Health Economics:

Medicare and Medicaid
Hospital Reimbursement

Jacobi Medical Center
Noon Conference Feb 14, 2011
Colin D. Cha Fong
Goals

- Brief introduction to Medicare and Medicaid
- How the hospital is reimbursed by these programs for the care you provide patients
- Describe some considerations of hospital management related to our patient census
- Provide insight into some of the reasons why you work with SW, case mgt, and documentation specialists
Overview of Medicare and Medicaid
Medicare

- Established in 1965
- Covers 3 primary groups
  - Aged 65 and older
  - Some with disabilities
  - Hemodialysis
- About 47 million individuals
  - 39 Million age 65 and older
  - 8 million non-elderly with disability

2010 Kaiser Family Foundation: Medicare Chartbook
Different Parts to Medicare

- A – Inpatient – hospital or SNF
- B – Physician services, some supplies
- C – Medicare Advantage
- D – Prescription drug benefits
Medicaid

- Established also in 1965
- Covering primarily the indigent
- Based on poverty level
- Covers prescriptions
- Administered individually by each state
Medicaid in NY

- Covers about 4.7 million individuals
- $1 billion alone to administer across state
- Calendar year 2009
  - about $46 billion in expenditures
- Most expensive program in the country

State of NY, DOH
Nov 2010 Medicaid Administration Report
Per these numbers, 23% of federal spending goes to Medicare/aid

Kaiser Foundation Fact Sheet
How do we fund these programs?

- **Medicare**
  - Federal Insurance Contributions Act (FICA)
  - 6.2% contribution to Social Security Trust Fund
  - 1.45% contribution to Medicare
  - Matched by the employer

- **Medicaid**
  - Managed by states and funded by state with contribution from the federal government (typically 50% in NY)

- And where do these funds come from?
Your check from HHC

<table>
<thead>
<tr>
<th>Type of Pay</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>REG BMH</td>
<td>Medicare Tax</td>
<td>32.68</td>
</tr>
<tr>
<td>EGA BMH</td>
<td>FIDA 403B</td>
<td>111.23</td>
</tr>
<tr>
<td><em><strong>TOTAL GROSS</strong></em></td>
<td></td>
<td>2253.73</td>
</tr>
<tr>
<td></td>
<td>1A HLTH GIC BP</td>
<td></td>
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<tr>
<td></td>
<td>696.52</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1528.65</td>
<td></td>
</tr>
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<td></td>
<td>PPED: 12/18/10</td>
<td></td>
</tr>
</tbody>
</table>

Medicare Tax = 1.45% = \( \frac{32.68}{2253.73} \) (Gross Pay)

1.45% matched by HHC

With permission from member of housestaff
What about Medicaid?

With permission from member of housestaff
Where do those Medicare taxes go?

Figure 9.1

Estimated Sources of Medicare Revenue, 2010

- **General Revenue**: 43%
- **Payroll Taxes**: 37%
- **Beneficiary Premiums**: 13%
- **Payments from States**: 1%
- **Taxation of Social Security Benefits**: 1%
- **Interest and Other**: 4%

**TOTAL**: $499 billion

**PART A**: $218 billion (85% of total)

**PART B**: $219 billion (74% of total)

**PART D**: $63 billion (82% of total)


Part A: Inpatient Payments
Hospital Reimbursement
A digression to hospital management

- First, remember not-for-profit does not mean no profit.

- Second, think about a hotel . . .
How much does one night cost?

- Daily rate, as of 2/10/11

- If you were to go to patient accounts and say, I have no insurance and I’d like to pay for my entire stay . . . How much would the room cost alone be for one day?
If you were to pay out of pocket

- Gen Med bed - $2730/night
- ICU bed - $4130/night
- Now add on labs, EKGs, imaging, etc.
Few people actually pay those rates

So reimbursement depends on who’s paying

- Medicare
- Medicaid
- Private/commercial insurance
- Other
- No insurance
What about patients with no insurance?

