



*AHRQ Quality Indicators™*

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## **MapIT Tool Conversion of ICD9 to ICD10**

## **MapIT**

### **Version 2.1.220 with 2012 and 2013 ICD-9/10 Codes and Mapping**

#### **Purpose**

The MapIT tool takes a selected set of ICD-9 codes, applies the CMS General Equivalence Mapping in various ways, then output the set of related ICD-9 and ICD-10 codes. The tool applies the GEM in a two stage process using both the forward and backward maps in conjunction with a novel reverse mapping (explained below). In stage one, the input ICD-9 codes are mapped to ICD-10 codes using the ICD-9 to 10 forward map as well as the reverse of the ICD-10 to 9 backward map. In stage two, the ICD-10 codes output from stage one are mapped back to ICD-9 codes using the GEM backward map as well as the reverse of the ICD-9 to 10 forward map. Finally, in stage three, the ICD-9 codes output from stage two are mapped to ICD-10 codes using the ICD-9 to 10 forward map and the reverse of the ICD-10 to 9 forward backward map. At each stage, only new codes are reported.

#### **Disclaimer**

The tool was developed by Battelle Memorial Institute and UC Davis under the AHRQ Quality Indicator™ (QI) Contract No. 290-04-0020 (AHRQ SQI-II). The tool was originally created as a research tool to facilitate the conversion of AHRQ QIs from ICD-9 diagnostic and procedure codes to ICD-10 diagnostic and procedure codes. The tool was not initially intended for public use and as such has not undergone extensive review, quality control and testing. Based on user demand, the tool is being released to the public for research purposes only. Documentation is limited and software testing beyond that required for research has not been completed. Technical support for the product is not being offered.

#### **Prerequisites**

.NET Framework 4.0 or higher

#### **Install**

The software can be installed simply by extracting the zip file contents into any folder.

#### **Execution**

There are two versions of the software (including codes and mapping) provided, one for FY12 (MapIT\_FY12\_2\_1\_120) and FY13 (MapIT\_FY13\_2\_1\_120). Run the Ahrq.Mapped.UI.exe program within either folder to execute the program with the codes and mapping for the respective year. The two versions may be run independently in order to compare the changes from one year to the next.

#### **Interactive Use**

The screen consists of three panes arranged horizontally. The left hand pane allows the user to find ICD 9 or 10 diagnosis or procedure codes. Typing a code or keyword from a code description into the search box and will filter the list below. Clicking on a code in the list will also display the mapping information for that code in the second pane. Clicking the green arrow at the bottom will send all checked codes to the export list in the third pane. The middle pane displays mapping information for the currently selected code. The top part displays a summary of the mapping. The middle part displays the mapping tree (each path from the source code through two stages using forward, backward, and reverse mapping. Selecting an entry in the mapping tree will show detail in the bottom part of the middle pane. The third pane allows the user to export the mapping information for a selected set of codes. The codes can be added from the left pane or loaded from a file (see below).

## Batch Mapping

1. Start with the code set in a file such as below. The name of the file will be used as the default set name. All of the codes must be either diagnosis codes (CM) or procedure codes (PCS) and must all come from the same ICD 9 or 10 version.
2. Click the Browse button in the upper left to specify the code set file.
3. Click the "Read in source codes" button.
4. Select the type of mapping based on the type of codes in the file. Remember that a given file can only contain one type of code.
  - Forward ICD-9 to ICD-10 CM: the files contain ICD-9 diagnosis codes that the user wants to have mapped to ICD-10.
  - Forward ICD-9 to ICD-10 PCS: the files contain ICD-9 procedure codes that the user wants to have mapped to ICD-10.
  - Forward ICD-10 to ICD-9 CM: the files contain ICD-10 diagnosis codes that the user wants to have mapped to ICD-9.
  - Forward ICD-10 to ICD-9 PCS: the files contain ICD-10 procedure codes that the user wants to have mapped to ICD-9.
5. Click Import.
6. The system will read in the codes. Codes not recognized are added to the gray box. A code may not be recognized because a) it is not the selected type (diagnosis or procedure), b) it is not included in the current version of the code and GEM files included with the software, or c) it is simply misentered. Codes that are recognized will be added to next box down.
7. Note the Set Name displayed in the bottom right. You can edit this if desired. It is used as a header in the report.
8. Click Export to create a report of the mapping stages. A new window containing a report of the mappings will appear.
9. Click the Export button (looks like a diskette with a green arrow pointing to it) on the toolbar at the top of that window. Select Excel from the list. Supply a directory and file name in the dialog that displays. The default name will include the set name.
10. Click Export Clusters to export a report of the combination clusters identified during each stage of mapping. Clusters are only identified during normal forward and backward mapping, not reverse mapping. A new window containing a report of the mappings will appear. Click the Export button (looks like a diskette with a green arrow pointing to it) on the toolbar at the top of that window. Select Excel from the list. Supply a directory and file name in the dialog that displays. The default name will include the set name.
11. To perform another batch mapping, click Reset/Clear in the middle part of the right pane.

### Batch Mapping Code File Format

- \* One code per line
- \* No decimals

### Example Batch Mapping Code File

```
53570
53571
538
5550
5551
5552
5559
```

5560  
5561  
5562  
5563  
5564  
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