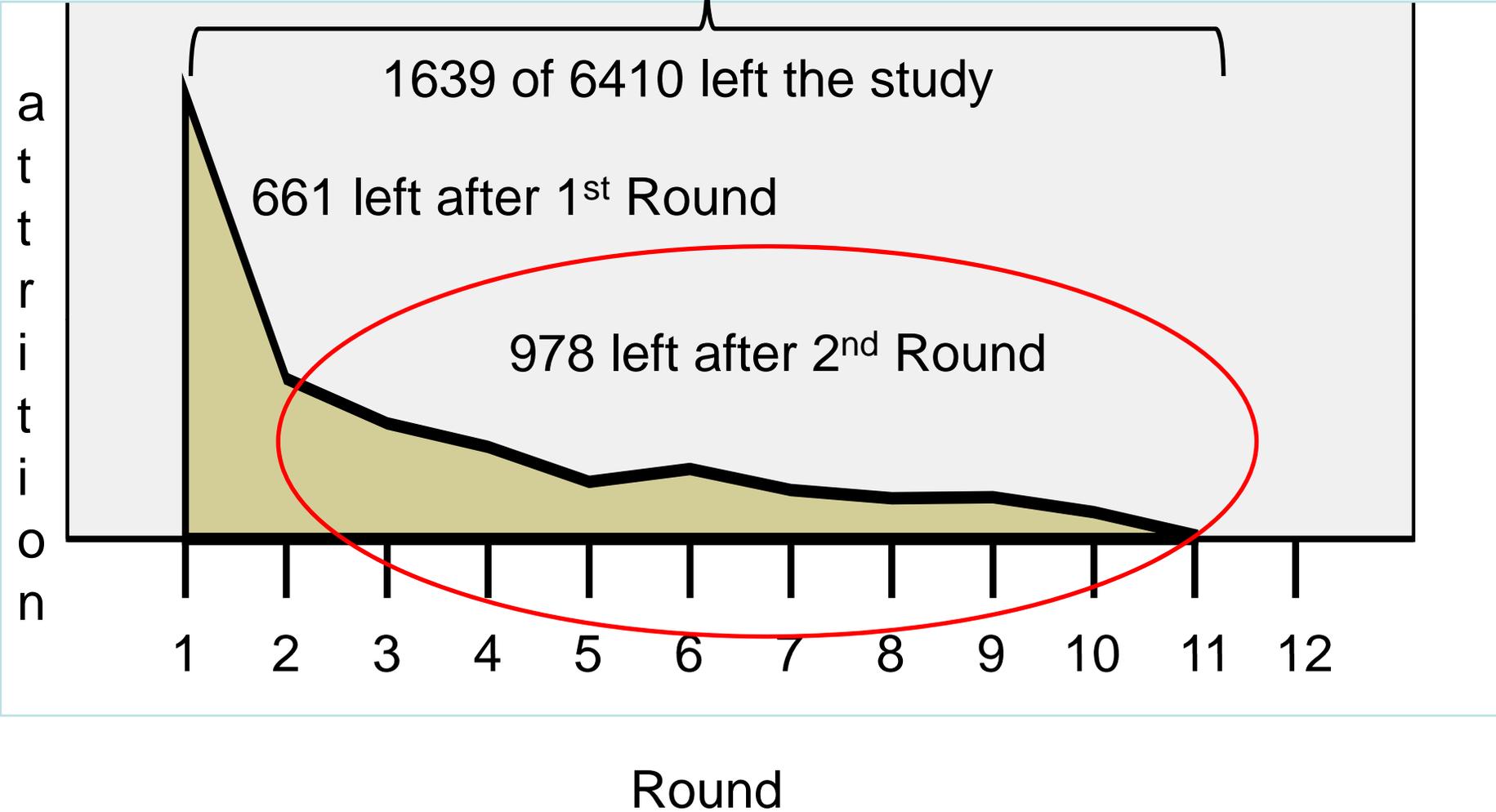
## Research Questions

- Does record usage increase attrition on the MCBS through increased perceived burden?
- Does the effect of statement collection differ from calendar keeping?
- Are there other factors related to the interview and the respondent that outweigh the effects of record usage?

