



A National Study of Health & Well-Being

**Midlife in the United States (MIDUS)
Field Report**

**For the
MIDUS 3
Telephone Interview, and
Self-Administered Questionnaire
(P1003 / P1004)**

FINAL REPORT

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OVERVIEW OF PROJECT

The University of Wisconsin Survey Center (UWSC) was hired by Professor Carol Ryff, Director of the University of Wisconsin Institute on Aging (UW-IOA), to conduct the third wave of the Midlife in the United States (MIDUS) study. This multidisciplinary investigation, led by researchers from across the United States, seeks to understand how factors in the lives of American adults such as working conditions, relationships, health, finances, personal outlooks and individual choices impact health and well-being as individuals age from early adulthood to later life. This third wave of the study—known as MIDUS 3--also sought to shed light on how U.S. adults have been impacted by the 2008 economic recession and how these experiences are linked with their health, broadly defined.

Funded by the National Institute on Aging, the MIDUS 3 initiative returns to the 4460 living longitudinal sample who participated in MIDUS 2. Participants were recruited into MIDUS 3 via an initial 45-minute telephone interview, and were then invited to complete a 100-page mail questionnaire and a 25-minute cognitive interview via telephone.

From May, 2013, through November, 2014, 3,294 respondents completed the initial telephone interviews, 2,732 returned self-administered questionnaires (SAQs), and 2,693 participated in the cognitive interviews. In addition, family members of 33 respondents, who were deceased, participated in a brief mortality cognitive closeout interview.

The response rate for the MIDUS 3 telephone interview was 77%. The response rate for the MIDUS 3 self-administered questionnaire was 83%. The response rate for the MIDUS 3 cognitive interview was 83%.

See Appendix A for a timeline showing field dates of each protocol. See Appendix B for a full discussion of response by protocol. All Appendices are available by request from the MIDUS Administrative Core. Please contact midus_help@aging.wisc.edu

See the MIDUS 3 Cognitive Interview Field Report for a full discussion of cognitive interview protocols and response.

The University of Wisconsin Survey Center

Founded in 1987, the UW Survey Center (UWSC) serves the survey research needs of a wide variety of clients including faculty, staff, and administration at the University of Wisconsin; faculty and staff at other universities; federal, state, and local governmental agencies; and not-for-profit organizations. A department in the College of Letters and Science of the University of Wisconsin—Madison, the UWSC provides a complete range of survey research capabilities. The mission of the Survey Center is to assist researchers by providing the highest quality survey research services.

Professor Nora Cate Schaeffer is the Faculty Director of the UWSC. John Stevenson is the Associate Director, Kelly Elver is the Director of Project Management, and Steven Coombs is the Field Director. Vicki Lein served as senior project director on the MIDUS 3 project, and oversaw data collection in both telephone interviews. Griselle Sanchez served as project director for the questionnaire data collection. Other key UWSC staff included:

Programming Staff

- Eric White, Technology Director. General oversight of all programming and technology programming staff. Responsible for setting up a secure file transfer protocol for daily delivery of MIDUS cognitive interview audio files.
- August Salick, MIDUS CASES programmer. Responsible for initial recruit telephone instrument and cognitive telephone instrument programming, project management system development, and Shell database development.
- Brendan Day MYSQL and CASES programmer. Responsible for creation of contact tracing database, and occupation and industry coding database.
- Kate Golan, CASES programmer. Responsible for programming and data delivery support.
- Dan Lawrence, CASES programmer. Responsible for programming the questionnaire data entry database.

Tracking and Locating

- Robert Breen, Tracking and Locating Supervisor. General oversight of tracking locating operations.
- John Matoushek, Tracking and Locating.

Field Staff, Call Center

- Robert Schultz, Garrett Wartenweiller, and Joe Degnitz, Call Center Supervisors. Responsible for hiring, training and supervising interviewers and shiftleaders in the Call Center. General oversight of calling on projects conducted by telephone.

- Linda Gomez, Leah Kutschke, Katie Odens, Katelyn Putz, Michael Turek, Paul Wade, Nora Brennan, and Meghan Eubanks. MIDUS Call Center Shiftleaders. Responsible for monitoring interviewers, finalizing cases, responding to respondent questions and referring issues for review by supervisors or project directors.
- Over 90 interviewers trained to call MIDUS 3.

Field Staff, Mail and Data Entry Center

- Carrie Barrett, Crystal Buttles, and Nick Shultz, UWSC Mail and Data Entry Center supervisors. Responsible for staffing and training of all Mail and Data Entry Center staff, and creating protocols unique to MIDUS data entry.
- Hilary Manley, Maria Richards, Brian Wood, Kate Manley, and Leo Schultz, Mail and Data Entry Center coordinators. Responsible for coordinating the preparation of all mailings of payments, questionnaire packets and letters to MIDUS respondents.
- Over 25 MIDUS-trained mail and data entry staff.

CASES Instruments

CASES CATI System

Recruitment and Cognitive interviews were conducted over the telephone using computer-assisted telephone interviewing (CATI) technology. The CATI system used by the UW Survey Center was CASES 5.5. CASES is copyrighted by the University of California-Berkeley's Computer-Assisted Survey Methods Program or CSM.

In the CASES CATI system, the text of the interview appears question by question on a computer screen for the interviewer to read to the respondent. Routing through the interview is based on pre-programmed skip logic. Question wording may be adapted according to answers previously given in the interview or based on pre-existing data in the sample record that has been imported into the system. The system allows for pre-coded questions, open-ended questions, and combinations of the two. In addition, the system allows only valid responses; when an invalid response is entered, the interviewer is asked to reenter the response.

For the cognitive interview, banners could be customized for each task, either providing interviewers cues on script timing, exactly when each item should be said, or providing a task timer to inform interviewers when the period for response had ended.

The CASES system keeps track of the current status of all sample telephone numbers, automatically routes them for proper follow-up for the next attempt, and maintains an elaborate set of management records.

CASES SAQ Data Entry System

The self-administered questionnaire (SAQ) data entry instrument was programmed for double data entry in CASES 5.5. In CASES, the text of the questionnaire appears question by question on a computer screen and the data entry operator enters the response provided by the respondent. Skip logic is pre-programmed into the system. The system allows for pre-coded questions, open-ended questions, and combinations of the two. In addition, the system allows only valid responses; when an invalid response is entered, the computer asks the data entry operator to reenter the response.

In double-data entry, such as with MIDUS, trained editors review all SAQs and clarify ambiguous response prior to first-pass data entry. When the second-pass data entry operator enters the response, CASES monitors discrepancies between first-pass and second-pass entries, and when any exist, loads a discrepancy screen requesting the second pass data entry operator to resolve the discrepancy.

UWSC programmed the system to track data entry operator error rates and used results for targeted training efforts.

BACKGROUND

MIDUS 1 launched in 1995 and recruited over 7,100 American adults, aged 25 to 74, into a national study on health and well-being. A panel of over a dozen researchers around the country, in fields ranging from psychology, sociology and anthropology, to medicine, and health care policy were involved in the MIDUS study. In addition to a main RDD national sample, MIDUS included a large subsample of 998 pairs of twins, the largest randomly drawn sample of twins in the United States. Also included was a sample of hundreds of siblings of the Main RDD respondents, as well as over-samples of different metropolitan areas in the U.S. The study's comprehensive, multimodal protocol included a 30-minute telephone interview, and a 100-page mail questionnaire. Further, some respondents also participated in a diary study of daily stress. MIDUS 1 was conducted at Harvard University and was sponsored by the John D. and Catherine T. MacArthur Foundation.

In 2004, **MIDUS 2** returned to the original MIDUS participants with a 45-minute telephone interview, a 100-page self-administered questionnaire, but also added a 25-minute cognitive interview via telephone and repeated and expanded the

daily stress project. MIDUS 2 also introduced projects that collected comprehensive biomarkers and conducted affective neuroscience assessments. Longitudinal survey data were collected on 75% of the eligible living respondents from the baseline MIDUS 1 study. MIDUS 2 also included a new African-American oversample of over 500 individuals from Milwaukee, Wisconsin, recruited via in-home interviews. The MIDUS 2 survey and cognitive project data was collected by the UWSC and supported by funding from the National Institute on Aging.

The **MIDUS Refresher**, fielded in 2012, replenished the original longitudinal sample, diminished over time through attrition, with a younger cohort. New participants were American adults aged 25 to 74, mirroring the original MIDUS sample. Data collection protocols were similar to those used in the MIDUS longitudinal study, and included the cognitive, daily stress, biomarker, and neuroscience projects. MIDUS Refresher participants were recruited in a 45-minute telephone interview, then invited to complete a 108-page mail questionnaire and to participate in a 25-minute cognitive interview via telephone. Complete telephone data was obtained by 3,577 individuals. The MIDUS Refresher survey and cognitive data were collected by the UWSC and funded by the National Institute on Aging.

