



**HCCA's 12<sup>TH</sup> ANNUAL COMPLIANCE INSTITUTE**

APRIL 13-16, 2008 | NEW ORLEANS, LA | HILTON RIVERSIDE NEW ORLEANS

**THE IMPACT OF MS-DRGs ON THE ACUTE  
HEALTHCARE PROVIDER**

**1st Quarter FY 2007 CMS-DRGs  
compared to  
1st Quarter FY 2008 MS-DRGs**

***American Health Lawyers Association  
April 10, 2008***



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**Today's Agenda**

- **Dynamics and reform of the Diagnostic Related Grouping (DRG) System**
- **Acute Care Facility's Leadership Challenges**
- **Addressing Metrics of Change**
  - \* Process' progress
  - \* Periods of Measure comparisons
  - \* CMI
  - \* Ratios
  - \* Periods of Measure
  - \* Unlike Systems
  - \* Secondary Diagnosis
  - \* Reimbursement
- **Methodology and Charts/Graphs for CMS-DRG vs. MS-DRG Demonstrating in categories of:**
  - \* Rural
  - \* Urban
  - \* Large Urban



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## Today's Agenda Cont.

- **Methodology**

- **Categories of Hospitals types**

- Rural (40)
    - Urban (8)
    - Large Urban (9)
    - Total (57)

- **Comparative Periods**

- Comparing CMS predicted changes
    - Comparing CMS-DRGs 1st Q, FY 07 to CMS-DRG 1st Q, FY 08 (converted)
    - Comparing MS-DRG1st Q, FY 07 (converted) to MS-DRG 1st Q, FY08

- **Data Categories Characteristics and Measurements**

- CMI (total, medical, surgical)
    - Secondary Diagnosis – demonstrated as Complications and Comorbidities
    - Ratios (simple PNA vs. complex PNA and Urosepsis vs. Sepsis)
    - Reimbursement (CC influence, MCC influence and CC/MCC influence)



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## *Dynamics and Reform of the DRG Systems*

- CMS-DRG System **adopted Nationwide - 1983**
- Congress mandated change in 2005 to a more **severity based system by 2008**
- **CMS studied six severity systems** for almost 2 years
- CMS New DRG System objectives:
  - Reconfigure to a **more equitable distribution assigning severity** weights based on resource consumption
  - **System needed to be readily available, logically intuitive, predictably sound and easily measurable**
  - Provide a **tiered severity within DRGs** using five tiers of possible severity configuration utilizing No CC, CC, MCC
  - **Use the current method** of Medical and Surgical DRGs
- **System flexibility to accommodate future DRG expansion**



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## Acute Care Facility's Leadership Challenges

- MS-DRG System mandated for FY 2008 leading to facility's **voiced challenges**:
  - Maintain Compliance with Regulations (many changes could result in **under/over billing**)
  - Remain **solvent** during transition
  - **Capture Severity/Mortality Profiling** during learning curve
  - **Potential hold-ups on AR** (Federal held payment X 4-6 days due to glitch of recalibrating weights)
  - **Manpower quality and quantity** (education / staff ramp-up)
  - **Physician communication** on new MS-DRG documentation and POA requirements
  - **Dual System** issues – many payors on different payments system requiring as many as three or four system familiarity
  - Identifying method to **adhere to regulations / physician education**
  - **Monitoring and Measuring** – Who, What, When & How?



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## Metrics of Measurement

- **Our Demonstration**:
  - **Assess the first Quarter of MS-DRG data** in a number (57) of volunteer client facilities
  - Categorize the facilities into **three buckets: Rural, Urban, Large Urban** (using CMS guidelines on category definitions)
  - Use **three data sets** to compare to the first Quarter of MS-DRG data (1<sup>st</sup> Q, FY 08)
    - **Any predicted data points released by CMS in the final rule FY08**
    - **1<sup>st</sup> Q, FY 07 compared to 1<sup>st</sup> Q, FY 08 (like periods converted to all CMS-DRG format)**
    - **1<sup>st</sup> Q, FY 07 compared to 1<sup>st</sup> Q, FY 08 (like periods converted to all MS-DRG format)**
  - **Data categories** to Measure
    - **CMI (total, medical, surgical)**
    - **Secondary Diagnosis (No CC, CC, MCC)**
    - **Ratios (simple PNA vs. complex PNA and UTI vs. Sepsis)**
    - **Reimbursement (CC influence, MCC influence and CC/MCC influence)**



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## I CMI Characteristics

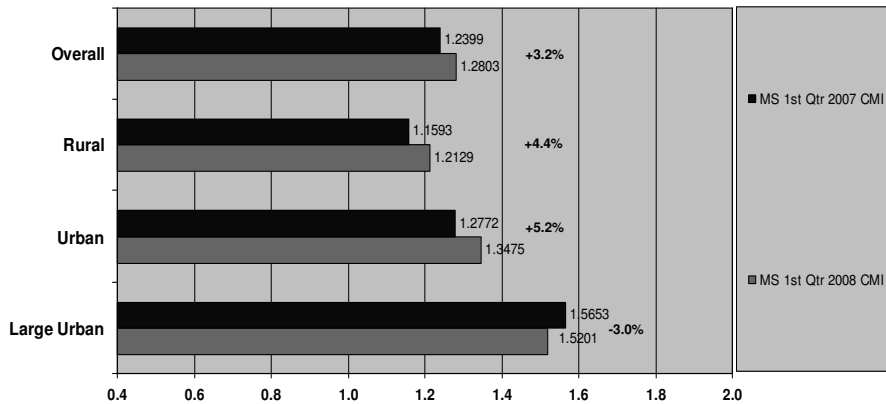
- Case Mix Index – a ‘**severity weight**’ assigned to a DRG category depicting the resources, on average, consumed
- Case Mix can be divided into **Medical and Surgical Categories**
- Generally Case Mix for **Surgical Cases is about twice that of Medical Cases**
- Case Mix is used as a **gross metric defining the aggregate severity** of a facilities population
- Case Mix can be **influenced by**:
  - **Volume of Medical / Surgical patient mix,**
  - **Specialty focus of each facility,**
  - **Documentation of the total picture (diagnoses) by the physician,**
  - **Skilled abstraction and conversion of conditions to medical and surgical codes**



