

Coding Manual of Curated Gen 1 (NP) dataset

Note:

1. This curated dataset contains information of Gen I participants.
2. There are 5209 unique FHS participants (Gen I) within this dataset, with a total of 1324 variables
3. Variables are generally grouped based on their origins (i.e., primary FHS dataset)
4. The format of the curated dataset is of wide format, with distinct variable names that allow users to tell the difference for repeated measurements of data of similar nature.
5. For protocol descriptions and annotated forms of the primary datasets, refer to the respective documents of the individual source datasets.
6. Refer to [Appendix](#) for FHS core exam timeline (all cohorts)

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Demographics

IDTYPE

Variable name: idtype

Description: Framingham Heart Study cohort identifier

Code or Value

Description

0	Gen 1
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ID

Variable name: id

Description: Framingham Heart Study participant identifier within cohort

IDTYPE and ID must be used together to form a unique study participant identification number or use variable “framid” instead

Code or Value

Description

0 – 9999	Range of values
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Note: To preserve confidentiality, the exact range for the ID is not reflected in the coding manual.

FRAMID

Variable name: Framid

Description: Framingham ID assigned to each participant

Code or Value

Description

00001 – 09999	Gen 1
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Note: To preserve confidentiality, the exact range for the ID is not reflected in the coding manual.

SEX

Variable name: sex

Description: Gender

Code or Value

Description

1	Male
2	Female

Demographics

AGE_CORE1 - AGE_CORE32

Variable name: Age_core1 - Age_core32

Description: Age at exam 1 - exam 32

Code or Value	Description
28 - 106	Range of value
.	Unknown

RACE_CODE

Variable name: RACE_CODE

Description: RACE and ETHNICITY - Summary code string from combining primary codes given at different exams (Character variable)

Information extracted from “vr_raceall_2008_a_0712”

Code or Value	Description
W	White
B	Black
H	Hispanic or Latino
E	Not Hispanic or Latino
A	Asian
P	Native Hawaiian or Pacific Islander
N	American Indian or Alaskan Native
X	Asian Indian or Pacific Islander
R	Prefer not to answer
O	Other
.	Unknown

Note: RACE_CODE is constructed using primary codes W, B, H etc.

Race at different time points (exams) were combined to form RACE_CODE to indicate all races reported by participant over time.

Example1: RACE_CODE = 'EW' participant reported 'Not Hispanic or Latino' (H701) and 'White' (H702).

Example2: RACE_CODE = 'HH' participant reported 'Hispanic or Latino' (RACEATOMNI1) and 'Hispanic or Latino' (H700).

Example3: RACE_CODE = 'BEB' participant reported 'Black' (RACEATOMNI1), 'Not Hispanic or Latino' (H701) and 'Black' (H703).

Example4: RACE_CODE = 'ER' participant reported 'Not Hispanic or Latino' (H701) and 'Prefer not to answer' (H707).

This is a standardized variable used across all FHS cohorts. Given that such question was not asked for Gen 1 cohort, please assume the variable “Race_code” to be “W” for all Gen 1 participants.

Anthropometric measurements

HEIGHT_CORE1 - HEIGHT_CORE32

Variable name: Height_core1 - Height_core32

Description: Height at exam 1 - exam 32

Unit: Inches, to next lower 1/4

Code or Value	Description
50.25 – 77	Range of value
.	Unknown

WEIGHT_CORE1 - WEIGHT_CORE32

Variable name: Weight_core1 - Weight_core32

Description: Weight at exam 1 - exam 32

Unit: Pounds, to nearest

Code or Value	Description
60 – 327	Range of value
.	Unknown

BMI_CORE1 - BMI_CORE32

Variable name: BMI_core1 - BMI_core32

Description: Body mass index at exam 1 - exam32 (rounded to two decimals)

Unit: kg/m²

Code or Value	Description
12.32 – 57.63	Range of value
.	Unknown

Hip and waist circumferences were only available from core exam 4 onwards

HIP_CORE19 - HIP_CORE23

Variable name: Hip_core19 - Hip_core23

Description: Hip girth at exam 19 - exam 23

Code or Value	Description
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25.5 – 64	Range of value
.	Unknown

WAIST_CORE4 - WAIST_CORE23

Variable name: Waist_core4 - Waist_core23

Description: Waist girth at exam 4 - exam 23

Unit: Inches, to next lower 1/4

Code or Value	Description
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19 – 72	Range of value
.	Unknown

