Understanding Data Collection in MIDUS

MIDUS is a complex longitudinal study involving wide-ranging data collection across diverse disciplinary domains. The purpose of this communication is to sharpen understanding of the flow of data collection across projects within each wave of the study. The information is organized in three parts: opening comments (first 2 pages), flow charts (next 4 pages, one for each wave of the study), and a final figure that provides an overview of the MIDUS Timelines, Samples, and Projects for the entire study as a whole. This last figure fills in temporal details behind the information summarized in the wave-specific flow charts described below.

The first flow chart pertains to the baseline data collection. At MIDUS 1 (M1), the national sample included a random-digit-dialing (RDD) sample plus siblings of main sample respondents and a national sample of twins. Eligibility criteria for participating in the national survey are listed along with response rates for the phone interview and the self-administered questionnaire (SAQ). Sociodemographic information (age, gender, education, race, marital status, subjective health) is also provided. One subsequent project (daily diary assessments) was part of MIDUS 1. The sample size for the daily project, its eligibility criteria, response rates, and sociodemographic information are also provided.

The next figure shows parallel information for MIDUS 2 (M2), which included recruitment of a new subsample of African Americans from Milwaukee, WI. In addition to sample expansion, M2 included three new projects. Following completion of the national survey, members of the sample were invited to complete a cognitive project (conducted by phone). Response rates across subsamples for the survey and cognitive projects are provided, along with sociodemographic information for each project. Members of the sample were then recruited for the daily project, the biomarker project (three data collection sites), and the neuroscience project (one data collection site). The primary eligibility criteria across these projects that participants had completed both the M2 phone interview and SAQ. Those who completed the daily project at M1 (i.e., longitudinal sample) were first distributed to the daily project. Some of these participants subsequently completed the biomarker project as well. Participants who were not part of the daily longitudinal sample were first sent to the biomarker project for sample recruitment. Some of these individuals subsequently completed the daily project as well. Recruitment for the neuroscience project (conducted at UW-Madison) was restricted to members of the biomarker project who completed assessments at the UW-Madison site. Sociodemographic information is provided for each project sample at M2.

Between the completion of M2 and the initiation of M3, a new MIDUS Refresher (MR) sample was recruited. It included a new national sample of U.S. adults that paralleled the age and gender distribution of the M1 national sample, along with recruitment of a new subsample of African Americans from Milwaukee, WI. The five-project data collection design for MR paralleled the projects that defined the M2 data collection. Information on eligibility criteria, response rates, and sociodemographics is included for each project. The flow of data collection across projects also paralleled the progression followed at M2.
The data collection for MIDUS 3 (M3) is partially completed; some projects are still in the field. Specifically, the survey and cognitive projects have been completed. Response rates and sociodemographic information for those two projects are detailed. The daily project, biomarker project, and neuroscience projects are currently recruiting participants and collecting data. Two additional projects are also part of M3: the gene expression project and the retention-early warning project. Details about these continuing and new MIDUS projects will be made available as data collection is completed.

Three summary points on information included in this document are noted. First, regarding the sociodemographic representativeness of MIDUS, detailed information (available on the MIDUS Portal [http://midus.colectica.org] and at NACDA (National Archive of Computerized Data on Aging), shows that the MIDUS baseline and Refresher samples compared favorably with CPS (Current Population Survey) data from the same time periods, with one exception. MIDUS participants have somewhat higher educational levels. This educational selectivity is also evident across the MIDUS projects, likely tied to eligibility requirements. That is, completion of the phone interview and SAQ from the survey project are prerequisites for participation in subsequent projects. The rationale behind such requirements was to maximize the availability of comprehensive data across members of the sample. Nonetheless, all MIDUS projects include substantial educational heterogeneity in their samples. Indeed, this heterogeneity central to the focus on social inequalities in health, which is a major thematic focus in MIDUS findings.

Second, within each wave of MIDUS, the multidisciplinary depth of data collection requires substantial time. That is, each project is carried out over a period of years (see MIDUS Timelines, Samples, and Projects). The biomarker project is by far the most time and labor-intensive, given that each participant must complete a two-day visit to one of three sites around the U.S. These lengthy visits are what lies behind the unprecedented richness of the MIDUS biomarker data.