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## Total CMI CMS-DRG vs. MS-DRG Comparison Version 25



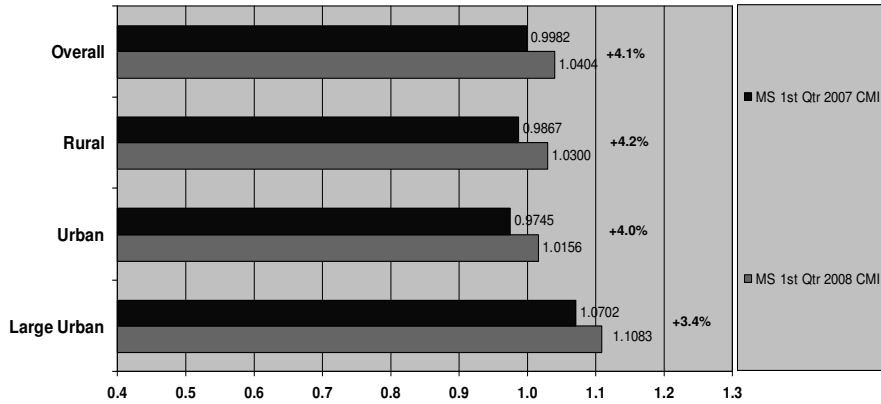
Using like data in the MS-DRG version 25 – the total DRG CMI increased from 1st Q FY 2007 to 1st Q FY 2008 in Rural, Urban, and overall but a decrease in Large Urban categories.



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**Medical CMI**  
**CMS-DRG vs. MS-DRG Comparison**  
 Version 25

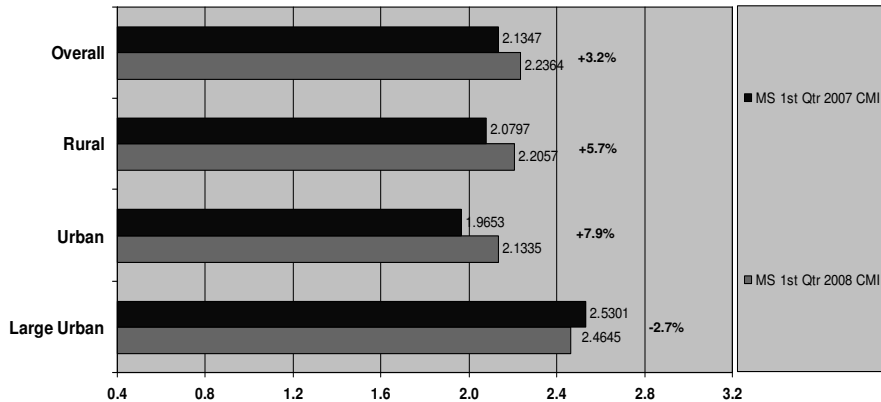


Using like data in the MS-DRG version 25 – the Medical DRG CMI increased from 1st Q FY 2007 to 1st Q FY 2008 in Rural, Urban, Large Urban and overall categories.



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**Surgical CMI**  
**CMS-DRG vs. MS-DRG Comparison**  
 Version 25



Using like data in the MS-DRG version 25 – the Surgical DRG CMI increased from 1st Q FY 2007 to 1st Q FY 2008 in Rural, Urban, Large Urban, and overall categories.  
 \*\*NOTE: Medical and Surgical Large Urban were individually demonstrated as an increase in CMI but the overall was depicted as a decrease due to an apparent imbalance driven by a shifting in %'s of Med/Surg volume.



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## II *Complication / Comorbidity Characteristics*

- CCs = Complications (**conditions occurring during the hospital stay**) and Comorbidities (**conditions pre-existing the hospital stay**)
- In the CMS-DRG System, by-in-large, **CCs were the only means of measuring severity** within the DRG
- In the MS-DRG System, there are **five tiers of severity** that may be applied to CMS-DRGs.
  - No CC
  - CC only
  - MCC only
  - CC and MCC
  - No CC and MCC (must have two secondary diagnoses – one a non-CC and one a MCC)



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## *Examples of CC/MCC/ No CC Diagnoses*

- ~Thirteen thousand potential Diagnosis Codes
- A few common diagnoses that do and do not impact DRG assignment