Note: There is no information for core exams 6 – 18

Cardiovascular related measurements

SBP_CORE1 - SBP_CORE32

Variable name: SBP_core1 - SBP_core32

Description: Systolic blood pressure at exam 1 - exam 32

Unit: mmHg

Code or Value	Description
71 – 295	Range of value
.	Unknown

71 – 295	Range of value
.	Unknown

DBP_CORE1 - DBP_CORE32

Variable name: DBP_core1 - DBP_core32

Description: Diastolic blood pressure at exam 1 - exam 32

Unit: mmHg

Code or Value	Description
20 – 163	Range of value
.	Unknown

20 – 163	Range of value
.	Unknown

HRX_CORE4 - HRX_CORE32

Variable name: HRX_core1 - HRX_core32

Description: Treated for hypertension at exam 1 - exam 32

Code or Value	Description
0	No
1	Yes
.	Unknown

0	No
1	Yes
.	Unknown

DLVH_CORE1 - DLVH_CORE32 (newly added)

Variable name: DLVH_core1 - DLVH_core32

Description: Definite left ventricular hypertrophy at exam 1 - exam 32

Code or Value	Description
0	No
1	Yes
.	Unknown

0	No
1	Yes
.	Unknown

Smoking

SMOKING_CORE1 - SMOKING_CORE32

Variable name: Smoking_core1 - Smoking_core32

Description: Current smoking status at exam 1

Code or Value Description

0	Not a current smoker
1	Current Smoker
.	Unknown

Note: There is no information for core exams 6 and 16

CPD_CORE1 - CPD_CORE32

Variable name: CPD_core1 - CPD_core32

Description: Cigarettes per day at exam 1 - exam 32

Code or Value Description

0 – 90	Range of value
.	Unknown
.	Unknown

Note: There is no information for core exams 6 and 16

BG_CORE1 - BG_CORE28

Variable name: BG_core1 - BG_core28

Description: Random blood glucose at exam 1 - exam 28

Unit: mg/dL

Code or Value	Description
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60 – 390	Range of value
.	Unknown

Note: There is no information for core exams 5, 7, 11, 12, 24 and 25

DMRX_CORE1 - DMRX_CORE32

Variable name: DMRX_core1 - DMRX_core32

Description: Treated for diabetes at exam 1 - exam 32

Code or Value	Description
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0	No
1	Yes
.	Unknown

Cholesterol related measurements

TC_CORE1 - TC_CORE28

Variable name: TC_core1 - TC_core28

Description: Total cholesterol at exam 1 - exam 28

Unit: mg/dL

Code or Value	Description
69 – 1124	Range of value
.	Unknown

Note: There is no information for core exams 9, 10, 11, 12, 16, 17, 18, 19 and 21

TRIGLYCERIDES_CORE7 - TRIGLYCERIDES_CORE28

Variable name: Triglycerides_core7 - Triglycerides_core28

Description: Triglycerides at exam 1 - exam 28

Unit: mg/dL

Code or Value	Description
27 – 2830	Range of value
.	Unknown

Note: There is no information for core exams 9 – 23

CALC_LDL_CORE24 - CALC_LDL_CORE28

Variable name: Calc_LDL_core24 - Calc_LDL_core28

Description: Calculated LDL-Cholesterol at exam 24 - exam 28

Unit: mg/dL

Code or Value	Description
15.6 – 290.8	Range of value
.	Unknown

HDL_CORE15 - HDL_CORE28

Variable name: HDL_core15 - HDL_core28

Description: HDL-Cholesterol at exam 15 - exam 28

Unit: mg/dL

Code or Value	Description
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Cholesterol related measurements

15 – 158	Range of value
.	Unknown

Note: There is no information for core exams 16, 17, 18, 19 and 21

LIPRX_CORE6 - LIPRX_CORE32

Variable name: LIPRX_core6 - LIPRX_core32
Description: Treated for lipids at exam 6 - exam 32

Code or Value	Description
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0	No
1	Yes
.	Unknown

CREATININE_CORE14 - CREATININE_CORE28

Variable name: Creatinine_core14 - Creatinine_core28

Description: Serum Creatinine at exam 14 - exam 28

Code or Value	Description
0.3 – 11	Range of value
.	Unknown

Note: There is no information for core exams 16, 17, 18, 19, 21, 22 and 23

This coding manual includes variables for the neuropsychological assessments for each participant. The naming system is similar for the variables of the remaining neuropsychological assessments.

EXAMDATE1 - EXAMDATE13

Variable name: examdate1 - examdate13
Description: Date of NP exam 1 to exam 13 (MMDDYYYY)

Code or Value **Description**

1982 – 2018	Range of value
.	Unknown

Note: Date includes month, day and year, however coding manual displays only year to preserve confidentiality.

