

NCHS-Medicaid Analytic eXtract (MAX) Linked Data Files
NCHS Created Variables

SURVEY **NCHS Survey linked to Medicaid Analytic eXtract (MAX) data**

Description:

NCHS survey linked to CMS Medicaid/CHIP enrollment and claims data

Type: Character **Width:** 16

Usage Notes:

The following NCHS surveys have been linked to CMS Medicaid/CHIP enrollment and claims data:

- 1994-2005 National Health Interview Survey (NHIS)
- 1999-2004 National Health and Nutrition Examination Survey (NHANES)
- 2004 National Nursing Home Survey (NNHS)
- NHANES I Epidemiologic Follow-up Study (NHEFS)
- Third National Health and Nutrition Examination Survey (NHANES III)
- The Second Longitudinal Study of Aging (LSOA II)

PUBLICID **NCHS Survey Identifier – Participant Identification Number**

Description:

Public use identifier assigned by NCHS used to link NHIS and MAX data

Type: Character **Width:** 14

Usage Notes:

Researchers linking to LSOA II and 1994-2005 NHIS should use PUBLICID.

See [Appendix A](#) for NCHS survey specific descriptions.

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FILE_YEAR4 **MAX File Year**

Description: Calendar year covered by MAX file

Type: Numeric **Width:** 4 **Format:** CCYY

Possible Values: 1999 - 2009

Usage Notes:

There is a separate data file for each year of Medicaid/CHIP coverage (1999-2009).

EXACT_DOB_FLAG **Yearly Date of Birth Match Indicator**

Description:

This variable specifies whether the NCHS survey participant matched exactly on full date of birth or month and year only to the MAX data for a given year.

Type: Numeric **Width:** 3

Possible Values:

- 0 = Matched on month and year of birth only
- 1 = Matched on full date of birth (month, day, and year)

Usage Notes:

This variable should be used in combination with [FILE_YEAR4](#) to determine how enrollees matched by date of birth in each given year of MAX data.

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FLG_PRSN_DOB_FLAG Overall Date of Birth Match Indicator

Description:

This variable specifies whether the NCHS survey participant matched exactly on full date of birth or month and year only to the MAX data for all years (1999-2009)

Type: Numeric **Width:** 3

Possible Values:

- 0 = Matched on month and year of birth only in all years of MAX data
 - 1 = Matched on full date of birth (month, day, and year) in all years of MAX data
 - 2 = Different values for EXACT_DOB_FLAG across MAX data years
-

FLG_MULT_RECS Overall Multiple Person Summary (PS) File Record Indicator

Description:

This variable specifies whether the Medicaid/CHIP enrollee has multiple Person Summary (PS) file records in any year of MAX data (1999-2009).

Type: Numeric **Width:** 3

Possible Values:

- 0 = No multiple PS file records
 - 1 = Multiple PS file records
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FLG_PRSN_MULT_RECS Overall Multiple Person Summary (PS) File Record Indicator - Detailed

Description:

This variable specifies whether the Medicaid/CHIP enrollee has multiple Person Summary (PS) file records in the same or different states in any year of MAX data (1999-2009).

Type: Numeric **Width:** 3

Possible Values:

- 0 = No multiple PS file records
- 1 = Multiple PS file records in the same state
- 2 = Multiple PS file records in different states
- 3 = Multiple PS file records in the same and different states

FLG_YEAR_MULT_RECS Yearly Multiple Person Summary (PS) File Record Indicator

Description:

This variable specifies whether the Medicaid/CHIP enrollee has multiple Person Summary (PS) file records in the same or different states in a given year of MAX data.

Type: Numeric **Width:** 3

Possible Values:

- 0 = No multiple PS file records
- 1 = Multiple PS file records in the same state
- 2 = Multiple PS file records in different states
- 3 = Multiple PS file records in the same and different states

Usage Notes:

This variable should be used in combination with [FILE_YEAR4](#) to determine if enrollees have multiple records in each given year of MAX data.

