3M Science. Applied to Life.™

3M All Patient Refined Diagnosis Related Groups (APR DRGs)

October 2016

3M APR DRG Education Session Agenda

Introductions

Introduction to Diagnosis Related Groups (DRGs)

Introduction to 3M™ All Patient Refined (APR) DRGs

Development of APR DRGs

- APR DRG clinical logic primer
- Present on Admission (POA) considerations

- APR DRGs for Payment
- Reporting
- Considerations for APR DRG implementation

3M's History:

Built DRGs for Medicare (1983). Contract with CMS to maintain MS DRGs through 2016

Severity Adjusted DRGs applicable to the entire population - 3M™ APR DRGs (1990).

Outpatient PPS Ambulatory Patient Groups (APGs) (1994). CMS Ambulatory Payment Classifications (APCs) (2000). 3M™ Enhanced Ambulatory Patient Groupers (EAPGs) 2007

Introduced population based PPS Clinical Risk Groups (CRG) (2004); Pharma module (2005); Functional Status module (2008)

Created the procedure portion of ICD-10 (ICD-10 PCS) and the ICD-9 to ICD-10 General Equivalency Maps

Released 3M™ ICD-10 Code Translation Tool Software (2009)

Introduced Potentially Preventable Complications (2004), Potentially Preventable Readmissions (2006), Potentially Preventable Outpatient Procedures and Services, Potentially Preventable Initial Admissions, Potentially Preventable ER Visits (last three are overall termed Population Focused Preventables and were released in 2012).

Introduction: 3M's role in classification systems

3M HIS specializes in classification systems (groupers) using coded claims data for health data analysis and payment

- **Provider market**: focus on the clinical record
  - Creating (dictation/transcription) and managing it (document management and abstracting)
  - Coding, coding compliance, managing coding process
  - Grouping and reimbursement for managing expected reimbursement
- **Payer market**: help payers flatten the cost curve by deploying groupers for payment and for quality-based payment incentives

Introduction to DRGs

Today's Acronyms

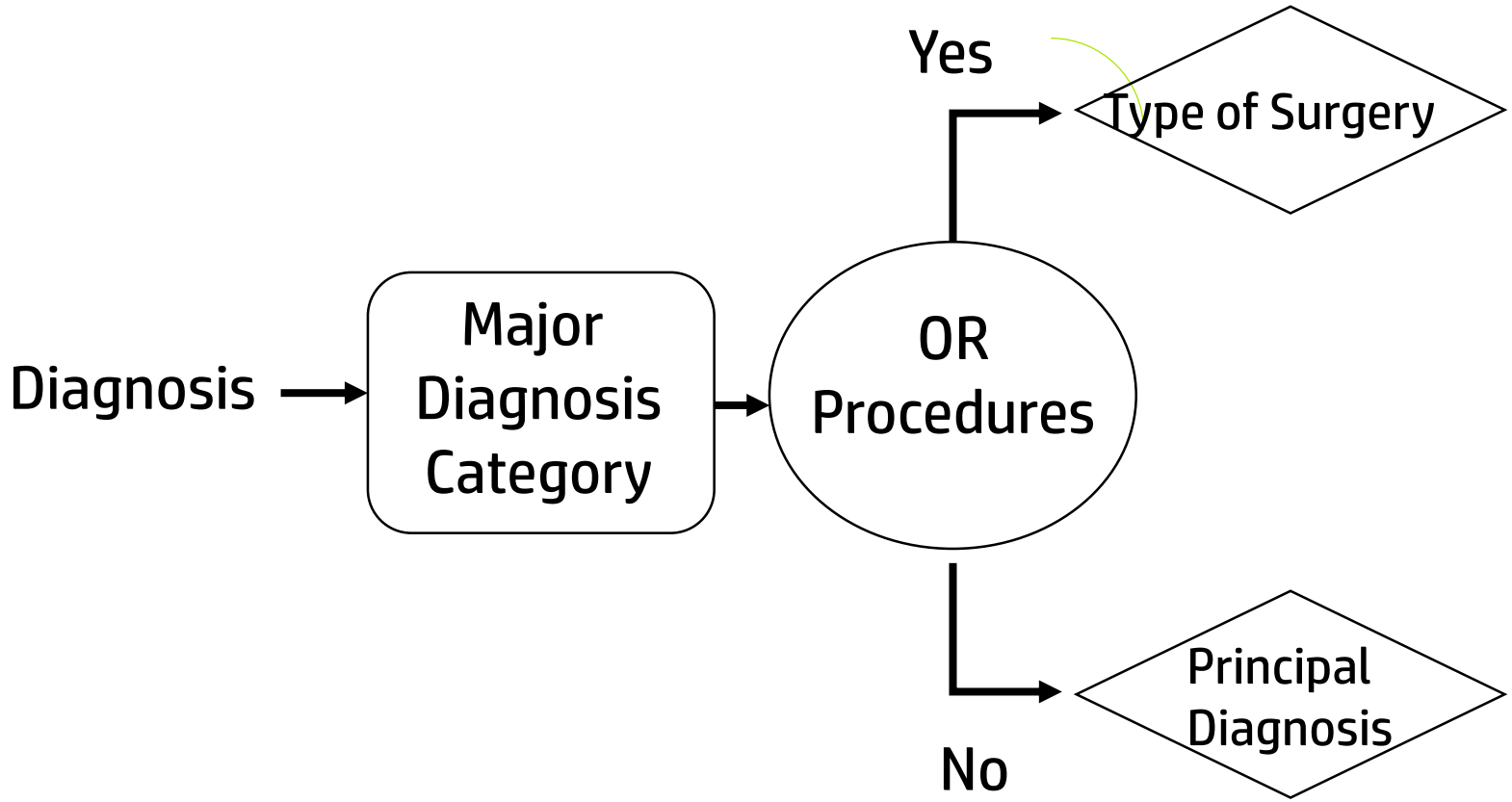
AHRQ – Agency for Healthcare Research and Quality
AP-DRGs – All Patient Diagnosis Related Groups
APCs – Ambulatory Payment Classifications
APR-DRGs – All Patient Refined Diagnosis Related Groups
CC – Complication & Comorbidities
CMS – Centers for Medicare and Medicaid Services
DRG – Diagnosis Related Groups
ICD – International Classification of Disease
IPPS – Inpatient Prospective Payment System
MCC – Major Complication & Comorbidities
MDC – Major Diagnostic Category
MS-DRG – Medicare Severity Diagnosis Related Groups
NACHRI – National Association of Children's Hospitals and Related Institutions
OPPS – Outpatient Prospective Payment System
ROM – Risk of Mortality
SOI – Severity of Illness

What is a DRG?

