Understanding Data Collection Across MIDUS Projects

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MIDUS is a complex longitudinal study involving wide-ranging data collection covering diverse disciplinary domains. This document provides an overview of the process of data collection, beginning with a description of eligibility for each wave of data collection, along with information about response rates. Then follows a visual distillation of sample flow across the MIDUS projects, separately for each wave. The project-specific information also includes eligibility requirements, response rates, and selected sociodemographic information (age, gender, education, marital status, subjective health). The above information is provided for each wave of the MIDUS Core sample (MIDUS 1, 2 and 3), as well as for the baseline of the MIDUS Refresher sample.

MIDUS 1 (Core)

The baseline MIDUS 1 (M1) sample was recruited in 1995-1996 using random-digit-dialing (RDD). Eligibility included the following: the participant had to be between the ages of 25 to 74, had to be English-speaking, non-institutionalized, and living in the co-terminus U.S. The response rate for the national RDD sample[1] (N = 4,244) was 70%. Note, only one other project (daily experience study) was included at MIDUS 1 (see visual information that follows).

Also recruited as part of MIDUS 1 were siblings (N = 950) of the core sample respondents (only siblings that had the same biological mother and father were considered eligible), plus a national sample of twins (N = 1,914) to facilitate research on genetic and environmental factors in health. Twin-pairs were recruited in a two-part sampling design. The first part involved screening a representative national sample of approximately 50,000 households for the presence of a twin. Then, the respondents who reported the presence of a twin in the family were asked whether it would be acceptable for the research team to contact the twins to solicit their participation in the survey.

MIDUS 2 (Core)

MIDUS 2 (M2) consisted of a follow-up assessment of M1 participants recruited in 2004-2005. Response rates for the various subsamples were as follows: RDD 70%, siblings 82%, twins 82%. To augment participation of African Americans, particularly in the MIDUS biomarker and neuroscience projects, M2 included recruitment of a new probability sample of African Americans (N = 592) from Milwaukee, WI. In addition to sample expansion, M2 included new data collection projects. Following completion of the survey, members of the sample were invited to complete a cognitive project (conducted by phone), with subsamples then invited to complete the daily project, the biomarker project, and the neuroscience project. Eligibility requirements and response rates across these projects are provided, along with sociodemographic information in the visual figure that follows.

[1] The RDD sample in this document included all the cases from subsample of national RDD and city oversample in the data file and field report.

MIDUS Refresher 1

Between the completion of M2 and initiation of M3, a new national sample known as the MIDUS Refresher 1 (MR1) sample (N = 3,577) was recruited in 2011-2014. It included U.S. adults that paralleled the age and gender distribution of the M1 baseline sample, along with recruitment of a new sample of African Americans from Milwaukee, WI (N = 508). The five-project data collection design for MR1 also paralleled with the projects that defined the M2 data collection. Information on eligibility criteria, response rates, and socio-demographics is included for each project in the tables below. The flow of data collection across projects also paralleled the progression followed at M2.

MIDUS 3 (Core)

The last figure shows information for MIDUS 3 (M3), the second longitudinal follow up of the MIDUS core sample which was recruited in 2013-2014. It also included the first longitudinal follow up of the Milwaukee sample. Response rates for the various subsamples were as follows: RDD 74%, siblings 84%, twins 78%, and Milwaukee 79%. The five-project data collection design for M3 paralleled the projects that defined the M2 and MR1 data collection. Information on eligibility criteria, response rates, and socio-demographics is included for each project. The flow of data collection across projects also paralleled the progression followed at M2 and MR1.

Other data collection not included in flow charts below

Retention Early Warning (REW) Project

At M3, after the completion of the survey project, there was an effort to reinstate participants who had dropped out of the study, known as the Retention Early Warning (REW) project. Such reinstatement was intended to improve representativeness of the sample as well as reduce problems of selective attrition. This project thus attempted to convert living cases who had dropped out of the MIDUS Survey at either M2 or M3 return to the study. REW data were collected via a CAPI (in-person) interview, a Self-Administered Questionnaire (SAQ), and the Brief Test of Adult Cognition via Telephone (BTACT). The CAPI data also included a set of anthropometric measures. Of previously attrited respondents, 651 MIDUS participants returned to complete the REW study. These cases are eligible for the next wave of data collection (MIDUS 4).

Genomic Project

Using the serum samples collected in Biomarker project, MIDUS added genomic measures of the participants consenting to genetic testing (genotyping). Such work included data from DNA (Polygenic Risk Score, Methylation Score) and RNA (Gene Expression). The proportion of Biomarker participants at M2, MR1 and M3 who provided tissue samples and consented to genotyping are as follows:

- MIDUS 2: 85% (n=1064/1255)
- MIDUS Refresher 1: 96% (n=825/863)
- MIDUS 3: 97% (n=723/747)

The plan going forward is to implement the same DNA and RNA extraction procedures for MIDUS Refresher 2 and MIDUS 4 data collection.