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YEAR_REC_COUNT **Yearly Person Summary (PS) File Record Count**

Description:

This variable specifies the number of Person Summary (PS) file records the Medicaid/CHIP enrollee has in a given year of MAX data.

Type: Numeric **Width:** 3

Possible Values:

1 – 6 records

Usage Notes:

This variable should be used in combination with [FILE_YEAR4](#) to determine if enrollees have multiple records in each given year of MAX data.

MSIS_SEQN **MSIS Sequence Number**

Description:

NCHS recoded Medicaid Statistical Information System (MSIS) identification number

Type: Character **Width:** 16

Usage Notes:

This variable is necessary to link Person Summary (PS) file records with claims data in other MAX files (Inpatient Hospital (IP), Long-Term Care (LT), Other Services (OT) and Prescription Drug (RX)).

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Appendix A: Data Usage Issues regarding PUBLICID/SEQN/RESNUM

The data provided on the 1994-2005 NHIS, NHEFS, 1999-2004 NHANES, NHANES III, LSOA II, and 2004 NNHS linked MAX files can be merged with the NCHS public use survey data files using the unique survey specific Public Identification number (PUBLICID/SEQN/RESNUM).

Note: At this time the linked MAX data files are only available for research use through the NCHS restricted access data center (RDC). Approved RDC researchers may choose to provide their own analytic files created from public use survey files to the RDC. Therefore, it is important for researchers to include survey specific Public Identification number on any analytic files sent to the RDC. The RDC will merge data (using PUBLICID, SEQN or RESNUM) from the linked MAX files to the analyst's file. The merged file will be held at the RDC and made available for analysis.

Information on how to identify and/or construct the NCHS survey specific PUBLICID, SEQN or RESNUM is provided below.

I. National Health Interview Survey (NHIS)

NHIS 1994

<u>Variable</u>	<u>Public-use Location</u>	<u>Length</u>	<u>Description</u>
YEAR	3-4	2	Year of interview
WTFQ	5	1	Calendar quarter of interview
PSU	6-8	3	Random recode of PSU #
WEEKPROC	9-10	2	Week of interview within quarter
SEGNUM	11-12	2	Segment number
HHNUM	13-14	2	Household number within quarter
PNUM	15-16	2	Person number within household

Note: Concatenate all variables to get the unique person identifier.

SAS example:

```
length PUBLICID $14;  
PUBLICID=YEAR || WTFQ || PSU || WEEKPROC || SEGNUM || HHNUM || PNUM;
```

Stata example: (note this will convert the variables to string variables)

```
egen PUBLICID = concat(YEAR WTFQ PSU WEEKPROC SEGNUM HHNUM PNUM)
```

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NHIS 1995, 1996

<u>Variable</u>	Public-use <u>Location</u>	<u>Length</u>	<u>Description</u>
YEAR	3-4	2	Year of interview
HHID	5-14	10	Household ID number
PNUM	15-16	2	Person number within Household

Note: Concatenate all variables to get the unique person identifier.

SAS example:

```
length PUBLICID $14;  
PUBLICID=YEAR || HHID || PNUM;
```

Stata example: (note this will convert the variables to string variables)

```
egen PUBLICID = concat(YEAR HHID PNUM)
```

NHIS 1997-2003

<u>Variable</u>	Public-use <u>Location</u>	<u>Length</u>	<u>Description</u>
SRVY_YR	3-6	4	Year of interview
HHX	7-12	6	Household serial number
FMX	13-14	2	Family number
PX	15-16	2	Person number within Household

Note: Concatenate all variables to get the unique person identifier.

SAS example:

```
length PUBLICID $14;  
PUBLICID=SRVY_YR || HHX || FMX || PX;
```

Stata example: (note this will convert the variables to string variables)

```
egen PUBLICID = concat(SRVY_YR HHX FMX PX)
```

*The person identifier was called PX in the 1997-2003 NHIS and FPX in the 2004 (and later) NHIS; users may find it necessary to create an FPX variable in the 2003 and earlier datasets (or PX in later datasets).