## Analytical Approach

- Analysis uses the two most recently completed panels in the study.
- Focus on the relative effect of record usage on non-death attrition in later rounds.
- Excludes cases where attrition was due to death or occurred prior to the second interview.
- Examine and control for other factors such as average interview length, number of events, and perceived poor health that may contribute to perceived burden.

# Non-death Attrition from the MCBS



## Key Variables

Variable	Mean: analytic sample	Corr. w/ attrition
Refusal-based attrition (including physically/mentally no longer able)	.17	
Ratio of rounds a calendar was used	.52	-.08
Ratio of costs covered by a statement	.32	-.18

N=5682

## Additional Predictors and Control Variables

Variable	Mean: full sample
Ever use a proxy	Age when entered study (1=0-44; 7=85+)
SP ever on Medicaid	Any interviews conducted in Spanish
Average self-reported health (1=excellent; 5=poor)	MCBS panel (1=2008 exit; 2=2009 exit)
Married at some point during study	Same interviewer throughout study
Eligible for VA benefits	Average interview length (min)
Highest degree (1=no school; 5=masters+)	Average number of events per round
Household income < \$25,000	Average health care payments per round (\$)
Sex of sample person (1=male; 2=female)	Average years of interviewer experience



# Analyses and Findings

# Logistic Regression Models

Main Predictors	Other Predictor Variables in Model		
Ratio of costs covered by statement	Average health care payments per round	Any interviews conducted in Spanish	Highest degree obtained
Ratio of rounds a calendar used	SP ever on Medicaid	MCBS panel	Ever use a proxy
	Average experience of interviewer	Same interviewer throughout study	Household income < \$25,000
	Married at some point during study	Average interview length (min)	Age when entered study (categorical)
	Eligible for VA benefits	Average number of events per round	Sex of sample person
	Average of self reported health (1=excellent;5=poor)		

## Logistic Regression Results: Key Predictors

<b>N=5682</b> <b>Variable</b>	<b>Standardized Coeff. [B]</b>	<b>Odds Ratio [EXP(B)]</b>
Ratio of costs covered by statement	-2.01	.134
Ratio rounds calendar used		

## Logistic Regression Results: Full Model

N=5193 Variable	Standardized Coeff. [B]	Odds Ratio [EXP(B)]
Ratio of costs covered by statement	-3.17	.04
Ratio rounds calendar used	-.39	.68
Ever use a proxy	-.47	.63
SP ever on Medicaid	-.62	.54
Average of self reported health	.11	1.12
Eligible for VA benefits	-.57	.57
Age when entered study (categorical)	.09	1.05
Any interviews conducted in Spanish	-.56	.57
MCBS panel	.27	1.31
Same interviewer throughout study		
Average interview length (min)	-.02	.98
Average number of events per round	.17	1.18
Average years of interviewer experience	-.05	.95

## Summary of Results: Hypotheses Revisited

- Higher levels of statement usage reduces the likelihood for refusal-based attrition. This relationship is stronger than any other in the model.
- Greater use of the calendar, controlling for other factors, reduces the likelihood for refusal-based attrition.
- Average interview time, average perceived health and consistency of interviewer seem to have little or no effect on attrition propensity.
- Interviewer experience, VA eligibility, and Medicaid coverage all show slight negative relationships with attrition.

## Explanation of Findings

Two competing views:

- Statement usage, because it is relatively passive, and calendar usage, because it is voluntary and may improve interview flow may actually dissuade attrition through a reduction in perceived burden.
- The effects we see actually represent unmeasured motivations such as topic salience and altruism. **Those invested in the study are more likely to comply with requests for record keeping and complete all rounds of the study.**

## Conclusions

- The MCBS may be somewhat shielded from perceived record-keeping burden due its voluntary nature, the passive requirement for statements, and a baseline interview that requires no records.
- Perceived burden may not translate into attrition if it is offset by the perceived gain: either altruistic or an easier interview.
- Interview length may not equal increased perceived burden for the Medicare population.

## Limitations and Next Steps

- The analysis would benefit from measures such as topic saliency or respondent commitment to the study.
- The analysis lacks data regarding why the Sample Person left the study. Plans to incorporate record of calls/refusal information.
- Most non-death attrition occurs between the baseline interview and the first cost and use interview. A more complete examination should incorporate an analysis of this early attrition.



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