An Overview of 3M™ All Patient Refined Diagnostic Related Groups (3M APR DRG)

July, 2012

3M

3M APR-DRG Education Session Agenda

- Introduction to APR DRG
- States Using APR DRGs
- Differences between CMS DRG and APR DRG v28.0
- APR-DRG clinical logic primer
- Uses of APR-DRGs.
- Steps for Your Organization's Success.
- Product Information
- Frequently Asked Questions
Current Use (Includes Commitments) of 3M Patient Classification Systems as of June, 2012

Importance of Understanding Risk Adjusted Data

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What are APR DRGs?

- All Patients Refined Diagnosis Related Groups (APR DRG) is a classification system that classifies patients according to their reason of admission, severity of illness and risk of mortality.
  - The patient characteristics used in the definition of the DRGs are limited to information routinely collected on hospital abstract systems.
  - There are a manageable number of DRGs which encompass all patients seen on an inpatient basis.
  - Each DRG contains patients with a similar pattern of resource intensity.
  - Each DRG contains patients who are similar from a clinical perspective.

How were APR DRG developed?

- A core panel of physicians (from the National Association of Children’s Hospitals and Research Institutes (NACHRI))
- Supplemented by specialists and subspecialists by body system
- Input from medical records specialists, nursing, health services researchers and economics analysts
- Intensive peer review of all clinical logic processes
- Review and revisions based on data analysis
Initial Development of All Patient Refined DRGs (APR DRGs)

- Medicare DRG Updates
- Yale DRG Refinements
- NACHRI Pediatric DRG Modifications
- New York AP-DRG Expansion

Summary of APR DRGs

25 MDCs
314 APR DRGs + 2 error DRGs

Severity of Illness is used for payment

Four Severity of Illness Subclasses:
1. Minor
2. Moderate
3. Major
4. Extreme

1256 Subclasses

Four Risk of Mortality Subclasses:
1. Minor
2. Moderate
3. Major
4. Extreme

1256 Subclasses
How are APR DRG updated?

- Clinical Panels review clinical logic for needed adjustments
  - Hospitals
  - State Agencies input
  - New literature evaluated
  - New code set
- Data is run to validate changes
- 2 tier Peer review of changes are reviewed
- APR DRG are updated Annually in Oct timeframe
- Note:
  - Typical updates are code related, low emphasis on changing logic occurs in October
  - Major updates of APR DRG are every 3-4 years
  - Next major update coming in October, 2012

Key Definitions

- **Severity of Illness**: the extent of physiologic decompensation or organ system loss of function

- **Risk of Mortality**: the likelihood of dying

- **Resource Intensity**: the relative volume and types of diagnostic, therapeutic and bed services used in the management of a particular disease
SOI and ROM are Independent

The severity of illness and risk of mortality subclass are calculated separately and may be different from each other.

![Acute Cholecystitis](image)

- **SOI = 3**
  - Significant Organ Decompensation
- **ROM = 1**
  - Low risk of mortality

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Example of Severity of Illness Progression of Diagnoses

<table>
<thead>
<tr>
<th>Severity Of Illness</th>
<th>Secondary Diagnosis of Diabetes Mellitus</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Minor</td>
<td>Uncomplicated Diabetes (250.0X)</td>
</tr>
<tr>
<td>2 Moderate</td>
<td>Diabetes with Renal Manifestation (250.4X)</td>
</tr>
<tr>
<td>3 Major</td>
<td>Diabetes with Ketoacidosis (250.1X)</td>
</tr>
<tr>
<td>4 Severe</td>
<td>Diabetes with Hyperosmolar Coma (250.2X)</td>
</tr>
</tbody>
</table>
Fundamental Principle of APR DRG Clinical Logic:

- Severity of illness and risk of mortality are dependent on the patient's underlying condition (i.e., the base APR DRG).

- High severity of illness and risk of mortality are characterized by multiple serious diseases and the interaction of those diseases.

