

Technical Notes for the 2004 NNHS Prescribed Medications (PM) Public-use File

Link to each section in the document:

	Page
1. Data Collection	1
2. Reason Why Prescribed and Adverse Events	1
3. The Prescribed Medications (PM) Public-use File	2
4. Variable Recodes	2
5. The Long-term Care Drug Database System (LTCDDS)	2
▪ PDF File 1: Drug Estimates and Characteristics	3
▪ PDF File 2: Drugs by NDC Class	4
6. Drug Characteristics in the PM Public-use File	5
7. Downloading the PM Public-use File	6
8. Data Dictionary	7
9. Analyzing the Prescribed Medications Data	7
▪ Finding the Drug Name and Drug Name Code	7
▪ Retrieving Records, Linking Files and Analyzing Data	8
○ Using SAS and SUDAAN	8
○ Using STATA	10
10. Contact Information	11
11. Appendix	12

(Text begins on next page with Data Collection.)

Data Collection

The 2004 National Nursing Home Survey, one of the National Health Care Surveys, collected medication¹ data (in the Prescribed Medications module) on sampled nursing home residents for the first time in the survey's history. Up to 12 residents were sampled in each facility. Using the medication administration records (MARs) in the resident's medical record, the designated nursing home respondent answered medication questions asked about each sampled resident. These questions included: (1) what medications were taken by the resident during the 24 hours the day before the facility interview, including standing or routine medications or PRN medications? and (2) what medications were taken regularly by the resident but not during the 24 hours the day before the facility interview? The second question included only medications with standing orders for administration, not PRN medications. Data on the type of medication order (i.e., standing or routine, or PRN) for each medication was not collected; nor was dosage, strength, route, or frequency information collected. The computer-assisted personal interviewing (CAPI) instrument allowed the interviewer to enter up to 25 medications for each question.

The survey had two separate medication questions because some medications are administered weekly or even monthly, as in the case of some osteoporosis drugs (e.g., alendronate) or commonly prescribed supplements (e.g., vitamin B-12). Therefore, the survey instrument was designed to capture information on medications taken every day through Question PM1A (i.e., medications taken by the resident during the 24 hours the day before the facility interview) and information on medications taken regularly but not everyday through Question PM2A (i.e., medications taken regularly but not taken during the 24 hours the day before the facility interview).

The medication data were collected as brand name or generic name, whichever name the respondent provided. A drug look up table, within the CAPI instrument, facilitated the entry of medication data. The interviewer's keystrokes automatically scrolled to the medications beginning with the letters entered. While not every medication was in the look-up table, many commonly prescribed medications were. When the interviewer came across a medication that was not in the look-up table, the medication was entered into an "Other, Specify" field. When the data collection was completed, the "Other, Specify" entries were matched with medications in the database. Medications for which a match was not found were assigned a unique drug code. Medications that were not understandable were coded '99980' for uncodeable.

Reason Why Prescribed and Adverse Events

For each medication reported in the 2004 NNHS, information on the reason why it was prescribed and on adverse events experienced by the resident were collected. Each entry for the reason a drug was prescribed was assigned a corresponding ICD-9 CM code through a computerized matching algorithm post-data collection. These data are not provided in the Prescribed Medications (PM) Public-use File because the data quality is questionable. Interview observers and survey interviewers, alike, found that the information on the reasons medications were prescribed was not documented in the medication administration records in many cases. Moreover, many respondents provided information based on their knowledge of the medication indication, not on the actual reason the sampled resident was prescribed the medication.

¹ Every medication administered to a nursing home resident, including those available as over-the-counter drugs (e.g., some pain relievers and dietary supplements), is considered a prescription medication because a physician must authorize its use and write a medication order before it is administered to the resident.

Data on adverse events, although collected, are also not included in the public-use file. The number of adverse events reported was too small (less than 1 percent of all nursing home residents) and would yield small cell sizes and unreliable estimates.

