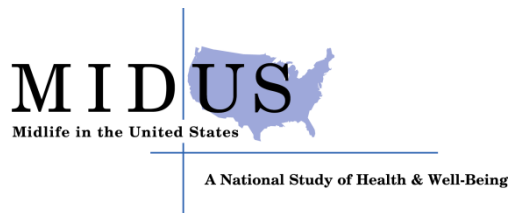




MIDUS 3 Project 7
Retention Early Warning (REW)
Final Field Report

Prepared for:



Midlife in the United States Study
University of Wisconsin–Madison
Institute on Aging
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Sample Description and Response Rate Report MIDUS REW (P1221) July 2021

Overview

The Midlife in the U.S. (MIDUS) is a national longitudinal study that investigates how the health and well-being of Americans is affected by work, relationships, health, finances, and personal outlooks, and to understand the factors that best protect health from early adulthood to midlife and into old age.

The MIDUS Retention Early Warning Study (MIDUS REW) was conducted by the University of Wisconsin Survey Center (UWSC) for Drs. Carol Ryff and Barry Radler at the University of Wisconsin Institute on Aging. The primary goal of the MIDUS REW project was to study associations among those who did not participate in MIDUS follow-up studies MIDUS 2 and MIDUS 3, and compare these non-responders across a broad range of topics to those who did respond in previous rounds.

The MIDUS REW interview was conducted as a computer-assisted personal interview (CAPI) in the respondent's home or a nearby neutral location such as a library study room. Most portions of the MIDUS REW interview were drawn from the MIDUS 2 and MIDUS 3 interviews, while other elements, such as the anthropometric and biomarker measures, were new. The MIDUS REW participation involved:

- An in-depth CAPI interview
- Anthropometric measures
- Dried blood spot (DBS) sample
- Cognitive telephone interview (Brief Test of Adult Cognition via Telephone)
- 28-page self-administered questionnaire (SAQ).

University of Wisconsin Survey Center

Founded in 1987, the University of Wisconsin 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, and John Stevenson is the Associate Director. Eric White, Augie Salick, Kate Krueger, Brendan Day, and Chris Schlapper were involved in instrument and CAPI tools programming. Kerryann DiLoreto was the Lead Project Director, alongside Project Directors Vicki Lein, Karen Zoladz, Carol Wintheiser, and Griselle Sanchez-Diettert.

Instruments

CAPI Interview

The basis for the REW CAPI interview instrument was the most recent CAPI instrument used during fielding of the Core MIDUS Milwaukee sample in 2016. This instrument was extensively modified to reduce the interview length while retaining the most widely-used questions, items and measures.

The CAPI interview for this project was conducted using a computer-assisted personal interviewing system (CAPI). The CAPI software employed by the UWSC is CASES 5.5 provided by the Computer-Assisted Survey Methods Program at the University of California-Berkeley.

The CASES program provides a comprehensive range of computer assisted interviewing tools. As a fully-featured CATI package, CASES has all the programs necessary to install sample (including importing pre-existing data into the sample records), prepare a data collection instrument, monitor survey progress, automatically send into the field those cases that require calling at a specific time or date (i.e. automatic call scheduling), code and clean data, produce reports, and output data into rectangular files for analysis.

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

The CAPI instrument consisted of questions about recession experience, health, education, occupation and industry, marriage; health insurance, finances, community involvement, parents' health, children and household members, caregiving, living arrangements, community involvement, race and ethnicity, discrimination, life satisfaction, and contact information of family and friends to help us contact the participant in the future. Showcards were used for items with long or complicated answer options. The CAPI instrument also included a series of anthropometric and biomarker measures, including blood pressure, height, weight, waist and hip circumference, lung strength, grip strength, a timed chair rise, and dried blood spot collection.

At the end of the CAPI interview, interviewers invited respondents to participate in the Cognitive Telephone Interview (Brief Test of Adult Cognition via Telephone or BTACT), handed over the self-administered questionnaire (SAQ), and handed over cash incentives. After interviewers left the place of the interview, they went back into the instrument to complete a set of interviewer observations.

Extensive in-house testing and debugging was done of the CAPI instrument. A pretest was conducted in June 2018 with "friends & family" as respondents which resulted in slight modifications to the subsequent instrument and protocols.

The average length of the interview was 153 minutes, with a mode of 142 minutes. Note: this average was calculated from timers in the instrument. It is the amount of time interviewers spent in the interview instrument itself, but not total time spent with the respondent from start to finish with the respondent. This average includes situations where the interviewer was in the instrument during the consent process. Also, this average includes situations where the interviewer might have encountered a technical problem while in the instrument. As a result, this average may be considered slightly inflated. This mean and mode does not include the partial interviews.

Self-Administered Questionnaire

A 28-page Self-Administered Questionnaire (SAQ) was fielded in this study using the 2005 MIDUS Milwaukee Refresher Oversample SAQ as a starting point. The only major change implemented was the replacement of Section D: Childhood, with a new Section D: Childhood and Race. In addition, some minor wording changes were made in Section F: Social Networks to update the types of social media listed in a couple questions.