The **MIDUS Milwaukee Refresher** project, also fielded in 2012, recruited 508 new participants from Milwaukee, Wisconsin, African-American adults, aged 25 to 64. The MIDUS Milwaukee protocols included an in-home interview lasting an average of 2 hours and 40 minutes, a 44-page leave-behind questionnaire, and a 25-minute cognitive interview via telephone. The Milwaukee Refresher sample also participated in the biomarker and neuroscience project data collection. The MIDUS Milwaukee Refresher was conducted by the UWSC and funded by the National Institute on Aging.

In 2013, **MIDUS 3** returned to living longitudinal respondents who had participated in MIDUS 2. Now aged 40 to 94, participants were recruited with a 45-minute telephone interview, and invited to complete a 100-page self-administered questionnaire, and to participate in a 25-minute cognitive interview via telephone. MIDUS 3 was conducted at the UWSC with funding from the National Institute on Aging. Fielding in May, 2013, MIDUS 3 re-interviewed 3,294 respondents. Subsequently, 2,732 returned the mail questionnaire, and 2,693 participated in the cognitive interview.

MIDUS 3 INSTRUMENT DEVELOPMENT

CATI and SAQ Instruments

The UWSC's work on the MIDUS 3 instruments began in 2011 with development of the MIDUS Refresher instruments. For the MIDUS Refresher the initial

telephone recruitment interview, self-administered questionnaires and cognitive telephone interviewer were all reviewed in an iterative fashion and updated to reflect current best practices. Strong consideration was given to maintaining comparability with previous MIDUS longitudinal instruments. Changes made for the Refresher included:

- Addition of new questions related to the recent economic recession to gain a better understanding of the health effects of the recession
- Updates to employment questions to better support occupational and industrial coding
- Addition of several limits and validity checks to improve data quality
- Redesign of the questionnaires to more closely conform to current best practices.

Starting with the freshly reviewed and revised MIDUS Refresher instruments, changes made for MIDUS 3 included:

- Addition of respondent verification and a mortality cognitive closeout interview to the initial telephone instrument
- Adjustment of reference periods to account for previously collected information
- Removal of inapplicable baseline questions from the initial telephone interview and questionnaires
- Revision of limits and validity checks to reflect the vastly wider age range for MIDUS 3 sample
- Addition of an abbreviated set of employment questions for some respondents, driven by information respondents had previously provided.

Skip pattern logic was reviewed and instruments thoroughly tested and debugged. The initial telephone instrument was ready for fielding by the end of May, 2013. Questionnaires, created in Microsoft Word, were converted to ready-to-print pdf format by April, 2013. Questionnaires were printed at UW Printing Services.

Cognitive Interview Instrument

In July, 2011, UWSC staff met with Dr. Margie Lachman of Brandeis University and key UW-IOA staff to discuss the Cognitive Interview instrument and protocols in preparation for the MIDUS Refresher. The Cognitive Interview instrument developed for the MIDUS Refresher was also used for MIDUS 3. Instruments and protocols mostly replicated those used during MIDUS 2. However, due to an increasing prevalence of cell telephones, measures were added to account for the variable latency in response due to technology.

Eric White, UWSC Director of Programming, investigated telephone relay lag variance, finding that lag could vary widely even within a call. Dr. Margie Lachman and Dr. Patricia Tun developed the Metronome Count, a method to

measure response variance both between and within calls. The Metronome Count protocols were further developed and tested, and the measure was added to the instrument before and after the key task measuring response latencies.

By October, 2011, the Cognitive Interview instrument, including the new relay latency measure, was programmed and tested. Cognitive data collection involved digital recording of the entire interview. A new audio file format was tested to ensure comparability with MIDUS 2 audio files. Audio recordings of mock interviews were reviewed by the client. Time stamps were added to the instrument to support the automation of audio processing and review being conducted at Brandeis University and the instrument was ready for fielding.

In July, 2013, after only minor revisions to the MIDUS Refresher Cognitive Interview instrument, the MIDUS 3 Cognitive Interview instrument was ready for fielding.

Project Management Database

The UWSC created a project management database, connected to the recruitment interview instrument, the UWSC tracing database, and the cognitive interview instrument, that allowed real-time review of progress of each case across all treatments throughout the entire field period. In addition, entries in the project management database initiated the individualized movement of each case through the treatments.

The database stored:

- Current and previous respondent contact information
- Dates of mailings
- Dates of participation
- Interim or final case disposition codes for each treatment
- Key variables from the recruitment and cognitive telephone interviews, including respondent age, gender, and education, call notes, and interviewer observations
- Sample variables such as sample type and replicate number

Customizable queries supported refusal conversion and tracing efforts; reporting of progress by treatment by sample type, age category and gender; generation of address labels for the on-going posting of birthday greetings; and review of Cognitive Interview results.

MIDUS 3 SAMPLE

In the MIDUS 3 study, UWSC sought to re-interview living MIDUS longitudinal sample who had completed the MIDUS 2 telephone interview. Of the 4,963 MIDUS 2 participants, 210 were known to be deceased (via previous National Death Index submissions), and 65 had either withdrawn from the study or been deemed cognitively unable to participate in future efforts.

From March, 2013, through May, 2013, UWSC conducted pre-tracing on the remaining 4,688 potential MIDUS 3 participants, seeking the most current contact information. The pre-tracing sample file included the last known name, address and telephone number for each respondent, the telephone number and address at the time of the MIDUS 2 interview, dates of previous interviews, date of birth and social security number, original sample type, and information linking sibling and twin respondents.

As a result of regular mailings by the UW-IOA to MIDUS participants, respondent addresses had been updated in the nine years since MIDUS 2 had fielded. Nevertheless, UWSC located over 500 new addresses. With no intervening calling efforts, and an increasing move to cellular telephones, the telephone information was expected to be less current. UWSC used a conservative approach during pre-tracing, opting to retain phone numbers unless strong evidence indicated they were not good.

When all 4,688 cases had been reviewed, an additional 220 potential participants were found to be deceased, and 10 deemed ineligible, leaving a sample of 4,458. Once fielding began, two additional ineligible respondents requested to participate and were included in the fielded sample, giving a total MIDUS 3 sample of 4,460 cases.

The sample of 4,460 included respondents who had originally been recruited in one of three ways: 2,423 respondents had been recruited by random digit dialing (RDD), 677 respondents recruited as siblings (SIB) of the RDD sample, and 1,360 respondents recruited in the largest random recruitment of twins anywhere (TWIN). See Table 1.

Table 1: MIDUS 3 Fielded Sample, by Sample Type

| Sample Type | Number of Cases Fielded |
|--------------------|--------------------------------|
| Random Digit Dial | 2423 |
| Sibling | 677 |
| Twin | 1360 |
| Total | 4460 |

The pre-traced sample was divided up into 46 replicates of approximately 100 cases each. See Table 2. The replicates were not random, but drawn based on original sample type and relationships:

- The initial 20 replicates were drawn from RDD sample who had never had siblings in the study.
- Replicates 21 through 31 were drawn from RDD sample who had ever had siblings in the study and their siblings.
- Replicates 32 through 45 were drawn from the twin sample.
- Replicate 46 was a mixture of sample types, and consisted of 28 suspect cases where no current address or telephone information had been located, or only overseas addresses had been found.

Care was taken to group twins and siblings together in replicates so that family members would be fielded simultaneously.

Table 2: MIDUS 3 Fielded Sample, by Replicate

| Replicates | Number of Cases Fielded |
|---------------------------------|--------------------------------|
| Replicate 1 - 3 (RDD) | 300 |
| Replicate 4 - 8 (RDD) | 500 |
| Replicate 9 - 13 (RDD) | 500 |
| Replicate 14 - 19 (RDD) | 600 |
| Replicate 20 (RDD) | 99 |
| Replicate 21 - 25 (RDD and SIB) | 500 |
| Replicate 26 - 31 (RDD and SIB) | 583 |
| Replicate 32 - 34 (TWIN) | 300 |
| Replicate 35 - 39 (TWIN) | 500 |
| Replicate 40 (TWIN) | 100 |
| Replicate 31 - 42 (TWIN) | 200 |
| Replicate 43 (TWIN) | 100 |
| Replicate 44 - 45 (TWIN) | 150 |
| Replicate 46 (MIX) | 28 |
| Overall | 4460 |

The first replicate was fielded in late May, 2013.
The last replicate fielded in July, 2013.

Sample Input files

The MIDUS 3 sample file included the dates of respondents' previous MIDUS interviews and basic demographic information. This information was used to remind respondents of past participation and helped to verify respondent identity. Some MIDUS 3 questions used the MIDUS 2 participation date to bound the reference period of interest, for example, to ask for changes since the last interview in a specified year.

The MIDUS 2 marital status and respondent and spousal employment status was used in the creation of employment flags that triggered alternate, potentially much-abbreviated, sets of employment questions.

TRACING

Tracing Database

Tracking and Locating staff used the UWSC Tracer to update and track contact information for respondents across protocols. The Tracer retains a record of all past and current addresses, names, and phone numbers. The Tracer system interacted with the recruitment telephone interview instrument, the project management database, and the cognitive interview telephone instrument to ensure the most up-to-date contact information was collected and used as cases flowed through the protocols. All new contact information collected during interviews was imported into the Tracer, then cleaned and traced. Tracking and Locating staff entered the date tracing was conducted, a "tracing code" indicating current status, and individual notes on each case.