The Prescribed Medications (PM) Public-use File

After the medications were coded, a separate Prescribed Medications Public-Use file was created. This file, which is also referred to as the PM flat file, includes 13,507 records, one for each sampled resident. Each record contains 531 variables. There are 92 residents whose medication data were not ascertained. For these cases, '99999' appears in all the PMCODE (i.e., PMCODE01 through PMCODE25) and OTHPMC (i.e., OTHPMC01 through OTHPMC15) fields of the resident's record.

Each record has a resident ID (RESNUM), the facility ID (FACNUM), the drug codes for the medication(s) taken by the resident, and the drug characteristics for each medication: generic code, ingredient codes, composition status, prescription status, Drug Enforcement Agency (DEA) status, and therapeutic class(es). The analytic value of the PM Public-use File is maximized when it is linked to the resident file (by RESNUM), which contains demographic information, health status information, and information on services used by each sampled resident. (The resident file data dictionary can be accessed at the following NNHS website: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NNHS/nnhs04/). These technical notes should be used with the following documents that are posted on the LTCDDS web page at <http://www.cdc.gov/nchs/about/major/nnhsd/drugdatabase.htm>: 2004 NNHS Data Dictionary: Prescribed Medications Public-Use File; Drug Estimates and Characteristics; and Drugs by NDC Class.

Variable Recodes

Four additional variables were created and added to the PM file after the data were collected, reviewed, and approved for public use: *ANYMEDS*, *RXMED*, *RXOTH*, and *RXTOT*. The *ANYMEDS* field identifies if a resident took any medications. The overwhelming majority of residents, 98 percent, took at least one medication. The *RXMED* field gives the number of medications a resident took during the 24 hours the day before the facility interview; the valid range is 0 to 25. The *RXOTH* gives the number of medications a resident took regularly but not during the 24 hours the day before the facility interview; the valid range is 0 to 15. The *RXTOT* field provides the sum of *RXMED* + *RXOTH*; the valid range is 0 to 30.

The Long-term Care Drug Database System (LTCDDS)

The Long-term Care Drug Database System (LTCDDS) is a web look-up feature that will enable data users to search for medications—by brand name, generic name, ingredient name(s), therapeutic class(es) according to the National Drug Code (NDC) Directory, prescription status, composition status, and DEA status. This information will allow data users to analyze the medication data in the PM Public-use File.

The drug coding convention for medication data collected in the 2004 NNHS was adopted from the Ambulatory Care Drug Database System (ACDDS). This system was originally created by the Ambulatory Care Statistics Branch (ACSB), which conducts annual surveys. The ACSB has collected medication data through the National Ambulatory Medical Care Survey since 1980 and through the National Hospital Ambulatory Medical Care Survey since 1992. The Long-term Care Statistics Branch (LTCSB), which administers the National Nursing Home Survey, used the same unique drug name codes as in the ACDDS. Medication names that were collected in the 2004 NNHS but not found in the database at the time of the facility interview and did not have a match in the final drug file were sent to NCHS. At NCHS, the drug names were assigned a unique five-digit code, and added to the drug database. The LTCDDS will be identical to the ACDDS in features and functionality when it is completed. The differences will lie in the weighted estimates and rates only; these data are unique to the individual surveys.

Currently, the LTCDDS is in development and will be available to the public in the future. In the meantime, there are two PDF files on our web page that provide information found in the LTCDDS: ***Drug Estimates and Characteristics*** and ***Drugs by NDC Class***. Information in the first file includes (1) the unique drug name code for the medication(s) of interest; (2) if the medication(s) of interest was taken by residents sampled in the 2004 NNHS; and (3) the drug characteristics associated with the medication(s) of interest. The second file lists the drug names and drug name codes by therapeutic class according to the National Drug Code (NDC) Directory; each medication can be assigned up to three therapeutic classes but the overwhelming majority is assigned only one class.