Handing over the SAQ involved briefly describing the questionnaire and letting the respondent know they should complete it as soon as possible. The interviewer also let the respondent know that if UWSC did not receive the SAQ, they may be re-contacted so UWSC could answer any questions or concerns the respondent might have about completing it, or to check in if the respondent required a new SAQ or stamped envelope.

Cognitive Telephone Interview

The Cognitive Telephone Interview for this project was conducted using the BTACT (Brief Test of Adult Cognition via Telephone) protocol and a computer-assisted telephone interviewing system (CATI). The CATI software employed by the UWSC is CASES 5.6 provided by the Computer-Assisted Survey Methods Program at the University of California-Berkeley.

The REW Cognitive Interview is an abbreviated version of the MIDUS 3 Cognitive Interview. Starting with the MIDUS 3 Cognitive Interview, the BTACT (Brief Test of Adult Cognition by Telephone), MIDUS REW eliminated two tasks and an administrative task measuring phone latency. The MIDUS REW Cognitive Interview did NOT include the Red-Green task, the Digits Backwards task, and the Metronome Count, but in other ways remained the same.

At the end of the CAPI interview, after collecting contact information and anthropometric measures, the CAPI interviewer briefly introduced the cognitive telephone interview component and asked if the respondent would be willing to complete it then. The respondent agreed to do the telephone interview then and there, agreed to do it at a different time, or refused to participate. There was also the possibility that the respondent would be unable to participate in the telephone interview, for example if they had extreme hearing loss.

If the respondent decided to complete the telephone interview right away, they were given the option of using their own phone or the CAPI interviewer's UWSC-provided phone. A landline phone was preferred whenever possible. The CAPI interviewer called the UWSC CATI lab right away to let them know a respondent was ready to do the MIDUS REW telephone interview now, provided a case ID, and provided a phone number to call back. Next, the CATI interviewer called the respondent and completed the Cog interview by phone.

If the Cognitive Interview was not completed while the field interviewer was in the home, the phone lab would later set up the case for outbound calling.

Sample Description

Eligibility & Sample

The MIDUS REW sample comprised living non-responders to the MIDUS 2 or the MIDUS 3 survey projects. Non-responders were those who has refused to participate, could not be reached or otherwise failed to complete the interview.

The sample was provided by the MIDUS client and imported into a UWSC project operations database (POD).

UWSC's tracking and locating department pre-traced the entire sample to identify deceased respondents confirmed with a record of death, such as an obituary. This pre-tracing effort wrapped up in early August 2018.

Table A: Overview of sample eligible for REW

MIDUS sample_code			
sample_code	N	sample_name	sample_description
1	1347	Main RDD	Main national baseline sample (recruited in 1995-96)
2	246	Sibling	Siblings of individuals in Main RDD sample (recruited in 1995-96)
3	594	Twin	National sample of twin pairs (recruited in 1995-96)
4	298	City Oversample	Oversample of individuals in selected metropolitan areas – Boston, Atlanta, Chicago, Phoenix, San Francisco (recruited in 1995-96)
13	N/A	Milwaukee	Sample of African Americans in the city of Milwaukee (recruited in 2004-05)
14	N/A	Boston New	Oversample of individuals in the Boston metropolitan area (recruited in 2004-05)
10	N/A	MIDUS I Missing Twins	
Total	2485		

Total REW sample eligible for fielding is 2485 minus 246 siblings = 2239

Pretracing found N=111 deceased cases. These cases were not fielded so a total of N=2128 cases were geographically mapped and assigned into strata and clusters.

Strata and Clusters

At the beginning of the project, it was unclear if the budget would allow for all sample (N=2128) to be fielded due to the geographically-distributed nature of a sample that required conducting in-person interviews. REW employed a stratified clustered design in order to field the geographically-distributed sample and ensure that each sample member had a known non-zero probability of being contacted and subsequently interviewed.

Bill Buckingham at the University of Wisconsin Applied Population Lab was responsible for stratifying the sample. Table B below shows the population thresholds for 5 strata that were eventually used. Then using a respondent's most recent known address, Bill created geographic clusters within strata at the county level. In the most dense population area strata, the cluster (county) with the most cases was N=198. In the medium small and small strata, contiguous counties were combined to form a cluster with a minimum of 5 cases. Any metropolitan area within a 1-hour drive from a larger metropolitan area was included in the larger metro's group, so there were some smaller metro population values included in larger clusters.

Table B: Total Number of Cases by Strata

Strata	Strata Label	Population Threshold	Sample N
Strata 1	Least Dense Population Area	Less than 1,200,000	869
Strata 2	...	1,200,001 - 2,300,000	297
Strata 3	...	2,300,001 - 3,300,000	141
Strata 4	Most Dense Population Area	Greater than 3,300,001	791
Strata 5	Missing address at time of strata assignment		30

Total			2128
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Cases were fielded in three batches in order to allocate fielding resources appropriately. The first batch included cases from each of the four strata: all of the cases in Strata 3 and 4 (representing the most dense population areas), 12 of the 18 clusters in Strata 2, and 7 of the 119 clusters in Strata 1. The second batch included the remainder of the Strata 2 clusters, and 33 of the remaining Strata 1 clusters. The third and final batch included all remaining cases in Strata 1. Cases that were missing an address at the time of strata/cluster assignment were traced from time to time. If an address was found, the case was fielded immediately rather than waiting for the next batch. Table C below summarizes the batches fielded and MIDUS sub-sample sizes.

