README file for MIDJA Biomarker Data
(October 22, 2018)

***   It is important to read through this document
prior to using the data and documentation.   ***

The purpose of this memo is to provide basic information about the MIDJA 1 Biomarker data and documentation that are publicly available via ICPSR.

MIDJA is a sister study to MIDUS, data and documentation for both longitudinal projects are available through:

1. The public archive at ICPSR: https://www.icpsr.umich.edu/icpsrweb/ICPSR/series/203

2. The MIDUS Colectica Portal (http://midus.colectica.org/) which houses interactive codebooks for all the publicly available MIDUS and MIDJA projects. The Portal also includes search and explore functions, links to documentation, and a custom download function.

Decoding Documentation File Names
The documentation files described below are available as PDF files through the Colectica Portal and at ICPSR. The Portal supports the naming system below, but unfortunately, the file management system in place at ICPSR renames the files into the following format:

Documentation.pdf (*shortfilename*)

The *shortfilename* is based on the file names of the documents we submit (see below), thus, the name of this readme file at ICPSR is something like "Documentation.pdf (readme)". To find documents of interest on the ICPSR site it is recommended that you review the following descriptions and then look for key words from these file names in the parenthetical *shortfilenames*. After downloading the files it may be helpful to rename them according to the conventions below for future reference.

This documentation has multiple sections describing the available data files and the structure of those files as well as available documentation (including guidance for merging the MIDJA and MIDUS data files). The final section provides an overview of updates/new additions included in the updated MIDJA 1 Biomarker data and documentation.

A. What Data Files Are Available?

The MIDJA Biomarker aggregate dataset:
> *MIDJA 1_Biomarker__Public_N382_20180816.sav*

An additional dataset accompanies this release. Please note this is a *stacked* file. That is there is one row per medication reported, thus the 'N' indicates the total number of medications, not the number cases:
> *MIDJA1_MEDICATION_STACKED_PUBLIC_N=793_01_08-03-2016.sav*

B. What is the Structure of the MIDJA Survey Dataset?

The file is a SPSS (ver. 23) dataset comprised of survey data (self-administered questionnaire), as well as physical exam, physiological, and medication data. The dataset has been initially cleaned, meaning that value ranges and skip patterns have been checked, and data entry errors corrected.

Variables have been named according to the MIDJA Short Variable Name (SVN) conventions. All variables include labels to aide interpretation. Value labels have been applied where appropriate. Discrete missing values have also been defined and the following labels applied: DON'T KNOW, REFUSED/MISSING, and INAPP. The following documents provide additional information about the data:

> *MIDJA Naming and Coding Conventions for Variables_5-5-11:* Describes conventions for naming and coding variables.

> *MIDJA Biomarker DDI Codebook _20181022*: provides additional details about each variable (e.g. question text, notes, frequency distributions, etc.). The codebook was created according to DDI (Data Documentation Initiative) standards for linking data and metadata.

Details about the MIDJA1 stacked medication data can be found here:

> *MIDUS-MIDJA Biomarker Medication Documentation 6-17-16* – provides details about details protocols for linking MIDUS and MIDJA medication data to the Lexicomp® Lexi-Data database that contains therapeutic and pharmacologic class codes. It also includes details about coding text data on reasons for taking medications as well construction of related administrative and other variables.

> *MIDJA1_STACKED_MEDICATION_DDI_CODEBOOK_08-01-2016* – provides additional details about each variable (e.g. question text, notes, frequency distributions, etc.). The codebook was created according to DDI (Data Documentation Initiative) standards for linking data and metadata

C. Documentation Files and Instruments

This section provides an overview of the Documentation files and Instruments that are linked to the MIDJA 1 Biomarker data.

General Documents:

> *MIDJA Study Acknowledgement:* This document includes sample text for reporting details about funding sources and grant numbers. Please include this information in all publications and presentations using data from the MIDJA study.

> *MIDJA Biomarker Study Summary:* Project overview contains a description of the

sample, and the data collection protocol along with information about sample selection and recruitment, and response rates.