PDF File 1: Drug Estimates and Characteristics

The PDF file labeled ***Drug Estimates and Characteristics*** provides the unique drug name code for each medication in the PM Public-Use File, the estimate for the number of residents who took the medication, the rate of use per 10,000 residents, and the drug characteristics associated with each medication. The layout of the PDF file, ***Drug Estimates and Characteristics***, is as follows:

Field 1: Drug name	Field 7: Prescription (Rx) status
Field 2: Drug name code	Field 8: Drug Enforcement Agency (DEA) status
Field 3: Drug estimate	Field 9: Composition (Comp) status
Field 4: Drug rate per 10,000 residents	Field 10: Drug ingredients
Field 5: Generic name	Field 11: Ingredient codes
Field 6: Generic name code	Field 12: Drug class codes

This PDF, which is 170 pages, enables the data analyst to find medications of interest using the Edit-Find feature in the toolbar. First, the analyst must type in the name of the medication and click the Next key. If the drug name is in the ***Drug Estimates and Characteristics*** file, the Edit-Find feature will automatically scroll to the Drug Name field and highlight the medication; the unique drug name code will be in the adjacent field. The drug estimate and the drug rate per 10,000 residents, which indicate if the medication was taken by sampled residents, are found in Fields 3 and 4. These data are particularly revealing if the medication is even in the public-use file (i.e., was taken by sampled nursing home residents). If these fields—drug estimate and drug rate per 10,000 residents—are blank, then the medication was not taken by any sampled nursing home residents.

Each medication is assigned a unique five-digit drug name code when it is first adjudicated² by NCHS staff. If a resident took the medication, the corresponding five-digit drug name code will appear in his/her record in one of the PMCODE fields (1 through 25) or OTHPMC fields (1 through 15). The analyst needs the five-digit drug name code to search the PM Public-use File for the resident IDs (RESNUM) associated with individuals who took the drug of interest. The analyst can then use the resident IDs to create an analytic file by linking the PM file to the resident file (by RESNUM). Once this file is created, he/she can conduct further analyses on the medication(s) and the resident characteristics associated with it.

PDF File 2: Drugs by NDC Class

The second PDF file, labeled ***Drugs by NDC Class***, lists every medication in the Long-term Care Drug Database System, by major therapeutic class code and therapeutic subclass code in ascending order. The therapeutic classification system used to classify medications collected in the 2004 NNHS is the 1995 National Drug Code (NDC) Directory (see Appendix A). This system has 21 major therapeutic classes and 139 therapeutic subclasses. This information enables data analysts to know which medications are assigned to each major therapeutic class and therapeutic subclass according to the NDC system. The layout of this PDF file is as follows:

Field 1: Major Therapeutic Class Code
Field 2: Therapeutic Subclass Code
Field 3: Drug Name Code
Field 4: Drug Name

At the top of each page, the major therapeutic class code is printed in Field 1 and applies to all medications on that page. The analyst should assume that all medications listed on that page have the same major therapeutic class code as that found at the top of the page unless otherwise indicated. When a drug with a major therapeutic class code (i.e., the next one in ascending order) different than that listed at the top of the page is listed, the major therapeutic class code changes accordingly and is noted right above the medication in Field 1. It is important to note that some medications are not assigned a therapeutic subclass because one was not found in the reference materials during adjudication. In those cases, the major therapeutic subclass is listed in both Fields 1 and 2.

The remainder of this section provides an example of how to use the ***Drugs by NDC Class*** file and the ***Drug Estimates and Characteristics*** file. If an analyst wants to know which medications are classified as antidepressants, for example, he/she should do the following: (1) Go to appendix A of this document to find the major therapeutic class code and therapeutic subclass code for antidepressants. The major therapeutic class code for antidepressants is 0600 because they target the central nervous system. The subclass code for antidepressants is 0630; (2) Go to the ***Drugs by NDC Class*** file and type in '0600' in the Edit-Find box. Click Next. Analysts can also scroll through the document to the page where 0600 appears in Field 1; (3) Search for therapeutic subclass code 0630 using the Edit-Find feature or by scrolling to the first page where this code appears in Field 2; and (4) On page 53, the listing for antidepressants starts closer toward the bottom of the page and continues to page 55. There are a total of 85 antidepressants listed, complete with their unique drug name code and drug name in Fields 3 and 4, respectively.

² When a new drug name that is collected in the survey is not in the LTCDDS, it must be assigned a distinct five-digit drug name code. This process involves researching the new drug in various pharmaceutical reference materials to determine its drug characteristics. This information is then entered into the Long-term Care Drug Database System and automatically assigned a new drug name code.