Diagnosis-Related Groups (DRGs) are a patient classification scheme which provides a means of relating the type of patients a hospital treats to the costs the hospital incurs.

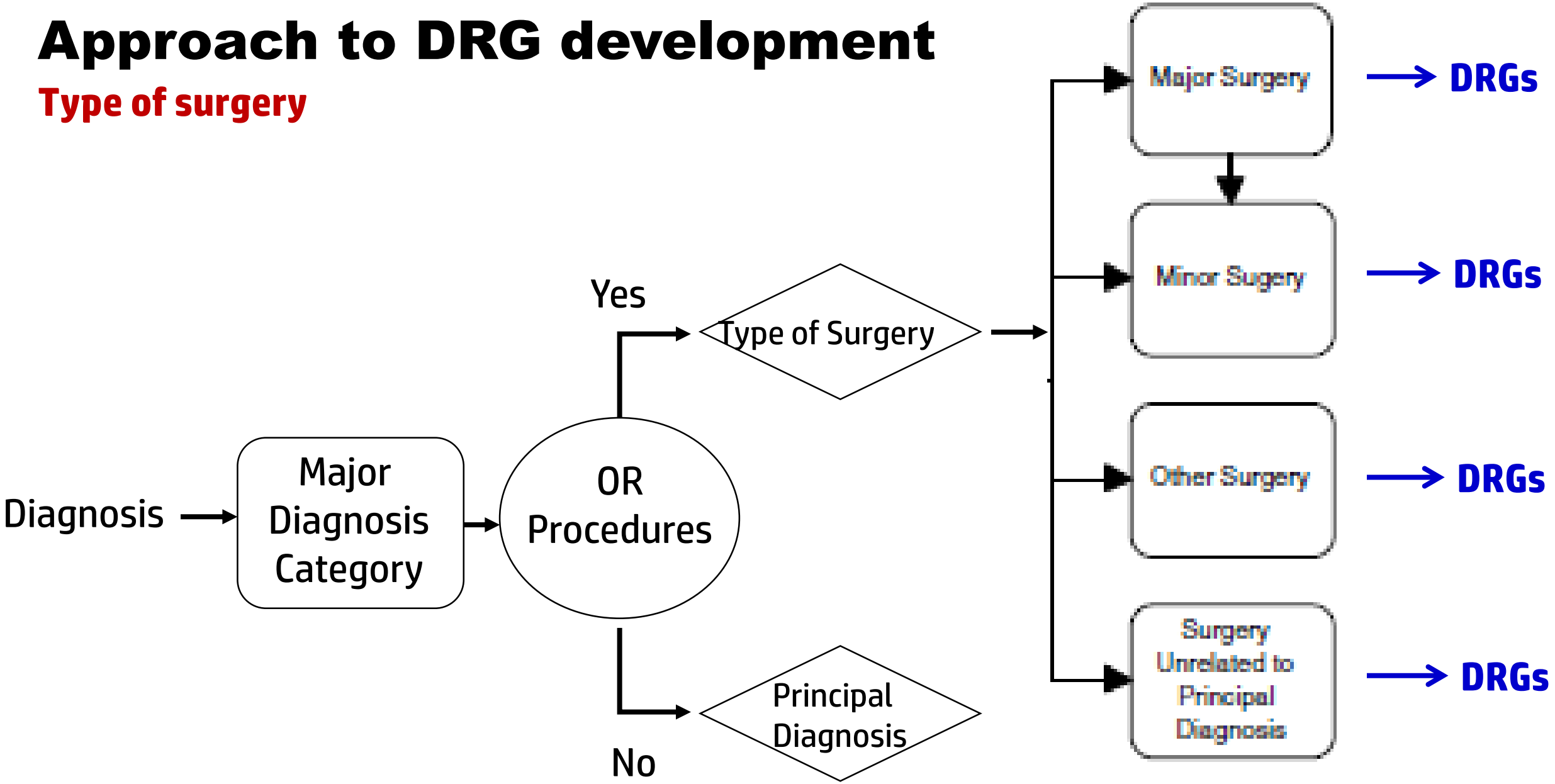
DRGs consist of classes of patients that are similar clinically and in terms of their consumption of hospital resources.