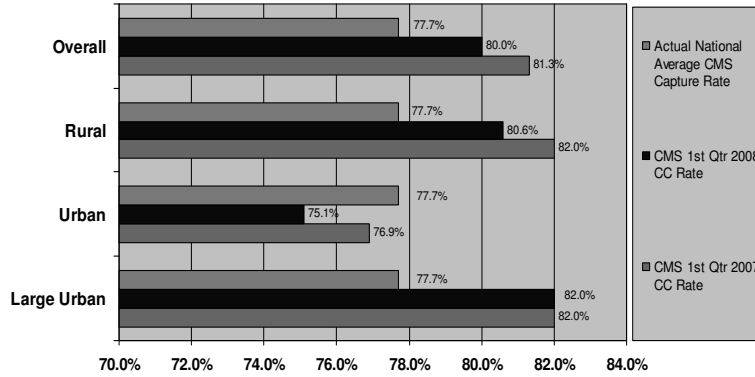
| Common Secondary Diagnoses |                          |                          |
|----------------------------|--------------------------|--------------------------|
| CC Description             | Major CC Description     | No CC Description        |
| Meningitis                 | Encephalitis             | Brain swelling           |
| Paraplegia                 | Quadraplegia             | Numbness of Leg          |
| Abscess of Lung            | Pneumonia                | Infiltrate in Lung       |
| Acute pericarditis         | Ventricular Fibrillation | Chest Pain               |
| Aneurysm of Heart          | Acute MI                 | Shortness of Breath      |
| Systolic Heart Failure     | Acute Heart Failure      | Congestive Heart Failure |
| Cellulitis and abscess     | Decubitis - site spec.   | Lesion of skin           |
| Malnutrition               | Severe Malnutrition      | Nutritional Failure      |



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**CC Capture Rate Comparison**  
**1st Qtr 2007 vs. 1st Qtr 2008**  
 Version 24



Using like data in the CMS-DRG version 24; 1st Q FY 2007 to 1st Q FY 2008 in Rural, Urban, Large Urban, and overall facilities, the graph demonstrates:

- Actual FY 2007 average CC capture rate for all reporting facilities was 77%, as reported by CMS
- In these hospitals pooled, Actual CC capture rates were higher than average in Overall, Rural, and Large Urban. Urban was less than the 77% average.
- 1st Q FY 2008 CC capture was less than in 1st Q FY 2007 for Overall and Rural facilities; greater for Urban facilities and was calculated as even for Large Urban facilities

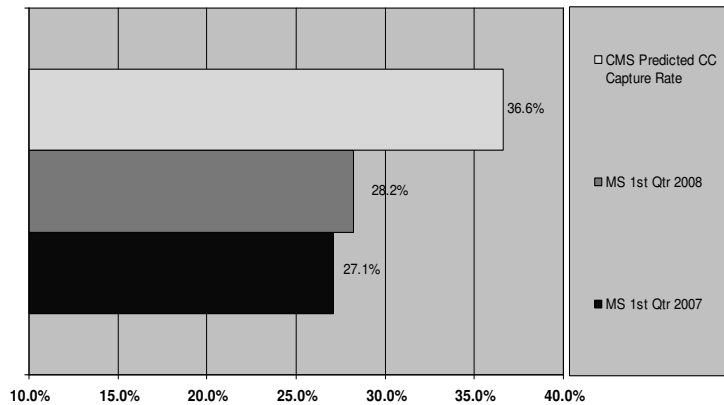


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**CC Capture Rate Comparison**  
**Rural Hospitals**

Version 25

Change in CC Capture Rate from 1st Quarter 2007 to 1st Quarter 2008 for Rural hospitals is 4%. However, the 1st Quarter of MS-DRGs in 2008 is 23% lower than the CMS predicted CC Capture Rate.



Using like data in the MS-DRG version 25; 1st Q FY 2007 to 1st Q FY 2008, in rural facilities, the graph demonstrates:

- Actual FY 2008 average CC capture rate was predicted by CMS to be 36.6% in the FY08 final rule
- In these rural acute care facilities pooled, Actual CC capture rates would have been 27.1% lower than predicted for 1st Q FY 2007 and were 28.2% lower for 1st Q FY 2008.
- Can it be assumed that proficiency in coding has increased by 1.1%?

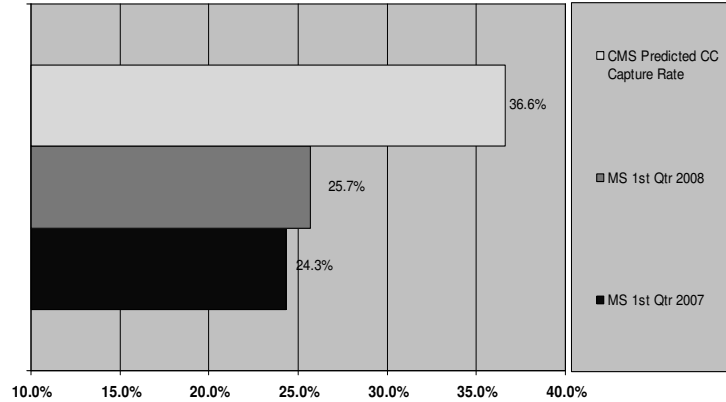


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## CC Capture Rate Comparison Urban Hospitals

Version 25

Change in CC Capture Rate from 1<sup>st</sup> Quarter 2007 to 1<sup>st</sup> Quarter 2008 for Urban hospitals is 5.4%. However, the 1<sup>st</sup> Quarter of MS-DRGs in 2008 is 29.7% lower than the CMS predicted CC Capture Rate.



- Using like data in the MS-DRG version 25; 1st Q FY 2007 to 1st Q FY 2008, in urban facilities, the graph demonstrates:
- Actual FY 2008 average CC capture rate was predicted by CMS to be 36.6% in the FY08 final rule
  - In these urban acute care facilities polled, actual CC capture rates would have been 24.3% lower than predicted for 1st Q FY 2007 and were 25.7% lower for 1st Q FY 2008.
  - Can it be assumed that proficiency in coding has increased by 1.4%?