AGE1 - AGE13

Variable name: age1 - age13
Description: Age of participant at NP exam 1 - exam 13

Code or Value **Description**

63 – 104	Range of value
.	Unknown

BATTERY1 - BATTERY13

Variable name: battery1 - battery13
Description: Form of the battery used for NP exam 1 - exam 13

Code or Value **Description**

1	Short form
2	Long form
.	Unknown

MARITAL1 - MARITAL13

Variable name: marital1 - marital13
Description: Current marital status, NP exam 1 - exam 13

Code or Value **Description**

1	Single
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Neuropsychological assessment

2	Married
3	Widowed
4	Divorced
5	Separated
6	Other
.	Unknown

HANDEDNESS1 - HANDEDNESS13

Variable name: handedness1 - handedness13

Description: Subject's handedness, NP exam 1 - exam 13 (self-reporting)

Code or Value	Description
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1	Right
2	Left
3	Ambidextrous
.	Unknown

EMPLOYMENT1 - EMPLOYMENT13

Variable name: employment1 - employment13

Description: Employment status at NP exam 1 - exam 13

Code or Value	Description
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0	Works full time
1	Works part-time
2	Not working due to disability
3	Retired, no longer works
4	Unemployed (expects to return to work)
5	Never worked for pay outside home
6	Volunteer
7	Other
10	Full-time student
11	Homemaker, expects to return to work
.	Unknown

EDUCATION_B11 - EDUCATION_B113

Neuropsychological assessment

Variable name: Education_b11 - Education_b113
Description: Highest Education Level Completed (Collected from NP battery1), NP exam 1 - exam 13

Code or Value	Description
0	None
1	4th grade or less
2	5th, 6th, or 7th grades
3	Grade school graduate; no high school
4	High school, did not graduate
5	High school diploma
6	College, did not graduate
7	College graduate
8	Postgraduate school
10	High school and business college, nursing school, music school, or art school only
.	Unknown

EDUCATION_B21 - EDUCATION_B213

Variable name: Education_b21 - Education_b213
Description: Highest Education Level Completed (Collected from NP battery2), NP exam 1 - exam 13

Code or Value	Description
0	None
1	4th grade or less
2	5th, 6th, or 7th grades
3	Grade school graduate; no high school
4	High school, did not graduate
5	High school diploma
6	GED
7	Some college course-work for credit (no certificate or degree)

Neuropsychological assessment

8	Junior college – earned certificate or degree (e.g., AD)
9	Business college, nursing school, music school, art school
10	Technical School (post-HS) – earned certificate
11	Four Year College, partial
12	Four Year College, graduate
13	Graduate School, partial (no Masters degree)
14	Graduate School (Masters)
15	Graduate School (Doctorate)
.	Unknown

EDUCG1 - EDUCG13

Variable name: educg1 - educg13

Description: Education group (derived variable), NP exam 1 - exam 13

Code or Value

Description

0	High school did not graduate
1	High school graduate
2	Some college
3	College graduate
.	Unknown

OCCUP_B11 - OCCUP_B113

Variable name: occup_b11 - occup_b113

Description: Occupation from NP battery1, NP exam 1 - exam 13

Code or Value

Description

1	Major professionals
2	Business managers
3	Administrative personnel
4	Clerical and sales workers
5	Skilled manual employees
6	Semi-skilled employees
7	Unskilled employed

Neuropsychological assessment

8	Never employed
.	Unknown

OCCUP_B21 - OCCUP_B213

Variable name: occup_b21 - occup_b213
Description: Occupation from NP battery2, NP exam 1 - exam 13

Code or Value Description

1	Professional, Technical and Related Occupations
2	Executive, Administrative, and Managerial Occupations
3	Sales Occupations
4	Administrative Support Occupations, Including Clerical
5	Precision Production, Craft, and Repair Occupations
6	Machine Operators, Assemblers, and Inspectors
7	Transportation and Material Moving Occupations
8	Handlers, Equipment Cleaners, Helpers, and Laborers
9	Service Occupations, Except Private Household
10	Never employed for pay (e.g., homemaker)
.	Unknown

LMI1 - LMI13

Variable name: lmi1 - lmi13
Description: Total number correct verbatim and paraphrases from "Logical Memories – Immediate Recall", NP exam 1 - exam 13 (Range: 0 – 23)

Code or Value Description

0 – 23	Range of value
.	Unknown

LMD1 - LMD13

Variable name: lmd1 - lmd13
Description: Total number correct verbatim and paraphrases from "Logical Memories – Delayed Recall", NP exam 1 - exam 13 (Range: 0 – 23)

Code or Value	Description
0 – 23	Range of value
.	Unknown

LMR1 - LMR13

Variable name: lmr1 - lmr13
Description: Logical Memories – Recognition, NP exam 1 - exam 13 (Range: 0 – 11)

Code or Value	Description
1 – 11	Range of value
.	Unknown

LMI_JOE1 - LMI_JOE13

Variable name: lmi_joe1 - lmi_joe13
Description: Total number of correct verbatim and paraphrases from WMS-III "Logical Memory – Immediate Recall" (only for Joe Garcia), NP exam 1 - exam 13 (Range: 0 – 23)

Code or Value	Description
NA	Range of value
.	Unknown

Note: This information is not collected for all Gen 1 participants

LMD_JOE1 - LMD_JOE13

Variable name: lmd_joe1 - lmd_joe13
Description: Total number of correct verbatim and paraphrases from WMS -III "Logical Memory – Delayed Recall" (only for Joe Garcia), NP exam 1- exam 13 (Range: 0 – 23)