Approach to DRG development – decision tree



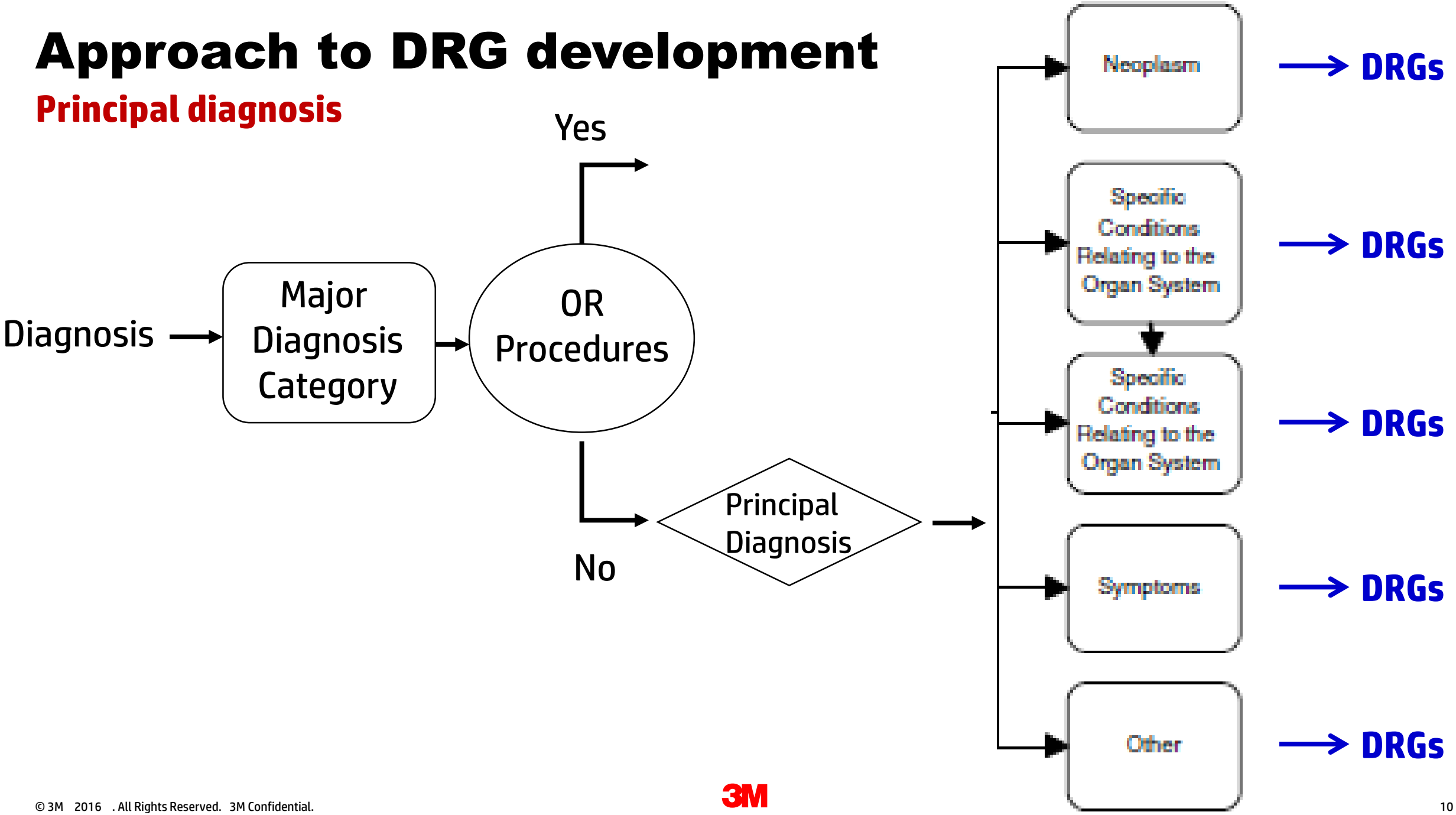
Approach to DRG development

Type of surgery



Approach to DRG development

Principal diagnosis



List of MDCs

01 Diseases and disorders of the nervous system
02 Diseases and disorders of the eye
03 Ear, nose, mouth, throat and craniofacial diseases and disorders
04 Diseases and disorders of the respiratory system
05 Diseases and disorders of the circulatory system
06 Diseases and disorders of the digestive system
07 Diseases and disorders of the hepatobiliary system and pancreas
08 Diseases and disorders of the musculoskeletal system and conn tissue
09 Diseases and disorders of the skin subcutaneous tissue and breast
10 Endocrine nutritional and metabolic diseases and disorders
11 Diseases and disorders of the kidney and urinary tract
12 Diseases and disorders of the male reproductive system
13 Diseases and disorders of the female reproductive system
14 Pregnancy, childbirth and the puerperium
15 Newborns and other neonates with condtn orig in perinatal period
...
25 Multiple significant trauma

MDC and APR-DRG assignment

With OR procedure

Principal Diagnosis K352 Acute appendicitis with generalized peritonitis (ADRG)(ASOI)(AROM)(DRG)(SOI)(ROM) Present On Admission (POA): Y Yes **Secondary Diagnoses** K4030 Unil inguinal hernia, w obst, w/o gangr, not spcf as recur (ASOI)(AROM)(SOI)(ROM) Present On Admission (POA): Y Yes **Procedures** 0DJD4ZZ Inspection of Lower Intestinal Tract, Perc Endo Approach (ADRG)(DRG)(OR) 0DTJ0zz Resection of Appendix, Open Approach (OR	**Admit MDC: 6** Diseases and disorders of the digestive system **Admit DRG: 223** Other small & large bowel procedures **Discharge MDC: 6** Diseases and disorders of the digestive system **Discharge DRG: 223** Other small & large bowel procedures

MDC and APR-DRG assignment

No OR procedure

Principal Diagnosis K352 Acute appendicitis with generalized peritonitis (ADRG)(ASOI)(AROM)(DRG)(SOI)(ROM) Present On Admission (POA): Y Yes **Secondary Diagnoses** K4030 Unil inguinal hernia, w obst, w/o gangr, not spcf as recur (ASOI)(AROM)(SOI)(ROM) Present On Admission (POA): Y Yes **Procedures**	**Admit MDC: 6** Diseases and disorders of the digestive system **Admit DRG: 248** Major gastrointestinal & peritoneal infections **Discharge MDC: 6** Diseases and disorders of the digestive system **Discharge DRG: 248** Major gastrointestinal & peritoneal infections

Introduction to APR DRGs

WHY another, different inpatient classification system?

CMS Developed MS-DRGs for the Medicare Populations

"As we have stated frequently, our primary focus in maintaining the CMS DRGs is to serve the Medicare population. We do not have the data or the expertise to maintain the DRGs in clinical areas that are not relevant to the Medicare population. We continue to encourage users of the CMS DRGs (or MS-DRGs if adopted) to make relevant adaptations if they are being used for a non-Medicare patient population"

CMS Proposed IPPS Rule April 13, 2007, *Pg 91*

MS-DRGs are not Applicable to non Medicare Population

MS-DRGs are fundamentally flawed for non Medicare populations, failing to adequately account for:

- newborn birth weight
- many pediatric illnesses (sickle cell anemia, cystic fibrosis, hemophilia, lead poisoning, nutritional disorders, congenital anomalies)
- high risk pregnancies
- HIV-related co-morbidities

These limitations are so extensive that a fair and equitable payment system for a non Medicare population cannot be achieved using the MS-DRGs.

For example, hospital admissions for a typical Medicaid population are composed of roughly 16% newborns, 20% pediatric and 25% obstetric patients.