An analyst can also focus on a particular type of antidepressant, like serotonin-specific reuptake inhibitors (SSRIs), for example. If the names of the SSRIs of interest are known, he/she can identify their names among the list of antidepressants. After finding the drug name codes for the SSRIs, he/she can check the **Drug Estimates and Characteristics** file to find out if the SSRIs were taken by any nursing home residents sampled in the survey. Using the antidepressant Lexapro as an example, one can see in the **Drugs by NDC Class** file that its drug name code is 02119. If the analyst then goes to the **Drug Estimates and Characteristics** file and types in 02119 in the Edit-Find search feature, he will find the medication on page 111 in row 11. Lexapro was taken by an estimated 300 residents and the rate per 10,000 residents is 2. Additional information reveals that the generic name for Lexapro is escitalopram oxalate; the generic name code for escitalopram oxalate is 70466. The Rx Status field shows that Lexapro is a prescription medication, its Drug Enforcement Agency status is undetermined, and its composition status is single entity. If one scrolls across to the last field of the Lexapro record, the therapeutic class code shows that it is 0630, an antidepressant. Additional information about the drug characteristics reported in the PM Public-use File is provided in the next section.

Drug Characteristics in the PM Public-use File

Once the PM data file was successfully checked for quality assurance and approved by the Disclosure Risk Review Board of NCHS, the drug characteristics information was appended to each medication reported in the 2004 NNHS. The PM Public-use File was then created. The drug characteristics in the public-use file are as follows:

- Generic name code
- Composition status (single entity or combination product) code
- Ingredient (up to five ingredients per medication) code
- Control status (most controlled to least controlled substance) code
- Prescription status (OTC or legend drug) code
- Therapeutic class code based on the 1995 National Drug Code (NDC) directory (up to three therapeutic classes per medication)

The following example shows the fields corresponding to the first medication (PMCODE01) in the first set of medication data reported in the PM Public-use File; these fields have the suffix of '01' or '1' to note that the fields refer to the first medication in the PM Public-use File. (The first set of medication data, PMCODE01 through PMCODE25, was collected in response to the survey question about medications taken by the resident the day before the facility interview. The second set of medication data, OTHPMC01 through OTHPMC15, was collected in response to the survey question about medications taken by the resident regularly, but not the day before the facility interview.) Again, all medications are identified by their unique five-digit drug name code only; the drug name is not spelled out anywhere in the PM Public-use File. Similarly each drug characteristic has a set of numeric values that refer to a particular quality about the medication. These numeric codes and descriptions are also provided below:

- **PMCODE01** (five-digit drug name code for first medication)
- **GEN01** (five-digit generic name code for first medication)
- **COMST01** (composition status of first medication)
 - 1=single entity drug
 - 2=combination drug
 - 3=undetermined

- **RXST01** (prescription status of first medication)
 - '=Blank
 - 1=prescription
 - 2=OTC (over the counter)
 - 3=undetermined
 - 4=illicit

- **CONTR01** (Drug Enforcement Agency (DEA) status of first medication)
 - '=blank
 - 1=schedule I (research only) (high abuse potential)
 - 2=schedule II (high abuse potential; abuse may lead to severe psychological or physical dependence)
 - 3=schedule III (lower abuse potential)
 - 4=schedule IV (low abuse potential; abuse may lead to limited physical or psychological dependence)
 - 5=schedule V (lowest abuse potential)
 - 6=uncontrolled
 - 7=undetermined

- **RX1ING1** (ingredient 1 of first medication)
- **RX1ING2** (ingredient 2 of first medication)
- **RX1ING3** (ingredient 3 of first medication)
- **RX1ING4** (ingredient 4 of first medication)
- **RX1ING5** (ingredient 5 of first medication)

- **DRG1CL1** (therapeutic class 1 of first medication)
- **DRG1CL2** (therapeutic class 2 of first medication)
- **DRG1CL3** (therapeutic class 3 of first medication)

The fields corresponding to the second medication are **PMCODE02**, **GEN02**, **COMST02**, **RXST02**, and **CONTR02**. The remaining fields that contain information on ingredients and therapeutic classes for the second medication entry are as follows: **RX2ING1**, **RX2ING2**, **RX2ING3**, **RX2ING4**, **RX2ING5** for the ingredients and **DRG2CL1**, **DRG2CL2**, and **DRG2CL3** for the therapeutic classes.

