**2018 National Ambulatory Medical Care Survey Public Use Data File Documentation Addendum for Refined Weights**

The 2018 National Ambulatory Medical Care Survey (NAMCS) Public Use Data File was released in May 2021. Survey data were weighted using a novel weighting method called multipurpose Iterative Proportional Fitting (IPF), described in more detail here. Ongoing methodological research with additional NCHS surveys led to refinement of the original method, and the refined method was adopted for use with the 2019 NAMCS.

As part of the research conducted with the refined weighting method, the refined method was applied retroactively to the 2018 NAMCS data, and comparisons were made between the estimates derived from the original weights and the refined weights. The overall visit estimate using the original weights was 860,386,000, while the estimate using the refined weights was 872,436,000. This difference was not found to be statistically significant. Comparisons were made between various frequency estimates and percent distributions using the original and refined weights; significant differences were mainly found at the physician level for variables which are typically not included on the public use data file. These physician characteristics variables are available in the NCHS Research Data Center and include items such as physician's age and whether the physician's office is located in a metropolitan statistical area. A report describing the refined weighting method and comparing 2018 estimates using both the original and the refined method is in progress.

This addendum to the 2018 NAMCS Public Use Data File comprises four variables, including the physician code (PHYCODE) and patient code (PATCODE) variables, along with both the refined visit weight (PATWT) and refined physician weight (PHYSWT) variables. A SAS program for merging the new weighting variables to the existing 2018 NAMCS Public Use Data File, using the PHYCODE and PATCODE variables, is also included.

This information is provided for any data user who wishes to use precisely the same weighting method used with 2019 NAMCS but applied back to 2018 NAMCS. As mentioned, results are not expected to differ significantly for most estimates, but the weights are being provided to permit maximum comparability across data years 2018 and 2019.

CODEBOOK is shown on next page.

## Codebook for 2018 NAMCS Public Use Data File Addendum for Refined Weights

| Variable Name | Variable labels | Character or Numeric | PUF data length | Values |
|---|---|---|---|---|
| PHYCODE | Physician marker | N | 5 | 1-9999 |
| PATCODE | Sequential number of visit records per physician | N | 3 | 1-999 |
| PATWT_NEW | Weight used to produce national estimates | N | 12 | 1.00000-999999.99999 |
| PHYSWT_NEW | Weight used for physician-level estimates based on responding in-scope physicians seeing patients | N | 10 | 1-999.999999 |

## SAS Program to Merge Variables from 2018 NAMCS Public Use Data File Addendum for Refined Weights to 2018 NAMCS Public Use Data File

NOTE: If downloading the 2018 NAMCS Public Use Data File for the first time, follow the steps here to create the SAS dataset:

The example shown below assumes that a SAS data set for the original 2018 NAMCS Public Use File has been created with the name namcs18_orig_wt and is saved in this folder: c:\MyFiles\NAMCS2018 (but you can use whatever name and location you prefer as long as it is also used in your program).

To download and read the 2018 NAMCS Public Use Data File Addendum for Refined Weights, follow these steps:

Download the file namcs2018_refined_weights from this location and save it to a folder on your local desktop, for example, C:\MyFiles\NAMCS2018. The new file is small and does not need to be unzipped.

This pathname will be used in the sample code below.

The following steps can be used to merge the two files together.

First, point to the file location in your program.

```
libname out1 ‘c:\MyFiles\NAMCS2018’;
/*The libname statement just sets a ‘nickname’ for the path where your SAS datasets are located;
the nickname, in this case ‘out1’, can be whatever you choose, as long as it is also used in the
next two data steps.*/

data namcs18_orig_wt; set out1.test18;
/*Should point to whatever you called the public use file when you created the SAS data set.  If
using the premade SAS data set for 2018 NAMCS that is provided on our website, simply point
to that file on your local workstation.  For this example we are assuming the data user has
created a SAS file with the name test18.*/

data namcs18_new_wt; set out1.namcs2018_refined_weights;
/*Should point to the downloaded file with the refined weights.*/

proc sort data=namcs18_orig_wt; by phycode patcode; run;
proc sort data=namcs18_new_wt; by phycode patcode; run;

data namcs18_new notrandom notvisit;
merge namcs18_orig_wt (in=inwt1) namcs18_new_wt (in=inwt2);
by phycode patcode;

/*below is a test to make sure things worked correctly*/
if inwt1=1 and inwt2 ne 1 then output notrandom;
if inwt1=0 and inwt2 =1 then output notvisit;
if inwt1=1 and inwt2 =1 then output namcs18_new;
run;

/*The temporary file called notrandom should have 0 observations;
  the temporary file called notvisit should have 0 observations;
  the temporary file called namcs18_new should have 9953 observations;
*/

/*This retains the physician weight on just the first visit record
for each physician; this is important so that physicians are not counted with multiple weights.
Each physician should only have one weight on the file.*/

data namcs18_new2; set namcs18_new;
if patcode ne 1 then physwt_new=.;
run;

/*This is just a test of what the new file looks like; it will contain all of the original public use
file variables, plus the new patwt and new physwt variables.*/

proc print data=namcs18_new2 (obs=50);
var phycode patcode patwt physwt patwt_new physwt_new;
run;
```

```
/* The new weight variables can be used in the same way as the original weight variables as
shown in these examples.*/

proc freq data=namcs18_new2;
tables msa/list;
weight patwt_new; run;

proc freq data=namcs18_new2;
tables msa/list;
weight physwt_new; run;
```

Questions? Contact the Ambulatory and Hospital Care Statistics Branch at 301-458-4600 or by email at AMBCARE@CDC.GOV.

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