

# Disease Management Program ESRD Patients Have Lower Overall Medical Costs

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## Introduction

The Centers for Medicare & Medicaid (CMS) End-Stage Renal Disease (ESRD) Demonstration Project (Demo) was a Medicare integrated care management pilot program designed to lower costs among ESRD patients while improving clinical outcomes. All patients received aggressive preventive care, co-morbid condition management, and care manager monitoring throughout the entire program. Since Demo Medicare payments were set up similar to Medicare Fee-For-Service (FFS), a cost effectiveness analysis was performed between DaVita Village Health's 2008-2010 Demo costs and the Medicare 5% sample.

# Objectives

The objective of this analysis was to evaluate the costs of the ESRD Demo in relation to the Medicare ESRD FFS 5% sample based on ESRD Demo results from 2008 to 2010.

Achievement of Quality Incentive Program (QIP) metrics was also assessed to understand other key tenets of integrated care management and improved clinical outcomes.

## Methods

- The Medicare 5% sample is a longitudinal dataset representative of the Medicare FFS population.
- Because 2010 FFS data was not available, 2010 Demo data was compared to 2009 FFS costs by applying a 1.5% trend in the average cost per service from 2009 to 2010 based on the CMS 2009 and 2010 United States Per Capita Cost for ESRD.
- From 2008-2010, FFS costs were risk-adjusted to reflect the Demo participants CMS-Hierarchal Condition Categories risk profile and the prevalence of members dually eligible for Medicaid (Table 1).
- Overall ESRD healthcare costs were calculated based on allowable charges.
- CMS set 6 clinical measures for the QIP. Against the 6 QIP measures the Demo needed to achieve both national and individual improvement targets in 6 month intervals to receive the 5% withheld CMS premiums. Due to a change in the way hemoglobin targets were measured, the anemia management goal for improvement was excluded, so only 11 targets were included.
- Mann-Wilcoxon-Whitney test was used to est whether the median costs of the Demo participants were less than those of the Medicare 5% sample.