The fields listed in the bullets above are provided for the sole purpose of orienting the data analyst to the naming conventions for the medication fields; this is not the actual layout of the PM Public-use File. The actual file layout is available in the data dictionary, which is referred to in the next section.

Downloading the PM Public-use File

The SAS version of the PM Public-use File can be accessed at ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Datasets/NNHS/nnhs04/SAS_Data/. The ASCII versions of the PM Public-use File, along with input and variable label statements, can be accessed at ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Datasets/NNHS/nnhs04/Text_ASCII/. These files can be downloaded to your PC to create a temporary medications dataset.

Data Dictionary

The data dictionary for the PM Public-Use File is available at the NNHS website at ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NNHS/nhhs04/. The data dictionary provides the layout of the variables as they appear in the public-use file. In addition to the file layout and its attributes, the data dictionary includes the number of records for select responses of certain variables in the public use file on pp. 33–36. This information can help to verify the integrity of the downloaded public-use file and layout.

Analyzing the Prescribed Medications Data

The PM Public-use File is most useful when it is linked to the resident data found in the 2004 NNHS Resident Public-use File. The resident file contains demographic information, health status information, and information on services used by each resident sampled in the survey. The PM Public-use File is presented as a stand-alone file simply because it was too large to include in the Resident Public-use File. As a result, the PM Public-use File must be linked to the Resident Public-use File to get all the data collected on each sampled resident.

The following pages provide instructions on how to link the PM file to the resident file—using SAS with SUDAAN and using STATA—to determine the characteristics associated with residents and their medications. In this example, the drug is Namenda. Step 1, directly below, explains how to search for a drug name code and the drug characteristics using the PDF files, ***Drug Estimates and Characteristics*** and ***Drugs by NDC Class*** described earlier. This step is very important as it gives the data analyst the drug name codes needed to use in his/her program to retrieve the RESNUM (resident identifier) for those residents who took Namenda (or whatever drug is being analyzed). Steps 2 through 5 then provide the SAS code to retrieve the records of Namenda residents and to link them to their records in the Resident Public-use File. Steps 6 and 7 show how to determine the weighted estimate and the mean age, by sex, of residents with Namenda, respectively, using SUDAAN. The instructions below do not provide the input statements to download the PM Public-use File nor the Resident Public-use file because they are available on the NNHS web site (<http://www.cdc.gov/nchs/nhhs.htm>) by clicking on Public Use Data Files (Micro-data). The instructions assume that the data analyst has already downloaded the PM Public-use File and the Resident Public-use File and has created temporary data sets that are ready for linking.

STATA code is also provided, following the SAS and SUDAAN code below. The SPSS code is being tested and will be available in the future in a revised version of this document.

Finding the Drug Name and Drug Name Code

The bullets below instruct the analyst how to find a drug name and its drug name code using the PDF files, ***Drugs by NDC Class*** and ***Drug Estimates and Characteristics***. The example uses Namenda and its generic form, memantine HCl. The instructions are general steps to find information on your drug(s) of interest.

- Using the ***Drugs by NDC Class*** file, find the drug name, Namenda. Begin by using the Edit-Find feature. Type 'Namenda' in the search box and click Next.

- This search feature will automatically take you to the bottom of page 58 where you learn that the drug name code is 04011, the major therapeutic class code is 0600 and the therapeutic subclass code is 0633.
- Using the *Drug Estimates and Characteristics* file, type 'Namenda' in the search box. The search feature will automatically scroll to the record for Namenda, which shows, again, that the drug name code is 04011, the drug estimate is 55,200 and the number per 10,000 residents is 370. This verifies that there are residents who took Namenda.
- This record also reveals that memantine HCl is the generic name for Namenda. To get the most accurate estimate of the use of medications having this generic ingredient, memantine HCl, you should search for the drug name memantine HCl.
- When you type in 'memantine HCl', you are taken to two other records: one for Memantine, whose drug name code is 03201 and estimate is 1,712; the other record is for Ebixa, whose drug name code is 03087 but whose estimate is 0. The example below uses the drug name codes for Namenda (04011) and memantine HCl (03201).