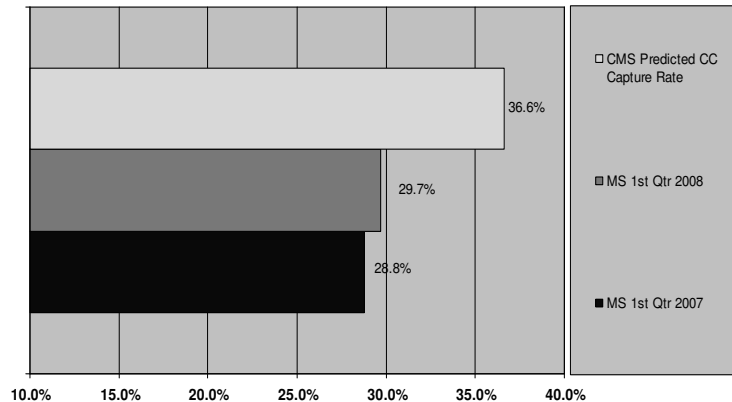
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## CC Capture Rate Comparison Large Urban Hospitals

Version 25

Change in CC Capture Rate from 1<sup>st</sup> Quarter 2007 to 1<sup>st</sup> Quarter 2008 for Large Urban hospitals is 3.0%. However, the 1<sup>st</sup> Quarter of MS-DRGs in 2008 is 18.9% lower than the CMS predicted CC Capture Rate.

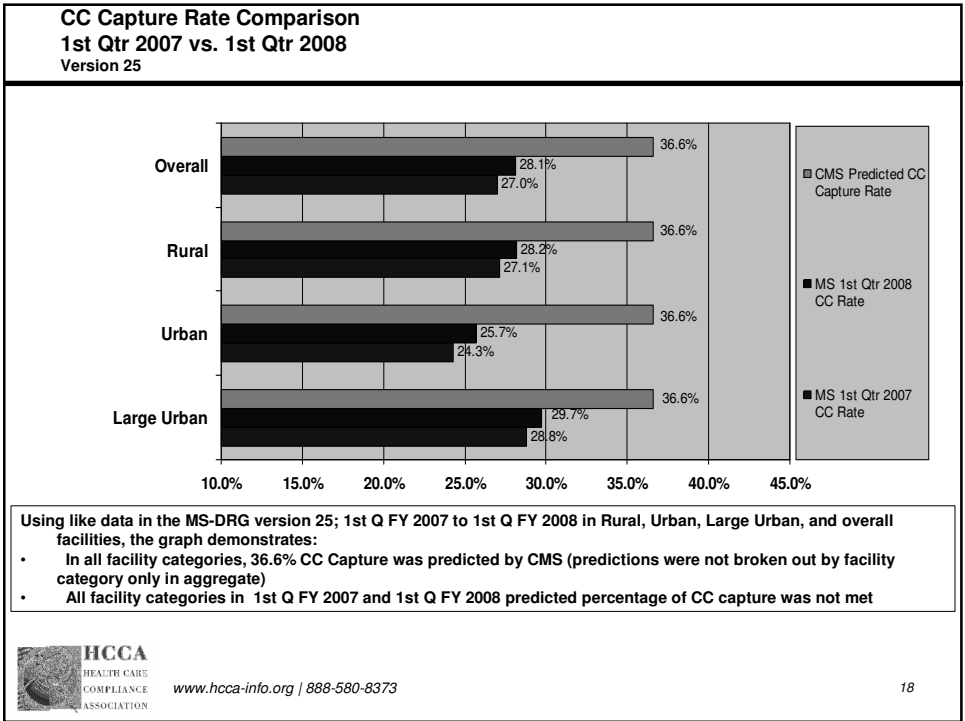
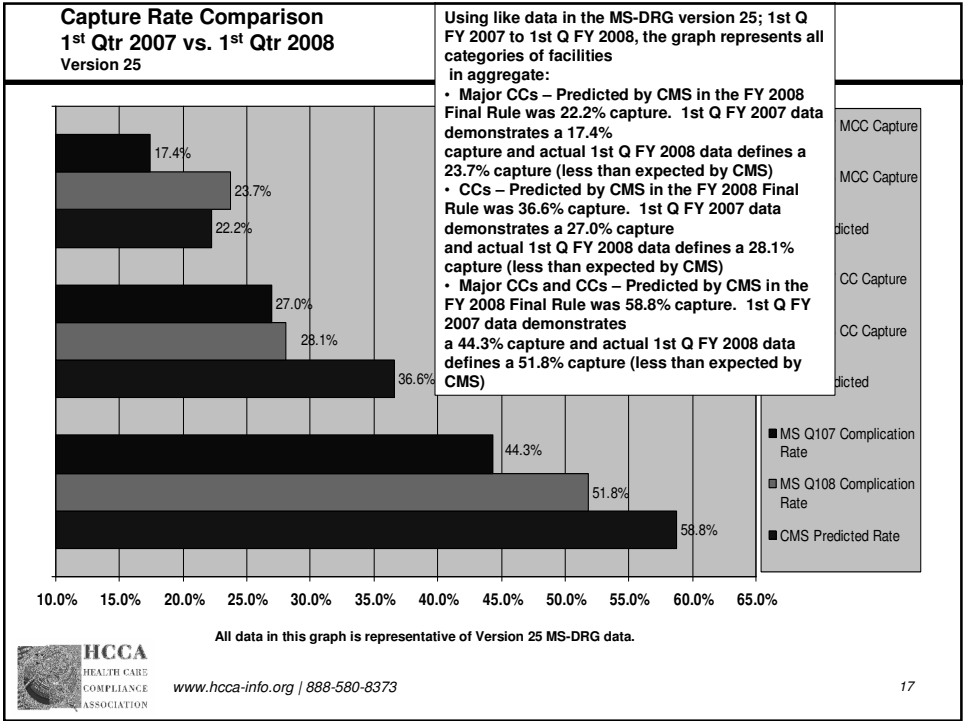


- Using like data in the MS-DRG version 25; 1st Q FY 2007 to 1st Q FY 2008, in large urban facilities, the graph demonstrates:
- Actual FY 2008 average CC capture rate was predicted by CMS to be 36.6% in the FY08 final rule
  - In these large urban acute care facilities polled, actual CC capture rates would have been 28.8% lower than predicted for 1st Q FY 2007 and were 29.7% lower for 1st Q FY 2008.
  - Can it be assumed that proficiency in coding has increased by 0.9%?