Finally, the potential for cross-project analyses in MIDUS is deep and wide. That is, all participants in the cognitive, daily, biomarker, and neuroscience projects have completed the phone interview and SAQ of the survey project. Further, most survey participants (more than 70%) also completed the cognitive project. This means that investigators interested in the daily, biomarker and neuroscience data can investigate linkages to the survey and cognitive data. Further, across the Core and Refresher samples, there is extensive overlap (n = 1,355) between those who participated in both the daily and biomarker projects. Finally, all neuroscience participants completed the biomarker project as well as the survey and cognitive projects, and many (n = 294) also completed the daily project. In short, although data for some MIDUS projects are collected only subsamples of the national sample (due to budgetary and temporal constraints), the scope of data available for cross-project analyses is extensive.
## MIDUS 1
Sample Flow Across Projects and Sociodemographics

### SURVEY PROJECT

**N=7108**  
(RDD=4244   Sibling=950   Twin=1914)

<table>
<thead>
<tr>
<th>Eligibility Criteria:</th>
<th>Age (M,SD)</th>
<th>Race - White</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Aged 25-74</td>
<td>46.38 (13.00)</td>
<td>90.7%*</td>
</tr>
<tr>
<td>✓ English speaking</td>
<td>35.0%</td>
<td></td>
</tr>
<tr>
<td>✓ Non-institutionalized adults</td>
<td>45.8%</td>
<td></td>
</tr>
<tr>
<td>✓ Living in the coterminous U.S.</td>
<td>19.2%</td>
<td></td>
</tr>
</tbody>
</table>

**Response Rate:** 70%

**% Completing SAQ:** 89%

<table>
<thead>
<tr>
<th>Education</th>
<th>Race - White</th>
</tr>
</thead>
<tbody>
<tr>
<td>High school or less</td>
<td>38.6%</td>
</tr>
<tr>
<td>Some college</td>
<td>30.6%</td>
</tr>
<tr>
<td>College or more</td>
<td>34.7%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subjective Health (M,SD)</th>
<th>2.47 (0.99)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1=excellent, 5=poor)</td>
<td></td>
</tr>
</tbody>
</table>

### DAILY PROJECT

**N=1476**  
(RDD=1009   Twin=467)

<table>
<thead>
<tr>
<th>Eligibility Criteria:</th>
<th>Age (M,SD)</th>
<th>Race - White</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ M1 Interview + SAQ</td>
<td>46.10 (12.82)</td>
<td>91.2%*</td>
</tr>
</tbody>
</table>

**Response Rate:** 70.6%

<table>
<thead>
<tr>
<th>Education</th>
<th>Race - White</th>
</tr>
</thead>
<tbody>
<tr>
<td>High school or less</td>
<td>36.6%</td>
</tr>
<tr>
<td>Some college</td>
<td>32.2%</td>
</tr>
<tr>
<td>College or more</td>
<td>31.2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subjective Health (M,SD)</th>
<th>2.40 (0.95)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1=excellent, 5=poor)</td>
<td></td>
</tr>
</tbody>
</table>

*Racial background is only available for the cases who completed SAQ questionnaire (N=6325 for P1 and N=1472 for P2).
## MIDUS 2

### Sample Flow Across Projects and Sociodemographics

#### SURVEY PROJECT
- **N=5555**
  - RDD=2746
  - Sibling=722
  - Twin=1484
  - Milwaukee=592
- **Completed Bio First**
- **N=634 63%**
- **DAILY PROJECT**
  - N=2022
    - RDD=1141
    - Sibling=185
    - Twin=516
    - Milwaukee=180
- **Eligibility Criteria:**
  - M1 Daily (Longitudinal)
  - M2 Interview + SAQ (New)
- **Response Rate:** 66.4%
  - Age (M,SD):
    - 33 to 49: 33.2%
    - 50 to 65: 42.9%
    - 66 to 85: 23.9%
  - Gender - Female: 57.2%
  - Education:
    - High school or less: 31.2%
    - Some college: 30.4%
    - College or more: 38.4%
  - Race - White: 84.1%
  - Marital Status - Married: 68.7%
  - Subjective Health (M,SD) (1=excellent, 5=poor): 2.44 (1.02)

#### COGNITIVE PROJECT
- **N=4512**
  - RDD=2279
  - Sibling=465
  - Twin=1264
  - Milwaukee=306
- **Eligibility Criteria:**
  - M2 Interview
- **Response Rate:**
  - RDD: 83%
  - Sibling: 96%
  - Twin: 85%
  - Milwaukee: 52%
  - Age (M,SD):
    - 33 to 49 (56.23, 12.20)
    - 50 to 65 (43.1%, 41.9%
    - 66 to 85 (42.5%, 36.5%
  - Gender - Female (55.1%
  - Education:
    - High school or less: 33.5%
    - Some college: 30.4%
    - College or more: 36.5%
  - Race - White: 85.6%
  - Marital Status - Married: 89.2%
  - Subjective Health (M,SD) (1=excellent, 5=poor): 2.46 (1.03)