The steps above give the data analyst the drug name codes necessary to use in the program to retrieve the records of residents who took Namenda and memantine HCl.

Retrieving Records, Linking Files, and Analyzing Data

The code provided in the following instructions is specific to the statistical software packages SAS and SUDAAN. These instructions show the data analyst (1) how to retrieve the records of residents who took Namenda or its generic form, using SAS; (2) how to link their records to those in the Resident Public-use File, using SAS; (3) how to find the percentage and standard error of residents who took Namenda or its generic form, using SUDAAN; and (4) how to find the mean age, by sex, of these residents who took Namenda or its generic form, using SUDAAN.

Comparable instructions for STATA users are given, starting on page 10. The STATA instructions also assume that the data analyst has already downloaded and saved the PM Public-use File and the Resident Public-use File.

Using SAS and SUDAAN

1) Using the two codes—04011 and 03201—the SAS code below will scan all the medication fields (i.e., PMCODE01 through PMCODE25 and OTHPMC01 through OTHPMC15) of all resident records to find Namenda and memantine HCl users. The code will flag the records when either drug name code appears at least once.

```

Libname res 'filepath';
data namenda;
set meds2004;
namenda=0;
array meds (40) PMCODE01-PMCODE25 OTHPMC01-OTHPMC15;
do i=1 to 40;
if meds (i) in (04011 03201) then namenda=1;
end;
keep resnum namenda; run;

```

2) This SAS code generates the RESNUM of the residents who took Namenda or memantine HCl:

```
Proc freq data=namenda;  
tables resnum;  
where namenda=1; run;
```

3) This SAS code links the file produced from the array (in step 2 above) with the Resident Public-use File. In this step, you must indicate which fields in the resident file you want to include in your analytic file:

```
Libname res `filepath`;  
Proc sort data=namenda; by resnum; run;  
Proc sort data=res.resident_04nnhs07192006 out=res; by resnum;  
run;  
data merged;  
merge namenda res(in=resident keep=resnum sex ageatint rstrata  
facnum popfac npopres samwt [and any other variables needed from  
the resident file]);  
by resnum;  
if resident=1; run;
```

4) Check that the newly created analytic file has all the required fields.

5) This SUDAAN code allows the analyst to get the weighted estimate for the number of residents who took Namenda or memantine HCl. The design variables and sample weight must be used to generate accurate estimates (see Technical Notes on Nesting and Weight Variables in the PM Public-use File data dictionary):

```
Proc sort data=merged; by rstrata facnum; run;  
Proc crosstab data=merged design=wor;  
nest rstrata facnum/missunit;  
totcnt popfac npopres;  
weight samwt;  
subgroup namenda;  
levels 2;  
table namenda; run;
```

6) This SUDAAN code lets the analyst determine the weighted mean age at interview, by sex, of the residents who took Namenda or memantine HCl:

```
Proc descript data=merged design=wor;  
nest rstrata facnum/missunit;  
totcnt popfac npopres;  
weight samwt;  
class sex;  
subpopn namenda=1;  
table sex;  
var ageatint; run;
```

Using STATA

1) Using the two codes—04011 and 03201—the STATA program below will scan all the medication fields (i.e., PMCODE01 through PMCODE25 and OTHPMC01 through OTHPMC15) of all resident records to find Namenda and memantine HCl users. The code will flag the records when either drug name code appears at least once in the record.

```
use drug_data clear
gen namenda=0

foreach i in `01' `02' `03' `04' `05' `06' `07' `08' `09' `10'
`11' `12' `13' `14' `15' `16' `17' `18' `19' `20' `21' `22' `23'
`24' `25' {
replace namenda=1 if pmcode `i'== `04011' | pmcode `i'== `03201'
}

foreach i in `01' `02' `03' `04' `05' `06' `07' `08' `09' `10'
`11' `12' `13' `14' `15' {
replace namenda=1 if othpmc `i'== `04011' | othpmc `i'== `03201'
}
keep resnum namenda
save namenda, replace
```

