Case Mix Adjustment: The Consequences of Divergence in Access to Data

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INTRODUCTION

The proposed Medicare prospective payment system for dialysis includes 18 case mix adjusters (CMAs), 17 of which exclusively adjust upward. CMS reduced the dialysis base payment 22% to offset the associated incremental costs. The inability of dialysis facilities to detect these CMAs will result in a payment reduction.

OBJECTIVE: Determine the ability of a large dialysis organization to detect CMAs and calculate the financial impact of differences in CMAs versus those reported by CMS.

METHODOLOGY

- Four dialysis facilities were randomly selected in each of 27 geographic regions.
- Chart reviews were conducted at each facility for patients with Medicare as primary payer receiving dialysis between October 1, 2008 and September 30, 2009.
- CMAs were ascertained via paper chart, electronic medical records, hospital discharge summaries, health-care professional notes, and discussions with on-site healthcare professionals.
- Fixed characteristics (age, gender, initiation of dialysis) were coded once at baseline; all others were coded monthly.
- After excluding facilities with incomplete data, the final sample included 100 facilities and 7,340 patients (Tables 1 and 2). CMS estimated CMAs were available for 89 of these facilities.
- The prevalence of each CMA detected in DaVita facilities was compared between those and those reported by CMS for the same facilities [1].

RESULTS

- The final sample included 100 facilities, with an average of 73 patients per facility.
- CMS provided estimated CMAs for 89 of these facilities.

Table 1. Sample Characteristics

Sample Characteristics	DaVita	UM-KECC
Data collection period	10/08 – 09/09	01/02 – 12/04
Number of facilities	100	11,174
Number of treatments	918,851	87,351,802
Number of treatment months	70,993	--
Number of patients	7,340	809,208

Table 2. Patient Demographics

Race/ethnicity*	DaVita	UM-KECC
Caucasian	39.8%	48.7%
African American	34.3%	37.7%
Hispanic	17.8%	5.2%
Asian / Pacific Islander	4.1%	2.7%**
Native American	1.1%	1.4%
Other/Unknown	2.2%	4.3%

*Not from UM-KECC. Source: Medicare Enrollment Database as cited in CMS proposed rules, p. 181.
**Does not include Pacific Islanders

Figure 1. Difference between CMS and DaVita Clinic Mean Case Mix Adjusters for 89 Clinics.

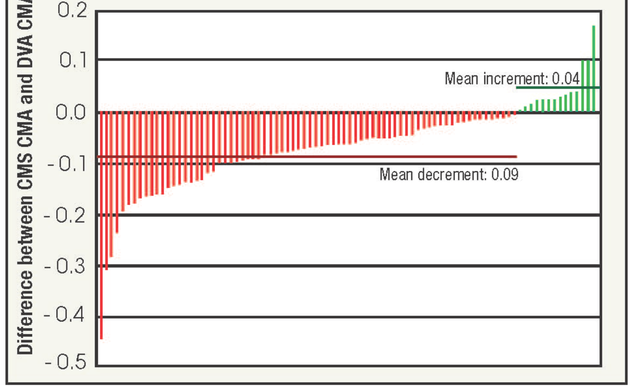

Table 3. Case Mix Adjuster Prevalence and Weight

	DaVita	UM-KECC	Difference	Case Mix Adjusters
Age				
18-44	16.8%	14.0%	+2.8%	1.194
45-59	24.0%	25.2%	-1.2%	1.000
60-69	23.6%	23.2%	+0.4%	1.012
70-79	24.7%	25.1%	-0.4%	1.057
80+	10.8%	12.3%	-1.5%	1.076
Percent female	44.4%	47.3%	-2.9%	1.132
Mean BSA	1.86	1.87	-0.001	1.034
BMI <18.5 (per 0.1 m^3)	4.7%	3.9%	+0.8%	1.020
Percent RRT <4 months	7.6%	5.6%	+2.0%	1.473
Comorbidities				
Hepatitis B	0.6%	76%	-7.0%	1.089
Septicemia	3.4%	10.1%	-6.7%	1.234
Cancer	12.1%	16.5%	-4.4%	1.128
HIV or AIDS	1.9%	4.1%	-2.2%	1.316
Hemolytic or sickle cell anemia	0.6%	2.4%	-1.8%	1.226
Monoclonal Gammopathy	0.4%	1.4%	-1.0%	1.021
Myelodysplastic Syndrome	0.2%	1.1%	-0.9%	1.084
Pericarditis	0.1%	0.4%	-0.3%	1.195
Cardiac Arrest	4.8%	3.1%	+1.7%	1.032
Pneumonia/ Other opportunistic infection	3.0%	1.7%	+1.3%	1.307
Alcohol-Drug Dependence	10.3%	9.2%	+1.1%	1.150
GI Bleed	1.3%	1.2%	+0.1%	1.316
Facility Characteristics				
Low volume facility	0.0%	5.5%†	-5.5%	1.202

CONCLUSIONS

- In 75 of 89 facilities, the CMA detected in the study was lower than that ascertained by CMS (mean difference=0.09).
- In 14 facilities, the CMA was higher than reported by CMS (mean difference=0.04).
- The average CMA for the 89 facilities was 1.21, versus 1.28 reported by CMS for these same facilities.
- The inability to replicate CMS CMAs would result in a 7% decrease in payment, with a differential from CMS projected payments of >$350 million over a 4 year period.

KEY LEARNINGS

- ✓ Without access to Medicare claims data, we were unable to replicate CMS CMAs.
- ✓ The inability to replicate the prevalence of CMS CMAs represents the potential for significant underpayment for dialysis facilities under the proposed prospective payment system.

References

1. University of Michigan Kidney Epidemiology and Cost Center, ESRD Payment System: Results of Research on Case-Mix Adjustment For Expanded Bundled, February 2008, accessed at http://www.sph.umich.edu/kecc/assets/documents/UM-KECC_Expanded_ESRD_Bundle.pdf

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