Summary points

Key points from the flow charts that follow:

- Within each wave of MIDUS, the multidisciplinary depth of data collection requires substantial time, with each project carried out over a period of years. The biomarker project is the most time and labor-intensive, given that each participant must complete a two-day visit, including overnight stay, to a biomarker data collection site. These lengthy visits account for the uniquely rich biomarker data collected in MIDUS.

- 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, majority of 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.

- 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. Thus, although data collected for some MIDUS projects are available for subsamples of the national sample (due to budgetary and temporal constraints), the scope of data available for cross-project analyses is extensive.

MIDUS 1 (Core)

Eligibility, Response Rates, and Sociodemographics for Survey and Daily Projects

SURVEY PROJECT
N=7108
(RDD=4244 Sibling=950 Twin=1914)

Eligibility Criteria: ✓ Aged 25-74 ✓ English speaking ✓ Non-institutionalized adults ✓ Living in the coterminous U.S. **Response Rate:** 70% **% Completing SAQ:** 89%	Age *(M,SD)* 25 to 39 40 to 59 60 to 75	46.38 (13.00) 35.0% 45.8% 19.2%
	Gender – Female	51.7%
	Education: High school or less Some college College or more	 38.6% 30.6% 34.7%
	Race – White	90.7%*
	Marital Status - Married	65.7%
	Subjective Health *(M,SD)* (1=excellent, 5=poor)	2.47 (0.99)

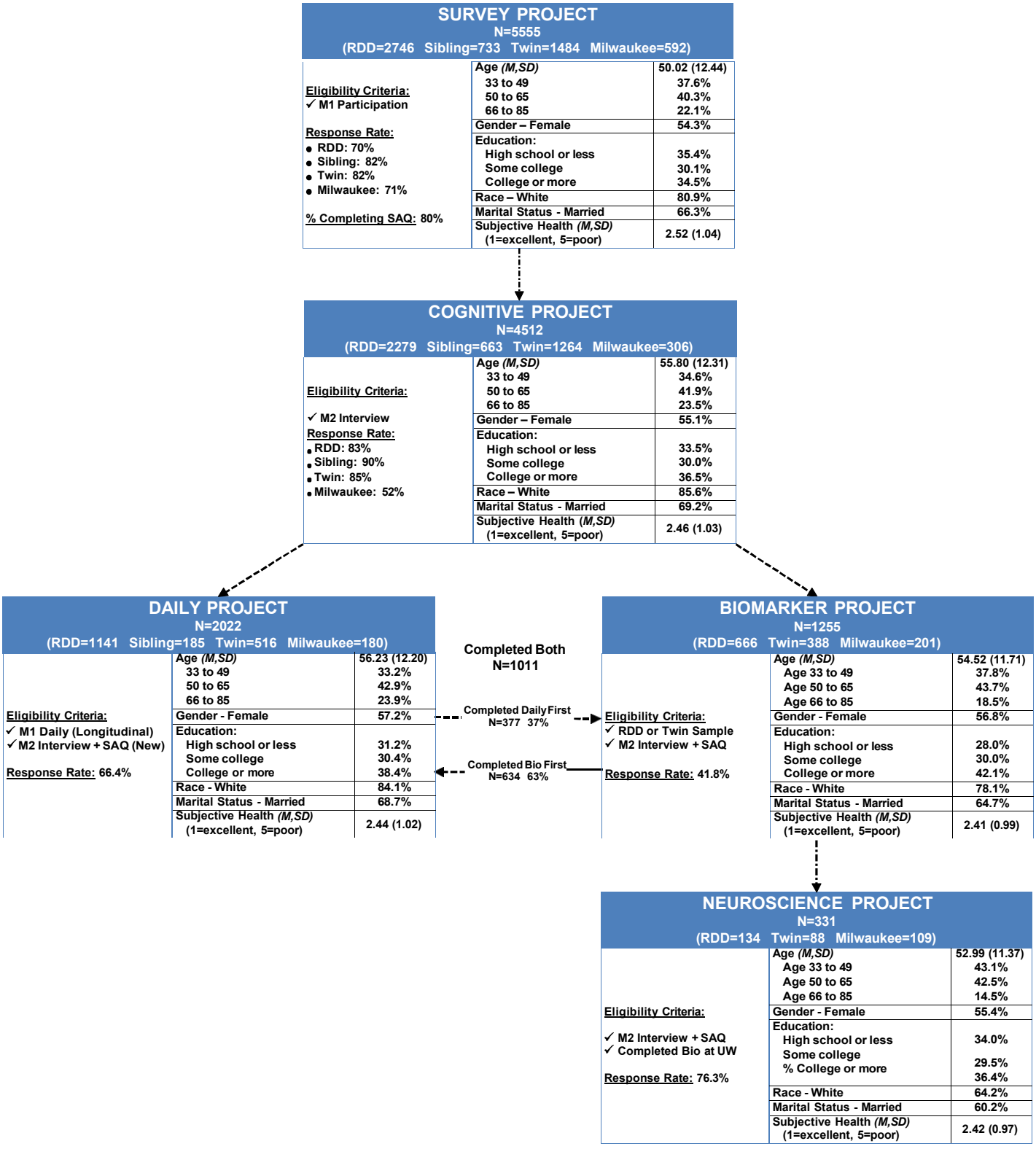
DAILY PROJECT
N=1476
(RDD=1009 Twin=467)