Table C: Total Number of Cases Fielded by MIDUS Sample and Batch

MIDUS Sub-Samples	Batch 1 Sample Fielded 10-29-2018	Batch 2 Sample Fielded 3-8-2019	Batch 3 Sample Fielded 6-25-2019	Total
Main RDD	653	236	388	1277
Twin	290	113	165	568
City Oversample	258	9	16	283
Total Fielded N	1201	358	569	2128

In summary, UWSC stratified the REW sample into 4 strata/groups¹ based on population density. Within each of these strata geographic clusters were sampled at the county level, with some clusters formed by combining counties that were contiguous to one another.

Ultimately, all REW cases (n=2128) contacted and invited to participate. In total, N=651 respondents completed the MIDUS REW CAPI interview, N=628 respondents completed the Cognitive Telephone interview (including n=4 usable partial interviews), and N=551 respondents completed the SAQ. UWSC also completed N=44 Mortality Cognitive Closeout interviews with informants who knew the respondents.

Tracing

UWSC created an Access database, referred to as the Project Operations Database (POD), to store respondent contact information. This database was used by UWSC Tracking and Locating staff to update contact information for respondents as needed. The database had the ability to add new telephone or address information while at the same time keeping a record of old information.

If an advance letter was returned to UWSC, the database was updated with this information and the respondent was traced again.

During the CAPI Phase

¹ The 5th strata was a category for those cases that did not have a good address and therefore could not be categorized by population density and county. N=30. Any cases in the 5th strata that were eventually found through re-tracing were permitted to be fielded in any order.

If it was determined by the field interviewer that an address or telephone number was no longer good, the database was updated to reflect this and the respondent was traced for new information.

In addition, if a field interviewer was told by an informant that the respondent was deceased or incarcerated, the respondent would be traced to attempt to confirm this information.

During the SAQ Phase

Tracing commenced for MIDUS REW when SAQ booklets were returned to UWSC as undeliverable. The Project Operations Database was then updated with any new information, including address and phone number.

During the SAQ and Cognitive interview phases, the tracing department also handled cases where the incentive checks for completing were returned undeliverable. The respondent was traced for new contact information so that the check could be resent.

During the Cognitive Interviewing Phase

During outbound calling for the Cognitive Interview, cases were sent for tracing as needed. If the Tracking and Locating Department found better information, the case was flagged for further calling. If no better information was found, staff reviewed notes from the in-home interviewer for better phone information. If new numbers were not identified, the case was finalized.

Field Materials

The MIDUS REW CAPI interview required the use of many different materials for the anthropometric and biomarker measures, as well as the SAQ handover. Some materials were single use, while others were used across multiple interviews. This section outlines what materials were used when.

Reusable Materials

UWSC provided interviewers with some materials that were to be used across multiple interviews. These included:

- Hand sanitizer
- Blood pressure machine (including cuff)
- Stop watch
- Retractable tape measure
- Rafter's square
- Soft tape measure
- Peak flow meter
- Dynamometer
- Safety glasses
- Small, portable fan
- Pencil

A UWSC-issued laptop was used for data collection in every interview, and all interviewers were issued a UWSC cell phone as well as a suitcase for transporting materials.

Interviewers also were provided with a supply of materials that could be used until they ran out. These included:

- Cardboard drying boxes for the dried blood spot samples, which could be reused as needed if they were unsoiled.

- Post-it notes

CAPI Generic Respondent Packet (GRP)

UWSC provided interviewers with a Generic Respondent Packet (GRP) for every case they were assigned. These GRPs were mailed to interviewers on an as-needed basis and included single-use materials necessary for an interview, such as the peak flow meter mouthpieces and DBS kit. It also included the SAQ packet, which consisted of an unlabeled SAQ, cover letter, and pre-stamped envelope. Interviewers affixed a case ID label to the SAQ upon handover. These materials were grouped in a tote bag for ease of handling.

Anthropometric Measure Materials

The anthropometric measures required a variety of materials. Some materials were single use while others were used across multiple interviews. Similarly, some materials were used only for a single measure, while others were used in several of the measures. The list of materials used for anthropometric measure is as follows:

- Blood pressure machine (including cuff)
 - Used only for the blood pressure measure.
- Stop watch
 - Used for the blood pressure, lung strength, and chair rise measures.
- Retractable tape measure
 - Used for the height and chair rise measures.
- Rafter's square (a.k.a.: triangle or speed square)
 - Used only for the height measure.
- Post-it note
 - Used for the height and weight measures.
- Pencil
 - Used for the height and weight measures.
- Scale
 - Used only for the weight measure.
- Gulick II soft tape measure
 - Used for the waist and hip circumference measures.
 - Reads in centimeters and has a ball-bearing tension indicator at the zero end to ensure the user is applying proper and consistent tension.
- Peak flow meters
 - One for demonstration, one for respondent use
 - Used only for the lung strength measure
- Cardboard mouthpieces
 - Used only for the lung strength measure.
 - Each GRP kit included two disposable cardboard mouthpieces, prepackaged in its own plastic bag. These were single use items. Once a mouthpiece had been used it was to be disposed of immediately.
- Dynamometer
 - Used only for the grip strength measure.
- Chair
 - Used for the blood pressure, grip strength, and chair rise measures.
 - Not provided by interviewers; used whatever suitable chair the respondent had available at the time of the interview.