MIDUS pre-tracing was not conducted in the Tracer. To ensure this historical information could be returned to the UW-IOA, the original untraced contact information for fielded cases was loaded into the Tracer prior to uploading the updated, pre-traced, contact information.

Tracing Protocols

During the initial and cognitive telephone interviews, cases were sent for tracing when calls resulted in wrong numbers, disconnected numbers, faxes, or when an informant reported a known respondent was no longer living at the number. After 20 calls without contact, cases were sent for tracing. If the Tracking and Locating department could not find a better number, a phone request letter was sent to the respondent, noting the contact information on file and requesting updates. If the respondent did not reply with a better number, the case was put on hold for a month, and retraced. This process was repeated as necessary throughout the field period. If the phone number looked good, a hard-to-contact letter was sent

to the respondent, indicating that the UWSC was having difficulty reaching them, and requesting respondents to call in at their convenience to participate. The case was put on hold for a month, and then retraced if the respondent had not yet called.

All undeliverable MIDUS mailings were also sent for tracing. If no better address was identified, up to five phone calls were placed to the respondent in an attempt to collect a new address or to confirm the existing one. Updated address information was entered in the Tracer.

If after multiple rounds of tracing, respondents still could not be located, calls were placed to people respondents had previously indicated would know how to reach them. To avoid respondent confusion, siblings and twins who were also in the study were not called for information until their participation was complete. See UWSC Tracing Manual highlighting tracing methods in Appendix C.

FIELD PROCEDURES

A Toll-Free Respondent Line

To maximize opportunities to make contact with respondents, UWSC re-activated the toll-free line dedicated to MIDUS, established during MIDUS 2. The MIDUS line is distinct from the general toll-free numbers in use for other studies conducted by UWSC, and is available only for MIDUS respondents. A voicemail box is set up on this phone number in the event that Call Center staff are not available to answer the phone. A recorded message instructs callers to leave a message if they are calling about an interview, or regarding a payment question. The toll-free number was included in advance letters sent to all MIDUS participants. During the field period, the toll-free number was given out by interviewers trying to reach respondents and left on answering machines to encourage difficult to reach respondents to call in.

Advance Letters

To emphasize the importance of every respondent's participation, one week prior to being contacted by a telephone interviewer each MIDUS respondent was sent a personalized mailing that included a cover letter, a \$2 bill as a pre-incentive, and a MIDUS 3 brochure. The letter explained the purpose of the study and informed respondents that a new wave of MIDUS calling was about to begin. The brochure highlighted the reasons for the study, emphasizing the ongoing importance of MIDUS research and reacquainted respondents with the MIDUS study. It explained that the initial MIDUS 3 interview would take place over the telephone, and that the study would also include a questionnaire, a short cognitive interview, and the potential to participate in other MIDUS research. The

respondent's current phone number was prominently displayed atop the letter, and respondents were asked to call the MIDUS toll-free number to update any information or to indicate preferences on the best times to reach them. Both the letter and the brochure included the MIDUS toll-free number. (See Appendix D.)

CATI Autoscheduler

The CATI autoscheduling system allowed anyone accessing a case to read the call notes of all previous attempts to reach the respondent, and administrative notes indicating when a case was sent for tracing, and the results of the tracing effort. The autoscheduler kept track of all sample telephone numbers, automatically routing cases for proper follow-up for the next call attempt or for review, and maintained an elaborate set of management records.

Verifying Identity via Telephone

Information from a respondent's previous MIDUS interviews was displayed on the electronic cover sheet to help interviewers and tracers confirm respondent identity. This information included respondent name, date of birth, approximate age, address during MIDUS 2, previous participation status, and current phone numbers.

A set of questions was programmed into the instrument for interviewers to verify respondent identity, by first confirming birth date or age, and if that verification failed, by confirming a respondent's address during MIDUS 2. If these questions failed to verify that a respondent was the one previously interviewed, the interview was exited. The respondent was told that they would be called back once UWSC verified that we had the correct respondent. This system was most helpful in identifying cases where an incorrect person had been identified as the respondent during tracing. It also helped in situations where family members lived in the same household, such as a junior and a senior with the same name, and ensured UWSC interviewed the correct respondent.

Verifying Identity via Questionnaire

The questionnaire contained a question requesting the respondent's date of birth. While not originally intended to verify respondent identity, the response to this question was compared to the date of birth provided during the initial recruitment telephone interview. Discrepancies identified cases where someone other than the recruited respondent may have completed the questionnaires. Cases with such discrepancies received further review and tracing, including personal calls to the respondent to verify information.

Study Protocols

The MIDUS 3 initial telephone interview, the mail questionnaire, and the cognitive telephone interview were all in the field simultaneously. Cases flowed through the protocols on an individualized timeline. Some respondents completed the mail questionnaire within days of finishing the phone interview, while others took months to complete the mail questionnaires.

MIDUS sent an **initial newsletter** in Spring, 2013 alerting longitudinal participants of the new round of data collection. Thereafter, the basic fielding protocol was as follows.

- 1) An **advance letter** was sent which included a brochure explaining the three portions of study, and a \$2 pre-incentive.
- 2) Cases were **fielded for the initial telephone interview** a week after the advance letter posted.
- 3) A **CATI post-incentive check** for \$25 and a thank you letter was sent to the respondent within a week of completion of the telephone interview.
- 4) An **SAQ packet** was sent to the respondent ten days after the CATI post-incentive was sent. The SAQ packet contained:
 - a. A cover letter explaining how to fill out the SAQ booklets
 - b. Two SAQ booklets
 - c. Two five dollar bills (\$10), pre-incentives to complete the SAQ booklets
 - d. A tape measure, for use in taking requested body measurements
 - e. A large business reply envelope, for returning completed questionnaires
 - f. A letter-sized business reply envelope, for separately returning a removable re-contact sheet requesting contact information of friends or family who might know how to find the respondent in the future.
- 5) An **SAQ reminder postcard** was sent two weeks after the SAQ packet was mailed. It encouraged respondents to complete and return the SAQs as soon as possible.
- 6) *For SAQ non-responders:*
A **second SAQ packet** was sent, similar to the first but without the pre-incentive, 4 weeks after the first SAQ packet postdate. A **second reminder postcard** was sent to non-responders in another 4 weeks that served as advance notice for the Cognitive Interview.

- 7) *For SAQ responders:*
An **SAQ post-incentive** check for \$25 and a thank you note was sent within one week of receipt of the completed SAQ booklets.
- 8) Cases were **fielded for the Cognitive Interview** two weeks after either the SAQ post-incentive OR the second SAQ reminder postcard was sent. No additional incentives were sent for completed Cognitive Interviews.
- 9) At the end of the Cognitive Interview, SAQ non-responders were again prompted to return their questionnaires. A **third SAQ packet** was sent to participants upon request.

Special protocols, used as needed, consisted of:

- 1) An additional copy of the **advance letter** and brochure were sent upon request to respondents who reported they had not received the advance letter.
- 2) A **phone request letter** was sent during the telephone interviews if the telephone number appeared to be bad, or if the respondent never answered. The letter asked respondents to update their contact information if it had changed. The mailing included a form to return with new contact information and also provided the MIDUS toll free number.
- 3) A copy of the **Certificate of Confidentiality**, obtained from the federal government for the MIDUS study, was sent upon request to respondents who expressed concern about confidentiality issues.
- 4) A **hard-to-contact letter** was sent to respondents who did not answer their phone for the initial telephone interview. The letter asked respondents to call the UWSC to schedule an interview or to update contact information if it had changed.
- 5) **Refusal letters** were sent to reluctant respondents, explaining the importance of their participation. Two weeks after this letter was sent, a specially trained refusal converter would attempt to conduct the interview with the respondent. If the respondent again refused, calling was suspended for that respondent.
- 6) When, during the initial interview, an informant reported that a **respondent was deceased**, a **Mortality Cognitive Closeout (MCC) interview** was attempted. The MCC interview collected details about the death and the respondent's cognition prior to death. Informants lacking knowledge about the death were asked for referrals to someone who did know more about the respondent's death. Contact information was collected for return calls. UWSC Tracking and Locating staff attempted to

find corroborating evidence of deaths and added death dates to the project management database.

- 7) Respondents expressing other concerns were contacted either by UWSC project director Vicki Lein, or by Dr. Barry Radler, University of Wisconsin IOA.

See Appendix E for examples of mailing materials.