Code or Value	Description
NA	Range of value
.	Unknown

Neuropsychological assessment

Note: This information is not collected for all Gen 1 participants

LMR_JOE1 - LMR_JOE13

Variable name: lmr_joe1 - lmr_joe13

Description: Total number of correct verbatim and paraphrases from WMS-III
“Logical Memory – Recognition” (only for Joe Garcia), NP exam 1 - exam 13 (Range: 0 – 11)

Code or Value

Description

NA	Range of value
.	Unknown

Note: This information is not collected for all Gen 1 participants

VRI1 - VRI13

Variable name: vri1 - vri13

Description: Total points scored from “Visual Reproductions – Immediate Recall”, NP exam 1 - exam 13 (Range: 0 – 14)

Code or Value

Description

0 – 14	Range of value
.	Unknown

VRD1 - VRD13

Variable name: vrd1 - vrd13

Description: Total points scored from “Visual Reproductions – Delayed Recall”, NP exam 1 - exam 13 (Range: 0 – 14)

Code or Value

Description

0 – 14	Range of value
.	Unknown

VRR1 - VRR13

Variable name: vrr1 - vrr13

Description: Total points scored from “Visual Reproductions – Recognition”, NP exam 1 - exam 13 (Range: 0 – 4)

Code or Value

Description

Neuropsychological assessment

0 – 4	Range of value
.	Unknown

PASI1 - PASI13

Variable name: pasi1 - pasi13
Description: Total Score from “Paired Associate Learning – Immediate Recall”, NP exam 1 - exam 13 (Range 0 – 21)

Code or Value Description

0 – 21	Range of value
.	Unknown

PASI_E1 - PASI_E13

Variable name: pasi_e1 - pasi_e13
Description: Easy Score from “Paired Associate Learning – Immediate Recall”, NP exam 1 - exam 13 (Range: 0 – 18)

Code or Value Description

0 – 18	Range of value
.	Unknown

PASI_H1 - PASI_H13

Variable name: pasi_h1 - pasi_h13
Description: Hard Score from “Paired Associate Learning – Immediate Recall”, NP exam 1 - exam 13 (Range: 0 – 12)

Code or Value Description

0 – 12	Range of value
.	Unknown

PASD1 - PASD13

Variable name: pasd1 - pasd13
Description: Total Score from “Paired Associate Learning – Delayed Recall”, NP exam 1 - exam 13 (Range: 0 – 10)

Code or Value Description

0 – 10	Range of value
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Neuropsychological assessment

.	Unknown
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PASD_E1 - PASD_E13

Variable name: pasd_e1 - pasd_e13
Description: Easy Score from "Paired Associate Learning – Delayed Recall", NP exam 1 - exam 13 (Range: 0 – 6)

Code or Value Description

0 – 6	Range of value
.	Unknown

PASD_H1 - PASD_H13

Variable name: pasd_h1 - pasd_h13
Description: Hard Score from "Paired Associate Learning – Delayed Recall", NP exam 1 - exam 13 (Range: 0 – 4)

Code or Value Description

0 – 4	Range of value
.	Unknown

PASR1 - PASR13

Variable name: pasr1 - pasr13
Description: Total Score from "Paired Associate Learning - Recognition", NP exam 1 - exam 13 (Range: 0 – 10)

Code or Value Description

0 – 10	Range of value
.	Unknown

DSF1 - DSF13

Variable name: dsf1 - dsf13
Description: Highest string from "Digits Forward Span", NP exam 1 - exam 13 (Range: 0 – 9)

Code or Value Description

0 – 9	Range of value
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Neuropsychological assessment

.	Unknown
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DSB1 - DSB13

Variable name: dsb1 - dsb13
Description: Highest string from “Digits Backward Span”, NP exam 1 - exam 13 (Range: 0 – 8)

Code or Value Description

0 – 8	Range of value
.	Unknown

TRAILSA1 - TRAILSA13

Variable name: trailsA1 - trailsA13
Description: Time in minutes to finish “Trail A”, NP exam 1 - exam 13, – capped at 7 minutes (Range: 0.10 – 7.0)

Code or Value Description

0.10 – 7.0	Range of value
.	Unknown

TRAILS B1 - TRAILS B13

Variable name: trailsB1 - trailsB13
Description: Time in minutes to finish “Trail B”, NP exam 1 - exam 13, – capped at 10 minutes (Range: 0.35 – 10.0)

Code or Value Description

0.35 – 10.0	Range of value
.	Unknown

SIM1 - SIM13

Variable name: sim1 - sim13
Description: Total raw score from “Similarities Test”, NP exam 1 - exam 13 (Range: 0 – 26)

Code or Value Description

0 – 26	Range of value
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Neuropsychological assessment

