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WHO LOSES INCOME UNDER THE ESRD PROSPECTIVE PAYMENT SYSTEM?

Kochevar Research Associates
197 8th Street, Boston MA, USA
Tel: 617-642-4332 Fax: 617-242-8009
www.kochevarresearch.com

Fredric Finkelstein[1], John J. Kochevar[2], J. Mark Stephens[2], Alan Kliger[1]
[1] St. Raphael's Hospital, Yale University, Department of Medicine, [2] Kochevar Research Associates, Boston, MA

INTRODUCTION

The Centers for Medicare and Medicaid Services (CMS) Prospective Payment System (PPS) was designed to reduce Medicare Payments for hemodialysis by 2%. Their analysis of 2007 Medicare payments under the old payment model versus the new model suggested some dialysis facilities will lose more money than others [1] but they concluded that the differences, on average, were slight and will not negatively impact facilities. Their regulatory analysis did not report variances in average losses or how many facilities will lose money. The 2004 Government Accounting Office study of dialysis facilities reported that many small dialysis organizations (independents and small chains) were only marginally profitable and 10% either failed or were in danger of failure annually [2]. Our questions in this study were:

- What is the range of income gains and losses across facilities?
- What are the characteristics of facilities predicted to lose the most income under the PPS?

Answers to these questions will provide detailed quantitative insight into the extent of income changes under the PPS.

METHODS

This is a retrospective database analysis, a retabulation of gains and losses CMS projected in the CY 2011 ESRD PPS Final Rule Provider Level Impact File [3]. CMS provided these calculations so facilities could see their gains or losses under the new payment model. They also used the calculations to demonstrate why payment changes did not require regulatory scrutiny.

Sample. The CMS Impact File contains 2007 treatment and payment data on 4951 facilities. CMS excluded facilities without a valid county code for determining the CBSA wage index and, within facilities, patients with an unknown birth date.

Gains or Losses Calculation. Using 2007 patient data, CMS calculated each individual dialysis provider's Medicare income per patient under the new PPS rules and projected the summed income along with actual payments under the old payment model to 2011. These projections show the income facilities would receive if their number of treatments and patient characteristics are approximately the same in 2011 as in 2007. Payments and costs were drawn from the CY 2007 National Claims History File updated with June 2008 data. Characteristics were from the Online Survey and Certification and Reporting (OSCAR) system and from the Healthcare Cost Report Information System (HCRIS).

We calculated 2011 Income Gain/Loss as PPS Medicare Income 2011 (PMT_100%PPS) minus Actual Medicare Income 2011 (PMT_CRSB).

Other Variables. The following Impact File variables were used in our tabulations:

- Provider Number: Six digit OSCAR Provider Number (CMS Certification Number)
- Treatments: Number of 2007 Hemo-equivalent treatments for Medicare patients.
- PMT_CRSB: Actual Medicare Income 2011: Actual Medicare income 2007, under the old payment model, updated to 2011. (Does not include -3.1% adjustment for transition.)
- PMT_100%PPS: PPS Medicare Income 2011: Medicare income 2007 case mix adjusted by the final rule PPS and projected to 2011. (**No transition adjustments.**)
- Rural/Urban: Identifies urban or rural status based on geographic location (Rural/Urban).
- Size: Identifies size of facility based on total number of hemo-equivalent treatments, including treatments for non-Medicare patients.(<4000, 4000-9999, >10,000).
- Census Region: Ten regions consolidated into six: Northeast, Midwest, South Atlantic, South Central, West, Puerto Rico/US Virgin Islands.

Kochevar Research Associates merged the Impact File with the August 2010 CMS Dialysis Compare File [4] to update facility ownership data. Additionally, we corrected the Impact File ownership classification with data from facility telephone surveys conducted in 2008 and 2010.

- Ownership: Large Dialysis Organization (LDO), Regional Chain, Independent, Hospital, Unknown.

We enhanced the Impact File with US Census data on racial composition of facility Zip Code.

- Minority: Greater than 50% minority, Less than 50% minority.