- Emergency Medicaid, which can turn into Medicaid
  - Unless you do not have citizenship
  - Once active, is good for 6 months, need to recertify
  - Functions and is paid like Medicaid
  - Does not mean they will get Medicaid
What if no medicaid?

- Say, we apply for emergency medicaid and it is rejected.
- Charity pool for uncompensated care
- Charity care
And a little background on insurance coverage in the US...

- Medicare to the rise of managed care

Now think about a table for 4 in a restaurant...
Diagnosis Related Groups
(DRGs)
Diagnosis Related Groups

- Classification system based primarily on diagnoses, age, treatments received intended to reflect the resources utilized in caring for a given group of patients.

- For reimbursement, the DRG essentially leads to a flat fee paid to the hospital to provide all the necessary care for a given patient.
History of the DRG

- 1960s  developed, piloted in the 70s
- 1983  Social Sec Act amended to include a national DRG-based hosp prospective payment system
- 80s  updated yearly, but by Medicare and focusing on issues affecting the elderly
- Late 80s  AP-DRG system developed
- 2007  MS-DRG system, severity adjusted
- 2009  APR-DRG system
Starts with a diagnosis

- Remember the principal diagnosis field in the discharge summary?

- That diagnosis gets translated into a code for billing and epidemiological purposes

- As do the comorbid conditions you write and document in your H&P, progress notes, etc
How many codes count?

- For Medicare, determined based upon the coded chart from the
  - Principal Dx
  - Up to 8 Additional Dx
  - Up to 6 Procedures during the admission
ICD-9 now and ICD-10 coming

- The diagnoses you write are categorized under codes, the current system is called ICD-9
- International Classification of Diseases
- Updated yearly

- Hospitals are currently transitioning to a new system, ICD-10, active Oct 1, 2013
- Fiscal Year 2014 start 10/01/2013
DRG 312 Syncope and Collapse

- **Diagnoses**
  - 458.0  Orthostatic hypotension
  - 458.2  Iatrogenic hypotension
  - 780.2  Syncope and collapse
DRG 313 Chest Pain

- 786.50 Unspecified chest pain
- 786.51 Precordial pain
- 786.59 Other chest pain (sometimes where MSK gets put)
- V71.7 Observation for suspected cardiovascular disease

However, it’s missing one commonly used diagnosis
“ROMI”

- Is a plan, not a diagnosis or a problem
- R/o ACS – is a plan, not a diagnosis
- R/o PNA – is a plan, not a diagnosis
- Etc, etc, etc
Some advantages of the DRG system

- A system for classifying, not exact, but a system that is manageable
- Allows for comparison
- Relate Case Mix Index to resource utilization
- Allows for simpler reimbursement without consideration of too many variables (prognosis, treatment difficulty)
What is the Case Mix Index?

- Often thought of as reflecting the acuity of our patients (higher meaning more ill)
- However, the DRG system was designed to reflect costs or resources utilized

- A measure of the resources consumed by our patients
- Essentially, the avg DRG weight for all of our patients
  - Take all the DRGs, sum the weights and divide by the number of DRGs
What about Weiler?

- **Jacobi Medical Center** – 330127
  - **Case Mix Index 1.4712**

- **Montefiore** 330059
  - **Case Mix Index 1.6093**
  - But Comprises Monte-Moses, North, Weiler
  - Monte-North – formerly, Our Lady of Mercy
Back to operating a hospital

Think again about the restaurant . . .
All patients are not the same

- A pneumonia patient could be simple or hard to provide care for
- Different levels of acuity
  - Medicare Severity - DRG
  - MS-DRG system developed
  - To capture severity of illness
MS-DRGs adopted by Medicare

- As of 10/1/2007 (the start of Fiscal Year 2008)

- Expanded to 745 MS-DRGs

- Three severity levels
  - MCC: With major complications or comorbidities
  - CC: With complications or comorbidities
  - Non CC: Without complications or comorbidities
Medicare Severity system

- **MCC** (major complications and comorbidities)
  - 1603 codes (51 pages in a PDF file)

- **CC** (complications and comorbidities)
  - 3491 codes (93 pages in a PDF file)