.	Unknown
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HVOT1 - HVOT13

Variable name: hvot1 - hvot13
Description: Total score from "Hooper Visual Organization Test", NP exam 1 - exam 13 (Range: 0 – 30)

Code or Value Description

0 – 29	Range of value
.	Unknown

BNT101 - BNT1013

Variable name: bnt101
Description: Correct score without cue from 10 items of "Boston Naming Test", NP Exam 1 (Range: 0 – 10)

Code or Value Description

0 – 10	Range of value
.	Unknown

BNT10_SEMANTIC1 - BNT10_SEMANTIC13

Variable name: bnt10_semantic1 - bnt10_semantic13
Description: Correct score with semantic cue from 10 items of "Boston Naming Test", NP exam 1 - exam 13 (Range: 0 – 10)

Code or Value Description

0 – 2	Range of value
.	Unknown

BNT10_PHONEMIC1 - BNT10_PHONEMIC13

Variable name: bnt10_phonemic1 - bnt10_phonemic13
Description: Correct score with phonemic cue from 10 items of "Boston Naming Test", NP exam 1 - exam 13 (Range: 0 – 10)

Code or Value Description

0 – 4	Range of value
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Neuropsychological assessment

.	Unknown
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BNT301 - BNT3013

Variable name: bnt301 - bnt3013
Description: Correct score without cue from 30 items of "Boston Naming Test", NP exam 1 - exam 13 (Range: 0 - 30)

Code or Value	Description
0 - 30	Range of value
.	Unknown

BNT30_SEMANTIC1 - BNT30_SEMANTIC13

Variable name: bnt30_semantic1 - bnt30_semantic13
Description: Correct score with semantic cue from 30 items of "Boston Naming Test", NP exam 1 - exam 13 (Range: 0 - 30)

Code or Value	Description
0 - 6	Range of value
.	Unknown

BNT30_PHONEMIC1 - BNT30_PHONEMIC13

Variable name: bnt30_phonemic1 - bnt30_phonemic13
Description: Correct score with phonemic cue from 30 items of "Boston Naming Test", NP exam 1 - exam 13 (Range: 0 - 30)

Code or Value	Description
0 - 15	Range of value
.	Unknown

BNT361 - BNT3613

Variable name: bnt361 - bnt3613
Description: Correct score without cue from 36 items of "Boston Naming Test", NP exam 1 - exam 13 (Range: 0 - 36)

Code or Value	Description
0 - 36	Range of value

Neuropsychological assessment

.	Unknown
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BNT36_SEMANTIC1 - BNT36_SEMANTIC13

Variable name: bnt36_semantic1 - bnt36_semantic13
Description: Correct score with semantic cue from 36 items of “Boston Naming Test”, NP exam 1 - exam 13 (Range: 0 – 36)

Code or Value Description

0 – 7	Range of value
.	Unknown

BNT36_PHONEMIC1 - BNT36_PHONEMIC13

Variable name: bnt36_phonemic1 - bnt36_phonemic13
Description: Correct score with phonemic cue from 36 items of “Boston Naming Test”, NP exam 1 - exam 13 (Range: 0 – 36)

Code or Value Description

0 – 14	Range of value
.	Unknown

FINGTAPR1 - FINGTAPR13

Variable name: FingTapR1 - FingTapR13
Description: Mean of five trials of “Finger-tapping” of right hand, NP exam 1 - exam 13

Code or Value Description

10 – 67	Range of value
.	Unknown

FINGTAPL1 - FINGTAPL13

Variable name: FingTapL1 - FingTapL13
Description: Mean of five trials of “Finger-tapping” of left hand, NP exam 1 - exam 13

Code or Value Description

9 – 61	Range of value
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Neuropsychological assessment

.	Unknown
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WRAT1 - WRAT13

Variable name: wrat1 - wrat13
Description: Raw Score from "Wide Range Achievement Test -Reading", NP exam 1 - exam 13 (Range: 15 - 57)

Code or Value Description

15 - 57	Range of value
.	Unknown

FAS1 - FAS13

Variable name: fas1 - fas13
Description: The total words from the Controlled Oral Word Association Test, NP exam 1 - exam 13

Code or Value Description

0 - 95	Range of value
.	Unknown

FAS_ANIMAL1 - FAS_ANIMAL13

Variable name: fas_animal1 - fas_animal13
Description: The total words from the animal part of the Category Naming Test, NP exam 1 - exam 13

Code or Value Description

0 - 25	Range of value
.	Unknown

Note: this variable only available on "NP battery2"

BD1 - BD13

Variable name: bd1 - bd13
Description: Total Score from "Block Design", NP exam 1 - exam 13 (Range: 0 - 26)

Code or Value Description

0 - 26	Range of value
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Neuropsychological assessment

.	Unknown
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WAIS1 - WAIS13

Variable name: wais1 - wais13
Description: Total correct answers from "WAIS test", NP exam 1 - exam 13 (Range: 0 - 29)