CATI Refusal Protocol

Standard protocol at the UW Survey Center is to hold a case that has refused for at least two weeks before attempting a conversion. This strategy was applied to and expanded upon for MIDUS 3. Cases continued to be called if refusals occurred directly after the phone was answered, before respondents knew the purpose of the call, or if an informant refused on behalf of a respondent with little information about the purpose of the call. When respondents or informants who knew the purpose of the call expressed reluctance to participate, the case was held for at least two weeks, and a letter reminding respondents of their past participation and the importance of the study was sent to encourage participation. Two weeks later, refusal conversion specialists assigned to the case attempted to convert reluctant respondents. If respondents again expressed reluctance to participate, cases were placed on hold. A Call Center shiftleader, trained as a refusal expert, reviewed all such cases. Cases might be finalized, or they might be sent for further treatments. For example, if a respondent refused because they were currently too busy, but they expected to have time in several months, the case might be put on long term hold to be called again in four to six months. Some cases were referred to the project director for possible follow up. The project director called respondents to address specific concerns, sending out the MIDUS Certificate of Confidentiality to respondents with confidentiality concerns, providing references to recent studies that used MIDUS data to respondents who wondered if their participation had value, and reassuring gatekeepers of the study's legitimacy and the respondent's previous participation. Some refusals were referred to Dr. Barry Radler at the University of Wisconsin IOA for further follow-up, such as when respondent concerns related to previous participation in other MIDUS projects. If, after concerns were addressed, a respondent was still reluctant to participate, the case was finalized as a refusal.

Respondent Payments

Respondent payments were discussed in sequence in the field protocol section, but to recap, respondents received a post-incentive check of \$25 after completing the main recruitment telephone interview. They were then sent \$10 (two five dollar bills) in pre-incentive along with the initial mail questionnaire

packet. After the completed questionnaires were received, respondents were sent another post-incentive check of \$25. No additional incentive was sent for the cognitive phone interview.

Interviewer Training

New interviewers at the UWSC receive over 20 hours of training. Due to its complexity and importance, all MIDUS interviewers were required to have had at least three months experience calling other CATI projects at the UWSC prior to being trained on MIDUS. In a few cases, interviewers showing above average proficiency and maturity were hand-selected for MIDUS training prior to the three month mark.

In addition to the general training and previous experience, MIDUS interviewers received 4 hours of training specific to MIDUS issues and the MIDUS instrument. Interviewers were trained on how cases would be fielded, how to verify respondent identity using information preloaded into the instrument, and how to conduct mortality closeout interviews if respondents were discovered to be deceased. They learned about MIDUS 3 calling protocols for refusals, and received focused training on industry and occupational items. As MIDUS 3 sample ranged from age 40 to age 94, interviewers were trained in interviewing older respondents, including how to conduct effective interviews in the face of respondent illness and mental or physical challenges related to aging. Interviewers completed a “walk-through” of the entire telephone instrument and participated in demonstrations of industry and occupational probing.

Dr. Barry Radler attended interviewer trainings, presenting on the importance of MIDUS, the purpose and design of the study, results from previous waves of data collection, and goals of MIDUS 3. Dr. Radler shared information about other MIDUS projects, to ground interviewers in the entire MIDUS study, to help interviewers understand how their work fit into the whole, and to prepare them for questions from longitudinal respondents who may have participated in these projects in past rounds of data collection. Dr. Radler’s presentations inspired interviewers, providing background information that helped interviewers inform and persuade potential MIDUS respondents.

After the training, interviewers were given time to practice on their own, pairing up to practice industry and occupation probing, and then completing at least two practice cases in their entirety before calling potential respondents.

After the training, interviewers were given time to practice on their own, pairing up to practice industry and occupation probing, and then, if they had not previously been a MIDUS Refresher interviewer, completing at least two practice cases in their entirety before calling MIDUS 3 sample.

In addition to project-specific training, all UWSC interviewers are regularly monitored during calls to respondents to ensure that they are following protocol and adhering to standardized interviewing techniques. UWSC uses a blind monitoring system, where a supervisor sits in a room not visible to the interviewer, and uses a monitoring system that allows them to hear interviews (both the respondent and the interviewer), see the same screens the interviewer is seeing during the interview, and see the answers that the interviewer enters as they are being entered. All interviewers have their work monitored on a monthly basis, and are provided feedback critiquing their work and offering suggestions for improvement. If there are special issues that require attention, interviewers are monitored more frequently. This system of monitoring interviewers allows for constant improvement of staff abilities. If there is a larger training issue that all interviewers would benefit from learning about, monitoring makes the issue apparent very quickly.

Cognitive Interviewer Training

Highly-specialized interviewer training was required for the Cognitive interview. Tasks involved in cognitive interviewing differ from the usual tasks in telephone interviews. Rather than obtaining factual information from the respondent or asking respondent opinions, the MIDUS Cognitive interview involved administering cognitive tests to the respondents on the telephone. Some of these tests were timed, and so included a speed element. Other tests involved collection of open-ended responses from the respondent in a timed fashion, which made it difficult for the interviewer to record using standard data entry methods. One of the tests involved a task-switching element for respondents which required the interviewer say things with very precise timing while recording respondent answers at the same time.

Interviewers were specifically selected to train for the Cognitive Interview. As a prerequisite, they had to have trained for the MIDUS recruitment telephone interviewer and to have successfully called on MIDUS for over a month. Cognitive interviewers had to attend trainings during non-standard work hours. Trainings took place in the UWSC Call Center, and thus usually were scheduled when the Call Center was closed.

The Cognitive interviewer training differed from other UWSC training sessions in that it is a hands-on training. Each task was explained, interviewers had a chance to administer the task, and then the task was discussed. Interviewers were given detailed instructions, including the tone of voice and inflection to use in administering each task, acceptable words to use between tasks, how to test and use programmed timers and audio recording equipment, how to respond to respondent 'errors' and self-corrections, how to judge when a task was too difficult for the respondent and how to graciously exit such a task. Interviewers

were given individual feedback during the training session on how to improve technique.

After the training, interviewers were paired up and asked to practice for at least four hours. When they were ready, they were tested on a specially programmed module, a stand-alone version of the “Red/Green” task-switching test. Interviewers were tested under three different scenarios: one with a respondent who had no trouble completing the interview, another where the respondent had some difficulties, and a third where the respondent had a great deal of trouble completing the task. Interviewers were tested on these three scenarios to ensure they could competently administer the test with all types of respondents. Only interviewers who obtained a 95% accuracy rate on all three scenarios were approved to start conducting cognitive interviews.

Audio recordings of the entire interview were delivered to Brandeis daily. In addition to the real-time live monitoring of the Cognitive interviews done by UWSC, staff at Brandeis also reviewed the audio recordings and provided specific feedback to individual interviewers.

See Appendix E for interviewer training materials

Data Entry Protocol and Staff Training

Double data entry for the MIDUS questionnaire began in October, 2013. The two SAQ booklets that make up the MIDUS 3 questionnaire were 45 and 55 pages in length respectively. They include every possible type of formatted question, making them quite complex to enter. Given all of these facts, each booklet was first reviewed by an “editor” to uncover any issues that could cause data entry confusion. Editors resolved issues before questionnaires moved on for data entry. All data entry operators were eligible to become editors if they passed the certification process. Editor protocols were included in the Data Entry Specifications Manual. Editors were trained on how to resolve the most common problems, such as respondents who gave multiple answers, selected answers that fell between actual response categories, or followed skip patterns incorrectly.

Data entry staff were given two hours of MIDUS-specific training to familiarize them with the instrument, train them in the specific protocols set for the project, and give them an opportunity to practice and ask questions about the data entry process. (See Data Entry Specifications Manual in Appendix F.) Each questionnaire booklet was double-data entered, blind entered by two different data entry staff members. When a discrepancy between the first pass and the second was found by the CASES system, the second data entry person was alerted to the difference in responses, determined the correct answer (with help from an editor if needed) and made the appropriate corrections.

EFFORT REQUIRED

Recruitment Interview Call Attempts

Overall, UWSC placed 57,648 telephone calls on 4,460 cases during the MIDUS 3 telephone interview. The number of call attempts per case ranged from 0 (cases with no working telephone number) to 95, with an average of 13 call attempts per case overall - 8 call attempts for cases with completed interviews, and 27 call attempts for cases without a completed interview. Call attempts included calls to numbers that were later found to be inaccurate. Some respondents had provided multiple numbers; if no one answered at the home number, subsequent numbers were called until a message could be left or the numbers were called through. See Table 3 for details of calling efforts and results.

Table 3: MIDUS 3 CATI Interview, Call Attempts

| Number of Call Attempts | Number of Completes | Percent of Completes | Cumulative Percent of Completes |
|--------------------------------|----------------------------|-----------------------------|--|
| 1-2 calls | 1030 | 31% | 31% |
| 3-5 calls | 925 | 28% | 59% |
| 6-10 calls | 615 | 18% | 78% |
| 11-20 calls | 406 | 12% | 90% |
| 21-30 calls | 169 | 5% | 95% |
| 30+ calls | 149 | 5% | 100% |
| All calls | 3294 | 100% | |

Of the 4,460 MIDUS 3 longitudinal cases, 569 had refused at some point during the recruitment interview, either by a respondent themselves or an informant. UWSC interviewers successfully converted 147 of these refusals (26%) into completed interviews.

Mailings

UWSC sent 20,000 pieces of mail over the course of the MIDUS 3 field period, including 4,568 advance letters, 6,012 post-incentive checks, 4,338 questionnaire packets, and 2,875 reminder cards. See Table 4. Undeliverable items were resent whenever better address information was located. All mailings were resent upon request.