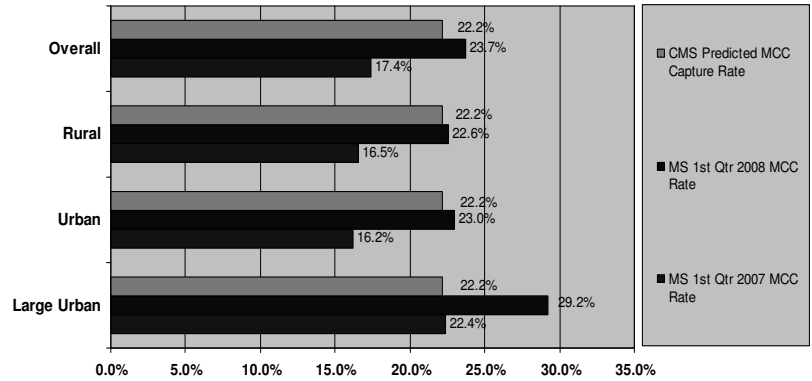


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**MCC Capture Rate Comparison**  
**1st Qtr 2007 vs. 1st Qtr 2008**  
 Version 25



Using like data in the MS-DRG version 25; 1st Q FY 2007 to 1st Q FY 2008 in Rural, Urban, Large Urban, and overall facilities, the graph demonstrates:

- In all facility categories, 22.2% MCC Capture was predicted by CMS (predictions were not broken out by facility category only in aggregate)
- All facility categories in 1st Q FY 2007 predicted percentage of CC capture would not have been met
- In actual 1st Q FY 2008, all facility categories have exceeded predictions



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### III *Ratio Characteristics*

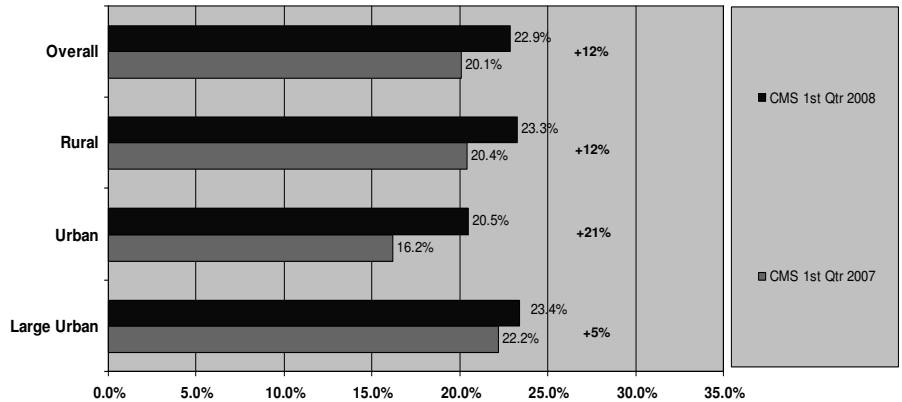
- Any **two groupings of MS-DRGs** may be compared to one another as a ratio
- Most likely ratios to measure are those that demonstrate **alternative approaches** to diagnostic documentation
- The clinical Ratio comparisons we will use are:
  - **Simple (i.e. community acquired) Pneumonia vs. Complex (i.e. pseudomonas) Pneumonia**
  - **Urosepsis (or UTI) vs. Sepsis**



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**Pneumonia: Complex vs. Simple**  
**1st Qtr 2007 vs. 1st Qtr 2008**  
 Version 24 (079/089)



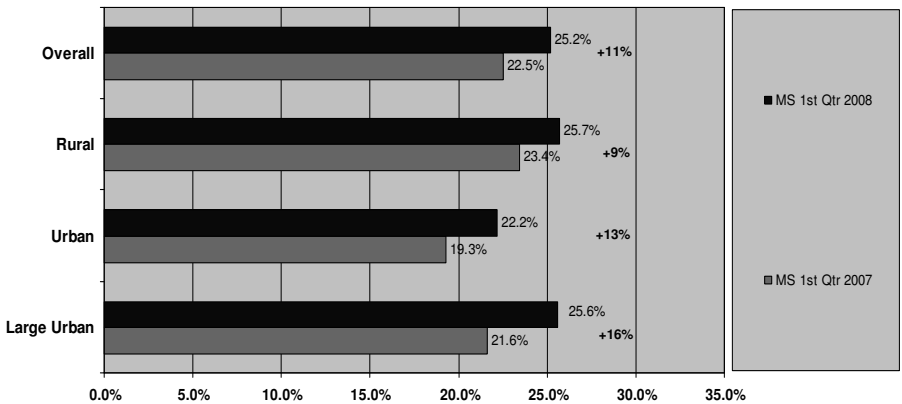
Using like data in the CMS-DRG version 24; 1st Q FY 2007 to 1st Q FY 2008 in Rural, Urban, Large Urban, and overall facilities, the graph demonstrates:

- No CMS predictions were identified
- In all facility categories, capture of the higher ratio occurs – is this due to a more in-depth abstraction of the Pneumonia data or better documentation of the Complex Pneumonia by the Physician?