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NHIS 2004

<u>Variable</u>	<u>Location</u>	<u>Length</u>	<u>Description</u>
SRVY_YR	3-6	4	Year of interview
HHX	7-12	6	Household serial number
FMX	13-14	2	Family number
FPX	15-16	2	Person number

Note: Concatenate all variables to get the unique person identifier.

SAS example:

```
length PUBLICID $14;
PUBLICID=SRVY_YR || HHX || FMX || FPX;
```

Stata example: (note this will convert the variables to string variables)

```
egen PUBLICID = concat(SRVY_YR HHX FMX FPX)
```

NHIS 2005

<u>Variable</u>	<u>Location</u>	<u>Length</u>	<u>Description</u>
SRVY_YR	3-6	4	Year of interview
HHX	7-12	6	Household serial number
FMX	16-17	2	Family number
FPX	18-19	2	Person number

Note: Concatenate all variables to get the unique person identifier.

SAS example:

```
length PUBLICID $14;
PUBLICID=SRVY_YR || HHX || FMX || FPX;
```

Stata example: (note this will convert the variables to string variables)

```
egen PUBLICID = concat(SRVY_YR HHX FMX FPX)
```

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II. NHANES I Epidemiologic Follow-up Study NHEFS

<u>Item</u>	<u>Length</u>	<u>Description</u>
SEQN	5	Participant identification number

All of the NHEFS public-use data files are linked with the common survey participant identification number (SEQN). Merging information from multiple NHEFS Files to the NHEFS-CMS MAX linked files using this variable ensures that the appropriate information for each survey participant is linked correctly.

III. National Health and Nutrition Examination Survey (NHANES)

<u>Item</u>	<u>Length</u>	<u>Description</u>
SEQN	5	Participant identification number

All of the NHANES public-use data files are linked with the common survey participant identification number (SEQN). Merging information from multiple NHANES Files to the NHANES-CMS MAX linked files using this variable ensures that the appropriate information for each survey participant is linked correctly.

IV. Third National Health and Nutrition Examination Survey (NHANES III)

<u>Item</u>	<u>Length</u>	<u>Description</u>
SEQN	5	Participant identification number

All of the NHANES III public-use data files are linked with the common survey participant identification number (SEQN). Merging information from multiple NHANES III Files to the NHANES III-CMS MAX linked files using this variable ensures that the appropriate information for each survey participant is linked correctly.

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V. The Second Longitudinal Study of Aging (LSOA II)

On the LSOA II survey, researchers need to construct the LSOA II public id from the following variables.

LSOA II

Public-use

<u>Item</u>	<u>Location</u>	<u>Length</u>	<u>Description</u>
Year	3-4	2	Year of interview
Quarter	5	1	Calendar quarter of interview
PSU	6-8	3	Random recode of PSU #
Week	9-10	2	Week of interview within quarter
Segment	11-12	2	Segment number
Household	13-14	2	Household number within quarter
Person number	15-16	2	Person number within household

Note: Concatenate all variables to get the unique person identifier. All variables are zero filled.

SAS example:

```
length PUBLICID $14;  
PUBLICID=YEAR || WTFQ || PSU || WEEKPROC || SEGNUM || HHNUM || PNUM;
```

Stata example: (note this will convert the variables to string variables)

```
egen PUBLICID = concat(YEAR WTFQ PSU WEEKPROC SEGNUM HHNUM PNUM)
```

VI. 2004 National Nursing Home Survey (NNHS)

<u>Item</u>	<u>Length</u>	<u>Description</u>
RESNUM	6	Resident Record (Case) Number

All of the 2004 NNHS public-use data files are linked with the common resident record (case) number (RESNUM). Merging information from the 2004 NNHS Files to the 2004 NNHS-CMS MAX linked files using this variable ensures that the appropriate information for each survey participant is linked correctly.