Table 4: MIDUS 3 Mailings

| Mailing Type | Number Sent |
|--|--------------------|
| CATI advance letter | 4568 |
| Phone request letters | 763 |
| Hard-to-contact letters | 1152 |
| Tracing postcards | 292 |
| CATI post-incentive* | 3295 |
| SAQ, first packet with pre-incentive* | 3295 |
| SAQ, reminder postcard | 2103 |
| SAQ, second packet, to non-responders | 963 |
| SAQ, second reminder to non-responders | 772 |
| SAQ, third packet, after COG | 80 |
| SAQ post-incentive | 2717 |
| TOTAL Mailings | 20000 |

*Includes 1 sent to respondents later deemed ineligible

Cognitive Interview Call Attempts

Out of the 3,294 participants recruited via the MIDUS 3 initial telephone interview, 3,286 were invited to complete a Cognitive Interview. See Table 5. The non-fielded cases were ineligible or had withdrawn from the study prior to the Cognitive Interview.

Table 5: MIDUS 3 Cognitive Interview Sample

| Potential Sample | Ineligible or Withdrawn From Study | Actual Sample |
|-------------------------|---|----------------------|
| 3294 | 8 | 3286 |

During the MIDUS 3 Cognitive Interview, the UWSC placed 33,782 telephone calls on 3,286 cases. The number of call attempts per case ranged from 0 (cases lacking any valid telephone number) to 75, with an average of 10 call attempts overall, and an average of 7 call attempts among cases with a completed interview. See Table 6 for details of cognitive calling efforts and results.

Table 6: MIDUS 3 Cognitive Interview, Call Attempts

| Number of Call Attempts | Completes and Usable Partial | Percent of total | Cumulative Percentage |
|--------------------------------|-------------------------------------|-------------------------|------------------------------|
| 1-2 calls | 934 | 35% | 35% |
| 3-5 calls | 790 | 29% | 64% |
| 6-10 calls | 446 | 17% | 81% |
| 11-15 calls | 204 | 8% | 89% |
| 16-20 calls | 134 | 5% | 94% |
| 21+ calls | 185 | 7% | 100% |
| All calls | 2693 | 100% | |

Of the 3,286 MIDUS 3 cases fielded for a Cognitive Interview, 278 had at some point been refused by a respondent or informant. UWSC interviewers successfully converted 79 of these refusals (28%) into completed cognitive interviews, and another 4 were finalized as usable partials (1%).

RESULTS

See Appendix B for a more detailed presentation of response.

MIDUS 3 CATI Recruitment

UWSC interviewers successfully recruited 3,294 longitudinal participants into the third round of the MIDUS longitudinal study via the initial MIDUS telephone interview. See Table 7.

Table 7: MIDUS 3 CATI Case Disposition by Sample Type

| Case Disposition | RDD | SIB | TWIN | Total |
|-----------------------------------|------|-----|------|-------------|
| Completed interview | 1730 | 544 | 1020 | 3294 |
| Mortality closeout interview | 14 | 7 | 12 | 33 |
| Refusal, respondent or informant | 188 | 40 | 113 | 341 |
| Withdrew from study | 8 | 1 | 3 | 12 |
| Respondent never available | 232 | 45 | 109 | 386 |
| Respondent not located | 167 | 17 | 64 | 248 |
| Deceased | 23 | 6 | 11 | 40 |
| Unable, physically or cognitively | 54 | 16 | 25 | 95 |
| Ineligible, live outside USA | 7 | 1 | 3 | 11 |
| Total | 2423 | 677 | 1360 | 4460 |

In the response rates calculated in Table 8, below, respondents who were deceased, living outside the USA, or physically or cognitively unable to participate were counted ineligible, and removed from the denominator.

Table 8: MIDUS 3 CATI Response Rate by Sample Type

| Status | RDD | SIB | TWIN | Total |
|--|--------------|--------------|--------------|--------------|
| Completed interviews | 1730 | 544 | 1020 | 3294 |
| Sample fielded | 2423 | 677 | 1360 | 4460 |
| - Ineligible, deceased or unable | 98 | 30 | 51 | 179 |
| Eligible sample | 2325 | 647 | 1309 | 4281 |
| CATI Response Rate (Completes / Eligible Sample) | 74.4% | 84.1% | 77.9% | 76.9% |

MIDUS 3 Questionnaires

All recruited participants who completed the initial telephone interview were invited to complete the SAQs. All phone respondents were invited to participate in the cognitive interview via telephone, whether they completed the SAQ or not.

Out of 3,295 participants sent a MIDUS 3 questionnaire, 2,732 respondents returned it with at least some portion completed. See Table 9.

Table 9: MIDUS 3 SAQ Results by Sample Type

| Case Disposition | RDD | SIB | TWIN | Total |
|-----------------------------------|------|-----|------|-------|
| Completed questionnaires | 1427 | 473 | 832 | 2732 |
| Refusal | 5 | 2 | 1 | 8 |
| Withdrew from study | 5 | 1 | 3 | 9 |
| Nothing returned | 286 | 67 | 181 | 534 |
| Deceased | 2 | | 1 | 3 |
| Unable, physically or cognitively | 5 | 1 | 2 | 8 |
| Ineligible, live outside USA | 1 | | | 1 |
| Total | 1731 | 544 | 1020 | 3295 |

In the response rates calculated in Table 10, below, respondents who were deceased, living outside the USA, or physically or cognitively unable to participate were counted ineligible, and removed from the denominator.

Table 10: MIDUS 3 SAQ Response Rate by Sample Type

| Status | RDD | SIB | TWIN | Total |
|---|--------------|--------------|--------------|--------------|
| Completed questionnaires | 1427 | 473 | 832 | 2732 |
| Sample fielded | 1731 | 544 | 1020 | 3295 |
| - Ineligible, deceased or unable | 8 | 1 | 3 | 12 |
| Eligible sample | 1723 | 543 | 1017 | 3283 |
| SAQ Response Rate (Completes / Eligible Sample) | 82.8% | 87.1% | 81.8% | 83.2% |
| Compounded Response Rate (CATI RR * SAQ RR) | 61.6% | 73.3% | 63.7% | 64.0% |

MIDUS 3 Cognitive Interview

Out of 3,286 cases fielded, 2,693 participated in the cognitive interview, 2,680 completed interviews, and 13 had usable partial interviews. See Table 11.

Table 11: MIDUS 3 COG Results by Sample Type

| Case Disposition | RDD | SIB | TWIN | Total |
|-----------------------------------|------|-----|------|--------------|
| Completed interview | 1402 | 467 | 811 | 2680 |
| Usable partial interview | 9 | 1 | 3 | 13 |
| Refusal, respondent or informant | 96 | 24 | 70 | 190 |
| Withdrew from study | 5 | | 4 | 9 |
| Respondent never available | 178 | 45 | 115 | 338 |
| Respondent not located | 11 | 2 | 4 | 17 |
| Deceased | 9 | 2 | 7 | 18 |
| Unable, physically or cognitively | 19 | 3 | 6 | 28 |
| Ineligible, live outside USA | 1 | | | 1 |
| Total | 1730 | 544 | 1020 | 3294* |

*Includes 7 cases deemed ineligible prior to fielding

In the response rates calculated in Table 12, below, respondents who were deceased, living outside the USA, or physically or cognitively unable to participate were counted ineligible, and removed from the denominator.

Table 12: MIDUS 3 COG Response Rate by Sample Type

| Status | RDD | SIB | TWIN | Total |
|---|--------------|--------------|--------------|--------------|
| Usable interviews | 1411 | 468 | 814 | 2693 |
| Sample fielded | 1730 | 544 | 1020 | 3294 |
| - Ineligible, deceased or unable* | 29 | 5 | 13 | 47 |
| Eligible sample | 1701 | 539 | 1007 | 3247 |
| COG Response Rate (Completes / Eligible Sample) | 83.0% | 86.8% | 80.8% | 82.9% |
| Compounded Response Rate (CATI RR * COG RR) | 61.7% | 73.0% | 63.0% | 63.8% |

*Includes 7 cases deemed ineligible prior to fielding

INTERIM AND FINAL DATA DELIVERIES

Delivery of Contact Information

UWSC staff worked with UW-IOA staff to modify the delivery database, known as the “Shell”. Contact information from the UWSC Tracer system, and information collected during the recruitment telephone interview and the cognitive telephone interview all fed into the Shell. The Shell included respondent contact information, demographic variables, interviewer assessments, call notes, and mailing and completion dates. UWSC monitored progress, identified eligible participants, and populated the Shell and delivered it to the UW-IOA as needed throughout the field period.

The Shell included:

- Contact information – Names, addresses, phone numbers, and previous contact information for each respondent.
- Call notes – Interviewer record of the outcome of each call attempt, giving possible insights into how to best re-contact respondents.
- Interviewer Assessments - After the initial interview and the cognitive interview, interviewers rated respondent cooperativeness and competency and recorded anecdotal information respondents may have shared that might help future recruitment efforts.
- Dates – Field dates were recorded, including the initial interview completion date, questionnaires mailing and completion dates, and the cognitive interview completion date.

The UWSC delivered one comprehensive installment of the Shell which included all cases, delivered on June 3, 2015.