DBS Collection Materials & PPE

The Dried Blood Spot collection materials included a kit of supplies to collect the sample, a drying box to protect the collected blood sample in transit, and personal protective equipment in adherence with protocols laid out by the University of Wisconsin Madison's Office of Biosafety.

The majority of the supplies used for a DBS sample collection were ordered from Arrowhead Forensics as a pre-assembled kit. UWSC ordered other more personalized items separately, and added them to the pre-assembled kits on an as-needed basis.

DBS Shipping Materials

Field interviewers mailed completed DBS samples back to UW Harlow Lab using bubble mailers and desiccant sachets. At the start of the field effort, UWSC provided field interviewers with a supply of self-sealing bubble mailer Kraft envelopes and a supply of desiccant sachets. The reinforced padded envelope ensured the Whatman 903 Protein Saver Card would not be damaged in transit. The desiccant sachets minimized the potential impact of moisture damage to the DBS samples.

Study Design and Field Procedures and Protocols

Interviewing for MIDUS REW occurred from November 3, 2018 – mid-December 2019. A debriefing with the field interviewers took place on December 19, 2020 that included Dr. Barry Radler. UWSC employed 15 field interviewers after a targeted hiring search based on groupings of cases as well as major airport hubs for efficient travel.

Sample was fielded in batches with careful attention paid to strata, as well as fielding clusters in random order within those strata.

UWSC provisioned for some cases to be conducted as CAPI x CATI: conducting the main interview over the telephone. We devised protocols for how to handle the other measures, as well as the incentives. However, given the success of the REW effort overall, in October 2019 MIDUS and UWSC determined not to field any cases in a CAPI x CATI sub-effort.

Sequencing

The MIDUS REW effort was complicated to field due to the fact that each case followed a unique trajectory or timeline, anchored by the CAPI complete date. About a month into the field period, UWSC was managing CAPI interviews, mail surveys, and cognitive telephone interviews concurrently. Some respondents went on to complete their mail survey within days of finishing the CAPI interview, while others took weeks to complete it. This delayed their fielding into the Cognitive telephone effort by as many weeks. The basic sequence of data collection is as follows:

- 1) A respondent was sent an advance letter telling them about the MIDUS REW study and that they would receive a call from an interviewer to schedule an interview.

- 2) After attempting to reach the respondent by phone, the field interviewer made doorstep visits alternating with email and text messages when available, while still continuing to try to reach the respondent by phone. The interviewer also tried to reach informants who might know how to get in touch with respondents.
- 3) When the CAPI interview was completed, the interviewer presented the respondent with sealed envelopes for each completed (or attempted) component of the study (CAPI interview, anthropometric measures, DBS sample, and cognitive telephone interview). The respondent could receive up to \$200 in cash. The respondent opened each envelope in the interviewer's presence to confirm the amount and signed receipt forms to acknowledge they had received each envelope of cash.
- 4) Once the respondent received the cash incentive(s), the interviewer handed over a 28-page SAQ booklet, a letter explaining how to fill it out, and a postage-paid stamped envelope for the respondent to send the completed survey back in.
- 5) When the respondent sent back their completed SAQ, they were mailed a check for \$45 within one week.
- 6) Approximately one week after the payment for the mail survey was sent, cases were fielded for the Cognitive telephone survey.
- 7) An additional \$50 check was mailed to the respondent within one week of completing the Cognitive survey.
- 8) If a respondent did not return the first SAQ within 8 days of receiving it, a postcard was sent to encourage the respondent to fill it out and send it back.
- 9) If a respondent had not returned their completed SAQ within 18 days of completing the CAPI interview, they were put into the Reminder Call effort, where a CAPI interviewer would call the respondent to encourage them to complete the SAQ. In most cases, the same CAPI interviewer who completed the CAPI interview with this respondent would make the reminder call. The interviewer could also flag an SAQ or return envelope to be mailed to the respondent if the respondent was missing one or both of these items. The interviewer would attempt to reach the respondent for a reminder call over the course of 14 days.
- 10) On a weekly basis, UWSC sent additional SAQ booklets in response to specific requests from respondents resulting from the reminder postcard effort or reminder call efforts.
- 11) Regardless of whether the interviewer reached the respondent for the Reminder Call, if 49 days after the CAPI interview UWSC still had not received the SAQ, the case was sent to Revisit Review. During this Revisit Review, CAPI supervisors assessed what components were missing, what respondents had initially said about each of the missing components, and the feasibility of sending a CAPI interviewer to collect these missing components during an in-person Revisit effort. The CAPI supervisors could flag any cases determined to be candidates for Revisit.
- 12) At 60 days after the initial CAPI interview, CAPI supervisors could assign flagged Revisit cases to an appropriate interviewer. Note that MIDUS and UWSC ultimately decided not to activate the Revisit Review or Effort on a large scale.
- 13) A second SAQ was sent to select SAQ non-responders in September 2019 after it was determined that the Revisit effort would not be activated broadly across eligible cases. The mailing contained all of the same materials as the first booklet but with a shorter, more direct cover letter.
- 14) If the respondent had not returned their completed SAQ by the time they completed the cognitive instrument, they were reminded to complete it.
- 15) The final SAQ to SAQ non-responders (n=120) was sent with a small gift (MIDUS tote and another MIDUS pen) in January 2020.