Code or Value Description

0 - 29	Range of value
.	Unknown

MRI3521 - MRI35213

Variable name: mri3521 - mri35213
Description: Tester's impression of participant's dementia status (Not verified), NP exam 1 - exam 13

Code or Value Description

0	Not demented
0.25	Not demented/MCI
0.5	Mild Cognitive Impairment
1	Mildly Demented
1.5	Mild – Moderately Demented
2	Moderately Demented
2.5	Moderately – Severely Demented
3	Severely Demented
5	Non-progressive impairment
.	Unknown

CODING_CORRECT1 - CODING_CORRECT13

Variable name: coding_correct1 - coding_correct13
Description: Total correct from WAIS-IV Coding, NP exam 1 - exam 13

Code or Value Description

12 - 79	Range of value
.	Unknown

CODING_INCORRECT1 - CODING_INCORRECT13

Variable name: coding_incorrect1 - coding_incorrect13

Description: Total incorrect from WAIS-IV Coding, NP exam 1 - exam 13

Code or Value	Description
0 – 7	Range of value
.	Unknown

INCIDENTAL_PAIRED1 - INCIDENTAL_PAIED13

Variable name: Incidental_paired1 - Incidental_paired13

Description: Total correct from Paired Incidental Learning (Given the number from Coding, the participant had to draw the appropriate symbol associated with that number; each number is presented twice), NP exam 1 - exam 13

Code or Value	Description
0 – 15	Range of value
.	Unknown

INCIDENTAL_FREE1 - INCIDENTAL_FREE13

Variable name: Incidental_free1 - Incidental_free13

Description: Total correct from Free Recall Incidental Learning (The participant was asked to draw all the symbols they remember from the Coding task, without having to identify which number accompanied the symbol), NP exam 1 - exam 13

Code or Value	Description
0 – 8	Range of value
.	Unknown

MATH_CORRECT1 - MATH_CORRECT13

Variable name: Math_correct1 - Math_correct13

Description: Total correct responses for Math Fluency, NP exam 1 - exam 13

Code or Value	Description
8 – 135	Range of value
.	Unknown

MATH_INCORRECT_ADD1 - MATH_INCORRECT_ADD13

Variable name: Math_incorrect_add1 - Math_incorrect_add13
Description: Incorrect responses for addition problems, NP exam 1 - exam 13

Code or Value	Description
0 – 7	Range of value
.	Unknown

MATH_INCORRECT_SUB1 - MATH_INCORRECT_SUB13

Variable name: Math_incorrect_sub1 - Math_incorrect_sub13
Description: Incorrect responses for subtraction problems, NP exam 1 - exam 13

Code or Value	Description
0 – 3	Range of value
.	Unknown

MATH_INCORRECT_MUL1 - MATH_INCORRECT_MUL13

Variable name: Math_incorrect_mul1 - Math_incorrect_mul13
Description: Incorrect responses for multiplication problems, NP exam 1 - exam 13

Code or Value	Description
0 – 6	Range of value
.	Unknown

RIGHT_OPEN1 - RIGHT_OPEN13

Variable name: right_open1 - right_open13
Description: Seconds from balance test on right leg with eyes open (maximum time is set at 30 seconds), NP exam 1 - exam 13

Code or Value	Description
NA	Range of value
.	Unknown

Note: This information is not collected for all Gen 1 participants

LEFT_OPEN1 - LEFT_OPEN13

Variable name: left_open1 - left_open13
Description: Seconds from balance test on left leg with eyes open (maximum time is set at 30 seconds), NP exam 1 - exam 13

Code or Value	Description
NA	Range of value
.	Unknown

Note: This information is not collected for all Gen 1 participants

RIGHT_CLOSE1 - RIGHT_CLOSE13

Variable name: right_close1 - right_close13
Description: Seconds from balance test on right leg with eyes closed (maximum time is set at 30 seconds), NP exam 1 - exam 13

Code or Value	Description
NA	Range of value
.	Unknown

Note: This information is not collected for all Gen 1 participants

LEFT_CLOSE1 - LEFT_CLOSE13

Variable name: left_close1 - left_close13
Description: Seconds from balance test on left leg with eyes closed (maximum time is set at 30 seconds), NP exam 1 - exam 13

Code or Value	Description
NA	Range of value
.	Unknown

Note: This information is not collected for all Gen 1 participants

TEST_LANGUAGE1 - TEST_LANGUAGE13

Variable name: test_language
Description: Language used at NP exam 1 - exam 13

Code	Description

Neuropsychological assessment

1	English
2	Spanish
.	Unknown/Missing

LM_STORY1- LM_STORY13

Variable name: LM_story1 - LM_story13

Description: Which logical memory story was administered?