- **Non-cc** (no complications or comorbidities)
DRG 193 Simple Pneumonia and Pleurisy

- 193 Simple PNA and Pleurisy with MCC
- 194 Simple PNA and Pleurisy with CC
- 195 Simple PNA and Pleurisy w/o CC/MCC
- Reimbursement accordingly is higher or lower
But the differences can be big

<table>
<thead>
<tr>
<th></th>
<th>ST BARNABAS HOSPITAL</th>
<th>NEW YORK WESTCHESTER SQUARE MEDICAL CENTER</th>
<th>JACOBI MEDICAL CENTER</th>
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<tr>
<td>4422 THIRD AVENUE</td>
<td>4.2 miles</td>
<td>1.3 miles</td>
<td>2.2 miles</td>
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<tr>
<td>BRONX, NY 10457</td>
<td>(212) 960-9000</td>
<td></td>
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</tr>
<tr>
<td>Acute Care</td>
<td>Map &amp; Directions</td>
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<tr>
<td>Adding to My Favorites</td>
<td>Add to My Favorites</td>
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<td></td>
</tr>
<tr>
<td>Heart failure and shock w/o CC/MCC MS-DRG 293</td>
<td>$1,335</td>
<td>94 Medicare Patients</td>
<td>$5,421</td>
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<tr>
<td>Heart failure and shock w MCC MS-DRG 291</td>
<td>$19,931</td>
<td>61 Medicare Patients</td>
<td>$10,963</td>
</tr>
<tr>
<td>Heart failure and shock w CC MS-DRG 292</td>
<td>$10,057</td>
<td>91 Medicare Patients</td>
<td>$7,550</td>
</tr>
</tbody>
</table>

Number of Medicare Patients Treated: The number of discharges the hospital treated for each MS-DRG from October 2007 through September 2008. The United States and state average of Medicare Patients does not include hospitals with zero cases.
Some DRGs are not broken out

- Syncope & Collapse (DRG 312)
- Chest pain (313)

- So, if patients are ultimately placed in these DRGs, it does not matter what their comorbid conditions are
- Some DRGs have a second level
- So, a given DRG can have 1 to 3 levels
Common CCs

(Complications and Comorbidities)

- Systolic or diastolic heart failure
- BMI > 40
- SIRS
- CKD Stage IV or V
- HTN with CKD, any stage
- Hypo or Hypernatremia
- Acute Kidney Failure
Common Major CCs

- End Stage Renal Disease (on HD not Stage V)
- Sepsis, Severe Sepsis, Septic Shock
- **Acute** systolic or diastolic heart failure
- Pressure ulcers, Stage III or IV
- Pneumonia
- Pulmonary embolism
- HIV
How many do you need?

- For Medicare and this MS-DRG system, you only need one CC or one MCC to qualify for the respective level.
- For example, if you patient is on HD – he or she will have a major cc . . . Anytime the patient is admitted, regardless of the cause.
- Which makes sense because there can be complications and dialysis needs to be provided while they are inhouse.
- However, this may not affect anything – like routine chest pain admissions – the DRG only has one level.
Medicare is watching

- Hospitals scrutinize the system and in turn, Medicare monitors the billing

- “Acute kidney failure, unspecified”

- Used to be a MCC, but as of Oct 1, 2010 was downgraded to a CC
Words that don’t count here

- CHF . . . Without further clarification
- CKD . . . Without a stage
- Obesity . . . Without a BMI
So, here’s the CC list again—What’s familiar about it?