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**Pneumonia: Complex vs. Simple**  
**1st Qtr 2007 vs. 1st Qtr 2008**  
 Version 25 (117, 178/193, 194)



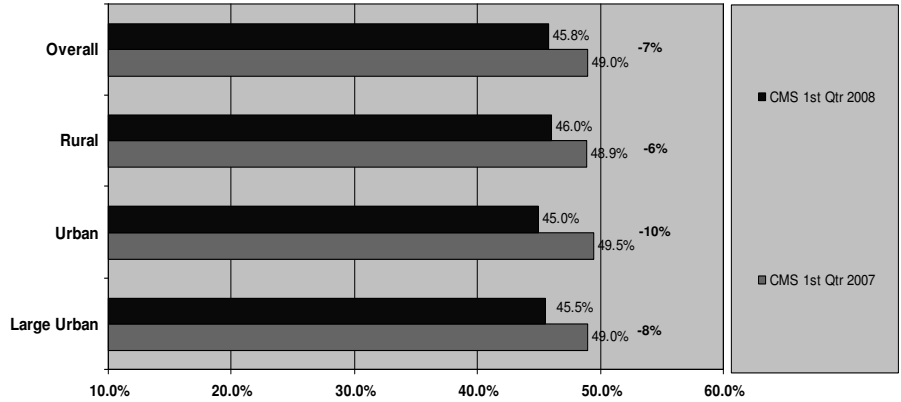
Using like data in the CMS-DRG version 25; 1st Q FY 2007 to 1st Q FY 2008 in Rural, Urban, Large Urban, and overall facilities, the graph demonstrates:

- No CMS predictions were identified
- In all facility categories, capture of the higher ratio occurs – is this due to a more in-depth abstraction of the Pneumonia data or better documentation of the Complex Pneumonia by the Physician?



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**Urosepsis vs. Sepsis**  
**1st Qtr 2007 vs. 1st Qtr 2008**  
 Version 24 (320/575/576)



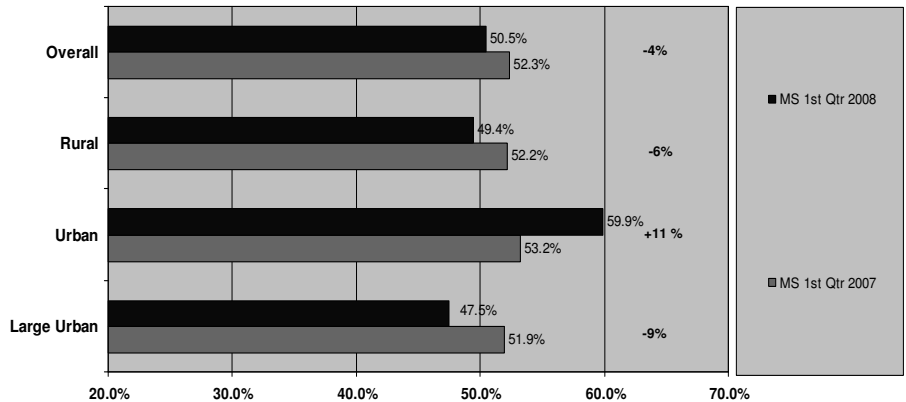
Using like data in the CMS-DRG version 24; 1st Q FY 2007 to 1st Q FY 2008 in Rural, Urban, Large Urban, and overall facilities, the graph demonstrates:

- No CMS predictions were identified
- Capture of the more severe condition of Sepsis vs. Urosepsis declined in 1st Q FY 2008 remarkably in all facility categories



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**Urosepsis vs. Sepsis**  
**1st Qtr 2007 vs. 1st Qtr 2008**  
 Version 25 (689,690/870,871,872)



Using like data in the MS-DRG version 25; 1st Q FY 2007 to 1st Q FY 2008 in Rural, Urban, Large Urban, and overall facilities, the graph demonstrates:

- No CMS predictions were identified
- Capture of the more severe condition of Sepsis vs. Urosepsis declined in 1st Q FY 2008 in overall, rural, and large urban facilities but improved in urban facilities.



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## IV Reimbursement Characteristics

- The reimbursement represented in our graphs are **reflected in average dollar per case**
- Reimbursement is the **average dollar amount paid to the hospital** for care provided (DRG assigned)
- In this demonstration the **relative weight of the CMS or MS DRG is multiplied by the rounded average Blended Rate** (composite of many factors such as rural, urban, large urban; teaching facility; geographic area, etc.) of the facility (\$5000).

