3M™ Potentially Preventable Readmissions-A Methodology Overview

Education Sessions for Texas Hospitals
January 2011
3M HIS is the developer of, and industry leader for, coding, classification and provider payment systems used by Federal agencies (CMS, DOD, AHRQ) and by 35 state health agencies, by many commercial payers, and by 75% of the nation’s hospitals.

3M HIS staff were responsible for the formulation of the original DRGs at Yale—a bundled payment system for hospital stays. Since 1983, 3M HIS has been CMS’ contractor for the update and maintenance of the Medicare IPPS.

3M developed the first outpatient classification/payment system (APGs)—subsequently modified for CMS to create, and to now maintain, APCs.

Under contract with CMS, 3M HIS designed and developed ICD-10-PCS and developed the official mapping between ICD-10-CM and ICD-9-CM.

The 3M APR Suite (APR DRGs, PPRs and PPCs) is extensively used in governmental and commercial payer quality measurement and pay for performance programs.

3M HIS has designed and developed every Prospective Payment System in widespread use in the U.S. including the CMS DRGS, AP-DRGs, APR-DRGs, APGs and APCs.
Current Applications of PPRs

- MedPAC analyzed prevalence and costs of preventable readmissions using 3M PPR methodology in its 2007 Report to Congress.

- Eight states including Texas have established PPR comparative public reporting.

- Maryland All-Payer Hospital Rate Commission and New York Medicaid program are incorporating PPR pay for performance into their hospital rates in first quarter 2011.

- New federal health care reform law mandates Medicare PPR P4P, Medicaid PPR tracking and reporting, and various pilots in readmissions bundled payment and coordinated care delivery.

- CMS will adjust inpatient prospective payment based on hospital performance in reducing excess readmissions effective 10/1/12.
3M™ Potentially Preventable Readmissions (PPRs)

“Research shows that specific hospital-based initiatives to improve communication with beneficiaries and their other caregivers, coordinate care after discharge, and improve the quality of care during the initial admission can avert many readmissions…17.6 percent of admissions result in readmissions within 30 days of discharge, accounting for $15 billion in [Medicare] spending.”

MedPAC Report to Congress, June 2007
**Definitions**

**PPRs Definition:**

A Potentially Preventable Readmission (PPRs) is a readmission that is clinically-related to the initial hospital admission that may have resulted from a deficiency in the process of care and treatment or lack of post discharge follow-up.

**Clinically-related:**

Clinically-related is defined as a requirement that the underlying reason for following a prior hospital readmission be plausibly related to the care rendered during or immediately following a prior hospital admission.
What makes a readmission potentially preventable?

What might cause a PPR to happen?

A readmission is considered to be clinically related to a prior admission and potentially preventable if there was a reasonable expectation that it could have been prevented by one or more of the following:

- The provision of quality care in the initial hospitalization
- Adequate discharge planning
- Adequate post-discharge follow up
- Improved coordination between inpatient and outpatient Health Care Teams

**Identifying Potential Preventable Readmission Article, Health Care Financing Review Fall 2008**
Development of PPRs

Requires the ability to link patients across different hospitalizations

Identify clinical circumstances under which a readmission is potentially preventable

- Created by Clinical Panels
- Dual level exclusion criteria

Develop a method of risk adjusting readmission rates
PPRs - An Overview of the Clinical Logic

Phase 1
Identify Excluded admissions And Non-events

Look at each admission:
Global Exclusions
(Where preventability is difficult to determine)

Phase 2
Determine Preliminary Classification of remaining admissions

Look at each admission:
Compare with Readmission Time interval
(can it be a readmission?)