- Systolic or diastolic heart failure
- BMI > 40
- SIRS
- CKD Stage IV or V
- HTN with CKD, any stage
- Hypo or Hypernatremia
- Acute Kidney Failure
- Pressure Ulcer, Stage III or IV
Those Quadramed interrupts

- “Doctor, if you think this patient has SIRS, please document in the chart.”
- “Morbid obesity was documented, please document BMI > 40”
- “Did this patient have hyponatremia?”
- “If the pressure ulcer was present on admission, please document.”
Why did the clinical documentation specialist ask me to document “Present on Admission”? 
Hospital Acquired Conditions

- HAC were implemented as of Oct 1, 2008, Hospital Acquired Conditions – 3 criteria
  - high cost, high volume, or both
  - Are assigned to a higher paying MS-DRG when present as a secondary diagnosis, that is when present lead to a higher paying DRG
  - could reasonably have been prevented through the application of evidence-based guidelines

Deficit Reduction Act of 2005, Section 5001
Federal Register, Vol 75, No 157, p50080
Hospital Acquired Conditions for FY2011

- Air Embolism
- Blood Incompatibility
- Pressure Ulcer Stages III & IV
- Falls and Trauma
  - With fracture, dislocation
- Catheter-Associated UTI
- Vascular Catheter-Associated Infection
- Manifestations of Poor Glycemic Control
Hospital Acquired Conditions for FY2011

- Foreign Object Retained After Surgery
- Surgical Site Infection
  - Mediastinitis following CABG
  - following orthopedic procedures – spine/neck/shoulder/elbow
  - following bariatric surgery
- DVT/PE following Total Knee Replacement or Hip Replacement
Financial impact

- Implemented as of Oct 1, 2008.
- From Medicare’s perspective they save because the DRGs are not higher.
- For October 2008 to September 2009 (Fiscal 2009), it was estimated that about 18.8 million dollars were saved by this.
- The point – it is here to stay.

Federal Register
Vol 75, No 157, p50097
One commenter noted that DVT/PE might be unreasonable because it is unclear how many would be prevented by EBM.

CMS responded that this year data on these HACs would be released for review and reconsideration.

The list can be amended, but one concern is that it will only become larger.
Medicaid uses APR-DRGs

- All Patients Refined Diagnosis Related Group
- Addresses Medicaid population and non-elderly population
- Specifies based on severity
- Minor, moderate, major, and extreme
- Includes a mortality score
In contrast to the MS-DRG system, the severity is based not on the presence of one particular factor (that is a cc or mcc)

- Levels of severity are assigned based on the mix of complications/comorbidities present, both
  - The severity of a particular factor
  - The combination of comorbidities
APR-DRGs

- Better reflects true acuity
- Sepsis is one thing,
- But sepsis with acidemia or ARF is much more concerning on the floor
Calculating a Hospital’s Payment
Step 1: Base payment Rate

- Each hospital has a base payment rate
- This is a standard amount applying broadly to all hospitals – like a base unit of payment
- Based upon labor and non-labor costs
- Labor costs adjusted by wage index
- Non-labor costs adjusted by a cost-of-living adjustment factor
### Standardized Rate for FY2011

<table>
<thead>
<tr>
<th></th>
<th>Labor</th>
<th>Nonlabor</th>
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</thead>
<tbody>
<tr>
<td>National</td>
<td>$3552.91</td>
<td>$1611.20</td>
</tr>
</tbody>
</table>

- Based on 1981 hospital costs per hospital data submitted to Medicare
- Annual adjustment called hospital market basket or cost-of-living
Wage Index and Adjustments

- Jacobi – 330127 (Medicare provider number)

- Wage Index 1.3122 (same as Monte’s)

- Cost-of-living adjustment 2.35%

- Hospital required to submit data on quality

- Reduced 2% if you do not submit the data
  - Think CHF, AMI, PNA patients
## Regional differences in labor cost

<table>
<thead>
<tr>
<th>CBSA Code</th>
<th>Urban Area</th>
<th>3 Yr Estimated Avg Hourly Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>41884</td>
<td>San Francisco-San Mateo-Redwood City</td>
<td>51.6877</td>
</tr>
<tr>
<td>35644</td>
<td>New York-White Plains-Wayne, NY-NJ</td>
<td>44.1205</td>
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<tr>
<td>19740</td>
<td>Denver-Aurora-Broomfield, CO</td>
<td>35.6538</td>
</tr>
<tr>
<td>48540</td>
<td>Wheeling, WV-OH</td>
<td>23.089</td>
</tr>
</tbody>
</table>
Step 2: Assign a DRG