Initial Development of All Patient Refined DRGs (APR DRGs)

All Patient Refined DRGs (APR DRGs)

- APR DRGs are an extension of DRGs to account for severity of illness and risk of mortality
- Assignment to a “Base” APR-DRG based on:
  - Principal Diagnosis, for Medical patients, or
  - Most Important Surgical Procedure (performed in an O.R.)
- Each Base APR-DRG is divided into 4 subclasses
  - Two types of Subclasses:
    - Severity of Illness (SOI)
    - Risk of Mortality (ROM)
  - SOI and ROM assignment take into account the interaction among principal & secondary diagnoses, age, and, in some cases, procedures
- Both an admission APR DRG and discharge APR DRG are computed
  - Admission APR DRG requires the secondary diagnoses present on admission indicator

All Patient Refined DRGs (APR DRGs)

- APR DRGs were developed by 3M HIS in conjunction with the National Association of Children's Hospitals (NACHRI)
- APR DRGs are widely used for public reporting and payment
- Used for severity adjustment in quality assessment initiatives
  - AHRQ Quality Indicators
  - NJ/CMS gain sharing demonstration project
- More than 50 percent of hospitals have the APR DRG software and most major hospital systems vendors integrated it into their systems
- There are more than 50 published articles evaluating or using APR DRGs
- APR DRGs are assigned using standard administrative data
  - No additional data collection required
- Recently completed an AHRQ study to incorporate laboratory test results into APR DRG logic

3M APR DRG to MS-DRG Comparison

Category	APR DRG	MS-DRG
Data requirements	Diagnoses, procedures, age, sex, discharge status, birth weight	Diagnoses, procedures, age, sex, discharge status
MDCs	Pre-MDC and 25 MDCs	Pre-MDC and 25 MDCs
Number of base DRGs	1,258 (314 base DRGs x 4 subclasses + 2 error DRGs)	751(749 + 2 error DRGs)
DRG representation	3 byte base DRG field + 1byte field for SOI +1byte field for ROM	3 byte DRG field
DRG severity	Base DRG + 4 levels each for SOI and ROM subclasses:	3 levels:
Diagnoses	1-Minor, 2-Moderate, 3-Major, 4-Extreme	Major CC, CC , Non-CC

3M APR DRG to MS-DRG Comparison

Category	APR DRG	MS-DRG
Newborns – MDC 15	0-7 days at admission + subset of 8-14 days	PDX assigned to MDC 15 regardless of the age of the patient
	Total APR DRGs = 108 (27 base DRG x 4 subclasses)	
Age splits	Base DRG are not differentiated by age, but SOI and ROM subclasses modified by patient age.	None
Discharge status	MDC 15 (transferred only)	MDC 5 (died)
	MDC 20 (LAMA)	MDC 15 (transferred, died)
		MDC 20 (LAMA)
Present on admission (POA) indicator	Used for admission APR DRG assignment	Used only for evaluation of HACs

2 types of APR DRG's

Discharge APR DRG – classification of the reason for admission, severity of illness and risk of mortality of a patient at discharge.

- Uses all the ICD codes on the record to account for classification
- Used for prospective payment , risk adjustment in quality reporting

Admissions APR DRG - classification of the reason for admission and the severity of illness and risk of mortality of a patient when they entered the admission.

- Uses a subset of ICD codes on the record based on Present on admission indicator +
- Seven additional steps in criteria to account for the codes used in Admissions APR DRG classification.

Development of APR-DRGs

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.

Key Definitions

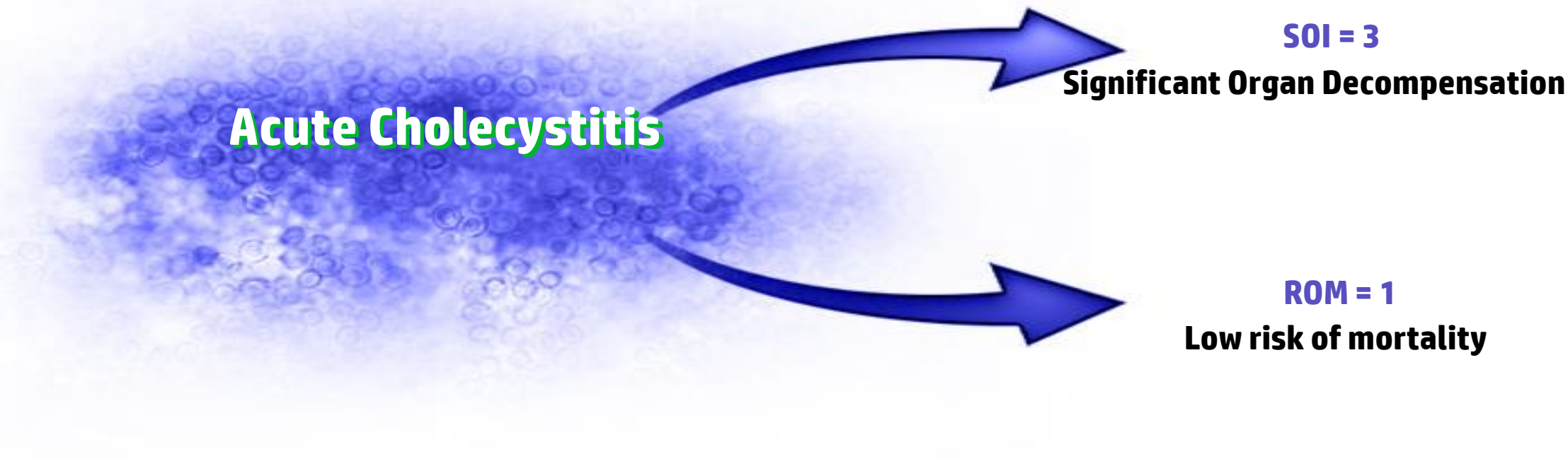
Severity of Illness: the extent of physiologic decompensation or organ system loss of function

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.



How were APR DRG developed?

- Formulate Clinical hypotheses to develop separate clinical models for each ‘group’ or base APR-DRG
  - 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
- Test hypotheses using historical data
- Iterations of clinical review, revisions and analysis with data to finalize clinical model.

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:
- APR-DRG v 33
  - Official version is ICD-10
  - Major update of APR DRG coming for version 34 ~ October 2016