Clinic Visit Documentation: Description of data collection protocols implemented during the clinic visit as well as details about subsequent data processing, including blood assay protocols. This document also includes details about collection of medication data and some information about coding reasons for taking medications and linkage of medication names to therapeutic and pharmacologic classifications. Additional details about that linkage can be found in:

MIDUS-MIDJA Biomarker Medication Documentation 6-17-16 (NEW)

Instruments:
The MIDJA Biomarker survey data were collected via a self-administered questionnaire (SAQ). The 36 page SAQ contains measures of:
- Health Conditions (symptom and condition checklist, cancer history)
- Major Health Events (head, joint, motor vehicle, and other major injury/illness)
- Pittsburgh Sleep Questionnaire
- Chronic Pain Assessment
- Nutrition Assessment (consumption of dairy products, caffeine, water, fruits, vegetables, whole grain, protein (meat, non-meat), fast food)
- Major Life Events (marital status change, death of family/friends, life event checklist, other events)
- Psychosocial Measures (Spielberger Trait Anger, Trait Anxiety, Social Obligation, Job Content etc)

Two versions of the SAQ are available:
    MIDJA Biomarker SAQ – Japanese
    MIDJA Biomarker SAQ – English

D. Additional Information
Constructed scales. Scale scores have been created for the psychosocial constructs assessed in the Self-Administered Questionnaire. In addition, other composite variables have been constructed (e.g. counts of conditions, use of prescription medications). These variables can be found at following the variables used to create the scale score or composite. Details about creating these variables can be found in:
    MIDJA Biomarker Documentation of Scales and Constructed Variables

Other Issues. Most of the MIDJA items were taken from the MIDUS study. Some of these items were modified to accommodate cultural differences. The remaining items are unique to MIDJA. Information about these items and issues to be aware of in using these data (e.g. recoding, response or question text modifications) can be found in:
    MIDJA Biomarker Data File Notes

E. Merging the MIDJA and MIDUS data

The MIDJA study was designed to facilitate comparisons of health and wellbeing among a Japan sample with health and wellbeing among a U.S. sample (i.e. MIDUS). The following documents can be used to identify variables of interest, create a merged data MIDJA-MIDUS dataset, and reformat variables as needed.

Guide to Merging the MIDJA Biomarker and MIDUS Data: this file describes resources that can be used to identify variables of interest as well as tools for renaming/labeling variables into common formats. It also provides an overview of steps to take when merging data from the two studies.

Roadmap MIDJA to MIDUS Biomarker (SAQ & Clinic): this tabular file provides side-by- side comparisons of MIDJA and MIDUS variables. There are 3 sections, one each for the SAQ data, Clinic & Lab data, and Medication data. In general these sections provide details about question numbers, variable names and question text (in Japanese and English respectively) to help users identify variables of interest in the two data sets.

MIDUS data and documentation are publicly available at ICPSR (Inter-university Consortium for Political and Social Research) in the National Archive of Computerized Data on Aging (NACDA) at:
http://www.icpsr.umich.edu/icpsrweb/NACDA/studies?archive=NACDA&q=MIDUS

F. Data and Documentation Updates and Additions

Significant modifications have been made to the aggregated data file. In some instances resources became available to support additional processing of extant raw data after the initial MIDJA 1 Biomarker data release in 2013. In other instances, the changes are made to optimize consistency in data availability and formatting between the MIDUS 2, MIDUS Refresher, and MIDJA Biomarker data. The most significant changes include the addition of new medication variables. These are highlighted below with additional details, unless otherwise noted, included in corresponding documentation files described above. Other changes include correcting typos in variable and value labels, as well as some formatting changes, most notably time variables, are also highlighted below. Unless otherwise noted, all of the new variables correspond to variables that are also included in the MIDJA Biomarker data and/or MIDUS Biomarker data files.