2) This code generates the RESNUM of all residents who took Namenda or memantine HCl:

```
tab resnum if namenda==1
```

3) This code will link the file produced from the array (in step 2 above) with the 2004 NNHS Resident Public-use File. In this step, you must indicate the fields in the resident file you want to include in your analytic file:

```
use resident_data, clear
sort resnum
save resident_data, replace

use namenda, clear
sort resnum
merge resnum using resident_data
keep if _merge==3
drop _merge
keep resnum sex ageatint samwt rstrata facnum popfac namenda
```

4) Check that the newly created analytic file has all the required fields.

5) This code allows the data analyst to determine the weighted estimate of residents who took Namenda or memantine HCl. The design variables and sample weight must be used to generate accurate estimates (see Technical Notes on Nesting and Weight Variables in the PM Public-Use File data dictionary):

```
svyset [pw=samwt], strata(rstrata) psu(facnum) fpc(popfac)
svy, subpop(namenda): total namenda
```

6) This STATA code allows the data analyst to determine the weighted mean age (at the time of the facility interview), by sex, of the residents who took Namenda or memantine HCI:

```
svy, subpop(namenda): mean ageatint, over(sex)
```

Contact information:

For technical assistance with the PM Public-use File, contact Lisa Dwyer in the Long-term Care Statistics Branch at (301) 458-4747 or by e-mail at LDwyer@cdc.gov.

An NCHS Series 1 Report on the collection, processing, and analysis of the 2004 NNHS medication data will be available in the future.

Appendix

1995 Version of National Drug Code (NDC) Directory

0100	ANESTHETIC DRUGS	0509	Relaxants/Stimulants, Urinary Tract
0117	Anesthetics, Local (Injectable)	0510	Calcium Channel Blockers
0118	Anesthetics, General	0511	Carbonic Anhydrase Inhibitors
0119	Adjuncts to Anesthesia / Analeptics	0512	Beta Blockers
0120	Medicinal Gases	0513	Alpha Agonist/Alpha Blockers
0121	Anesthetics, Topical	0514	ACE Inhibitors
0122	Anesthetics, Ophthalmic		
0123	Anesthetics, Rectal	0600	CENTRAL NERVOUS SYSTEM
		0626	Sedatives and Hypnotics
0200	ANTIDOTES	0627	Antianxiety Agents
0281	Antidotes, Specific	0628	Antipsychotic/Antimanics
0283	Antidotes, General	0630	Antidepressants
0285	Antitoxins / Antivenins	0631	Anorexiant/CNS Stimulants
0286	Anaphylaxis Treatment Kit	0632	CNS, Miscellaneous
		0633	Alzheimer-Type Dementia
0300	ANTIMICROBIAL AGENTS	0634	Sleep Aid Products-OTC
0346	Penicillins	0635	Antiemetics
0347	Cephalosporins		
0348	Erythromycins/Lincosamides/ Macrolides	0700	CONTRAST MEDIA/ RADIOPHARMACEUTICAL
0349	Polymyxins	0789	Diagnostics, Radiopaque & Nonradioactive
0350	Tetracyclines	0790	Diagnostics - Radiopharmaceuticals
0351	Chloramphenicol/Derivatives	0791	Therapeutics -Radiopharmaceuticals
0352	Aminoglycosides	0792	Miscellaneous
0353	Sulfonamides and Trimethoprim		
0354	Urinary Tract Antiseptics	0800	GASTROINTESTINAL AGENTS
0355	Miscellaneous Antibacterial Agents	0874	Disorders, Acid/Peptic
0356	Antimycobacterial/Anti-Leprosy Agents	0875	Antidiarrheals
0357	Quinolones/Derivatives	0876	Laxatives
0358	Antifungals	0877	Miscellaneous Gastrointestinals
0388	Antiviral Agents	0878	Antispasmodics/ Anticholinergics
		0879	Antacids
0400	HEMATOLOGIC AGENTS		
0408	Deficiency Anemias	0900	METABOLIC/NUTRIENTS
0409	Anticoagulants/Thrombolytics	0912	Hyperlipidemia
0410	Blood Components/Substitutes	0913	Vitamins/Minerals
0411	Hemostatics/Antihemophilics	0914	Nutrition, Enteral/Parenteral
		0915	Repl/Regs of Electrolytes/ Water Balance
0500	CARDIOVASCULAR-RENAL DRUGS	0916	Calcium Metabolism
0501	Cardiac Glycosides	0917	Hematopoietic Growth Factor
0502	Antiarrhythmic Agents		
0503	Antianginal Agents	1000	HORMONES/HORMONAL MECHANISMS
0504	Vascular Disorders, Cerebral/ Peripheral	1032	Adrenal Corticosteroids
0505	Agents Used to Treat Shock/ Hypotension	1033	Androgens/Anabolic Steroids
0506	Antihypertensive Agents	1034	Estrogens/Progestins
0507	Diuretics	1035	Anterior Pituitary/ Hypothalamic Function
0508	Coronary Vasodilators	1036	Blood Glucose Regulators