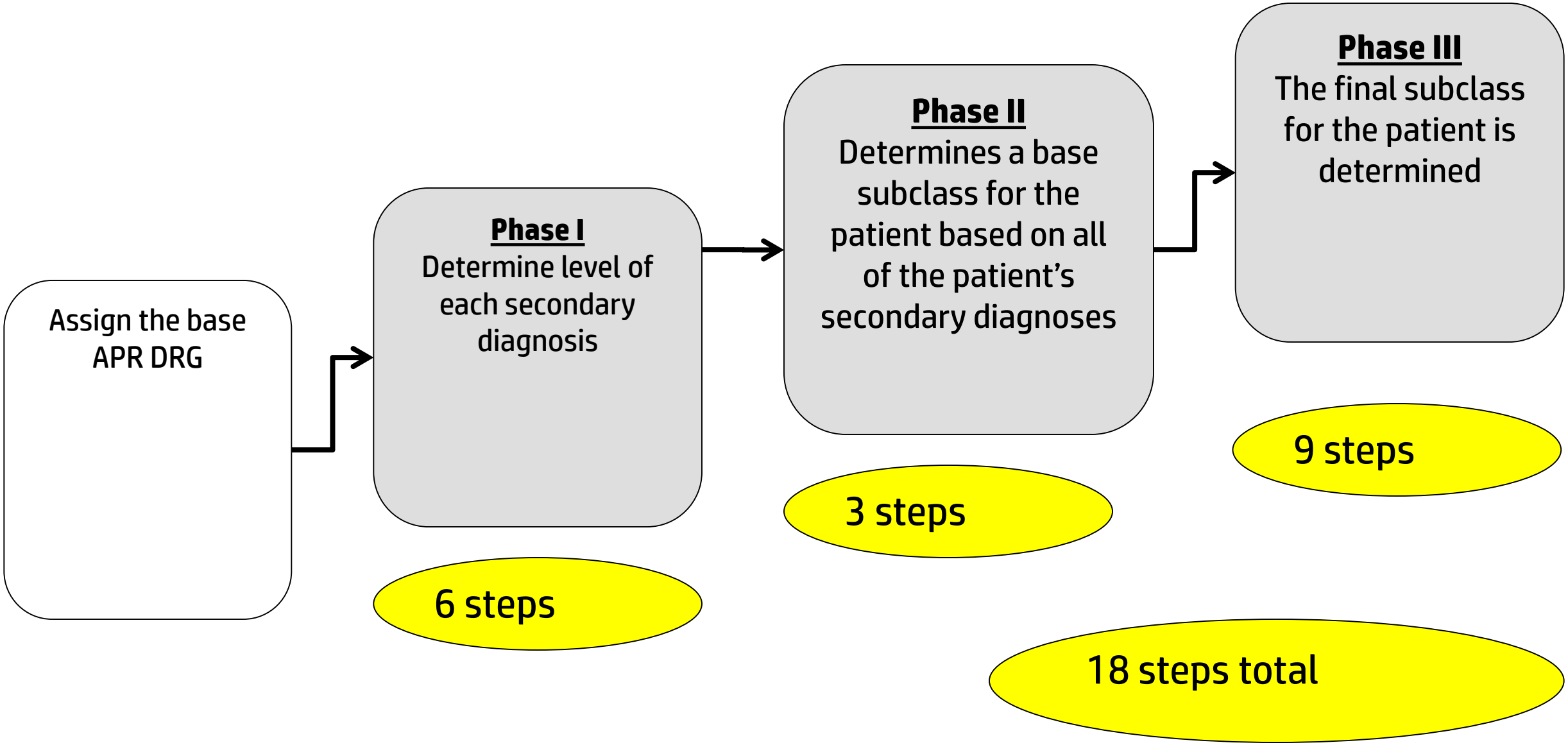
Example of Severity of Illness Progression of Diagnoses

Severity Of Illness		Secondary Diagnosis of Diabetes Mellitus
1	Minor	Other specified diabetes mellitus without complications (E139)
2	Moderate	Other specified diabetes mellitus with other diabetic kidney complication (E1329)
3	Major	Other specified diabetes mellitus with ketoacidosis without coma (E1310)
4	Extreme	Other specified diabetes mellitus with ketoacidosis with coma (E1311)

Example of Risk of Mortality Progression of Diagnoses

Risk of Mortality		Secondary Diagnosis of Dysrhythmias
1	Minor	Ventricular premature depolarization (I493)
2	Moderate	Sick sinus syndrome (I495)
3	Major	Ventricular tachycardia (I472)
4	Severe	Ventricular fibrillation (I4901)

Explanation of APR DRG Methodology



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) Level
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

APR-DRG Definition Transparency

Phase 1: Determine Secondary Diagnosis Level

5715 CIRRHOSIS OF LIVER NOS

STEP 1: PDX / SDX Exclusion

5712-5713, 5715-5719, 5728, 5738-5738

STEP 2: SDX Default SOI 2

STEP 3: SDX / AGE Exception

0 - 28 days	3
29 - 364 days	3
1 - 3 years	3
4 - 17 years	3

STEP 5: SDX / DRG EXCEPTION

001	Liver Trans &/or Intest Tran	1
279	Hepatic Coma / Oth Maj Liv	1
280	Alcoholic Liver Disease	1
283	Other Disorders of Liver	1
661	Coagulation / Platelet Disorc	1
663	Other anemia / blood disorc	1

SOI modified base on age (extract)

SDX	SDX Description	SOI level	0 to 28 days	0 years	1 to 3 years	4 to 17 years	18 to 54 years	55 to 64 years	65 to 69 years	70 to 74 years	75 to 79 years	80 to 84 years	>=85 years
A047	Enterocolitis due to Clostridium difficile	3	4	4	4	4							
A5005	Early congenital syphilitic rhinitis	1	2										
C7400	Malignant neoplasm of cortex of unspecified adrenal gland	1	2	2	2	2							
D551	Anemia due to other disorders of glutathione metabolism	3	2	2									
D6189	Other specified aplastic anemias and other bone marrow failure syndromes	3		4	4	4							
E860	Dehydration	1								2	2	2	2
G710	Muscular dystrophy	2			3	3							
I051	Rheumatic mitral insufficiency	1		2	2	2						2	2
I120	Hypertensive chronic kidney disease with stage 5 chronic kidney disease or end stage renal disease	2	4	4	3	3							
I2789	Other specified pulmonary heart diseases	2	4	4	3	3							
J210	Acute bronchiolitis due to respiratory syncytial virus	2	3	3		1	1	1	1	1	1	1	1
J45902	Unspecified asthma with status asthmaticus	2								3	3	3	3

Step 6 - Modify the standard severity of illness level of a secondary diagnosis based on non-OR procedures