Delivery of CATI Data

On June 5, 2013, within one week of fielding the initial MIDUS 3 telephone interview, UWSC delivered for UW-IOA review an interim data set of the first 38 completed interviews. UW-IOA staff reviewed recruitment data cleaning scripts and confirmed that all data was being collected in the desired format. By June 14, 2013, two weeks after calling began, interim data for 329 completed recruitment interviews was delivered. No issues were identified as needing further attention.

Final telephone interview data on 3,294 cases was delivered in August, 2014. The delivery included data from 3,294 interviews conducted from May, 2013 through June, 2014.

Delivery of Industry and Occupation (IO) Codes

In a series of open-ended questions in the MIDUS 3 telephone interview, the UWSC collected employment information for the respondent and their spouse or partner. Collected information was exported verbatim into the UWSC coding database, a system used by trained coders to convert open-ended response into job titles and industry codes.

UWSC coders are trained to use hard-copies of the Alphabetic Index of Industries and Occupations, the Alphabetic Index of Military Occupations, and the Production Coder Manual published by the Bureau of the Census, but the majority of coding is done using software developed by UWSC staff. The software searches a database of occupation and industry titles and returns all titles that match the search parameters. The resulting titles and codes are sorted by group and displayed in a hierarchical list, allowing coders to quickly review all variations on a given title. The software records the codes and titles assigned to each response, along with a detailed history of coder searches.

MIDUS coders work in pairs, double-coding each case. Supervisors review all codes that do not agree, and later meet with individual coders to review discrepancies. MIDUS coded to the 2010 Alphabetic Index of Industries and Occupations distributed by the US Census Bureau. Codes assigned with the Alphabetic Index were then converted to their SOC and NAICS counterparts.

All IO codes were delivered in September, 2014. Coded variables included industry and occupation for jobs reported by the respondent for their own current or former occupation, and for the current occupation of the respondents' spouse.

Delivery of SAQ Data

In November, 2013, UWSC delivered an interim data set of the first 100 completed MIDUS 3 questionnaires data entered. IOA staff reviewed the SAQ data cleaning scripts, slightly revised data entry specifications affecting interviewer notes, and approved continuing data entry.

MIDUS 3 SAQ final data was delivered in December, 2014, and include 2,732 cases.

Delivery of Cognitive Interview Data

An additional data delivery that took place involved the Cognitive interview. MIDUS 3 Cognitive Interview interim data was delivered to researchers at Brandeis regularly throughout the field period. Data deliveries usually occurred biweekly, and consisted of a data file, open ended response, and interviewer notes. MIDUS 3 Cognitive Interview data interim deliveries ran from July, 2013 through October, 2014.

In addition to the data itself, full audio recordings of cognitive interviews were delivered daily via a secure shared drive. Five key demographic variables were delivered regularly for all completed interviews, in addition to interviewer notes on respondent cooperativeness, and interviewer assessments of respondent physical or mental health issues that may have made the interview difficult for the respondent. This information was used by Brandeis to begin scoring the tasks conducted in the interview and to assess the quality of the data.

MIDUS 3 Cognitive interview final data was delivered on October 30, 2014, and included 2,680 completed and 13 usable partial interviews.

NOTE:

All Appendices are available upon request from the MIDUS Administrative Core. Please contact midus_help@aging.wisc.edu.

APPENDIX: M3 Re-fielding (M3RE) Project

OVERVIEW OF PROJECT

In 2017, the **MIDUS 3 Refielding** effort returned to MIDUS 3 participants who had not completed the MIDUS 3 questionnaires and/or the cognitive interview. MIDUS 3 participants were re-invited to complete the missing instruments. Of the 830 participants thought living, 291 were missing **only** the questionnaires, 240 were missing **both** the questionnaires and the cognitive interview, while 299 were missing **only** the cognitive interview. The M3 Refielding protocols included, as needed, a 100-page self-administered questionnaire, followed by a 25-minute cognitive interview. In M3 Refielding, an additional 193 MIDUS 3 participants completed the questionnaires (37% response) and an additional 263 participated in the cognitive interviews (50% response).

MIDUS 3 REFIELDING INSTRUMENT DEVELOPMENT

SAQ Instrument

The M3 Refielding SAQ and SAQ DE instrument replicated MIDUS 3 to the extent possible. Starting with MIDUS 3 instruments, changes made for M3 Refielding included:

- Adjustment of reference periods in a few questions.
- Removal of two questions, redundant due to the passage of time.
- Re-ordering of employment questions so retired respondents would see their relevance.

After re-numbering questions, and the reviewing skip pattern logic, the data entry instrument was re-programmed, and thoroughly tested and debugged.

The M3 Refielding questionnaires, created in Microsoft Word, and converted to ready-to-print pdf format by May 2017, were printed at UW Printing Services.

Cognitive Interview Instrument

In July 2017, after minor revisions to the MIDUS 3 Cognitive Interview instrument and training materials, the M3 Refielding Cognitive Interview instrument was ready for fielding.

Mortality Cognitive Closeout Instrument

A brief Mortality Cognitive Closeout (MCC) interview was prepared to replicate protocols used during MIDUS 3. If a participant was identified as deceased, an

attempt was made to interview a family member or friend familiar with the participant's final days, to learn about the cause of death and the participants cognitive functioning at the end of life.

Project Operations Database

The UWSC Project Operations Database (POD) individually managed the flow of each case through study protocols. The MIDUS POD stored:

- Important dates such as the dates of mailings and completion
- Each protocol's interim or final case disposition codes
- Respondent contact information as collected or updated in each protocol
- Key variables, including interviewer observations, call notes, and respondent demographics such as age, gender, and education
- Sample characteristics

M3 REFIELDING SAMPLE

M3 Refielding returned to MIDUS 3 participants in in the initial telephone interview who had not completed the MIDUS 3 questionnaires and/or the MIDUS 3 cognitive interview. MIDUS 3 participants were re-invited to complete the missing instruments. After reviewing sample and excluding participants known to be unable to participate, there remained 846 MIDUS 3 participants.

In May 2017, UWSC conducted pre-tracing on M3 Refielding sample, seeking the most current contact information. The pre-tracing sample file included the last known name, address and telephone number for each respondent, previous telephone numbers and addresses, the date of the MIDUS 3 recruitment interview, date of birth, and social security number.

After review, an additional 16 participants identified as deceased were deemed ineligible for the M3 Refielding effort and moved to the Mortality Cognitive Closeout (MCC) sample, leaving an M3 Refielding sample of 830 cases. Of these 291 were missing **only** the questionnaires, 240 were missing **both** the questionnaires and the cognitive interview, and 299 were missing **only** the cognitive interview. See Tables 1 and 2.

Table 1: M3 Refielding Sample

| Sample Type | Sample |
|--------------------|---------------|
| SAQ only | 291 |
| SAQ and COG | 240 |
| COG only | 299 |

| | |
|-------|-----|
| Total | 830 |
|-------|-----|

Table 2: M3 Refueling Sample by Instrument

| Sample Type | SAQ | COG |
|-------------|-----|-----|
| SAQ only | 291 | |
| SAQ and COG | 240 | 240 |
| COG only | | 299 |
| Total | 531 | 539 |

SAQs were sent in June 2017 to SAQ-only and SAQ-and-COG sample. As participants returned SAQs or as SAQ recruitment efforts were deemed complete, SAQ-and-COG sample fielded into COG protocols. In July 2017, all COG-only sample was fielded for the cognitive telephone interview.

Sample Input files

The M3 Refueling sample file included the respondents' full name, and basic demographic information collected in previous interviews. In the cognitive interview, demographic information was used to verify respondent identity.

TRACING

Tracing Database

Tracking and Locating staff used the UWSC Project Operations Database (POD) to update and track contact information for respondents across protocols. The POD retains records of past and current addresses, names, and phone numbers. It interacted with the cognitive interview telephone instrument to ensure the most up-to-date contact information was used through all protocols. In the POD, each change to a contact element is dated and receives a code indicating the element's current status.

Tracing Protocols

During the cognitive telephone interviews, cases were sent for tracing when calls resulted in wrong numbers, disconnected numbers, faxes, or when an informant reported a known respondent was no longer living at the number. In addition, after 15 calls without contact, cases were sent for tracing. If the Tracking and Locating department could not find a better number, the case was put on hold for a month, and retraced. This process was repeated as necessary throughout the field period.

All undeliverable MIDUS mailings were sent for tracing. Updated address information was entered in the POD.

FIELD PROCEDURES

A Toll-Free Respondent Line

To maximize opportunities to make contact with respondents, UWSC maintains a toll-free line dedicated to MIDUS, that was established during MIDUS 2. A voicemail box is set up on this line in the event that Call Center staff are not available to answer the phone. The MIDUS toll-free number is included in letters sent to MIDUS participants. In addition, interviewers provided the toll-free number to respondents and left the number in messages on answering machines to encourage difficult to reach respondents to call in.

Verifying Identity via Questionnaire

The questionnaire contained a question requesting the respondent's date of birth. The response to this question can be compared to the known date of birth. Discrepancies can identify cases where someone other than the respondent may have completed the questionnaires. Cases with such discrepancies receive further review and tracing, including personal calls to the respondent to verify information.