Advance Letters

To introduce respondents to the REW project, advance letters were mailed in batches to respondents approximately three days prior to being assigned to field interviewers to begin calling them. In this way, interviewers were not doing “cold-calls” to respondents.

The letter itself was personalized, printed on MIDUS letterhead, and mailed from UWSC headquarters to the respondent’s last known address. The letters described the MIDUS study and explained that an interviewer would be contacting them shortly about an in-person interview. Letters were signed by Dr. Carol Ryff. Each advance letter included a \$2 pre-incentive.

CAPI Interview

Respondents were sent an advance letter to introduce this round of the study and inform respondents that interviewers would be contacting them shortly. A few days after the advance letter was mailed, field interviewers began reaching out to respondents by phone. After call attempts, the field interviewer began making doorstep visits. When the field interviewer reached the respondent, they discussed what the MIDUS REW Effort would involve and attempted to set an appointment to conduct the CAPI interview. Interviewers were allowed to text message and email respondents during the MIDUS REW CAPI effort, but only under limited circumstances. For example, if the respondent explicitly requested to only be texted rather than called, or if all other contact information had been exhausted and the only available information was the respondent’s email address provided in a previous round of MIDUS. All email messages included a warning that email is not a secure form of communication.

The CAPI interviews were conducted in the respondent’s home whenever possible, in an effort to minimize burden on the respondent. Also, when possible we tried to avoid collecting the anthropometric measure and dried blood spots in a public setting.

The CAPI interview included a battery of questions as described in the “Instruments” section above.

Anthropometric measures

During CAPI interview, interviewers attempted to collect the following anthropometric measures:

- Blood pressure
- Height
- Weight
- Waist circumference
- Hip circumference
- Lung strength
- Grip strength
- Timed chair rise

Respondents were asked not to eat, drink, or smoke during these measurements. Respondents were also informed that they could skip or end any measurement they did not feel comfortable or safe doing. Interviewers applied hand sanitizer and offered some to the respondent before starting to collect any of these anthropometric measures.

The blood pressure measurement was collected using a blood pressure machine and a stop watch. The respondent’s height was collected against a wall or doorframe, and on a flat and stable surface. The interviewer asked the

respondent to remove their shoes, then stand against the wall as straight as is comfortable. If the respondent was unable or unwilling to participate in the height measure, the interviewer asked them to self-report.

The weight measurement was taken on a digital scale placed on a flat, hard surface. The interviewer asked the respondent to remove their shoes and any objects from their pockets so the reading could be as accurate as possible. If the respondent was unable or unwilling to participate in the weight measure, the interviewer asked them to self-report. The interviewer asked the respondent to stand up and remove any bulky clothing that could inhibit collecting an accurate measure. If the respondent was unable to stand, the measurement was not collected.

In order to measure hip circumference, the interviewer asked the respondent to remain standing and remove any bulky clothing that could inhibit collecting an accurate measure. If the respondent was unable to stand, the measurement was not collected.

The lung strength measure was taken using a peak flow meter, single-use cardboard mouthpieces, and a stopwatch. The interviewer asked the respondent to stand, but the measure could also be collected from a seated position if the respondent was unable to stand.

The grip strength measure was taken from a seated position using a dynamometer.

The chair rise measure involved timing how long it takes the respondent to rise from a seated position five times, as quickly as possible and without using their arms (keeping them crossed at the chest). If an appropriate chair was not available the measure was not attempted.

Dried Blood Spots (DBS) Sample

During the CAPI interview, after collecting other anthropometric measures but before inviting the respondent to participate in the Cognitive Telephone Interview, the interviewer attempted to collect a dried blood spot sample from the respondent. During this DBS section the field interviewer would:

- Fully explain the DBS collection process and consent form
- Collect a respondent signature for the DBS specific consent form
- Attempt to collect a DBS sample

Shipping and Delivery

After the CAPI interview, the field interviewer would let the freshly-collected DBS sample sit, partially open, in the drying box at least overnight. The drying box containing the sample would be kept in a secure and temperature-controlled location in the field interviewer's home or hotel, where it could remain undisturbed until the time of shipping or delivery. Next, the field interviewer removed the DBS sample collection card from the drying box, closed the card by folding over the cover flap, and placed it in a bubble mailer envelope along with two desiccant sachets. The interviewer then sealed the bubble mailer and shipped it to UW Harlow Lab, the designated lab on UW campus.

Upon sending a DBS sample to UW Harlow Lab, the field interviewer would re-enter the case in their CASES instrument, and log shipping details which included the date and time they brought it to UPS and the tracking number of the UPS label affixed to the shipment.

In most cases, SAQs were mailed back to UWSC by the respondent themselves via USPS. For a very small number of cases, the CAPI interviewer attempted to return to collect it from the respondent.