SDX	SDX description	Non-OR Procedure	Non-OR Description	Increment value	Maximum value
A0222	Salmonella pneumonia	5A1935Z	Respiratory Ventilation, Less than 24 Consecutive Hours	1	3
A0222	Salmonella pneumonia	5A1945Z	Respiratory Ventilation, 24-96 Consecutive Hours	1	3
A0222	Salmonella pneumonia	5A1955Z	Respiratory Ventilation, Greater than 96 Consecutive Hours	2	4
A051	Botulism food poisoning	5A1935Z	Respiratory Ventilation, Less than 24 Consecutive Hours	1	3
A051	Botulism food poisoning	5A1945Z	Respiratory Ventilation, 24-96 Consecutive Hours	1	3
A051	Botulism food poisoning	5A1955Z	Respiratory Ventilation, Greater than 96 Consecutive Hours	2	4
A212	Pulmonary tularemia	5A1935Z	Respiratory Ventilation, Less than 24 Consecutive Hours	1	3
F5000	Anorexia nervosa, unspecified	0D163J4	Bypass Stomach to Cutaneous with Synthetic Substitute, Percutaneous Approach	1	4
F5000	Anorexia nervosa, unspecified	0D16074	Bypass Stomach to Cutaneous with Autologous Tissue Substitute, Open Approach	1	4
F5000	Anorexia nervosa, unspecified	0D160J4	Bypass Stomach to Cutaneous with Synthetic Substitute, Open Approach	1	4

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 SDX to determine the base SOI subclass for the patient. (Highest SOI used)

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:

Phase III
The final subclass for the patient is determined

Modify patient SOI subclass based on the interaction:

- **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

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

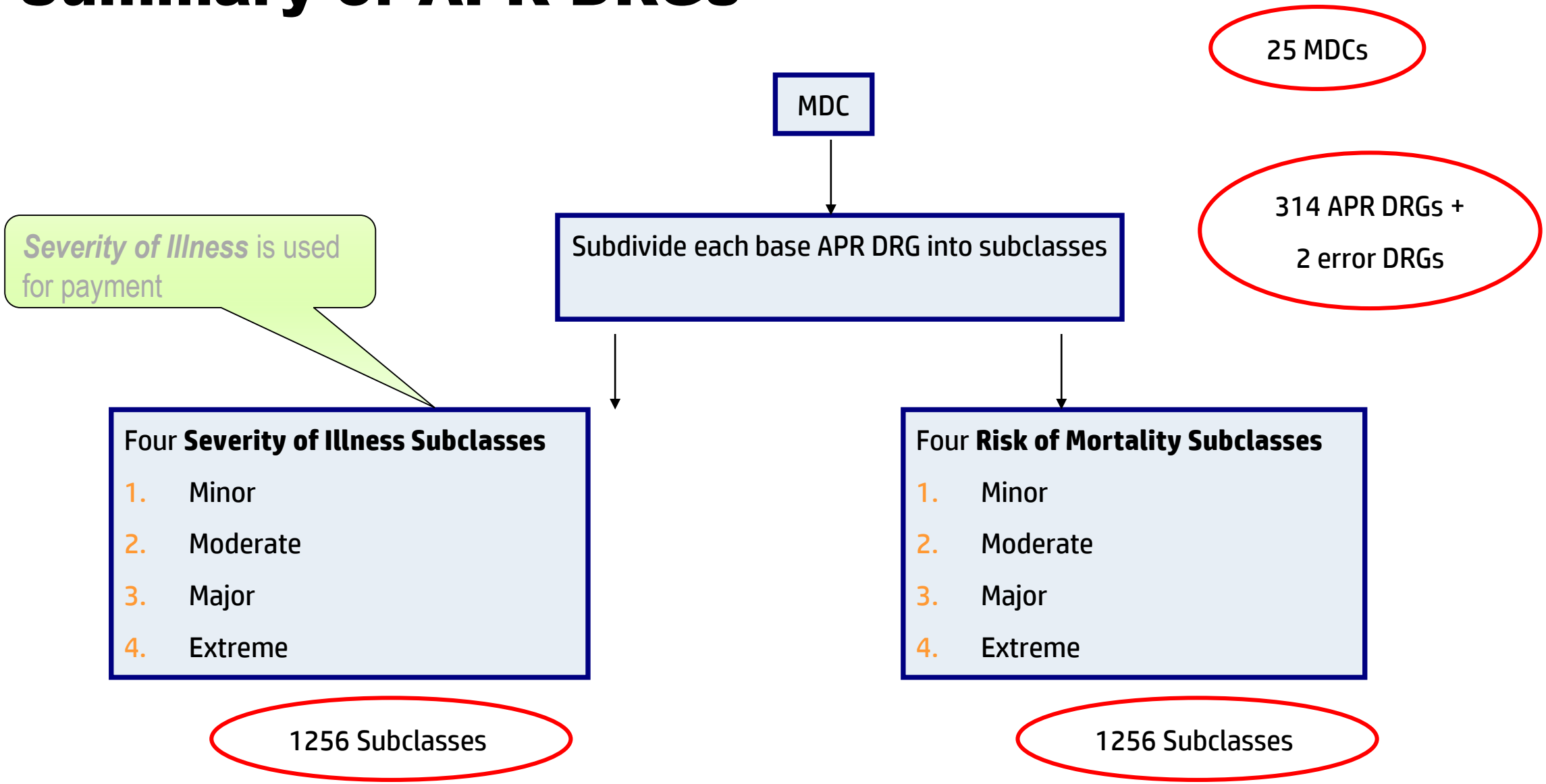
Step 18
Compute the final SOI subclass based on a hierarchy established for steps 9-17

Modification of SOI based on APR-DRG

Table 2–2. Examples of modification of standard Severity of Illness level based on APR DRG

Secondary Diagnosis	Standard Severity of Illness Level	APR DRG	Modified Severity of Illness Level
Chronic Renal Failure	Moderate	Diabetes	Major
Cardiomegaly	Moderate	Congestive Heart Failure	Minor
Uncomplicated Diabetes	Minor	Vaginal Delivery	Moderate

Summary of APR DRGs



APR DRGs for Payment Examples

Comparative example of MS-DRGs vs APR-DRGs

	PDX Z38.00: Single liveborn, born in hospital, delivered without mention of cesarean section Admission age in days: 0 Discharge status: Home Birthweight: 750 G				
	Case 1	**Case 2**	**Case 3**	**Case 4**	**Description**
Secondary Diagnoses		Q33.0	Q33.0 P28.5	Q33.0 P28.5 Q60.0	Congenital Cystic Lung Respiratory Failure of NB Renal Agenesis, unilateral
MS DRG	795	794	793	793	**Normal Newborn / Newborn with other significant problems / Full Term Neonate w/ Maj. Prob.**
APR DRG	593 Subclass 1	593 Subclass 2	593 Subclass 3	593 Subclass 4	**Neonate, birth weight 500-749G, without major procedure**
MS DRG APR DRG	0.1758 **3.9034**	1.2987 **8.2690**	3.6692 **10.7087**	3.6692 **15.8429**	Payment weights*

