MONAHRQ Release Notes

Version 3.0
June 2012
Table of Contents

1. INTRODUCTION

2. WHAT’S NEW
   2.1 Updated WinQI Software
   2.2 Updated Cost to Charge Ratio Files
   2.3 Additional AHRQ Quality Indicators
   2.4 Additional Hospital Compare Measures
   2.5 New Nursing Sensitive Care Health Topic
   2.6 Rules for Suppressing Values Based on the Denominator
   2.7 Using User-Defined DRG and MDC Groupings
   2.8 Saving and Reloading Hospital Information
   2.9 Preserving Host User Customizations

3. SYSTEM REQUIREMENTS
   Operating Systems
   Software
   Disk Space

4. INSTALLATION

5. TROUBLESHOOTING
   5.1 AHRQ Quality Indicators Prediction Module Error During Data Load
   5.2 APR Grouper Error During Data Load
   5.3 “Ordinal” Error Message during Run Analysis

6. CONTACTS

Index of Tables

TABLE 1. ADDITIONAL AHRQ QUALITY INDICATORS
TABLE 2. ADDITIONAL HOSPITAL COMPARE OUTPATIENT MEASURES
TABLE 3. ADDITIONAL HOSPITAL COMPARE IMAGING MEASURES
TABLE 4. ADDITIONAL HOSPITAL COMPARE SURGICAL PATIENT SAFETY MEASURES (INPATIENT)
TABLE 5. NURSING SENSITIVE CARE MEASURES
1. INTRODUCTION

MONAHRQ is a free Windows-based software product that enables host users—such as state and local data organizations, chartered value exchanges, hospitals, and health plans—to input their own raw inpatient hospital administrative data and/or the Centers for Medicare and Medicaid Service’s (CMS) Hospital Compare data and generate a data-driven Website. This tool was developed by the Agency for Healthcare Research and Quality (AHRQ), the federal government’s lead agency for health care quality in the United States. MONAHRQ is based on two of AHRQ’s most popular and widely respected tools, the AHRQ Quality Indicators (AHRQ QI) and HCUPnet.

These release notes provide information regarding new features in MONAHRQ 3.0 as well as installation and upgrade information.

2. WHAT’S NEW

Release 3.0 of MONAHRQ includes a number of updates, several new features for MONAHRQ host users, the ability to report several additional hospital quality measures from the AHRQ QI and from Hospital Compare, and three new health topics in the hospital quality path.

2.1 Updated WinQI Software

MONAHRQ embeds AHRQ’s QI Windows Software (WinQI). Version 3.0 of MONAHRQ has been updated to embed WinQI version 4.3a. For details on the WinQI 4.3a software, please see the AHRQ QI website at http://www.qualityindicators.ahrq.gov/Archive/Software.aspx#winqi.

2.2 Updated Cost to Charge Ratio Files

The Cost to Charge Ratio files provided in MONAHRQ have been updated to include those derived from 2009 HCUP data. For additional details on AHRQ’s Cost to Charge Ratio files, please see HCUP website at http://www.hcup-us.ahrq.gov/db/state/costtocharge.jsp.

The MONAHRQ 3.0 host user application continues to allow the host user to override the default cost to charge ratio values manually. Use the Edit Hospital Discharge Information screen during the Edit Discharge Hospital step of the Define Regions and Hospitals Wizard.

2.3 Additional AHRQ Quality Indicators

MONAHRQ 3.0 is able to report four additional AHRQ Quality Indicators – including three AHRQ QI composites. The additional QI and their assigned MONAHRQ health topics are listed below in Table 1, Additional AHRQ Quality Indicators. The provider-level quality indicator composites comprise the new Composites health topic. Please note that some measures may appear in more than one health topic.
### Additional Hospital Compare Measures

MONAHRQ 3.0 is able to report twelve additional Hospital Compare Measures. The additional measures include outpatient measures, imaging measures, and surgical patient safety measures. The measures and their assigned MONAHRQ health topics are listed in the table below. Please note that some measures may appear in more than one health topic.