- Our clinical documentation is coded and sent to an outside company/system to submit to Medicare.
- Each patient admission is assigned a MS-DRG which carries a certain weight.
- This weight is a multiplier factor that is multiplied times the base payment rate.
## Range of weights

<table>
<thead>
<tr>
<th>MS-DRG</th>
<th>Name</th>
<th>DRG Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>Heart Transplant or Implant of Heart Assist System w MCC</td>
<td>26.3441 (Highest)</td>
</tr>
<tr>
<td>227</td>
<td>Cardiac Defib Implant w/o Cardiac Cath w/o MCC</td>
<td>5.1936</td>
</tr>
<tr>
<td>871</td>
<td>Septicemia or Severe Sepsis w/o MV 96+ Hours w/MCC</td>
<td>1.9074</td>
</tr>
<tr>
<td>292</td>
<td>Heart Failure &amp; Shock w/CC</td>
<td>1.0302</td>
</tr>
<tr>
<td>202</td>
<td>Bronchitis &amp; Asthma w/CC/MCC</td>
<td>0.8424</td>
</tr>
<tr>
<td>313</td>
<td>Chest Pain</td>
<td>0.5499</td>
</tr>
<tr>
<td>795</td>
<td>Normal Newborn</td>
<td>0.1649 (Lowest)</td>
</tr>
</tbody>
</table>
# CHF vs CHF w/ICD placement

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</table>
## Differences in weights

<table>
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<tr>
<th>MS-DRG</th>
<th>Name</th>
<th>DRG Weight</th>
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<tbody>
<tr>
<td>193</td>
<td>Simple Pneumonia &amp; Pleurisy w/MCC</td>
<td>1.4796</td>
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<tr>
<td>194</td>
<td>Simple Pneumonia &amp; Pleurisy w/CC</td>
<td>1.0152</td>
</tr>
<tr>
<td>195</td>
<td>Simple Pneumonia &amp; Pleurisy w/o CC/MCC</td>
<td>0.7096</td>
</tr>
</tbody>
</table>
Step 3: DSH Payment

- Payment for those hospitals that care for a larger percentage of low-income patients
- Added on, not a multiplier
- May depend on percentage or sometimes if a hospital serves a very large region
Step 4: Indirect Medical Education

- For approved teaching hospitals
- Add-on percentage payment
- For the extra costs anticipated in a teaching program, such as
  - Testing for academic purposes
  - Unnecessary ordering of labs, imaging, etc.
Direct Graduate Medical Education payments

- Also, the hospital receives direct funding from Medicare for support of the residency program.
Step 5: New technology add-on

- Add-on payment for admissions utilizing new technologies, specified by CMS

- What about cases that stay for months?
Step 6: Consider as outlier

- If the costs for an admission are exorbitant, the hospital receives extra payments for these outlier cases
- Added on to MS-DRG adjusted base rate
- There are cost thresholds specific to each DRG
In summary

- Base rate x DRG weight = DRG adjusted rate

- DRG adjusted rate plus, if applicable,
  - DSH payment
  - Indirect Medical Education
  - New technology add on
  - Outlier payments
Last analogy

- We’ve covered the basic framework for payments by Medicare and Medicaid - **Inpatient**

- Back to the restaurant idea, but now think about it as if it is an all-you-can eat, **fixed price buffet**

- If we are paid a fixed amount at the end of the day for a patient, how else can the hospital increase its revenue?
Take home message – the Don’ts

- **Do not** try to game the system
- **Do not** falsify your documentation or order procedures so the hospital can get more reimbursement
- **Do not** oversimplify our entire clinical situation to an all-you-can eat buffet (and say that Dr. Cha Fong told you so) – it’s only an analogy
Take home message – The Do’s

- **Treat your patient first and foremost.**
- **Document accurately and specifically so that the hospital can be reimbursed appropriately.**
- **Understand better how interdisciplinary care helps the hospital and more importantly, our patients well-being.**
- **Appreciate the economic environment for the hospital now and for you in the future.**
Any questions?