Explanation of APR DRG Methodology

1. Assign the base APR DRG
2. Phase I: Determine level of each secondary diagnosis
3. Phase II: Determines a base subclass for the patient based on all of the patient's secondary diagnoses (3 steps)
4. Phase III: The final subclass for the patient is determined (9 steps)
5. Total of 18 steps
Assign the Base APR DRG

SOI Phase I:

Phase I
Determine level of each secondary diagnosis

Step 1
Eliminate secondary diagnoses (SDX) that are associated with principal diagnosis (PDX)

Step 2
Assign each secondary diagnosis its standard severity of illness (SOI)
1-Minor 2-Moderate 3-Major 4-Extreme

Modify the standard severity of illness of each secondary diagnosis based on:
Step 3 Age
Step 4 APR DRG and PDX (DRG 190)
Step 5 APR DRG
Step 6 Non-OR procedures
SOI Phase II:

Phase II
Determines a base subclass for the patient based on all of the patient's secondary diagnoses

Step 7
Eliminate SDXs that are redundant with other SDXs.

Step 8
Combine all SDXs to determine the base SOI subclass for the patient.
(Highest SOI usec)

Step 9
Reduce the subclass of patients in level 3 or 4 to next lower subclass if no multiple secondary diagnoses at a high severity of illness level exist.

SOI Phase III:

Modify patient SOI subclass based on the interaction of
Step 10 APR DRG and PDX
Step 11 APR DRG and age or APR DRG and PDX and age
Step 12 APR and non-OR procedure
Step 13 APR DRG and OR procedure

Modify patient SOI subclass based on the interaction of
Step 14 APR DRG and pairs of OR procedures
Step 15 APR DRG and ECMO and presence/absence of certain OR procedures (DRG 583)
Step 16 APR DRG and PDX and non-OR procedures

Phase III
The final subclass for the patient is determined

Step 17
Establish a minimum SOI subclass based on the presence of specific combinations of categories of SDXs.

Step 18
Compute the final SOI subclass based on a hierarchy established for steps 9-17
MDC 15 Criteria

- Age at admission = 0 - 7 days
- Age at admission = 8 - 14 days and birthweight <1,000 grams
- Age at admission = 8 - 14 days, birthweight 1,000 - 1,999 grams, and procedure from MDC 15 list of major O.R. procedures
- Age at admission = 8 - 14 days, birthweight 1,000 - 1,999 grams, and mechanical ventilation (procedure codes 9670, 9671 and 9672)
- Age at admission = 8 - 14 days and principal diagnosis of an acute perinatal problem

V28.0 New criteria for low birth weight babies...

- DRG 589- Neonate BWT <500G or GA <24 weeks
  - MDC 15 neonates who do not meet the criteria for DRGs 580,581, 583, or 588, and
  - Birthweight < 500 grams (PDX, SDX, or entered*), or
  - Birthweight 500-999 grams (PDX, SDX, or entered*) and gestational age <24 weeks (PDX or SDX of 75521), or
  - Birthweight 500-749 grams (PDX, SDX, or entered*) and does not have any life sustaining non-O.R. premature newborn intervention procedures as listed
  - For SOI and ROM assignment, DRG 589 will bypass the usual 18 step algorithm

<table>
<thead>
<tr>
<th>Birthweight Index (BWI)</th>
<th>Absence of Premature Newborn Intervention</th>
<th>GA &lt;24</th>
<th>GA 24</th>
<th>GA 25-26</th>
<th>GA &gt;26</th>
<th>GA not reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>BWI &lt;500g</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>BWI 500 - 749g</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>BWI 750 - 999g</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: Absence of a premature newborn intervention procedure as listed in #2d takes priority in DRG 589 regardless of birthweight and gestational age, but is shown here in this table format for completeness of presentation.
Characteristics of APR DRGs:

- APRs are a statistically better methodology
- APRs have increased payment categories to 1256
- APR DRGs are transparent
- Every secondary DX and all procedures are evaluated for their impact on a case
  - SC Medicaid will accept 25 Diagnoses and 25 Procedures
  - 3 byte DRG + 1 byte SOI + 1 byte ROM
- Effects are additive not absolute

Need more information?