#### DAILY PROJECT
- **N=2022**
  - RDD=1141
  - Sibling=185
  - Twin=516
  - Milwaukee=180
- **Completed Both**
  - N=1101
- **Eligibility Criteria:**
  - M1 Daily (Longitudinal)
  - M2 Interview + SAQ (New)
- **Response Rate:** 66.4%
  - Age (M,SD):
    - 33 to 49: (56.23, 12.20)
    - 50 to 65: 42.9%
    - 66 to 85: 23.9%
  - Gender - Female: 57.2%
  - Education:
    - High school or less: 31.2%
    - Some college: 30.4%
    - College or more: 38.4%
  - Race - White: 83.5%
  - Marital Status - Married: 68.7%
  - Subjective Health (M,SD) (1=excellent, 5=poor): 2.44 (1.02)

#### BIOMARKER PROJECT
- **N=1255**
  - RDD=666
  - Twin=388
  - Milwaukee=201
- **Eligibility Criteria:**
  - RDD or Twin Sample
  - M2 Interview + SAQ
- **Response Rate:** 41.8%
  - Age (M,SD):
    - 33 to 49: (54.52, 11.71)
    - 50 to 65: 37.8%
    - 66 to 85: 21.5%
  - Gender - Female: 56.8%
  - Education:
    - High school or less: 28.0%
    - Some college: 30.0%
    - College or more: 42.1%
  - Race - White: 76.1%
  - Marital Status - Married: 64.7%
  - Subjective Health (M,SD) (1=excellent, 5=poor): 2.41 (0.99)

#### NEUROSCIENCE PROJECT
- **N=331**
  - RDD=134
  - Twin=88
  - Milwaukee=109
- **Eligibility Criteria:**
  - M2 Interview + SAQ
  - Completed Bio at UW
- **Response Rate:** 76.3%
  - Age (M,SD):
    - 33 to 49: (52.99, 11.37)
    - 50 to 65: 43.1%
    - 66 to 85: 14.5%
  - Gender - Female: 55.4%
  - Education:
    - High school or less: 34.0%
    - Some college: 29.5%
    - College or more: 36.4%
  - Race - White: 64.2%
  - Marital Status - Married: 60.2%
  - Subjective Health (M,SD) (1=excellent, 5=poor): 2.42 (0.97)
MIDUS 3
Sample Flow Across Projects and Sociodemographics

SURVEY PROJECT
N=3683
(RDD=1732  Sibling=544  Twin=1018  Milwaukee=369)

Eligibility Criteria:
✓ M2 Participation

Response Rate:
- RDD: 74%
- Sibling: 84%
- Twin: 78%
- Milwaukee: 79%

Age (M,SD)
- 39 to 59: 40.3%
- 60 to 75: 43.7%
- 76 to 93: 16.0%

Gender - Female: 56.0%

Education:
- High school or less: 31.0%
- Some college: 30.1%
- College or more: 38.9%

Race - White: 80.5%

% Completing SAQ: 83%

Subjective Health (M,SD)
- (1=excellent, 5=poor):
  - 2.64 (1.05)

COGNITIVE PROJECT
N=3022
(RDD=1413  Sibling=468  Twin=812  Milwaukee=329)

Eligibility Criteria:
✓ M3 Interview

Response Rate:
- RDD: 81%
- Sibling: 86%
- Twin: 79%
- Milwaukee: 85%

Age (M,SD)
- 39 to 59: 64.13 (11.21)
- 60 to 75: 45.9%
- 76 to 93: 17.3%

Gender - Female: 54.7%

Education:
- High school or less: 27.9%
- Some college: 28.7%
- College or more: 43.4%

Race - White: 87.1%

% Completing SAQ: 83%

Subjective Health (M,SD)
- (1=excellent, 5=poor):
  - 2.95 (1.02)

DAILY PROJECT
Data collection in progress.

Eligibility Criteria:
✓ M2 Daily
✓ M3 Interview + SAQ

BIOMARKER PROJECT
Data collection in progress.

Eligibility Criteria:
✓ M2 Biomarker
✓ M3 Interview + SAQ

NEUROSCIENCE PROJECT
Data collection in progress.

Eligibility Criteria:
✓ M2 Neuroscience
✓ M3 Interview + SAQ
✓ M3 Bio at UW