Analysis. CMS focused on the average gains and losses using aggregate income for different subgroups to demonstrate regulatory compliance. For example, they calculated the total amount independent facilities were paid in 2007, subtracted the total they would be paid under the PPS, divided by the total paid and determined the reduction to be -0.3% and concluded no harm would be done to independent facilities. Independent facilities are likely to experience income reductions as individuals rather than in aggregate. And, there will be variation in losses. We calculated the percent of projected losses compared to annual income for each facility and ranked facilities by their average percent loss. All results assume a 100% transition in 2011. Our analysis focused on the top quintile (20%) of those projected to lose the most money under the PPS. **Estimates do not include the additional -3.1% transition adjustment CMS plans to remove from facility payments in 2011.** Tabulations were done in Microsoft Excel.

RESULTS

Ownership. The number of facilities affiliated with large chains and hospitals grew, and the number of regional chains and independent facilities declined (Table 1). The CMS Flat File based on 2007 industry data included 89 facilities no longer in the current ESRD Dialysis Compare database. A total of 737 facilities listed in the 2010 Dialysis Compare file were not in the CMS Flat File.

Table 1: Changes in Dialysis Facility Ownership – 2007 versus 2010

Ownership Type	2007		2010	
	N	%	N	%
LDO	3069	(62.0%)	3205	(64.7%)
Regional	787	(15.9%)	651	(13.1%)
Independent	614	(12.4%)	517	(10.4%)
Hospital	470	(9.5%)	576	(11.6%)
Unknown	11	(0.2%)	2	(0.0%)
Total	4951	(100.0%)	4951	(100.0%)

Sources: 2007 statistics are from the CMS Facility-level Impact File (Flat File.) 2010 Ownership updated from 2010 Dialysis Compare file and Kochevar Research Associates surveys.

Gains and Losses by Ownership. The results in Table 2 were based on revised ownership data. LDO facilities were projected to sustain the largest losses under both aggregate and individual calculation methods. Standard deviations of percent losses indicate wide variations in gains and losses of income.

Table 2: Gains and Losses by Ownership 2011

Ownership Type	N	Average Income (000)	Aggregated % Gain/Loss	Average Individual Gain/Loss		
				Absolute (000)	%	Range (%)
LDO	3205	$1,954	(3.6%)	($70)	(2.2%)	-26% to +87%
Regional Chain	651	$1,799	(0.1%)	($1)	1.4%	-34% to +65%
Independent	516	$1,667	0.9%	$15	5.0%	-38% to +80%
Hospital	576	$1,629	3.6%	$58	9.0%	-24% to +110%
Total	4948	$1,865	(2.0%)	($37)	0.4%	-38% to +110%

Sources: Income and Gain/Loss are from the CMS Facility-level Impact File (Flat File.) 2010 Ownership updated from 2010 Dialysis Compare file and Kochevar Research Associates surveys. Note: An outlier Independent facility with a gain of 220% was eliminated.

Top Losses by Ownership. The CMS Impact File indicated about 20% of facilities will lose an average of 12% of Medicare income in 2011. About 64% of the facilities in this quintile were LDO facilities, the same as their proportion in the total facility population, but they will lose more money on average than other types of facilities.

Figure 1: PPS Losses by Ownership 2011: Top Quintile Losers

Ownership	N	Average	
		Income Loss	% Income Loss
LDO	641	$264,000	-12.7%
Regional Chain	131	$187,000	-11.1%
Independent	103	$179,000	-9.6%
Hospital	115	$134,000	-7.7%
Total	990	$230,000	-11.6%

Sources: Income Losses are from the CMS Facility-level Impact File (Flat File.) 2010 Ownership updated from 2010 Dialysis Compare file and Kochevar Research Associates surveys

Top Losses by Region. Facilities in the South Atlantic census region were more likely to be in the top loser quintile. Detailed results show the vast majority of these facilities were LDOs.