- 3M™ APR DRG Assignment Report
- Website www.aprdrgassign.com
- User id =
- Password =
- Other documents on this site are:
  - 3M™ APR DRG Definitions Manual
  - Methodology overview
  - Case examples – For discussion
  - APR DRG calculator
Products

- 3M™ APR DRG grouping software
  - Interactive – allows you to see the grouped information at the point of coding
  - Batch – Core grouping software – allows you to send a batch file of abstracted data to report grouping information.
- 3M™ Reimbursement Calculation Software
  - Interactive and Batch (batch is bundled with grouping)
  - Automates the reimbursement weights, rates and algorithms to estimate reimbursement.
- Other products and services are available.

3M Product Inputs & Outputs

- Only standard grouping inputs required
  - Diagnoses with POA
  - Procedures
  - Patient age
  - Patient sex
  - Discharge status
  - Birthweight
- No change to grouper outputs
- Changes to reimbursement outputs not yet known, expected to be simplified.
Key APR Outputs:
Core Grouping Software (CGS) & Grouper Plus System (GPS) and Mainframe Groupers

- DRG
- MDC
- SOI (subclass)
- ROM (subclass)
- Diagnosis SOI (level)
- Diagnosis ROM (level)
- Diagnosis Affect DRG Flag
- Diagnosis Affect ROM Flag
- Diagnosis Affect SOI Flag
- Procedure Affect DRG Flag
- Procedure Affect ROM Flag
- Procedure Affect SOI Flag

*Full set of outputs available for both admission and discharge APR DRGs*

Who Uses APR DRGs:

- Groups using the APR DRG
  - Providers
    - Quality Improvement
    - Clinical Improvement
    - Utilization Management
    - Strategic Planning
    - Operations/Finance
  - Payers
    - Managed care
    - States
  - Consumer
    - Public Reporting
Operational Keys to Success

1. Complete and Accurate coding (including POA)
2. Documentation Improvement/Concurrent review
3. Use APR DRG throughout organization
   1. IT involvement
   2. QA, CM, Strategy, Finance
4. Know where you stand - Monitor rates
5. Reporting tools to analyze your data - Distribution Matters
   1. APR DRG assignment on all patients, all payer
   2. Ability to store and report multiple grouping information
6. Be involved in state activities

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CMS DRG to APR DRG Migration

Complete and Accurate Coding → Concurrent Review of Documentation → Accurate Representation of CMI → Common Language for entire organization

- Coders strong in anatomy, physiology, and patho-physiology
- Coders benefit from seeing grouped data
- Provides early dialog and queries for most accurate data
- Allows data to be used for performance, finance and quality and IT

Clinical Specificity

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Frequently Asked Questions

- Am I required to license a grouper to get paid?
  - No. Medicaid will not require hospitals to license the APR DRG Grouper. No changes to current hospital billing or coding procedures.

- Does anyone else sell the grouper?
  - Yes, while the 3M APR DRGs are a proprietary product, 3M has arrangements with several business partner vendors who can license APR DRGs.

I have APR DRGs. Do I need another version for MS?
  - No. MS is using the standard APR DRG grouper. However, many hospitals will want to add the MS Medicaid Reimbursement Calculation Software.

Will my vendor HIS system be able to store APR DRG?
  - This depends on your vendor. Most major HIS vendors do store and report APR DRG but you will need to ask your specific vendor.

What is the cost of the APR DRG grouper?
  - Licensure fees are dependent on volume and several other factors. Contact your 3M HIS sales rep or your vendor for more information.

Do I need to use a different standard for coding?
  - No. APR DRGs uses the standard UHDDS coding guidelines. However, you will need to code all the conditions found in the record.

Discussion/Comments