MONAHRQ Release Notes

Version 3.0
June 2012

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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.

Name	MONAHRQ Display Name	MONAHRQ Health Topic(s)	Identifier
AMI mortality rate - without transfers	Dying in the hospital after heart attack (excludes patients transferred to another hospital)	Heart attack and chest pain	IQI 32
Mortality for selected procedures (esophageal resection, pancreatic resection, AAA repair, CABG, craniotomy, hip replacement, percutaneous transluminal coronary angioplasty (PTCA), and carotid endarterectom)	Combined measure: Dying in the hospital following eight major surgeries	Composites; Deaths and readmissions	IQI Proc
Mortality for selected conditions (AMI, CHF, stroke, hemorrhage, hip fracture, and pneumonia)	Combined measure: Dying in the hospital for six conditions	Composites; Deaths and readmissions	IQI Cond
Patient safety composite for selected indicators (decibutus ulcer, iatrogenic pneumothorax, infection due to medical care, postoperative hip fracture, postoperative PV or DVT, postoperative sepsis, postoperative wound dehiscence, accidental puncture/laceration)	Combined measure: Eight patient safety problems	Composites; Other patient safety	PSI Comp

Table 1. Additional AHRQ Quality Indicators.

2.4 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.

Name	MONAHRQ Display Name	MONAHRQ Health Topic(s)	Identifier
Median Time to Fibrinolysis	Average length of time to receive clot-dissolving medication	Heart attack and chest pain	OP-1
Fibrinolytic Therapy Received Within 30 Minutes	Clot-dissolving medication received within 30 minutes	Heart attack and chest pain	OP-2
Median Time to Transfer to Another Facility for Acute Coronary	Average length of time for transfer to another hospital to receive a procedure for heart attack	Heart attack and chest pain	OP-3

Intervention			
Aspirin at Arrival	Received aspirin on arrival to the hospital	Heart attack and chest pain	OP-4
Median Time to ECG	Average length of time to receive an ECG (a test that can detect heart damage following heart attack)	Heart attack and chest pain	OP-5
Prophylactic Antibiotic Initiated Within One Hour Prior to Surgical Incision	Antibiotics given one hour before surgery (outpatient)	Surgical patient safety	OP-6
Prophylactic Antibiotic Selection for Surgical Patients	Right antibiotics given (outpatient)	Surgical patient safety	OP-7

Table 2. Additional Hospital Compare Outpatient Measures.

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

Table 3. Additional Hospital Compare Imaging Measures.

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

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.

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

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

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.