Figure 2: PPS Losses by Region 2011: Top Quintile Losers

Region	Total		Losers	
	N	%	N	%
Northeast	738	14.9%	194	19.6%
Midwest	1,163	23.5%	150	15.2%
South Atlantic	1,119	22.6%	388	39.2%
South Central	1,070	21.6%	236	23.8%
West	827	16.7%	22	2.2%
Puerto Rico / VI	34	0.7%	0	0.0%
Total	4,951	100%	990	100%

Source: CMS Facility-level Impact File (Flat File.)

Top Losses by Facility Size. Medium size facilities, those with number of treatments between 4000 and 9999 in 2007, were more likely to be in the top loser quintile.

Figure 3: PPS Losses by Size 2011: Top Quintile Losers

# Treatments	Total		Losers	
	N	%	N	%
< 4000	857	17.5%	119	12.2%
4000 - 9999	1,949	39.9%	452	46.3%
≥ 10,000	2,084	42.6%	406	41.6%
Total	4,890	100%	977	100%

Source: CMS Facility-level Impact File (Flat File.) Note: The Impact File was missing data on number of treatments for 61 facilities.

Top Losses by Rural Location. Rural facilities were slightly more likely to be among the top losers. Detailed analyses (handouts) indicated they will lose an average of 2.1% of their incomes, while top losers will lose an average of 12.4% of their incomes.

Figure 4: PPS Losses by Rural Location: Top Quintile Losers

Top Quintile Losers 21.8%
78.2%

Rural Losers By Ownership

Ownership	Total N	Losers	Losers as % of Total
LDO	710	165	23.2%
Regional Chain	119	25	21.0%
Independent	114	23	20.2%
Hospital	182	32	17.6%
Total	1,125	245	21.8%

Sources: Gain/Loss and Rural Classification from the CMS Facility-level Impact File (Flat File.) 2010 Ownership updated from 2010 Dialysis Compare file and KRA surveys.

Top Losses by Minority Zip Code. Facilities in minority Zip Code areas were slightly more likely to be among the top losers. Detailed analyses indicated they will lose an average of 3.3% of their incomes, while top losers will lose an average of 11.7%.

Figure 5: PPS Losses by Minority Zip Code: Top Quintile Losers

Top Quintile Losers 29.4%
71.3%

Minority Area By Ownership

Ownership	Total N	Losers	Losers as % of Total
LDO	708	228	32.2%
Regional Chain	120	24	20.0%
Independent	122	28	23.0%
Hospital	90	26	28.9%
Total	1,040	306	29.4%

Sources: Gain/Loss is calculated from the CMS Facility-level Impact File (Flat File.) 2010 Ownership updated from 2010 Dialysis Compare file and Kochevar Research Associates surveys. Minority status is from 2000 US Census data on racial composition of facility Zip Code. Note: Minority Zip Code information was not available for 550 facilities.

DISCUSSION

Among the top quintile losers (N=990), a total of 663 facilities were projected to lose more than 10 percent of their Medicare income in 2011. LDOs were the main losers, but results indicated that substantial numbers of regional chain, independent, rural and minority area facilities will also lose significant income. One problem with these estimates is that they were based on 2007 facility data. If facility patient characteristics are different in 2011, they could receive more or less than estimated. They could also earn more or less if they opt for the blend in transition to the new payment model; regardless, gainers and losers will lose 3.1% more because of the transition deduction. These results may not be representative: facility ownership patterns have changed, facilities have failed, and there are new start-ups. Finally, CMS did not conduct a demonstration study of the effects of payment changes. There is no indication of how payment reductions of 10% or more will affect facility operations or patient outcomes.

CONCLUSIONS

CMS argued in the Final Rule that the average reductions in facility income were so small there would be no impact on facilities, and hence they were not subject to regulatory scrutiny. Their own data suggest otherwise: A significant number of facilities will face large reductions in income. There needs to be a closer examination of the possible outcomes of these reductions for the dialysis infrastructure and patient outcomes.

REFERENCES

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[4] CMS Dialysis Compare database can be downloaded as an Access database from: http://www.medicare.gov/Download/downloaddb.asp

This research was supported by a grant to Drs. Finkelstein and Kliger from Amgen, Inc.

American Society of Nephrology 43d Annual Meeting, Denver, CO, November 16-21, 2010.