** Payment weights are budget neutral and computed from a national database*

Comparative example of MS-DRGs vs APR-DRGs

	PDX: K57.32 **Diverticulitis of large intestine without perforation or abscess without bleeding** Proc: 0DBN0ZZ **Excision of Sigmoid Colon, open approach**				
	Case 1	**Case 2**	**Case 3**	**Case 4**	**Description**
Secondary Diagnoses	K62.6	K62.6 56.60	K62.6 K56.60 I40.8 I44.2	K62.6 K56.60 I40.8 I44.2 I121.3	Ulcer of anus and rectum Unspecified intestinal obstruction Other acute myocarditis Atrioventricular block, complete ST elevation myocardial infarction
CMS DRG	330 w CC	330 w CC	329 w MCC	329 w MCC	**Major small and large bowel procedures**
APR DRG	221 Subclass 1	221 Subclass 2	221 Subclass 3	221 Subclass 4	
CMS DRG **APR DRG**	**2.5511** 1.2786	**2.551** 1.6875	**5.0709** 2.8353	5.0709 **5.9885**	Payment weights*

***** Payment weights are budget neutral and computed from a national database

Case study of how to calculate a reimbursement from APR DRG and SOI.

APR DRG- SOI	APR-DRG Description	Relative Wt for Payment	DRG Base Payment Using Example Discharge Rate
139-1	OTHER PNEUMONIA	0.4022	$3,298.04
139-2	OTHER PNEUMONIA	0.6128	$5,024.96
139-3	OTHER PNEUMONIA	0.9459	$7,756.38
139-4	OTHER PNEUMONIA	1.8787	$15,405.34
220-1	MAJOR STOMACH, ESOPHAGEAL & DUODENAL PROCEDURES	1.3302	$10,907.64
220-2	MAJOR STOMACH, ESOPHAGEAL & DUODENAL PROCEDURES	2.0852	$17,098.64
220-3	MAJOR STOMACH, ESOPHAGEAL & DUODENAL PROCEDURES	3.4859	$28,584.38
220-4	MAJOR STOMACH, ESOPHAGEAL & DUODENAL PROCEDURES	7.2851	$59,737.82
540-1	CESAREAN DELIVERY	0.5400	$4,428.00
540-2	CESAREAN DELIVERY	0.6424	$5,267.68
540-3	CESAREAN DELIVERY	0.9728	$7,976.96
540-4	CESAREAN DELIVERY	2.3023	$18,878.86

Considerations for APR DRG Implementation

Who Uses APR DRGs:

- Groups using the APR DRG
  - Providers
    - Quality Improvement
    - Clinical Improvement
    - Utilization Mgt./Performance
    - Strategic Planning
    - Operations/Finance
  - Payers
    - Managed care
    - States
  - Consumer
    - Public Reporting

Operational Keys to Success- considerations for executive management (CEO, CFO, CIO, CMO, etc.)

HIM: Redefinition of Success Criteria

- Complete and Accurate coding (including POA)
- Documentation Improvement/Concurrent review
- Migration from productivity to more holistic measurement system

Financial Modeling : Know where you stand - Monitor rates

- Risk adjust your whole population and know your RA CMI
- Model new payment design (look at outliers last year to projected new year)
- Model What if's
  - Include excess costs in model scenarios
- Monthly monitoring

Operational Keys to Success- considerations for executive management (CEO, CFO, CIO, CMO, etc.)

IT: Centralize Risk Adjustment

- Use APR DRG throughout organization
- Perform system gap analysis
  - Does you're HIS store APR DRG? If so, where?
  - Reach out to vendors (Most HIS systems support APR DRG)
- Support Concurrent Workflows
- Align Analytics for QA, CM, Performance
- Align reports/Analytics: Strategy, Finance

Operational Keys to Success- considerations for executive management (CEO, CFO, CIO, CMO, etc.)

Case Management: Expansion of focus

- Expand the use of Case Management to manage pt LOS
- Identify Anticipated LOS
- Identify high risk patients

Performance – more focused on efficiency and quality of care

- Risk adjust performance measures
- Include both efficiency and quality metrics
- Consider Risk Sharing

Reporting tools to analyze your data - Distribution Matters

- APR DRG assignment on all patients, all payer
- Ability to store and report multiple grouping information

Be involved in state activities

Standard of Coding

APR DRGs uses the standard Uniform Hospital Discharge Data Set (UHDDS) coding guidelines. However, you will need to code all the conditions found in the record.

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

Reporting

Essential Features of Effective Performance Comparisons

Unit of comparisons is based on a categorical clinical model

- Stable
- Facilitates communication
- Applicable as unit of comparison for multiple resource and outcome variables

Statistical outliers are removed from comparisons

Actual and expected values are compared

- Expected value computed based on experience in a reference database
- Case mix/risk adjusted

Includes a determination as whether a difference between the actual and expected value is statistically significant

Facilitate drill down

Produces actionable information

Tabular and graphic presentations

MDC Report Average Total Cost by MDC (non-outlier) Compared to Norm

MDC	Cnt	Hosp $ Avg	Norm $ Exp	Norm % Diff	Description
1	1144	16679	15512	7.3	Nervous System
2	183	7101	6982	2.7	Eye
3	290	9411	9448	-0.4	ENT & Mouth
4	1313	16581	13009	27.5*	Respiratory System
5	4110	21488	20841	3.1	Circulatory System
6	1215	15941	14144	12.7	Digestive System
•	•	•	•	•	
•	•	•	•	•	
•	•	•	•	•	
	26414	13660	12712	7.5	Totals

APR-DRG Report Average Total Cost by APR-DRG (non-outlier) Compared to Norm

MDC	DRG	Cnt	Hosp $ Avg	Norm $ Exp	Norm % Diff	Description
•	•	•	•	•	•	•
•	•	•	•	•	•	•
•	•	•	•	•	•	•
4	88	120	9301	8912	4.4	COPD
4	89	209	11011	8098	36.0*	Simple Pneumonia
4	90	8	6349	6209	2.3	RSV Pneumonia
•	•	•	•	•	•	•
•	•	•	•	•	•	•
•	•	•	•	•	•	•