Eligibility Criteria: ✓ M1 Interview + SAQ **Response Rate:** 70.6%	Age *(M,SD)* 25 to 39 40 to 59 60 to 75	46.10 (12.82) 36.3% 45.4% 18.3%
	Gender – Female	53.6%
	Education: High school or less Some college College or more	 36.6% 32.2% 31.2%
	Race – White	91.2%*
	Marital Status - Married	68.8%
	Subjective Health *(M,SD)* (1=excellent, 5=poor)	2.40 (0.93)

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

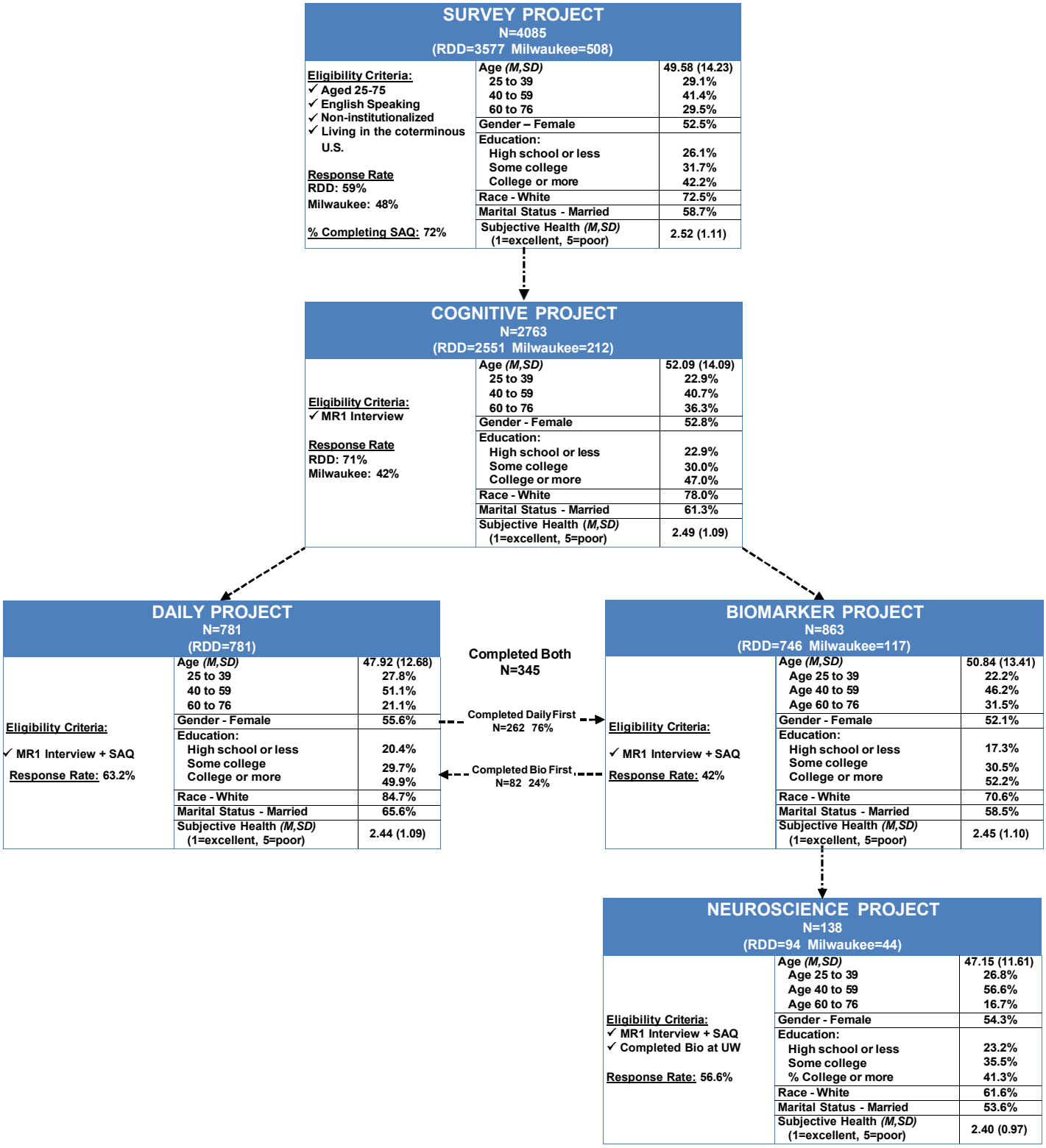
MIDUS 2 (Core)