DBS Intake

UWSC did not perform the intake of any DBS samples. DBS samples were sent directly from the interviewer to the UW Harlow Lab. This lab was responsible for sending batches of DBS samples to Alan Potter's Lab at the University of Washington. It was there that the samples were assayed for multiple biomarkers, such as C-reactive protein and lipid levels.

In the rare instances that the interviewer encountered an issue shipping the DBS sample directly to UW Harlow Lab or there was an issue with the case ID label affixed to the DBS sample collection card, the UWSC coordinated directly with UW Harlow Lab to resolve the issue.

Reminder Call for SAQ

About 34 days after the CAPI interview was completed, reminder calls were made to respondents who did not return their completed SAQ. During these reminder calls, the interviewer encouraged the respondent to complete the SAQ and could also initiate a re-send of the SAQ booklet, return envelope, or both, if needed.

Revisit (Return Visit for Anthro, DBS, SAQ, Cognitive Interview)

49 days after the CAPI interview was completed, cases for which we had not received a completed SAQ or were missing other key measures (e.g.: anthropometric or dried blood spot) were triggered for Review by CAPI Supervisors. The CAPI Supervisors then flagged specific cases as eligible for revisits to be done via doorstep attempts. These doorstep visits were made to flagged respondents, regardless of whether we reached the respondent for a reminder call. At this visit, interviewers offered assistance to complete the SAQ. They also invited respondents to complete the Anthro measures and/or DBS if they were not collected during the initial interview. Further, interviewers asked respondents to complete the Cognitive Telephone Interview on the spot, or to schedule an appointment for the Cognitive Telephone Interview. If any of these missing components were completed on the spot, the interviewer provided the corresponding cash incentive.

UWSC designed the Revisit effort anticipating that a percentage of cases would complete the main CAPI interview but decline to complete the other measures. After months in the field, we learned that once participants agreed to the main interview, most were compliant with the other measures, likely because these measures were each incentivized separately. Only 8 cases were actually fielded into the Revisit effort. Revisits were completed with 3 of these 8 cases.

Cognitive Telephone Interview

As soon as the SAQ was completed, the case flowed to the Cognitive Telephone Interview outbound calling effort conducted by the UWSC CATI Lab. Exceptions were if the Cog interview was completed on the spot during a Revisit or a specific appointment was set up at the end of the CAPI interview.

Non-Response and Refusal Protocol

To enhance study recall and to address possible concerns about legitimacy, interviewers attempted to leave their business card and/or a goodie-bag with non-responsive or reluctant households. The goodie-bag contained the MIDUS REW brochure, a “Sorry I missed you...” note, and a pack of LifeSavers. If the non-response or reluctance continued, the case was given a “cooling off” period of at least two weeks and usually reassigned to a different CAPI interviewer. Interviewer location and availability also factored into supervisors’ reassignment decisions.

In July and early August 2019, UWSC reviewed refusals and selected about 75 cases to receive a refusal mailing, which consisted of a handwritten note on UWSC notepad paper, a copy of the advance mailing letter, and one of three MIDUS special interest (Daily Stress, Volunteering, and Childhood Experiences) brochures (selected based on what information we had about the nature of each respondent’s refusal). These cases were then re-assigned to a CAPI interviewer specifically coached to handle refusals.

Respondent Incentives

Pre-incentives:

- \$2 cash mailed with the advance letter
- MIDUS pen included with SAQ packet hand-over

Post-incentives:

The post-incentive structure was such that respondents were given specific amounts for completing (or attempting to complete) specific parts of the MIDUS REW project. In all instances where cash incentives were handed over, the interviewer collected a receipt signature from the respondent and asked that they open the envelope(s) on the spot to confirm the correct amount. The incentive breakdown for all components of the MIDUS REW interview is as follows:

- CAPI Interview: \$100 cash, handed over at the end of the CAPI interview
- Anthropometric Measures: \$25 cash, handed over at the end of the CAPI interview
- DBS Collection: \$25 cash, handed over at the end of the CAPI interview
- Cognitive Telephone Interview: \$50 cash handed over at the end of the telephone interview (if completed immediately after the CAPI interview), \$50 check mailed from UWSC within a week of completing the telephone interview (if completed at a later date than the CAPI interview)
- SAQ: \$45 check, mailed from UWSC headquarters within a week of receiving the completed SAQ

The check mailed following the SAQ. Some Cognitive interviews provided the MIDUS REW toll-free number so that respondents could call if they did not have the ability to cash the check. In those instances, UWSC worked to issue them a USPS money order to be cashed at any USPS location with no fee.

If the SAQ and/or Cognitive telephone interview were completed during a Revisit (n~3), the CAPI interviewer handed over the incentives in cash, on the spot.

CAPI Interviewer Training

UWSC drew from an existing pool of CAPI interviewers who had worked on previous projects to fill eight of the fifteen interviewer slots for the MIDUS Milwaukee project. The remaining seven slots were filled with new hires that had other previous interviewing experience.

Interviewers received 64 hours of training that included basic standards and procedures, field logistics, specific MIDUS issues, and MIDUS REW instrument training. Interviewers learned how cases would be fielded, how to contact respondents, how to take physical measurements and collect blood spots for the health module of the instrument, fieldwork guidelines, and protocol for refusals. They also completed a “start-to-finish certification” of the main CAPI instrument during which they demonstrated mastery of basic interviewing skills, as well as mastery of the MIDUS REW protocols. Interviewers were given time to practice the interview on their own, and were instructed to complete practice cases before they began to visit actual respondents.