<table>
<thead>
<tr>
<th>Name</th>
<th>MONAHRQ Display Name</th>
<th>MONAHRQ Health Topic(s)</th>
<th>Identifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median Time to Fibrinolysis</td>
<td>Average length of time to receive clot-dissolving medication</td>
<td>Heart attack and chest pain</td>
<td>OP-1</td>
</tr>
<tr>
<td>Fibrinolytic Therapy Received Within 30 Minutes</td>
<td>Clot-dissolving medication received within 30 minutes</td>
<td>Heart attack and chest pain</td>
<td>OP-2</td>
</tr>
<tr>
<td>Median Time to Transfer to Another Facility for Acute Coronary</td>
<td>Average length of time for transfer to another hospital to receive a procedure for heart attack</td>
<td>Heart attack and chest pain</td>
<td>OP-3</td>
</tr>
<tr>
<td>Intervention</td>
<td>Description</td>
<td>Health Topic(s)</td>
<td>Identifier</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>-----------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Aspirin at Arrival</td>
<td>Received aspirin on arrival to the hospital</td>
<td>Heart attack and chest pain</td>
<td>OP-4</td>
</tr>
<tr>
<td>Median Time to ECG</td>
<td>Average length of time to receive an ECG (a test that can detect heart damage following heart attack)</td>
<td>Heart attack and chest pain</td>
<td>OP-5</td>
</tr>
<tr>
<td>Prophylactic Antibiotic Initiated Within One Hour Prior to Surgical Incision</td>
<td>Antibiotics given one hour before surgery (outpatient)</td>
<td>Surgical patient safety</td>
<td>OP-6</td>
</tr>
<tr>
<td>Prophylactic Antibiotic Selection for Surgical Patients</td>
<td>Right antibiotics given (outpatient)</td>
<td>Surgical patient safety</td>
<td>OP-7</td>
</tr>
</tbody>
</table>

Table 2. Additional Hospital Compare Outpatient Measures.

<table>
<thead>
<tr>
<th>Name</th>
<th>MONAHRQ Display Name</th>
<th>MONAHRQ Health Topic(s)</th>
<th>Identifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRI Lumbar Spine for Low Back Pain</td>
<td>MRI for lower back pain</td>
<td>Imaging</td>
<td>OP-8</td>
</tr>
<tr>
<td>Abdomen CT - Use of Contrast Material</td>
<td>Contrast material (dye) used during abdominal CT scan</td>
<td>Imaging</td>
<td>OP-10</td>
</tr>
<tr>
<td>Thorax CT - Use of Contrast Material</td>
<td>Contrast material (dye) used during chest CT scan</td>
<td>Imaging</td>
<td>OP-11</td>
</tr>
</tbody>
</table>

Table 3. Additional Hospital Compare Imaging Measures.

<table>
<thead>
<tr>
<th>Name</th>
<th>MONAHRQ Display Name</th>
<th>MONAHRQ Health Topic(s)</th>
<th>Identifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgery patients whose urinary catheters were removed on the first or second day after surgery</td>
<td>Surgery patients whose urinary catheters were removed on the first or second day after surgery</td>
<td>Surgical patient safety</td>
<td>SCP-INF-9</td>
</tr>
<tr>
<td>Perioperative Temperature Management</td>
<td>Preventing low body temperature during and after surgery</td>
<td>Surgical patient safety</td>
<td>SCP-INF-10</td>
</tr>
</tbody>
</table>

Table 4. Additional Hospital Compare Surgical Patient Safety Measures (Inpatient).
2.5 New Nursing Sensitive Care Health Topic

MONAHRQ 3.0 adds a new health topic in the Hospital Quality path, Nursing sensitive care. The measures assigned to this health topic are listed in the table below. While these measures were reported in previous MONAHRQ versions, MONAHRQ 3.0 also makes it possible to group them under the single Nursing sensitive care health topic.