Phase 3
Identify Chains and Determine Final Classification of Admissions

Look across admissions:
Determine Clinical Relevance (can it be a PPR?)
Identify the Readmission Chains
PPR Methodology - Phase 1

Identify Excluded Admissions and Non Events

- Excluded Admissions:
  - Global Exclusions (Malig adm, Trama/Bum adm, Neonatal adm, and Other global exclusions)
  - AMA
  - Age Exclusions
  - Error DRGs (955/956)

Identify Non Events:

- Admission to non acute facility
- Admissions to acute care hospital for non acute care (ie hospice)
PPR Methodology - Phase 2

1. Calculate the number of days between subsequent admission and prior admission.
2. Apply readmission time interval (Texas using 15 days)
3. Determine preliminary classification of admission
### PPR Methodology - Phase 2
#### Identify candidate admissions

<table>
<thead>
<tr>
<th>Days between current admission &amp; previous discharge</th>
<th>APR DRG</th>
<th>DRG Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>304</td>
<td>DOR/LUMB FUS EXC CRV BCK</td>
</tr>
<tr>
<td>13</td>
<td>721</td>
<td>POST-OP INFECTION</td>
</tr>
<tr>
<td>10</td>
<td>347</td>
<td>BACK PAIN</td>
</tr>
</tbody>
</table>
PPR Methodology - Phase 3

1. Determine if Readmission is clinically related to Initial Admission
2. Identify Readmission Chains
3. Reclassify Readmission and Initial Admission when not clinically related
4. Assign Final PPR Classification
   - Initial PPR
   - Only Admission
   - Transfer Admission
   - PPR
PPR Methodology- Phase 3
READMISSION CHAIN

In some instances, two or more readmissions will all be related to a single Initial Admission. A readmission chain is essentially a sequence of clinically-related admissions. If for a given readmission, the preceding admission is itself a readmission related to a prior Initial Admission, then the most recent readmission is assessed to determine if it is clinically-related to the Initial Admission that initiated the readmission chain, rather than to the readmission immediately preceding it.
# Readmission Chains

<table>
<thead>
<tr>
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<td>347</td>
<td>BACK PAIN</td>
<td>PPR</td>
</tr>
<tr>
<td>285</td>
<td>229</td>
<td>Other Digestive System and Abdominal Procedures</td>
<td>New initial admission</td>
</tr>
<tr>
<td>10</td>
<td>720</td>
<td>Septicemia</td>
<td>PPR</td>
</tr>
</tbody>
</table>

**Chain 1**

**Chain 2**
PPR MATRIX

A matrix was created in which there were 314 rows representing the possible base APR DRGs of the Initial Admission, and 314 columns representing the base APR DRG of the readmission. Each cell in the matrix then represented a unique combination of a specific type of Initial Admission and readmission. Clinical panels applied criteria for clinical relevance and preventability to the combination of base APR DRGs in each cell.
### Clinical Relevance

<table>
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<td>347</td>
<td>BACK PAIN</td>
<td>PPR</td>
</tr>
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</table>
# General Guidelines for PPRs

<table>
<thead>
<tr>
<th>Initial Discharge</th>
<th>Medical</th>
<th>Surgical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical</td>
<td>PPR except if clearly unrelated acute events</td>
<td>Not PPR unless initial medical diagnosis clearly should have resulted in surgery</td>
</tr>
<tr>
<td>Surgical</td>
<td>PPR except conditions clearly unrelated</td>
<td>PPR if related to complications of prior surgery</td>
</tr>
</tbody>
</table>
# PPR Matrix

<table>
<thead>
<tr>
<th>M - Medical</th>
<th>MS - Major Surgical</th>
<th>OS - Other Surgical</th>
<th>EM - Elective Medical</th>
<th>ES - Elective Major Surgical</th>
<th>EO - Elective Other Surgical</th>
<th>XMA - Malignancy Exclusion</th>
<th>XTB - Trauma Exclusion</th>
<th>XNN - Neonatal Exclusion</th>
<th>XDB - Obstetrical Exclusion</th>
<th>XDG - Other Exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liver trans &amp;/or intest trans</td>
<td>Heart &amp;/or lung transplant</td>
<td>Bone marrow transplant</td>
<td>ECMO or trach w MV w extr</td>
<td>Trach w/IV w/vent proc</td>
<td>Pancreas transplant</td>
<td>Craniotomy for trauma</td>
<td>Craniotomy exc for trauma</td>
<td>Ventricular shunt proc</td>
<td>Extracranial vascular proc</td>
<td>Oth nervous syst &amp; relat proc</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PPR</th>
<th>RA APR</th>
<th>IA APR Desc</th>
</tr>
</thead>
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<tr>
<td>00</td>
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<td>X</td>
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<tr>
<td>00</td>
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<td>X</td>
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<td>01</td>
<td>15</td>
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</tr>
<tr>
<td>01</td>
<td>16</td>
<td>X</td>
</tr>
</tbody>
</table>

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Clinical Relationship Reasons

1. Medical readmission for a continuation or recurrence of the reason for the initial admission, or for a closely related condition.