New Variables:

1. **Medication Data**. As noted above the medication data has been significantly enhanced via linkage to the Multum Lexicomp® Lexi-Data database. In addition the protocol for coding text data regarding reasons for taking medications has been significantly expanded to support coding all responses. Both of these changes in data processing allow for more comprehensive coding of therapeutic and pharmacologic class and reasons for taking medications than was possible under the earlier methodologies. ***Thus, the new data described below replaces the earlier data about medications and reasons for taking them.***

   a. **NEW** - The following new sets of variables have been added to the aggregated data file as a result of the Lexicomp linkage (see Documentation of MIDUS and MIDJA Medications for details). Note, the '_' is a placeholder for P or Q indicating medication type (Prescription or Quasi, respectively):

      i. Drug IDs and Generic Names – where # indicates the Medication number (i.e. location in the list of medications of a given type).
- 1. J2M_MID# - DrugID from the Lexi-Data database
- 2. J2M_GN# - Generic Drug Name associated with the DrugID

      ii. Therapeutic Class Codes where # indicates the class code
- 1. J2MTC# - Lexi-Data major therapeutic class codes
- 2. J2MTC#S# - Lexi-Data Sub-class codes for major therapeutic classes
- 3. J2MTC#S#_1 – Lexi-Data Sub-sub-class codes for major therapeutic classes

      iii. Pharmacologic Class Codes – where # indicates the class code
- 1. J2MPC# - Lexi-Data pharmacologic class codes

      iv. Additional related dummy and count codes related to the Therapeutic and Pharmacologic class codes have also been created.

      v. Allergies – the following new variable is now available regarding Medication Allergies Reactions reported by participants (where # refers to the medication number) :
- 1. J2MLRC# - Codes representing the allergic reaction to the medication (see documentation for details about coding)

b. **NEW** - Protocols for coding reasons for taking medications were modified such that the reasons reported are assigned a code from one of two mutually exclusive coding systems (see Clinic Documentation and MIDUS-MIDJA Medication documentation for details).

      i. J2M_ICD9M# -- 3 digit numeric codes representing major categories in the International Classification of Diseases, 9th Revision.

      ii. J2M_MDC# – 5 character alphanumeric variables representing a set of codes used to categorize reasons for taking a medication that could not be classified into an ICD-9 category

c. **REPLACED** – variables having the following general formats were removed from the data set and replaced by the above more comprehensive variables.

      i. *J2M(type)C#* variables – these variables contain Medication Codes based on the American Hospital Formulary System (AHFS) Pharmacologic-Therapeutic classification system.
- 1. Variables containing this information had the format where 'type' refers to the medication type (P=prescription, Q=Quasi) and '#' refers to the medication number (i.e. prescription medication 1, 2, etc.)

      ii. *J2M_D* and *J2M__C* variables – these represent Yes/No and Count variables constructed to indicate whether the participant was taking medications of several types.

      iii. *J2M(type)DC#* variables – these variables contained diagnosis codes based on a less rigorous protocol for coding text data about reasons for taking medications using the International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM).

2. Blood Assay Data: there is one update to the extant assay data -
   a. CRP (C-Reactive Protein) – samples falling below the assay range were re-assayed using a new high-sensitivity assay kit. Thus, those values have been updated.

3. MIDJA 1 Biomarker Documentation of Scales and Composite Variables – this document has been updated to include details about the following new scales and composite variables:
   a. CES-D – new subscales have been added
   b. Medication Use – includes updated text about medication summary variables related to changes described above

4. Variable label, formatting changes: the following changes were also made as appropriate
   a. Variable labels –
      i. Typographic errors were corrected
      ii. Text that had been previously abbreviated due to software limitations has been expanded
   b. Value labels –
      i. All value labels are now capitalized
      ii. Extra characters have been removed as appropriate
      iii. DON'T KNOW labels are now consistent

5. Time variables- MIDUS conventions for formatting time variables have been modified, thus the MIDJA variables were updated to be consistent with the new format. See the MIDJA Biomarker DataFile Notes for details.