<table>
<thead>
<tr>
<th>Name</th>
<th>MONAHRQ Display Name</th>
<th>MONAHRQ Health Topic(s)</th>
<th>Identifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Death in low mortality DRGs</td>
<td>Dying in the hospital while getting care for a condition rarely results in death</td>
<td>Nursing sensitive care; Other patient safety; Deaths and readmissions</td>
<td>PSI 2</td>
</tr>
<tr>
<td>Pressure Ulcers</td>
<td>Developing a bed sore in the hospital</td>
<td>Nursing sensitive care; Other patient safety</td>
<td>PSI 3</td>
</tr>
<tr>
<td>Death in surgical inpatients</td>
<td>Dying in the hospital because a serious condition was not identified and treated</td>
<td>Nursing sensitive care; Surgical patient safety; Deaths and readmissions</td>
<td>PSI 4</td>
</tr>
<tr>
<td>Foreign body left in during procedure</td>
<td>Surgical tool accidentally left in a body during surgery</td>
<td>Nursing sensitive care; Other patient safety</td>
<td>PSI 5</td>
</tr>
<tr>
<td>Central Line Associated BSI</td>
<td>Blood infection that patients with catheters developed while in the hospital</td>
<td>Nursing sensitive care ; Other patient safety</td>
<td>PSI 7</td>
</tr>
<tr>
<td>Post-operative hip fracture</td>
<td>Hip fracture after surgery</td>
<td>Nursing sensitive care; Surgical patient safety</td>
<td>PSI 8</td>
</tr>
<tr>
<td>Postoperative Physiologic and Metabolic Derangement</td>
<td>Abnormal changes in internal body functions after surgery</td>
<td>Nursing sensitive care; Surgical patient safety</td>
<td>PSI 10</td>
</tr>
<tr>
<td>Post-operative pulmonary embolism or deep vein thrombosis</td>
<td>Blood clot in the lung or leg vein after surgery</td>
<td>Nursing sensitive care; Surgical patient safety</td>
<td>PSI 12</td>
</tr>
<tr>
<td>Post-operative sepsis</td>
<td>Severe bloodstream infection after surgery</td>
<td>Nursing sensitive care; Surgical patient safety</td>
<td>PSI 13</td>
</tr>
</tbody>
</table>

Table 5. Nursing Sensitive Care Measures.
2.6 Rules for Suppressing Values Based on the Denominator

Previous versions of MONAHRQ allow the host user to specify a suppression threshold based on numerator values. Numerator suppression is generally used to ensure confidentiality.

MONAHRQ 3.0 also allows the host user to specify a suppression threshold based on denominator values. Denominator suppression is generally used to ensure a sufficient number of cases for reliability.

The suppression logic in MONAHRQ 3.0 follows the following rules. For specific details on how MONAHRQ implements numerator-based and denominator-based suppression, see the Host User Guide.

- If the denominator is strictly below the specified denominator threshold, denominator-based suppression applies. In general, the denominator value is displayed, but all other values are suppressed.
- If the numerator is strictly below the specified numerator threshold AND denominator-based suppression does not apply, numerator-based suppression applies. In general, rates are displayed, but the numerator and denominator values are suppressed.
- Denominator-based suppression takes precedence over numerator-based suppression.
- For volume measures that do not have a denominator, only numerator-based suppression applies.

In addition, MONAHRQ 3.0 has been enhanced to optionally support margin suppression. Margin suppression enforces an additional trigger condition for numerator-based suppression.

1. Regular numerator-based suppression is triggered when the numerator is strictly below the numerator suppression threshold. For example, suppose the numerator suppression threshold is set at 5. If the numerator=4 and the denominator=100, regular numerator-based suppression applies.
2. Margin suppression is triggered when the difference between the numerator and denominator is strictly below the numerator suppression threshold. For example, suppose the numerator suppression threshold is set at 5. If the numerator=96 and the denominator=100, margin suppression applies.

The host user can specify numerator and denominator suppression thresholds and whether to apply margin suppression in the Website Builder Wizard of the MONAHRQ host application.
2.7 Using User-Defined DRG and MDC Groupings

MONAHRQ embeds an MDC-DRG grouper produced by Innovative Resources for Payors (IRP). MONAHRQ 3.0 makes it optional to use this embedded grouper; the host user can now instead choose to load their own MDC-DRG assignments.

To override MONAHRQ's embedded MDC-DRG grouper, the host user should include their own MDC-DRG assignments in the hospital discharge data file that they load into MONAHRQ. MONAHRQ 3.0 allows the host user to map these MDC-DRG values to MONAHRQ variables named “DRG Import” and “MDC Import.” This mapping occurs during the Data Mapping step of the Import Discharge Data Wizard in the MONAHRQ host application. User-defined DRG and MDC groupings are not checked for consistency or correctness; all such groupings will be used as provided by the user.

