The BIOCARD Study

Biomarkers of Cognitive Decline Among Normal Individuals

Medications
Limited Dataset

Glossary of Terms

Term	Description
Allowable Codes	codes (and their meanings) allowed to be values for that variable
Audit Findings	error rates based on BIOCARD or NIH phase audits error rates are calculated as number of errors / total number of variables examined
Baseline visit	date admitted to NIH phase of BIOCARD study *[Note: some data may have been collected prior to this date]*
Collection	when the variable information was collected (i.e., Baseline, Follow-up)
Comments	further information about the variable not covered in the above fields
Data Type	numeric or character *[Note: Dates are numeric data]* numeric or character classifications are strictly related to how the data are stored and not how the data should be analyzed
JHU phase	the study phase at JHU from 2009 - present
Missing OK If	instances (such as skips) or reasons why a blank or missing value is acceptable
NA	not applicable for this variable
NIH / NIH phase	the study phase that was performed at the NIH from 1995-2005
Question Text	the question as it appears on the NACC or BIOCARD data collection forms
Short Description	a short explanation of what the variable means
Source	the name of the NACC form, BIOCARD form, or NIH dataset containing the variable information (or "DERIVED" if the variable was derived) and the variable question number located on the form or in the dataset, if applicable
Unknown Code	the codes for the "unknown", "don't know", or missing values for the variable
Variable Name	the name of the variable in the provided dataset *[Note: Variables will follow the NACC naming scheme as closely as possible]*

Acronyms and Definitions

AD	Alzheimer's Disease
CDR	Clinical Dementia Rating
CERAD	Consortium to Establish a Registry for Alzheimer's Disease
CNS	Central Nervous System
CSF	Cerebrospinal Fluid
CVD	Cardiovascular Disease
CVLT	California Verbal Learning Test
FAQ	Functional Assessment Questionnaire
FTD	Frontotemporal Degenerations
GDS	Geriatric Depression Scale
JHU	The Johns Hopkins University
MCI	Mild Cognitive Impairment
MMSE	Mini-Mental State Examination
NACC	National Alzheimer's Coordinating Center
NIA	National Institute on Aging
NINDS	National Institute of Neurological Disorders and Stroke
NPI-Q	Neuropsychiatric Inventory Questionnaire
UPDRS	Unified Parkinson's Disease Rating Scale
WAIS	Wechsler Adult Intelligence Scale
WMS	Wechsler Memory Scale

Medications Limited Dataset Characteristics

Number of variables:9

Order of variables:

1)	JHUANONID	*Participant ID Anonymized by JHU*
2)	VISITNO	*Chronological visit number*
3)	MOFROMBL	*Months since baseline visit*
4)	ONMED	*Participant Medication Status*
5)	MEDCODE	*NACC Medication Code*
6)	GENERIC	*GENERIC Medication Name*
7)	AHFS1	*AHFS code(s) 1*
8)	AHFS2	*AHFS code(s) 2*
9)	AHFS3	*AHFS code(s) 3*

1)	Variable Name	**JHUANONID**
	Short Description	Participant ID Anonymized by JHU
	Source	NA
	Question Text	NA
	Time of Collection	Baseline
	Data Type	Character
	Allowable Codes	JHU + 6 numbers
	Missing OK If	NA
	Audit Findings	NA
	Comments	None

2)	Variable Name	**VISITNO**
	Short Description	Chronological visit number
	Source	NA
	Question Text	NA
	Time of Collection	Baseline and Follow-up
	Data Type	Numeric
	Allowable Codes	NIH visit: Integers and decimals from 0 to 10, where a visit 0 represents a visit that occurred prior to the established baseline date JHU visit: 101, 102, 103, 104, ….. 1XX where XX is from 01 to 99 Visit number 999 used for all participants that have died before a 101 visit for forms: A4, A5, A5a, B1, B2, B3, B3a, B8, B9, and D1. For participants that are alive, an A5 may have a 999 visit number to capture medical data acquired during the NIH phase of the study.
	Missing OK If	NA
	Audit Findings	NA
	Comments	None

3)	Variable Name	**MOFROMBL**
	Short Description	Months since baseline visit
	Source	DERIVED
	Question Text	NA
	Time of Collection	Follow-up
	Data Type	Numeric
	Allowable Codes	Min = 0 Max = TBD
	Missing OK If	NA
	Audit Findings	NA
	Comments	Derived variable. [JHU phase] Calculated as months between the baseline start date and the V1 VISITDATE (formerly V11_Date) for follow-up visits. [NIH phase] Calculated as months between the baseline start date and the recorded visit date.
4)	Variable Name	**NOMED**
	Short Description	Participant Medication Status
	Source	A4 #1
	Question Text	ONMED
	Time of Collection	Baseline and Follow-up
	Data Type	Numeric
	Allowable Codes	0 = Subject is not currently taking any medications 1 = Subject is currently taking medications
	Missing OK If	NA
	Audit Findings	NA
	Comments	None