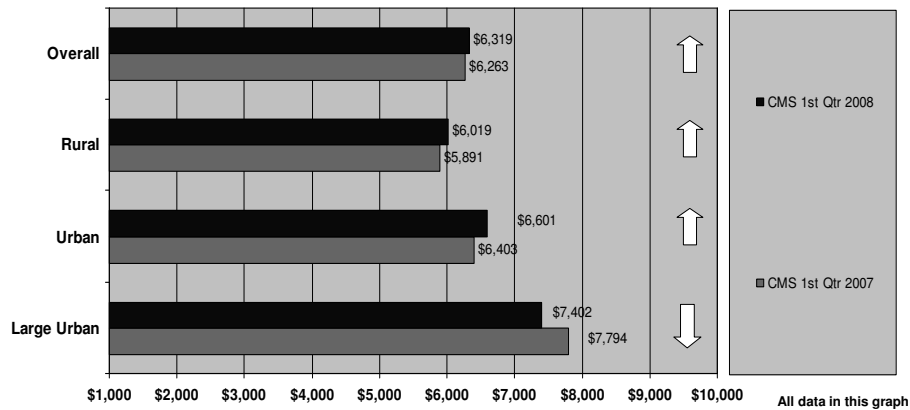
|                       |               |
|-----------------------|---------------|
| DRG RW                | 1.500         |
| X                     | X             |
| Hospital Blended Rate | <u>\$5000</u> |
|                       | \$7500        |



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### Average Reimbursement per Case 1st Qtr 2007 vs. 1st Qtr 2008 Version 24



Using like data for both Medical and Surgical cases in the CMS-DRG version 24 with an average blended rate of \$5000; 1st Q FY 2007 to 1st Q FY 2008 in Rural, Urban, Large Urban, and overall facilities, the graph demonstrates:

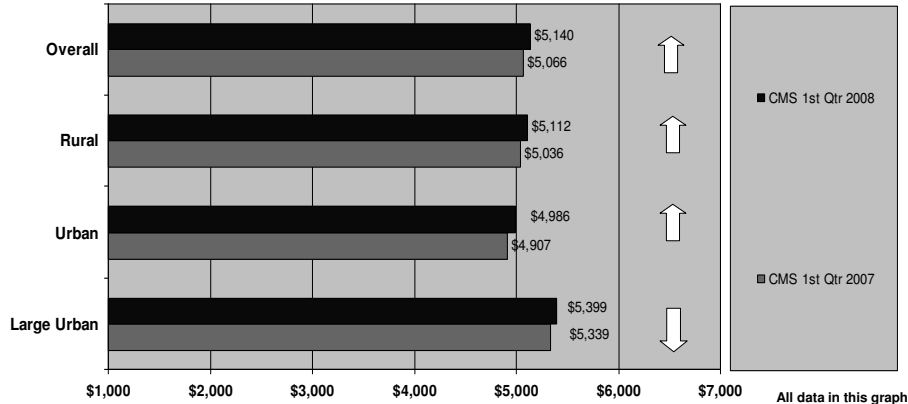
- An increase in average reimbursement per case is realized for overall, rural and urban facilities while Large Urban has declined.



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**Average Reimbursement per Case: Medical**  
**1st Qtr 2007 vs. 1st Qtr 2008**  
 Version 24



Using like data for Medical cases in the CMS-DRG version 24 with an average blended rate of \$5000; 1st Q FY 2007 to 1st Q FY 2008 in Rural, Urban, Large Urban, and overall facilities, the graph demonstrates:

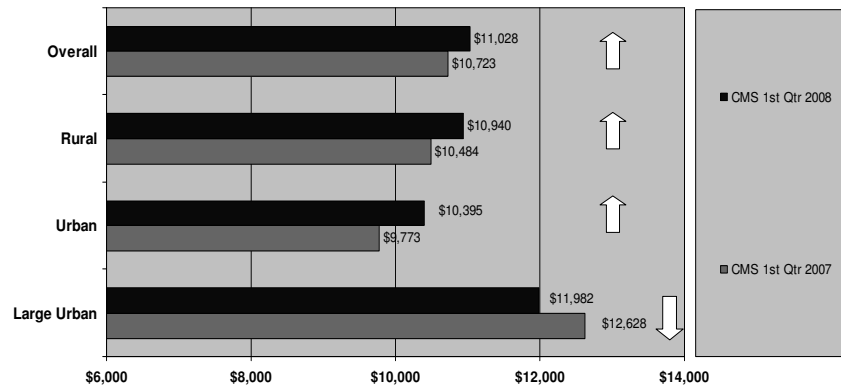
- An increase in average reimbursement per case is realized for overall, rural and urban facilities while Large Urban has declined.



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**Average Reimbursement per Case: Surgical**  
**1st Qtr 2007 vs. 1st Qtr 2008**  
 Version 24



Using like data for Surgical cases in the CMS-DRG version 24 with an average blended rate of \$5000; 1st Q FY 2007 to 1st Q FY 2008 in Rural, Urban, Large Urban, and overall facilities, the graph demonstrates:

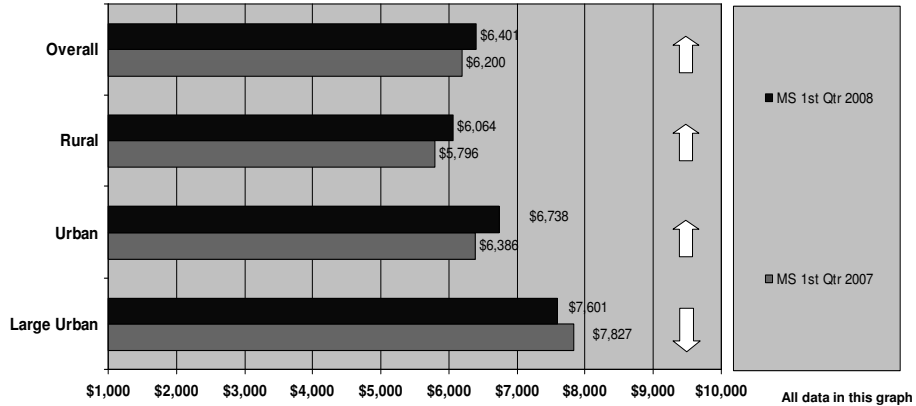
- An increase in average reimbursement per case is realized for overall, rural and urban facilities while Large Urban has declined