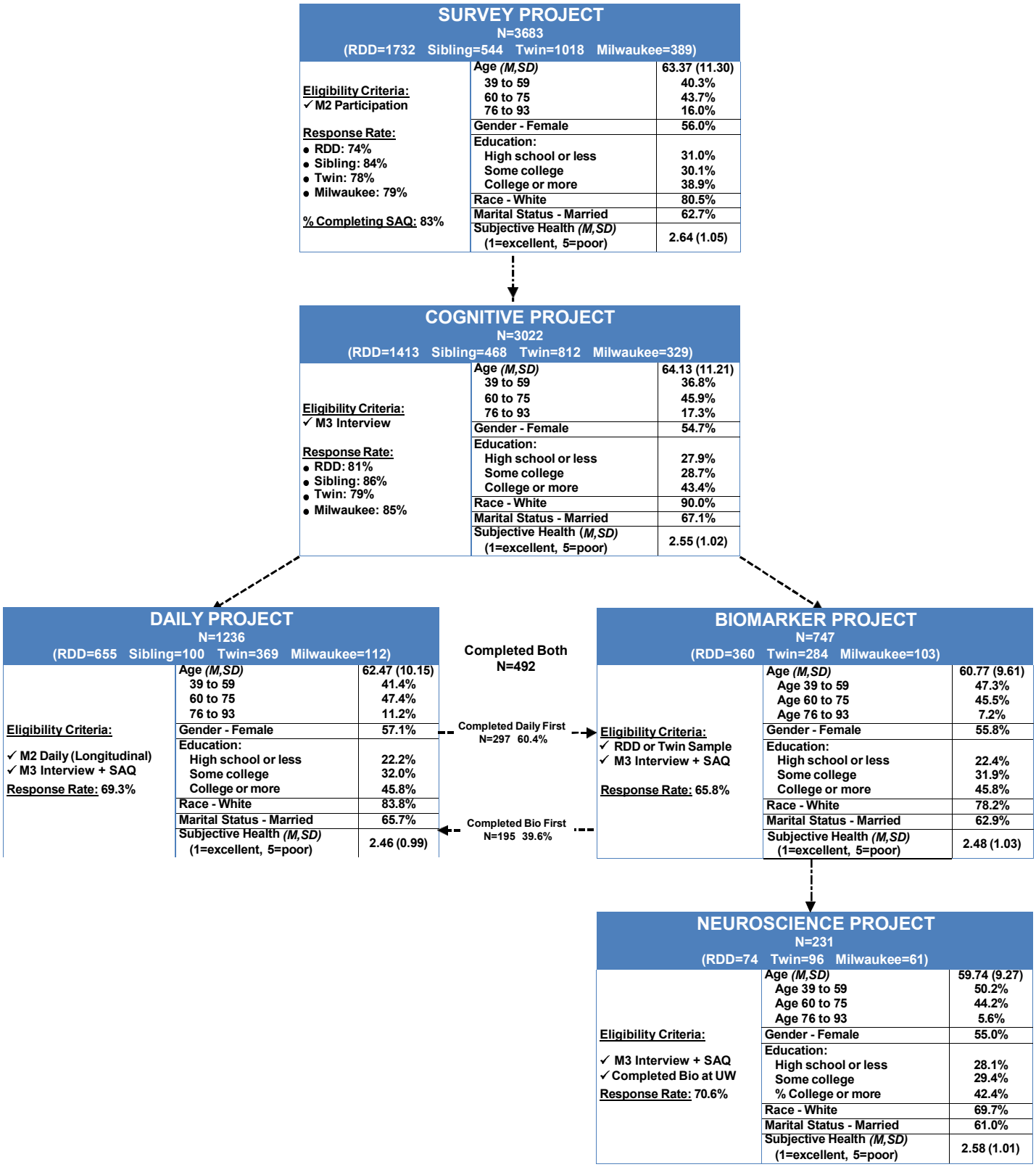
Eligibility, Response Rates, Sociodemographics and Participant Flow from Project to Project



MIDUS Refresher 1

Eligibility, Response Rates, Sociodemographics and Participant Flow from Project to Project



MIDUS 3 (Core)

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