Advance Letters

To emphasize the importance of participation, and to garner attention, one week prior to being contacted for the cognitive telephone interviewer, Cog-only respondents were sent a personalized mailing that included a cover letter, a \$10 cash pre-incentive, and a gift of a MIDUS bag. The letter explained the purpose of the study, emphasizing the ongoing importance of MIDUS research, and informed respondents that a MIDUS interviewer would be calling soon. The respondent's current phone number was prominently displayed atop the letter, and respondents were asked to call the MIDUS toll-free number to update any information or to indicate preferences on the best times to reach them.

CATI Autoscheduler

The CATI autoscheduling system allowed review of the call notes of all previous attempts to reach the respondent, the administrative notes indicating when a case was sent for tracing, and the results of the tracing effort. The autoscheduler kept track of all sample telephone numbers, automatically routing cases for

proper follow-up for the next call attempt or for review, and maintained an elaborate set of management records.

Verifying Identity via Telephone

A set of questions was programmed into the instrument for interviewers to verify respondent identity, by first confirming birth date or age. If that verification failed, the interview was exited. The respondent was told that they would be called back once UWSC verified that we had the correct respondent.

Study Protocols

The M3 Refielding mail questionnaire and the cognitive telephone interview were in the field simultaneously. Cases flowed through the appropriate protocols on an individualized timeline. Protocols varied by sample type, if the participant were SAQ-only sample, SAQ-and-COG sample, or COG-only sample. See Table 3.

For M3 Refielding **SAQ-only sample** and **SAQ-and-COG sample**, the SAQ fielding protocols were the same.

- 10) An **SAQ packet** was sent that contained:
 - a. A cover letter explaining how to fill out the SAQ booklets
 - b. Two SAQ booklets
 - c. A MIDUS pen for completing the SAQs
 - d. A tape measure, for taking requested body measurements
 - e. Two five dollar bills (\$10), pre-incentives to complete the booklets
 - f. A large stamped priority mail reply envelope, for returning completed SAQs
 - g. A stamped letter-sized reply envelope, for separately returning a re-contact sheet with contact information for someone who might know how to find the respondent in the future
 - h. A gift of a MIDUS bag

Returned mailings were sent for tracing and resent to better addresses when possible. If no address was located through standard tracing resources, calls were placed to respondents to request better address information.

- 11) An **SAQ reminder postcard** was sent ten days after the SAQ packet was mailed, encouraging participants to complete and return the SAQs as soon as possible.

- 12) *For SAQ non-responders:*

An **SAQ reminder phone prompt** was placed 4 weeks after the SAQ

packet was sent. The phone prompt was used to confirm receipt of the SAQs, to collect current address information if needed, and to encourage participants to complete and return the SAQs. A **second SAQ packet** was sent upon request. Non-responders were sent a **final SAQ reminder postcard** about 5 months after the initial SAQ packet was sent.

13) *For SAQ responders:*

An **SAQ post-incentive** check for \$75 and a thank you note was sent within one week of receipt of the completed SAQ booklets. The only difference for **SAQ-and-COG sample**, was that the SAQ thank you letter was also tailored to serve as advance notice for the cognitive interview.

For M3 Refielding **SAQ-and-COG sample** and **COG-only sample**, only the advance notice differed, but otherwise fielding protocols for the cognitive interview were the same.

- 1) **SAQ-and-Cog sample** was fielded in COG one week after either:
 - a. SAQ responder’s post-incentive with COG advance notice sent, or
 - b. SAQ non-responder’s SAQ recruitment efforts were deemed complete.

- 2) **COG-only sample** was fielded in COG one week after an advance mailing was sent. The advance mailing included:
 - a. A cover letter alerting participants that an interviewer would soon be calling, promising \$50 post-incentive
 - b. A \$10 pre-incentives for cognitive interview
 - c. A gift of a MIDUS bag

- 3) All COG responders were sent a **COG post-incentive** check for \$50 and a thank you note, within one week of the completed cognitive interview.

Table 3: M3 Refielding Contacts and Incentives by Sample Type

| Sample | SAQ prompts: | | | SAQ TY | SAQ TY/ COG advance | COG advance | COG | COG TY | SAQ final reminder card |
|-------------|--------------|------|------|--------|---------------------|-------------|-----|--------|-------------------------|
| | SAQ | card | call | | | | | | |
| SAQ only | \$10 bag pen | x | x | \$75 | | | | | x |
| SAQ and COG | \$10 bag pen | x | x | | \$75 | | x | \$50 | x |
| COG only | | | | | | \$10 bag | x | \$50 | |

Special protocols, used as needed, consisted of:

- 8) When an informant reported a **participant deceased**, a **Mortality Cognitive Closeout (MCC) interview** was attempted with the informant. The MCC requested details about the participant's death and cognition prior to death. Informants lacking knowledge about the death were asked for referrals to someone who might know more. UWSC Tracking and Locating staff sought corroborating evidence of the death and added death dates to the POD.
- 9) Respondents expressing concerns were contacted either by UWSC project director Vicki Lein, or by Dr. Barry Radler, UW Institute of Aging.

Data Entry Protocol and Staff Training

Double data entry for the MIDUS questionnaire began in February 2018. The two SAQ booklets that make up the M3 Refueling questionnaire were 45 and 55 pages in length respectively. They include every possible type of formatted question, making them quite complex to enter. Given all of these facts, each booklet was first reviewed by an "editor" to uncover any issues that could cause data entry confusion. Editors resolved issues before questionnaires moved on for data entry. All data entry operators were eligible to become editors if they passed the certification process. Editor protocols were included in the Data Entry Specifications Manual. Editors were trained on how to resolve the most common problems, such as respondents who gave multiple answers, selected answers that fell between actual response categories, or followed skip patterns incorrectly.

Data entry staff were given two hours of MIDUS-specific training to familiarize them with the instrument, train them in the specific protocols set for the project, and give them an opportunity to practice and ask questions about the data entry process. Each questionnaire booklet was double-data entered, blind entered by two different data entry staff members. When a discrepancy between the first pass and the second was found by the CASES system, the second data entry person was alerted to the difference in responses, determined the correct answer (with help from an editor if needed) and made the appropriate corrections.

Respondent Payments

Respondent payments were discussed in sequence in the field protocol section, but to recap, participants were then sent a small gift and a \$10 in pre-incentive either with the initial mail questionnaire packet or with the cognitive interview advance mailing. After completed questionnaires were received, respondents were sent a post-incentive check of \$75. After the cognitive interview was completed, respondents were sent a post-incentive check of \$50.

Interviewer Training

New interviewers at the UWSC receive over 20 hours of training. Due to its complexity and importance, all MIDUS interviewers are required to have had at least three months experience calling other CATI projects at the UWSC prior to being trained on MIDUS. In a few cases, interviewers showing above average proficiency and maturity are hand-selected for MIDUS training prior to the three month mark.

In addition to the general training, highly-specialized interviewer training was required for the individually selected cognitive interviewers. Tasks involved in cognitive interviewing differ from the usual tasks in telephone interviews. Rather than obtaining factual information from the respondent or asking respondent opinions, the MIDUS Cognitive interview involved administering cognitive tests to the respondents on the telephone. Some of these tests were timed, and so included a speed element. Other tests involved collection of open-ended responses from the respondent in a timed fashion, which made it difficult for the interviewer to record using standard data entry methods. One of the tests involved a task-switching element for respondents which required the interviewer say things with very precise timing while recording respondent answers at the same time.

The Cognitive interviewer training differed from other UWSC training sessions in that it was a hands-on training. Each task was explained, interviewers had a chance to administer the task, and then the task was discussed. Interviewers were given detailed instructions, including the tone of voice and inflection to use in administering each task, acceptable words to use between tasks, how to test and use programmed timers and audio recording equipment, how to respond to respondent 'errors' and self-corrections, how to judge when a task was too difficult for the respondent and how to graciously exit such a task. Interviewers were given individual feedback during the training session on how to improve technique.

After the training, interviewers were paired up and asked to practice for at least four hours. They were then tested on a specially programmed module, a stand-alone version of the "Red/Green" task-switching test. Interviewers were tested under three different scenarios: one with a respondent who had no trouble completing the interview, another where the respondent had some difficulties, and a third where the respondent had a great deal of trouble completing the task. Interviewers were tested on these three scenarios to ensure they could competently administer the test with all types of respondents. Only interviewers who obtained a 95% accuracy rate on all three scenarios were approved to start conducting cognitive interviews.

Audio recordings of the entire interview were delivered to Brandeis daily. In addition to the real-time live monitoring of the Cognitive interviews done by UWSC, staff at Brandeis also reviewed the audio recordings and provided specific feedback to individual interviewers.

In addition to project-specific training, all UWSC interviewers are regularly monitored during calls to respondents to ensure that they are following protocol and adhering to standardized interviewing techniques. UWSC uses a blind monitoring system, where a supervisor sits in a room not visible to the interviewer, and uses a monitoring system that allows them to hear interviews (both the respondent and the interviewer), see the same screens the interviewer is seeing during the interview, and see the answers that the interviewer enters as they are being entered. All interviewers have their work monitored on a monthly basis, and are provided feedback critiquing their work and offering suggestions for improvement. If there are special issues that require attention, interviewers are monitored more frequently. This system of monitoring interviewers allows for constant improvement of staff abilities. If there is a larger training issue that all interviewers would benefit from learning about, monitoring makes the issue apparent very quickly.