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**Average Reimbursement per Case**  
**1st Qtr 2007 vs. 1st Qtr 2008**  
 Version 25



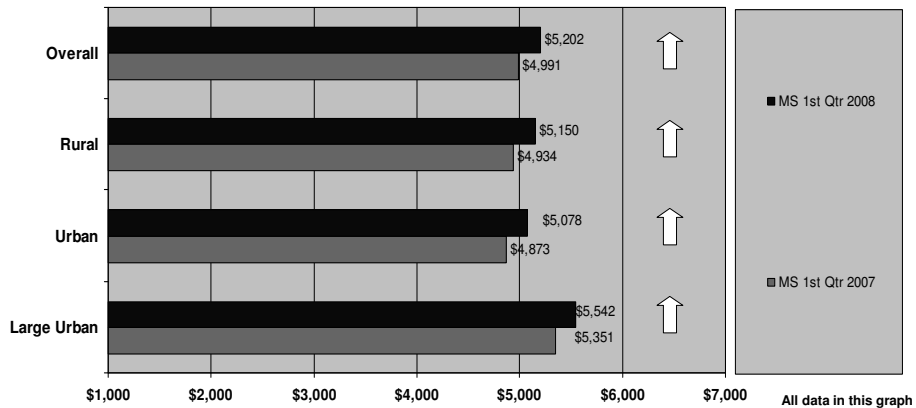
Using like data for both Medical and Surgical cases in the CMS-DRG version 25 with an average blended rate of \$5000; 1st Q FY 2007 to 1st Q FY 2008 in Rural, Urban, Large Urban, and overall facilities, the graph demonstrates:

- An increase in average reimbursement per case is realized for overall, rural and urban facilities while Large Urban has declined.



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**Average Reimbursement per Case: Medical**  
**1st Qtr 2007 vs. 1st Qtr 2008**  
 Version 25



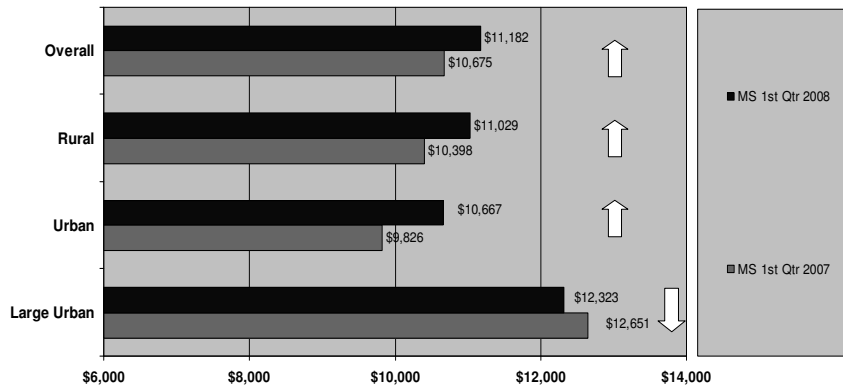
Using like data for Medical cases in the CMS-DRG version 25 with an average blended rate of \$5000; 1st Q FY 2007 to 1st Q FY 2008 in Rural, Urban, Large Urban, and overall facilities, the graph demonstrates:

- An increase in average reimbursement per case is realized for overall, rural, urban and large urban facilities.



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**Average Reimbursement per Case: Surgical**  
**1st Qtr 2007 vs. 1st Qtr 2008**  
 Version 25



Using like data for Surgical cases in the CMS-DRG version 25 with an average blended rate of \$5000; 1st Q FY 2007 to 1st Q FY 2008 in Rural, Urban, Large Urban, and overall facilities, the graph demonstrates:

- An increase in average reimbursement per case is realized for overall, rural and urban facilities while Large Urban has declined



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## Concluding Comments

- **CMI has increased in the medical and surgical areas for all facilities.** This warrants a close eye but, as CMS predicted, the overall affect is an increase.
- **CC and MCC combined capture percentages as well as CC capture have not met the CMS predicted model.** Only MCC capture percentages are at or slightly exceeding the anticipated CMS levels.
- **Ratios in Pneumonias (Simple vs. Complex) are at a higher Complex percentage when using the MS-DRG Methodology.** But by-in-large, **Sepsis diagnoses documentation and coding have declined** significantly when compared to the Urosepsis diagnoses used in the same facility populations.
- **Reimbursement is increasing in most categories except for Large Urban.** A surprise when considering the predicted model stated a possible 1.7 – 3.4 percent increase.



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## Concluding Comments

This briefing is a compilation of data collected from a relatively small sample of health care facilities... although we cannot conclude that an extrapolation of this data can be applied to the mass of all acute healthcare, we can identify and summarize a sound composite of initial first quarter results from the 57 healthcare facilities polled...



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## KPMG Methodology Complying with CMS MS-DRG Documentation Mandates

KPMG's **Inpatient Documentation Integrity (IDI)** program is a service to identify and educate in documentation compliance for acute healthcare facilities complying with the rules and regulations set forth by CMS.

Phase I - ***assessing*** and identifying the breadth of MS-DRG documentation compliance in the facilities medical records and readiness to receive and apply a concurrent physician communication process.

Phase II - ***implementing*** a process and educational roll-out initiative to the medical staff, identified documentation specialists, professional coding staff and ancillary departments.

Phase III – ***measuring*** pre-determined metrics that will track progress in the communication process between the documentation specialist and coding staff with the physicians. The metrics demonstrate the facilities progress in CMI, CC capture, Ratio comparatives, and resulting reimbursement compared to self, state, and national benchmarks.



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