The main CAPI interviewer training for MIDUS REW took place at UW-Madison’s Pyle Center from October 23 to October 31, 2018. Dr. Barry Radler attended a session of the training, and was very helpful in motivating the interviewers and providing them with sufficient background information and talking points for persuading participants. He talked about the previous wave of data collection, the purpose and design of the study, and the goals for the REW effort in particular. Dr. Radler also shared information about MIDUS projects 2-5 to help interviewers understand the full MIDUS study and how the portion they would be working on fit in.

On April 18th 2019, UWSC hosted an anthropometric refresher quiz for all interviewers. Interviewers reviewed physical measure materials and submitted test scores showing that they retained important measure steps.

Interviewer Observation Questions

In order to minimize burden on the respondent while hosting the interviewer in their home, interviewer observation questions were programmed into the CAPI instrument as a separate module that could be completed by the interviewer at a later time. Interviewer observations included questions about the respondent’s health, cooperation, and ability to participate, as well as whether anyone else was present during the interview. Interviewers were trained to be as objective as possible when answering these questions.

Quality Control

At the beginning of the CAPI interview, respondents were asked for their consent to have the interview recorded. The audio-recordings were used only for quality control conducted by the CAPI Supervisor or a specially-trained UWSC staff member fluent in CAPI interviewing protocols. QC was conducted on approximately 10% of all completed CAPI interviews, with a strong effort to perform QC on all interviewers’ first completed interviews. Interviewers were provided with timely feedback on their administration of the CAPI interview and their adherence to protocols.

Verification Interviews

UWSC employed “verification interviews” to follow-up on a random selection of at least 10% of each interviewer’s completed cases. A trained specialist at UWSC called respondents to confirm key details about the circumstances of the completed interview, and that the respondent had been treated with the utmost respect and care. These verifications ensured that protocols and procedures apart from what could be heard in the audio recordings were being followed in the field.

Weekly Conference Calls

Interviewers were required to attend a weekly conference call with the Field Supervisors. This provided interviewers with an opportunity to interact with project staff and colleagues as well as to debrief and stay up-to-date with protocol and procedures.

Cognitive 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. Then all interviewers did a successful mock interview before being cleared to conduct the interview.

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

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 MIDUS, with the exception that if a respondent had expressed any reluctance to participate during the in-home interview, the case was immediately finalized.

Cognitive Interview Call Attempts

During the MIDUS REW Cognitive Interview, most interviews were completed while the in-home interviewer was in the home with the respondent, so very little outbound calling was necessary. When outbound calling was triggered, usually a maximum of 10 calls were placed to each number in the case.

Table 1: MIDUS REW Cognitive Interview, Call Attempts

Number of Call Attempts	Completes and Usable Partial	Percent of all completes
1-2 calls	600	95.8%
3-10 calls	16	2.6%
11+ calls	10	1.6%
All calls	626	100%

Data Entry Protocol and Staff Training

Data entry for the MIDUS REW SAQs began in November 2018. The SAQ booklet was 28-pages long and included various types of formatted questions, making them more complex to enter. Following previous MIDUS SAQ data entry protocols, each booklet was first reviewed by an “editor” to uncover and resolve any issues that could cause data entry error. Editors were trained on how to resolve the most common problem issues, such as respondents who gave multiple answers, selected answers that fell between actual response categories, or followed skip patterns incorrectly.

Editors and data entry staff underwent 1 hour of MIDUS-specific training to make them familiar with the instrument, train them in the specific protocols set for the project, and give them an opportunity to ask questions about the data entry process. Each booklet was blind double-entered by two different data entry staff members. When a discrepancy between the first pass and the second was found by the computer, the data entry person was alerted to the difference in responses, and they then determined the correct answer (with help from an editor if needed) and then made the correction to the error, either from the first or second pass.

Interim and Final Data Deliveries

Delivery of Contact Information

Historically, UWSC would provide regular deliveries of updated contact and participation information via what was called a database “Shell”. This file included respondent contact information, interviewer assessments, call notes, and mailing and completion dates, all of which were imported into the MIDUS Administrative Database.

However, UWSC and MIDUS prepared for the REW effort to be a test case for a more automated sample sharing process. Internally referred to as a “sample handshake,” UWSC and MIDUS exchanged sample information through linked databases. UWSC pushed sample information over to the MIDUS Administrative Database partway through the REW effort and again at the full conclusion of the effort.

Delivery of Interim Data Files

In November 2018, about one month after production calling began, UWSC delivered an interim data set of the first 27 cases to complete the CAPI interview so that MIDUS staff could review and help ensure that all variables were included and data were looking as expected. A second interim delivery of CAPI data for 175 cases was done in April 2019. In late December 2018, interim SAQ data for the first 25 cases data entered was delivered. Cognitive interview data for the REW effort was delivered on a regular basis to researchers at Brandeis University during the field period.

Final Data Deliveries

Final data delivery for the REW CAPI data took place in 2020. The final SAQ data also was delivered in March 2020. Final data delivery for REW Cognitive interview effort occurred in February 2020.