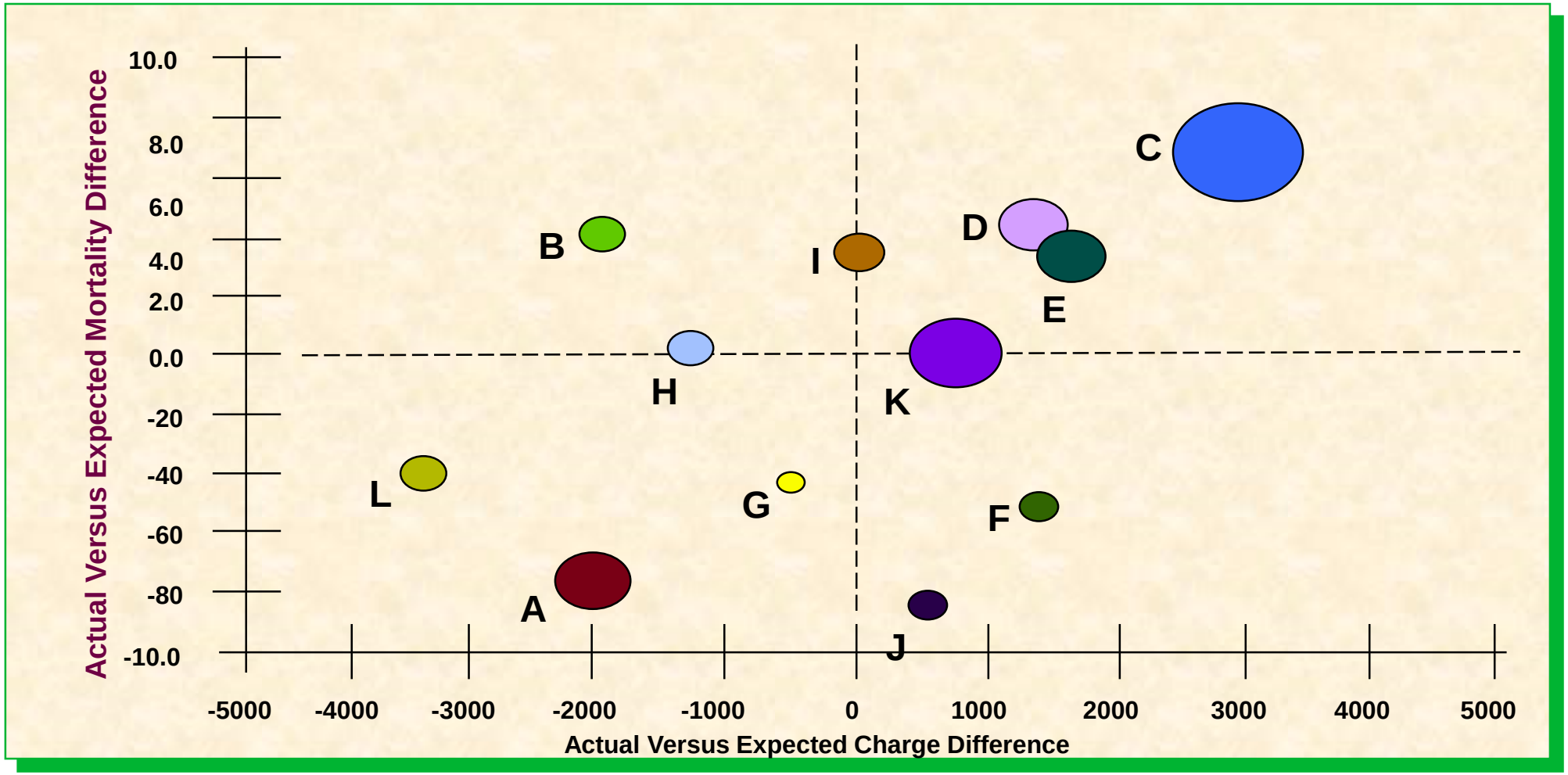
Average Departmental Cost for APR-DRG 89 Simple Pneumonia **(non-outlier) Compared to Norms**

			----------Non Outliers----------					
DRG	Cnt		Lab	Rad Diag	Pharm	MS Supp	Total Chgs	Total LOS
89	209	Act:	1612	412	3922	752	11011	6.9
		Exp:	1498	353	2264	651	8098	6.5
		Diff:	114	59	1658	101	2913	0.4
		% Diff	7.1	16.7	42.3*	15.5	36.0*	6.2

Average Cost for Physician 123456 for APR-DRG 89 Simple Pneumonia (non outlier) by SOI Subclass Compared to Norms Percentage Difference Between Actual and Expected

			----------Non Outliers----------					
DRG	Cnt	SOI	Lab	Rad Diag	Pharm	MS Supp	Total Chgs	Total LOS
89	42	1	12.1	21.2	92.3*	14.2	48.7*	18.2
		2	14.2	16.3	66.4*	18.1	38.2*	16.2
		3	10.3	17.2	32.3*	17.3	30.1*	16.6
		4	9.7	13.4	18.1	16.9	21.9	14.4

Hospital Profile



APR DRG Assignment Report- Want to know more?

Ask for web access code to
APR-DRG Assignment Report

3M Health Information Systems

3M™ APR DRG Assignment Report
APR DRG Version 30.0
Codes: FY 2013 ICD-9

Patient ID :	-	**Sex :**	Female
Age in Years :	19	**Status :**	1 - Home
Days Mech Vent (DMV) :		**DMV Source :**	6 - No DMV

Grouper Results for Admission APR DRG

MDC:	20 - ALCOHOL & DRUG USE
All Patient Refined DRG :	774 - COCAINE ABUSE & DEPENDENCE
Severity of Illness :	3 - Major Patient Severity of Illness
Risk of Mortality :	2 - Moderate Patient Risk of Mortality
Medical/Surgical DRG :	Medical
Return Code :	0 - DRG assigned

Grouper Results for Discharge APR DRG

MDC :	20 - ALCOHOL & DRUG USE
All Patient Refined DRG :	774 - COCAINE ABUSE & DEPENDENCE
Severity of Illness :	3 - Major Patient Severity of Illness
Risk of Mortality :	2 - Moderate Patient Risk of Mortality
Medical/Surgical DRG :	Medical
Return Code :	0 - DRG assigned

Gives Access to:

- APR DRG definition manual
- APR DRG calculator
- APR DRG Examples
- Other good information!

In Summary

"All Patient refined" is a more sophisticated system than MS-DRGs

- More base DRGs to represent the entire patient population, including pregnant women and newborns
- Subclasses to represent SOI and ROM, modified by age
- POA considered in DRG assignment

APR DRGs are transparent

Severity-adjusts all patient for 'apples-to-apples" comparison

Links costs, resource use to patterns in clinical care

Questions