2a Ambulatory care sensitive conditions as designated by ARHQ

2b All other readmissions for a chronic problem that may be related to care either during or after the initial admission

3 Medical readmission for an acute medical condition or complication that may be related to or may have resulted from care during the initial admission or in the post-discharge period after the initial admission.

4 Readmission for a surgical procedure to address a continuation or a recurrence of the problem causing the initial admission.

5 Readmission for surgical procedure to address a complication that may be related to or may have resulted from care during the initial admission.

6a Readmission for mental health reasons following an initial admission for a non-mental health, non-substance abuse reason

6b Readmission for a substance abuse diagnosis reason following an initial admission for a non-mental health, non-substance abuse reason

6c Mental health or substance abuse readmission following an initial admission for a substance abuse or mental health diagnosis
“Non-Valid” Readmissions Reasons (version 28)

NC – Readmission not clinically related to initial admission
NP – Readmission clinically related but not preventable
P – Planned readmission
M – Initial admission or readmission for medical treatment for an immunocompromised malignancy
T – Initial admission or Readmission for Multiple trauma
In Summary...

- Open Methodology – can get to the patient level
- Inpatient Acute Care Admissions
- Uses APR as base
- Categorical Model
- Use abstracted data
- Clinically based – Not all readmissions are preventable
- Clinical Exclusion Criteria
- Automation - Software/Consulting
Keys to Success

1. Improve Data quality
2. Know your current readmission status
3. Increase efficiency by implementing a readmissions reduction program
   1. know the drivers of preventable readmissions.
4. Integrate outcomes improvement interventions into current workflow
5. Continuously Monitor progress
6. Negotiate using your data
Want more information?

Go to [www.aprdrgassign.com](http://www.aprdrgassign.com)

User ID - TXHosp

Password - aprdrg004

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**Welcome to 3M™ Potentially Preventable Readmissions (PPRs) for the Web**

At this site, you will learn how 3M™ can help hospitals evaluate patient data for Potentially Preventable Readmissions (PPR) in order to make patient care more effective and efficient.

### PPR Output Report

<table>
<thead>
<tr>
<th>Record Seq</th>
<th>Provider ID</th>
<th>DRG Code</th>
<th>DRG Description</th>
<th>Chain ID</th>
<th>Chain Seq</th>
<th>Admit Seq</th>
<th>Record Type</th>
<th>PPR Record Description</th>
<th>Clinical Relationship Reason</th>
<th>Exit Record Cost</th>
<th>Hospital Type</th>
<th>LOS</th>
<th>PPR Adjuci</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>103228</td>
<td>29701</td>
<td>Coronary artery bypass surgery w/o CABG</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>IA</td>
<td>Initial admission</td>
<td></td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>103228</td>
<td>40101</td>
<td>Other complications of treatment</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>RA</td>
<td>Readmission</td>
<td></td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

**Summary**

Chain Id Reason: End of admission
Frequently Asked Questions

1. How are hospitals attributed to a readmission chain?
2. How are transfers to another acute care facility handled in the clinical logic?
3. Does the logic account for patients going to skilled nursing, hospice or rehab?
4. Is patient compliance considered an exclusion?
5. How is end of life handled in the logic?
6. Is the logic automated in any software?
7. Will my HIS vendor use PPR’s in my readmission reports?
### Attribution of readmission chains

<table>
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Non events

APR DRG 860 = Rehabilitation

APR DRG 860 = Rehabilitation

14 days
Transfers to another acute care facility
3M Products Related to PPRs

PPR Grouping Software

- Batch Grouping software – PC based - Version 27.0 is used by TX

PPR Consulting Services

- PPR Impact Analysis Service
- PPR Education
- PPR Chart Review
- Clinical Documentation Info. Systems (CDIS)

Database Tools

- 3M Clintrac Clinical applications PPR workflow and report information

For more information on 3M solutions, please contact your 3M sales representative, call us toll-free at 800-367-2447, or visit us online at www.3Mhis.com.