CATI Refusal Protocol

Standard protocol at the UW Survey Center is to hold a case with a reluctant respondent for at least two weeks before attempting a conversion. Cases continue to be called if a respondent refuses directly after the phone is answered, before participants know the purpose of the call, or if an informant refuses on behalf of a participant with little information about the purpose of the call. When participants or informants who know the purpose of the call express reluctance to participate, the case is held for at least two weeks. Two weeks later, refusal conversion specialists are assigned to the case to attempt to convert reluctant participants. If participants again express reluctance to participate, their case is finalized as a refusal. This protocol was used for M3 Refielding, with the exception that if a respondent had expressed any reluctance to participate during MIDUS 3, the case was immediately finalized.

EFFORT REQUIRED

Mailings

UWSC sent over 2,100 pieces of mail over the course of the MIDUS 3 Refueling field period. See Table 4. Undeliverable items were resent whenever better address information was located. All mailings were resent upon request.

Table 4: M3 Refueling Mailings

| Mailing Type | Number Sent |
|--|--------------------|
| Tracing letter | 8 |
| SAQ packet with pre-incentive | 530 |
| SAQ reminder postcard | 529 |
| SAQ second packet, upon request | 13 |
| SAQ final reminder postcard | 321 |
| SAQ post-incentive, final | 130 |
| SAQ post-incentive, COG advance notice | 63 |
| COG advance mailing | 299 |
| COG post-incentive* | 263 |
| TOTAL Mailings | 2156 |

SAQ Telephone Prompt

Out of the 530 participants sent the M3 Refueling SAQ, 464 were eligible to receive a telephone prompt, encouraging return of the completed SAQs. Interviewers tracked calls and outcomes on individualized call sheets, which were then forwarded for proper follow-up. Follow-up may have included entry of new contact information into the POD, mailing of additional SAQs, re-tracing phone and address information, or coding final SAQ case disposition. Each participant received up to 3 calls at available numbers. Successful completion of the protocol included speaking with the respondent or with a knowledgeable informant, leaving a message on a verified participant's answering machine, or, after three calls, leaving a message on a household answering machine.

Table 5: M3 Refueling SAQ Telephone Prompt Cases by Sample

| Sample | SAQ Phone Prompt Cases |
|---------------|-------------------------------|
| SAQ only | 258 |
| SAQ and COG | 206 |
| COG only | |
| Total | 464 |

Cognitive Interview Call Attempts

Out of the 830 participants fielded in the M3 Refielding effort, 539 were eligible for the Cognitive Interview. See Table 6.

Table 6: M3 Refielding Cognitive Interview Sample

| Total Sample | SAQ-only sample | COG Sample |
|---------------------|------------------------|-------------------|
| 830 | 291 | 539 |

During the M3 Refielding Cognitive Interview, the UWSC placed over 4000 telephone calls on 539 cases. The number of call attempts per case ranged from 0 (cases lacking any valid telephone number) to 30, with an average of 8 call attempts overall, and an average of 5 call attempts among cases with a completed interview. See Table 7 for details of cognitive calling efforts and results.

Table 7: M3 Refielding Cognitive Interview, Call Attempts

| Number of Call Attempts | Completes and Usable Partial | Percent of all completes |
|--------------------------------|-------------------------------------|---------------------------------|
| 1-2 calls | 104 | 39% |
| 3-5 calls | 78 | 29% |
| 6-10 calls | 52 | 19% |
| 11-15 calls | 23 | 9% |
| 16+ calls | 11 | 4% |
| All calls | 268 | 100% |

Of the 539 M3 Refielding cases fielded for a Cognitive Interview, ALL had been non-responders in MIDUS 3.

RESULTS

M3 Refielding Questionnaires Response

Sample included participants who completed the MIDUS 3 recruitment telephone interview but who thereafter failed to return completed SAQs.

Out of 531 participants sent a MIDUS questionnaire, 193 respondents replied with at least some portion completed. See Table 8.

Table 8: M3 Refielding SAQ Results by Sample Type

| Case Disposition | SAQ only | SAQ COG | Total |
|-----------------------------------|----------|---------|-------|
| Completed questionnaires | 114 | 79 | 193 |
| Refusal | 6 | 4 | 10 |
| Withdrew from study | 1 | 3 | 4 |
| Nothing returned | 164 | 147 | 311 |
| NO good address | 1 | 1 | 2 |
| Deceased | 2 | 5 | 7 |
| Unable, physically or cognitively | 3 | 1 | 4 |
| Total | 291 | 240 | 531 |

In response rates calculated in Table 9, below, respondents were counted ineligible, and removed from the denominator if they were deceased, living outside the USA, or physically or cognitively unable to participate.

Table 9: M3 Refielding SAQ Response Rate by Sample Type

| Status | SAQ only | SAQ COG | Total |
|---|--------------|--------------|--------------|
| Completed questionnaires | 114 | 79 | 193 |
| Sample fielded | 291 | 240 | 531 |
| - Ineligible (deceased or unable) | 5 | 6 | 11 |
| Eligible sample | 286 | 234 | 520 |
| SAQ Response Rate (Completes / Eligible Sample) | 39.9% | 33.8% | 37.1% |

M3 Refielding Cognitive Interview Response

Out of 539 eligible cases, 268 participated in the cognitive interview - 263 completed the interview and 5 had usable partial interviews. See Table 10.

Table 10: M3 Refielding COG Results by Sample Type

| Case Disposition | SAQ COG | COG only | Total |
|-----------------------------------|---------|----------|-------|
| Completed interview | 86 | 177 | 263 |
| Usable partial interview | 4 | 1 | 5 |
| Refusal, respondent or informant | 17 | 23 | 40 |
| Withdrew from study | 8 | 2 | 10 |
| Respondent never available | 66 | 35 | 101 |
| Respondent not located | 52 | 50 | 102 |
| Deceased | 5 | 3 | 8 |
| Unable, physically or cognitively | 2 | 8 | 10 |
| Total | 240* | 299 | 539* |

*Includes 10 finalized prior to fielding: 5 deceased, 4 global refusals, and 1 no contact info

Response rates were calculated using the AAPOR (American Association of Public Opinion Researchers) response rate calculation as explained below. Cases were deemed ineligible if respondent was deceased or physically or mentally incapable of participating, and were removed from the denominator. Calculated response rates are displayed in Table 11.

The AAPOR 2 response rate calculation was used:

$$\frac{\text{Number of completed interviews} + \text{Number of usable partial interviews}}{\text{Fielded Sample} - \text{Ineligible Sample}}$$

Table 11: M3 Refielding COG Response Rate by Sample Type

| Status | SAQ COG | COG only | Total |
|---|--------------|--------------|--------------|
| Usable interviews | 86 | 177 | 263 |
| Sample fielded | 240 | 299 | 539 |
| - Ineligible, deceased or unable | 7* | 11 | 18* |
| Eligible sample | 233 | 288 | 521 |
| COG Response Rate (Completes / Eligible Sample) | 36.9% | 61.5% | 50.5% |

*Includes 5 cases deemed ineligible prior to fielding

INTERIM AND FINAL DATA DELIVERIES

Delivery of SAQ Data

In February 2018, UWSC delivered an interim data set for an initial set of 62 M3 Refueling questionnaires. Final questionnaire data for 193 cases, and recontact information for 164 cases, was delivered in April 2018.

Delivery of Cognitive Interview Data

M3 Refueling Cognitive Interview interim data was delivered to researchers at Brandeis regularly throughout the field period. Data deliveries usually occurred biweekly, and consisted of a data file, and open ended response and interviewer notes. M3 Refueling Cognitive Interview data interim deliveries ran from July 2017 through January 2018.

In addition to the data itself, full audio recordings of cognitive interviews were delivered daily, uploaded to a secure shared Box folder. Finally, five key respondent demographic variables, and interviewer assessments of respondent cooperativeness and physical or mental health were delivered regularly. This information was used by Brandeis to begin scoring the tasks conducted in the interview and to assess the quality of the data.

Final data for the M3 Refueling Cognitive Interview was delivered in February 2018, and included 263 completed and 5 usable partial interviews.

Delivery of Contact Information

UWSC modified the delivery database, known as the “Shell”. Information stored in the UWSC POD fed into the Shell. The Shell included:

- Respondent contact information – Names, addresses, phone numbers, and previous contact information for each respondent.
- Respondent demographic variables
- Interview call notes – Interviewer record of the outcome of each call attempt, giving possible insights into how best to re-contact respondents.
- Interviewer assessments - After the cognitive interview, interviewers rated respondent competency and recorded anecdotal information respondents may have shared that might help future recruitment efforts.
- Dates – Field dates were recorded, including questionnaires mailing and completion dates and the cognitive interview completion date.

In February 2018, the UWSC delivered one comprehensive installment of the Shell.