Code	Description
1	Anna Thompson ONLY
2	Joe Garcia ONLY
3	Anna Thompson AND Joe Garcia
.	Unknown/Missing

Date and related derived variables

DATE_CORE1 - DATE_CORE32

Variable name: date_core1 - date_core32

Description: Exam date of core exam 1 to core exam 32 (MMDDYYYY)

Code or Value	Description
1948 – 2014	Range of value
.	Unknown

Note: Date includes month, day and year, however coding manual displays only year to preserve confidentiality.

Survival Information

DEATH_DATE

Variable name: Death_date
Description: Date of death

Code or Value	Description
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1950 - 2018	Range of value
.	Unknown

Note: Date includes month, day and year, however coding manual displays only year to preserve confidentiality.

LAST_CONTACTED_DATE

Variable name: Last_contacted_date
Description: Date of last contact (This is the last time the participant was known to be alive)

Code or Value	Description
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1953 - 2018	Range of value
.	Unknown

Note: This date is censored to be the last day of 2018 if the last contact date was after the last day of 2018. Date includes month, day and year, however coding manual displays only year to preserve confidentiality.

NEUROPATH_AVAIL (newly added)

Variable name: neuropath_avail
Description: Availability of brain autopsy data

Code or Value	Description
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0	No
1	Yes
.	Unknown

Dementia outcomes and related variables

REVIEW_DATE

Variable name: review_date

Description: Date of dementia consensual review

Code or Value **Description**

1984 – 2019	Range of value
.	Unknown

Note: Date includes month, day and year, however coding manual displays only year to preserve confidentiality.

NORMAL_DATE

Variable name: normal_date

Description: Last date documented to be cognitively intact

Code or Value **Description**

1950 – 2016	Range of value
.	Unknown

Note: Date includes month, day and year, however coding manual displays only year to preserve confidentiality. In event that the day and/or month of onset are uncertain, the day is default to 15 and the month is default to 6. The year of onset is always certain for all non-missing values.

IMPAIRMENT_DATE

Variable name: impairment_date

Description: Date of cognitive impairment onset

Code or Value **Description**

1945 – 2013	Range of value
.	Unknown

Note: Date includes month, day and year, however coding manual displays only year to preserve confidentiality. In event that the day and/or month of onset are uncertain, the day is default to 15 and the month is default to 6. The year of onset is always certain for all non-missing values.

MILD_DATE

Dementia outcomes and related variables

Variable name: mild_date

Description: Date of diagnosis of mild dementia

Code or Value Description

1964 – 2018	Range of value
.	Unknown

Note: Date includes month, day and year, however coding manual displays only year to preserve confidentiality. In event that the day and/or month of onset are uncertain, the day is default to 15 and the month is default to 6. The year of onset is always certain for all non-missing values.

MODERATE_DATE

Variable name: moderate_date

Description: Date of diagnosis of moderate dementia

Code or Value Description

1965 – 2018	Range of value
.	Unknown

Note: Date includes month, day and year, however coding manual displays only year to preserve confidentiality. In event that the day and/or month of onset are uncertain, the day is default to 15 and the month is default to 6. The year of onset is always certain for all non-missing values.

SEVERE_DATE

Variable name: severe_date

Description: Date of diagnosis of severe dementia

Code or Value Description

1972 – 2016	Range of value
.	Unknown

Note: Date includes month, day and year, however coding manual displays only year to preserve confidentiality. In event that the day and/or month of onset are uncertain, the day is default to 15 and the month is default to 6. The year of onset is always certain for all non-missing values.

EDDD

Variable name: eddd

Dementia outcomes and related variables

Description: Earliest documented date of Dementia

Code or Value	Description
1964 – 2016	Range of value
.	Unknown

Note: Date includes month, day and year, however coding manual displays only year to preserve confidentiality. This date variable is an estimated onset date for dementia using the earliest dates of various supporting resources and/or derived from earliest documented date variables of “mild_date”, “moderate_date” and “severe_dates”. In certain situations, the “EDDD” may precede those derived using “mild_date”, “moderate_date” and “severe_dates”.

DEMRV046

Variable name: demrv046

Description: Probable Dementia present

Code or Value	Description
0	No
1	Yes
.	Unknown

Note: This variable refers to all-cause dementia.

DEMRV103

Variable name: demrv103

Description: Dementia subtype

Code or Value	Description
0	None
1	Alzheimer's disease without stroke
2	Alzheimer's disease with stroke
3	Vascular dementia without Alzheimer's disease
4	Mixed dementia type (Alzheimer's disease + vascular dementia)
5	Frontotemporal dementia

Dementia outcomes and related variables

6	Dementia with Lewy bodies
7	Dementia that does not fit any other Category (progressive)
8	Dementia that does not fit any other category (non-progressive)
9	Cognitive Impairment – No Dementia
10	Dementia – Uncertain
.	Unknown

Note: Value “9” refers to Cognitive impairment without Dementia. These subjects are verified to have mild cognitive impairment (MCI). However, it is also possible that participants, who had not yet been screened by the dementia consensus panel, may also suffer from mild cognitive impairment. Hence, if the research outcome of interest is mild cognitive impairment, it is advisable to also consider the psychometric results of the study population as part of the outcome evaluation.