1037	Thyroid/Antithyroid	1568	Ocular Anti-infective/Anti-inflammatory
1038	Antidiuretics	1569	Miscellaneous Ophthalmics
1039	Relaxants/Stimulants, Uterine	1570	Decongestants/Antiallergy Agents
1040	Contraceptives	1571	Contact Lens Products
1041	Infertility		
1042	Growth Hormone Secretion Disorder	1600	OTOLOGICS
1100	IMMUNOLOGICS	1670	Otic, Topical (Misc)
1180	Vaccines/Antisera	1671	Vertigo/Motion Sickness/ Vomiting
1181	Immunomodulators	1700	RELIEF OF PAIN
1182	Allergenic extracts	1720	Analgesics/General
1183	Immune serums	1721	Analgesics, Narcotic
1200	SKIN/MUCOUS MEMBRANE	1722	Analgesics, Non-Narcotic
1264	Antiseptics/Disinfectants	1723	Antimigraine/Other Headaches
1265	Dermatologics, Misc.	1724	Antiarthritics
1266	Keratolytics	1725	Antigout
1267	Antiperspirants	1726	Central Pain Syndrome
1268	Topical Steroids	1727	NSAID
1269	Burn/Sunburn, Sunscreen/Suntan Products	1728	Antipyretics
1270	Acne Products	1729	Menstrual Products
1271	Topical Anti-infectives	1800	ANTIPARASITICS
1272	Anorectal Products	1860	Antiprotozoals
1273	Personal Care (Vaginal) Products	1862	Anthelmintics
1274	Dermatitis/Antipuretics	1863	Scabicides/Pediculicides
1275	Topical Analgesics	1864	Antimalarials
1300	NEUROLOGIC DRUGS	1900	RESPIRATORY TRACT
1371	Extrapyramidal Movement Disorders	1940	Antiasthmatics/Bronchodilators
1372	Myasthenia Gravis	1941	Nasal Decongestants
1373	Skeletal Muscle Hyperactivity	1943	Antitussives/Expectorants/Mucolytics
1374	Anticonvulsants	1944	Antihistamines
1400	ONCOLYTICS	1945	Cold Remedies
1479	Antineoplastics, Miscellaneous	1946	Lozenge Products
1480	Hormonal/Biological Response Mod.	1947	Corticosteroid-Inhalation, Nasal
1481	Antimetabolites	2000	UNCLASSIFIED/ MISCELLANEOUS
1482	Antibiotics,Alkaloids,Enzymes	2087	Unclassified
1483	DNA Damaging Drugs	2095	Pharmaceutical Aids
1500	OPHTHALMICS	2096	Surgical Aids
1566	Glaucoma	2097	Dental Preparation
1567	Cycloplegics/Mydriatics	2098	Dentrice/Denture Products
		2099	Mouth Pain, Cold Sore, Canker
		2100	HOMEOPATHIC PRODUCTS