

## User Memorandum 002

**To:** MCBS Users  
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**Subject:** **Note to MCBS Users on the use of Computer Audio Recorded Interviewing (CARI)**  
**Date:** September 23, 2014  
**CC:** Project Files

### **Note to MCBS Users on the use of Computer Audio Recorded Interviewing (CARI)**

Since 2012, MCBS has begun recording (with appropriate consent) the question-and-answer process for selected items in the survey. This is accomplished via a recording capability built into the laptop computer and a program that can direct that the laptop record the interaction for selected questions or the entire interview. The software is called Computer Audio Recorded Interviewing (CARI), and was developed by RTI computer scientists in 1998 and first implemented in 1999. <sup>i</sup>

#### What does CARI do?

CARI allows the laptop to act as a sophisticated tape recorder as the interviewer administers a CAPI (Computer Assisted Personal Interview) questionnaire. CARI unobtrusively digitally records the verbal exchange between the interviewer and the respondent during actual production interviews. The system is completely under software control. At any predetermined or randomly selected point during the interview, the recording can start or stop. Previously, survey interactions have been tape recorded, but the computer adds the ability to record selected passages. Neither the interviewer nor the respondent is told which parts of the interview are being recorded.

The recordings can be transmitted to the home office alongside the collected survey data for later analysis.

#### Uses of CARI for the MCBS

The uses of CARI are many:

- As a means of verifying that an interview has taken place.
- To monitor interview quality, both interviewer performance, questionnaire performance, and the reactions of the respondents to the survey questions.
- Collecting verbatim responses to open-ended questions, and
- Detecting questionnaire and question difficulties.

#### CARI Results

The intent of CARI is to assure that the questionnaire is administered as written. There is considerable evidence that its use has increased interviewer compliance to the MCBS interviewing protocols.

CARI in MCBS was begun in Round 63 (summer 2012) and has continued. The respondent consent rate in Round 63 was 81%, 93% in Round 64, and 94% in Round 65. A detailed comparison of MCBS data in R63 and R64 to data from previous rounds suggests a CARI effect for a specific set of variables. Findings for these variables are consistent with expectations of CARI implementation.

Items where change was documented and attributed to a possible CARI effect had no design change introduced and experienced stable trends prior to CARI introduction. There appears to be some CARI item selection effect where items

interviewers thought were less important or unlikely to change were no longer short-cut. Particularly, this affects probes and operational variables such as the updating of contact addresses and phone numbers and future proxy information. In addition to these items, interviewers were more likely to report the use of records such as statements and calendars, possibly because they were now more likely to read the prompts in the questionnaire asking respondents to produce these. This also seemed to hold for more sensitive items like bladder control and income to a lesser extent. Verbatim reading of the items seems to have increased the quantity of information, i.e. fewer missing values and fewer contact information changes, rather than having a large effect on point estimates. Some less common attributes regarding plans and events did show a slight shift, such as the relationship of a home health aide to the respondent, and plan coverage characteristics like optical coverage. While there was an initial slight increase in the number of average medical events reported, this trend plateaued and dropped to close to pre-CARI levels by round 65.

The following are some detailed findings that suggest CARI is increasing adherence to the MCBS interview protocol:<sup>ii</sup>

- The length of the interview was greater in Round 63 than in Round 60 (though the protocol was the same).
- Contact information for the next round was more complete than in Round 62.
- More home health visits by friends or relative were reported (+7.0%), with a decrease in “other”.
- More dental visits were reported (+3.5%).
- Interviewers were more likely to report the need for minor corrections to the questionnaire (+2.4%).
- Respondents referred more often to the calendar (+13.3%).
- 5.1% increase in reporting that HMO covers optical care.
- Increase in reports of “person nearby” in ADL section (3.4% to 9.3%).
- Fewer instances of don’t know and refusals in income section and increase of \$50,000 and over income reports.

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<sup>i</sup> Biemer,P, Herget,D, Morton,J, Willis,G (Research Triangle Institute) *The Feasibility of Monitoring Field Interview Performance Using Computer Audio Recorded Interviewing (CARI)*, Proceedings of the American Statistical Association Section on Survey Research Methods, 2001

<sup>ii</sup> Personal correspondence, Ryan Hubbard, Westat (September 16, 2014)