UWSC delivered all cases that contained any data rather than making a distinction between useable or non-useable partials. Partial completes are not included in the response rate numerators below.

Response Rates

Table 1. Response Rates Across Data Collection Phases

Type of Sample	Main CAPI Survey	SAQ Survey	Cognitive Survey
MIDUS REW	31.7%*	84.3%	97%

Above response rates reported as AAPOR 1 calculation.

*Does not include mortality cognitive closeout completes (MCCs). If MCCs are included then the response rate is 33.1%.

534 respondents participated in all three phases (CAPI, SAQ, Cognitive)

15 respondents participated in CAPI and SAQ but not Cognitive

92 respondents participated in CAPI and Cognitive but not SAQ

11 respondents participated in CAPI only

UWSC completed a total of 651 CAPI interviews, all of which were completed in-person. The UWSC completed a total of 44 Mortality Closeout interviews, 12 of which were completed in-person and 33 of which were completed via phone call.

The overall raw response rate for the survey is 31.7% (651 completes / 2128 cases fielded).

Table 2 includes the sample disposition for all sample members by category.

AAPOR Response Rates 1 and 2 are reported below. A detailed summary of the contact outcomes is available in Table 3.

Table 2. Overall Sample Disposition (N=2128)

Final Disposition	Cases
Completed Interview (Category 1)	651
Completed Mortality Closeout Interview (Category 1)	44
Eligible, non-interview (Category 2)	1402
Unknown Eligibility, non-interview (Category 3)	0
Not Eligible (Category 4)	31
Totals	2128

AAPOR Response Rate 1, not including Mortality Closeout Interviews

of completed interviews

$$\frac{((\text{Complete interviews} + \text{Partial interviews}) + (\text{Eligible, non-interview}) + (\text{Unknown Eligibility, non-interview}))}{651}$$

651

$$\frac{651 + 0 + 1402 + 0}{2053}$$

651 / 2053 = 31.7%

AAPOR Response Rate 2, not including Mortality Closeout Interviews

of completed interviews + # of partial interviews

$$\frac{((\text{Complete interviews} + \text{Partial interviews}) + (\text{Eligible, non-interview}) + (\text{Unknown Eligibility, non-interview}))}{651 + 0}$$

651 + 0

$$\frac{651 + 0 + 1402 + 0}{2053}$$

651 / 2053 = 31.7%

AAPOR Response Rate 1, including Mortality Closeout Interviews

of completed interviews

$$\frac{((\text{Complete interviews} + \text{Partial interviews}) + (\text{Eligible, non-interview}) + (\text{Unknown Eligibility, non-interview}))}{651 + 44}$$

695

$(695 + 0 + 1402 + 0 = 2097)$

695 / 2097 = 33.1%

AAPOR Response Rate 2, including Mortality Closeout Interviews

of completed interviews + # of partial interviews

$((\text{Complete interviews} + \text{Partial interviews}) + (\text{Eligible, non-interview}) + (\text{Unknown Eligibility, non-interview}))$

695 + 0

$(695 + 0 + 1402 + 0 = 2097)$

695/ 2097 = 33.1%

Table 3. Contact Dispositions by Specific Outcome

Final Disposition	AAPOR Code	Cases
Interview (Category 1)		
Complete Interview, Finalized	1110	651
Complete Interview, Not Finalized	1100	2
Mortality Closeout Interview Complete	1099	44
Eligible, non-interview (Category 2)		
Household-Level Refusal	2111	78
Known Respondent Refusal	2112	377
Hard & Final Refusal	2114	6
Do Not Contact Ever – No Data Collected (Refusal)	2502	5
Break-Off	2120	1
Non-Contact	2200	416
Respondent Away/Unavailable	2250	482
Physically / Mentally Unable to Interview	2320	32
Incarcerated – Unable to Interview	2322	1
Other	4630	4
Unknown eligibility, non-interview (Category 3)		
Not eligible (Category 4)		
Deceased	2310 & 2311	31
TOTAL		2128

Table 4. Number of Refusals to Audio Recording for QC Purposes Consent Item

Item	# of Refusals
Recording interview	8

Table 5. Final Disposition for MIDUS REW SAQ

SAQ Disposition Code	SAQ Disposition Description	Frequency
1100	Completed SAQ	549
2112-2113; 2360	Refusal	1
2270	Completed questionnaire, but not returned during field period	2
2310	Deceased	1
3190	Mail survey component never returned	2
3300	No Good Address	2
Blank / No code	No Response	94
Total		651
	AAPOR 1 Response Rate	84.3%

Table 6. Final Disposition for MIDUS REW Cognitive Interview

AAPOR Code	Telephone Disposition Description	Frequency
1100	Complete	622
1200	Usable partial	4
2112	Refusal, respondent or informant	4
2210	Never available	15
2302	Respondent not located	1
2320	Cognitive or physically unable	5
Total		651
	AAPOR 2 Response Rate	97%

Table 7. MIDUS REW COG AAPOR 2 Response Rate

Status	As percent of CAPI completes
Usable interviews	626
Sample fielded	651
- Ineligible, deceased or unable	5
Eligible sample	646
COG Response Rate (Completes/Eligible Sample)	97%

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