5)	Variable Name	**MEDCODE**
	Short Description	Medication Code
	Source	A4 #3a-3y & #5a-5j
	Question Text	Medication
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	NIH visits allowable codes: (a, c, d, e, f, n, o, p, r, s, v, vs, ve, vm, or, x). JHU visits Alpha-numeric Codes: ("d" with 5 numbers, or "s" with 5 numbers)
	Missing OK If	NA
	Audit Findings	NA
	Comments	None

6)	Variable Name	**GENERIC**
	Short Description	Drug Generic Names
	Source	A4 #3a-3y & #5a-5j
	Question Text	Medication Name
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	Text
	Missing OK If	NA
	Audit Findings	NA
	Comments	None

7)	Variable Name	**AHFS1**
	Short Description	American Hospital Formulary Service drug coding schema*
	Source	Please see below
	Question Text	AHFS code(s) 1
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	Please see below
	Missing OK If	NA
	Audit Findings	NA
	Comments	None

8)	Variable Name	**AHFS2**
	Short Description	American Hospital Formulary Service drug coding schema*
	Source	Please see below
	Question Text	AHFS code(s) 2
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	Please see below
	Missing OK If	NA
	Audit Findings	NA
	Comments	None

9) Variable Name **AHFS3**

Short Description	American Hospital Formulary Service drug coding schema*
Source	Please see below
Question Text	AHFS code(s) 3
Time of Collection	Baseline and Follow-up
Data Type	Char
Allowable Codes	Please see below
Missing OK If	NA
Audit Findings	NA
Comments	None

* For more information on the American Hospital Formulary Service (AHFS) drug coding schema, please refer to

http://www.ahfsdruginformation.com/ahfs-pharmacologic-therapeutic-classification/#1455225455483-38135b76-9975

The data dictionary that accompanies the medication datafile indicates that the medications in this file are coded according to the AHFS drug coding schema, which systematically classifies drugs using a long-established coding system.

Each medication has up to three possible AHFS codes – AHFS1, AHFS2, and AHFS3.

a. The majority of medications are categorized according to their primary active ingredient, as shown by the code under the AHFS1 variable.

b. A smaller number of medications are coded with multiple AHFS codes (as indicated by codes under the AHFS2/AHFS3 variables, in addition to AHFS1). These are drugs that are combination drugs. (For example, pseudoephedrine/dextromethorphan – a common cold/cough medicine, would have codes under both AHFS1 and AHFS2).

Each medication code includes up to 4 ‘tiers’ of detail, separated by a colon (e.g., 24:04.04.16 = Cardiovascular Drugs » Cardiac Drugs » Antiarrhythmic Agents » Class II Antiarrhythmics).

Please note, a subject might have multiple rows for a given visit date.

The categories included in Tier 1 are shown on page 8 of the data dictionary. Due to the fact that the AHFS coding scheme is copyrighted, information about Tiers 2-4 will need to be accessed through an institutional on-line library.

The AHFS schema uses the following first tier classification system.

To this schema, BIOCARD has added 95:00 to designate reported treatments not in the AHFS codex (including naturalistic, homeopathic, or dietary compounds).

4:00	Anti-histamine drugs
8:00	Anti-Infective drugs
10:00	Antineoplastic drugs
12:00	Autonomic drugs
16:00	Blood derivatives
20:00	Blood formation, coagulation, and thrombosis
24:00	Cardiovascular drugs
28:00	Central nervous system agents
36:00	Diagnostic agents
40:00	Electrolyte, caloric, and water balance
44:00	Enzymes
48:00	Respiratory tract agents
52:00	Eye, ear, nose, and throat preparations (EENT)
56:00	Gastrointestinal drugs
60:00	Gold compounds
64:00	Heavy metal antagonists
68:00	Hormones and synthetic substitutes
72:00	Local anesthetics
76:00	Oxytocis
80:00	Antitoxins, immune globulins, toxoids, and vaccines
84:00	Skin and mucous membrane agents (topical)
86:00	Smooth muscle relaxants
88:00	Vitamins
92:00	Miscellaneous therapeutic agents