2.8 Saving and Reloading Hospital Information

The MONAHRQ host user application allows the host user to edit hospital information.

For convenience, MONAHRQ 3.0 also allows the host user to save hospital information to a file and to load hospital information from a file. To save hospital information to a file, select the Export this Data button during the Edit Discharge Hospital step of the Define Regions and Hospitals Wizard in the MONAHRQ host application. To load hospital information from a file, select the Load from File button during the Edit Discharge Hospital of the Define Regions and Hospitals Wizard in the MONAHRQ host application.

2.9 Preserving Host User Customizations

For convenience, the MONAHRQ 3.0 host application now automatically saves several host user-specified customization parameters and reuses them by default for subsequent invocations of MONAHRQ. Parameters that are now automatically saved and reused include:

- Which hospitals are selected for reporting.
- Which health topics and measures are selected for reporting.
- Which Web pages are selected to be generated.
- The directory to which to write the generated Web site. A warning is provided when the host user attempts to overwrite a previously generated Web site.

3. SYSTEM REQUIREMENTS

Operating Systems

- Windows XP.
- Windows Server 2003 or higher.
- 32- and 64-bit Windows 7.

**Software**
- Microsoft .NET Version 4.0.
- SQL Server Express 2005 or higher. SQL Server Express 2008 R2 is recommended.
- AHRQ Quality Indicator Prediction Module.
  Download and install the WinQI 4.3a-compatible version of the Prediction Module from [http://qualityindicators.ahrq.gov/Downloads/Software/SAS/V43/AHRQSetup%200.9.2.190.msi](http://qualityindicators.ahrq.gov/Downloads/Software/SAS/V43/AHRQSetup%200.9.2.190.msi)

**Disk Space**
- MONAHRQ application – 192 MB
- Microsoft .NET 4.0 – 600 MB (1.5 GB for 64 bit systems)
- Microsoft SQL Server Express – 600 MB
- AHRQ Quality Indicator Prediction Module – 2 MB
- MONAHRQ data – Requirements vary depending on the number of discharges you wish to process. About 100 MB is typical, but this can be up to 4GB.

4. INSTALLATION

Please refer to the *MONAHRQ Step-by-Step Installation Guide* for detailed instructions on installing MONAHRQ 3.0.

To run MONAHRQ 3.0, you must use the version of the AHRQ Quality Indicator Prediction Module that is compatible with the WinQI 4.3a software embedded in MONAHRQ 3.0. The download URL is provided above in the section System Requirements – Software.

5. TROUBLESHOOTING

Some users have experienced issues running MONAHRQ that are related to the desktop environment. The most common are explained below.

5.1 *AHRQ Quality Indicators Prediction Module Error During Data Load*

Problem: During the Data Load step, the following error message appears:

```
AHRQPrediction.exe - Unable to Locate Component
This application has failed to start because MSVCP100.dll was not found. Re-installing the application may fix this problem.
```
Solution: This problem occurs if the appropriate version of the AHRQ Quality Indicators Prediction Module has not been installed. Please refer to the System Requirements – Software section of this document to obtain information about installing the correct version of the Prediction Module.

5.2 APR Grouper Error During Data Load

Problem: During the Data Load step, the following error message appears:

Unable to load DLL 'aprlim.dll': This application has failed to start because the application configuration is incorrect. Reinstalling the application may fix this problem. (Exception from HRESULT: 0x800736B1)

Solution: This problem occurs because the APR Grouper provided by 3M depends upon a version of the Microsoft C++ Dynamic Link Libraries (DLLs) from a July 2009 security update. To resolve this problem, please download and install the "vcredist_x86.exe" package from the Microsoft website at http://www.microsoft.com/download/en/details.aspx?id=14431.

5.3 “Ordinal” Error Message during Run Analysis

Problem: During the Run Analysis step, the following error message appears:

The ordinal 481 could not be located in the dynamic link library iertutil.dll

Solution: This message can safely be ignored. Select the OK button on the message box.

6. CONTACTS

Should you have any questions, issues, or feedback regarding MONAHRQ, the MONAHRQ team can be reached by email at monahrq@ahrq.gov or by phone at 1-888-720-1824.