DEMRV104

Variable name: demrv104

Description: Severity of Dementia subtype

Code or Value	Description
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0	None
1	Mild
2	Moderate
3	Severe
.	Unknown

Appendix

Exam Dates and Age Ranges as of 09/14/2016				
Original Cohort				
Exam	Exam Date Range	Age Range	Mean Age	Attendees
Exam 1	1948 - 1953	28 - 74	44	5209
Exam 2	1950 - 1955	31 - 65	46	4792
Exam 3	1952 - 1956	32 - 67	48	4416
Exam 4	1954 - 1958	34 - 69	50	4541
Exam 5	1956 - 1960	37 - 70	52	4421
Exam 6	1958 - 1963	38 - 72	54	4259
Exam 7	1960 - 1964	40 - 74	55	4191
Exam 8	1962 - 1966	42 - 76	57	4030
Exam 9	1964 - 1968	44 - 78	59	3833
Exam 10	1966 - 1970	46 - 80	61	3595
Exam 11	1968 - 1971	49 - 81	62	2955
Exam 12	1971 - 1974	50 - 83	64	3261
Exam 13	1972 - 1976	53 - 85	66	3133
Exam 14	1975 - 1978	55 - 88	68	2871
Exam 15	1977 - 1979	57 - 89	69	2632
Exam 16	1979 - 1982	59 - 91	70	2351
Exam 17	1981 - 1984	61 - 93	72	2179
Exam 18	1983 - 1985	63 - 94	74	1825
Exam 19	1985 - 1988	65 - 96	75	1541
Exam 20	1986 - 1990	67 - 97	77	1401
Exam 21	1988 - 1992	69 - 99	79	1319
Exam 22	1990 - 1994	72 - 101	80	1166
Exam 23	1992 - 1996	73 - 101	81	1026
Exam 24	1995 - 1998	76 - 103	83	831
Exam 25	1997 - 1999	78 - 104	84	703
Exam 26	1999 - 2001	79 - 103	86	558
Exam 27	2002 - 2003	82 - 104	87	414
Exam 28	2004 - 2005	84 - 104	89	303
Exam 29	2006 - 2007	85 - 102	91	218
Exam 30	2008 - 2010	88 - 102	92	141
Exam 31	2010 - 2011	90 - 99	92	91
Exam 32	2012 - 2014	93 - 106	96	40
Offspring Cohort				
Exam	Exam Date Range	Age Range	Mean Age	Attendees
Exam 1	1971 - 1975	5 - 70	36	5124
Exam 2	1979 - 1983	17 - 77	44	3863
Exam 3	1983 - 1987	18 - 77	48	3873
Exam 4	1987 - 1991	22 - 81	52	4019
Exam 5	1991 - 1995	26 - 84	55	3799
Exam 6	1995 - 1998	29 - 86	59	3532
Exam 7	1998 - 2001	33 - 90	62	3539
Exam 8	2005 - 2008	40 - 93	67	3021
Exam 9	2011 - 2014	46 - 98	71	2430
Generation 3 Cohort				
Exam	Exam Date Range	Age Range	Mean Age	Attendees
Exam 1	2002 - 2005	19 - 72	40	4095
Exam 2	2008 - 2011	24 - 78	47	3411
Exam 3	2016 - 2019			
New Offspring Spouse Cohort				
Exam	Exam Date Range	Age Range	Mean Age	Attendees
Exam 1	2003 - 2005	47 - 85	65	103
Exam 2	2008 - 2011	53 - 90	70	68
Exam 3	2016 - 2019			
Omni 1 Cohort				
Exam	Exam Date Range	Age Range	Mean Age	Attendees
Exam 1	1994 - 1998	27 - 78	52	506
Exam 2	1999 - 2001	33 - 83	55	405
Exam 3	2007 - 2008	39 - 89	62	298
Exam 4	2011 - 2014	44 - 88	66	301
Omni 2 Cohort				
Exam	Exam Date Range	Age Range	Mean Age	Attendees
Exam 1	2003 - 2005	20 - 80	43	410
Exam 2	2009 - 2011	25 - 85	48	321
Exam 3	2016 - 2019			

Revisions

Revisions	
November 2021	<p>Original Draft</p> <ul style="list-style-type: none">• Coding Manual of Curated Gen 1 dataset• Dataset: curated0_09_16_2021 <p>Available in both SAS and csv files</p>
December 2021	<p>Revision of November 2021</p> <ul style="list-style-type: none">• Description corrections for selected variables• Added missing datapoints for waist circumferences• Dataset has been renamed as “curated0_12_09_2021” <p>Available in both SAS and csv files</p>