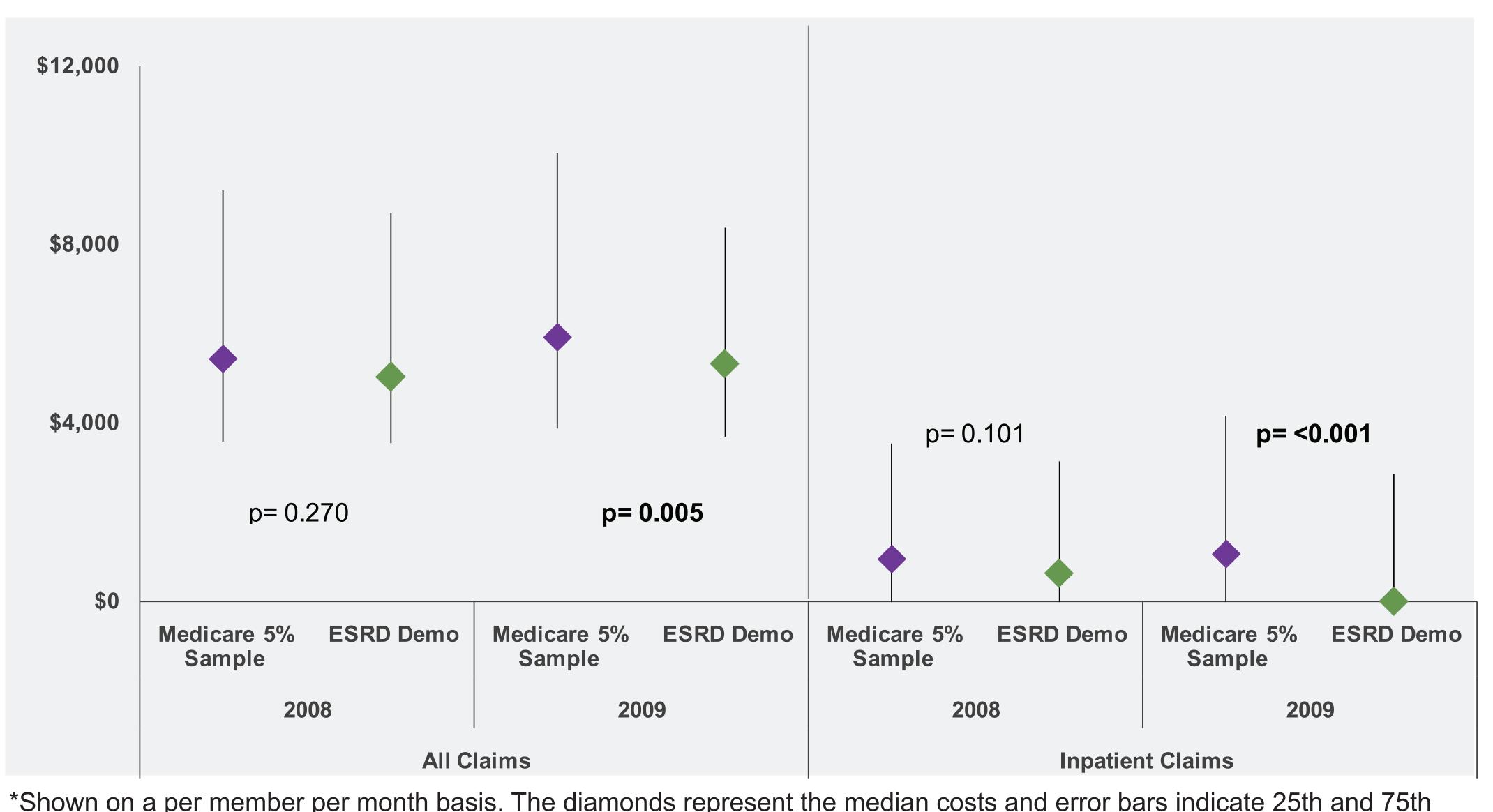
#### Results

Table 1. Demographics of ESRD Demo and Medicare 5% Sample\*

	Medicare 5% Sample					ESRD Demo				
	Dialysis			Total		Dialysis			Total	
	Member Months (n)	Member Month (%)	Risk Score	Member Month (n)	Member Months (%)	Member Month (n)	Member Months (%)	Risk Score	Member Month (n)	Member Months (%)
Total	46,023	100%	1.059	49,353	100%	13,469	100%	1.045	14,995	100%
Status										
Dual	30,704	67%	1.080	32,868	67%	10,513	78%	1.054	11,828	79%
Non-Dual	15,319	33%	1.017	16,485	33%	2,956	22%	1.011	3,167	21%
Race										
Asian	4,645	10%	1.024	5,041	10%	588	4%	1.048	633	4%
Black	7,801	17%	1.051	8,203	17%	2,304	17%	1.006	2,610	17%
Hispanic	8,894	19%	1.034	9,957	20%	4,544	34%	1.015	5,175	35%
North American Indian	246	1%	1.089	246	1%	55	0%	1.271	72	0%
White	21,833	47%	1.085	22,937	47%	5,117	38%	1.082	5,481	37%
Other	2,475	5%	1.024	2,804	6%	832	6%	1.071	995	7%
Unknown	129	0%	0.915	165	0%	29	0%	1.040	29	0%
Gender										
Male	26,096	57%	1.026	28,031	56%	8,629	64%	1.012	9,767	65%
Female	19,927	43%	1.103	21,322	44%	4,840	36%	1.103	5,228	35%
Gender Age	Band									
M < 45	4,453	10%	0.876	5,058	10%	1,535	11%	0.892	1,873	12%
M 45-54	5,113	11%	0.963	5,566	11%	2,592	19%	0.974	2,999	20%
M 55-64	6,585	14%	1.043	7,103	14%	2,638	20%	1.021	2,913	19%
M 65-74	5,426	12%	1.114	5,734	12%	1,502	11%	1.173	1,619	11%
M 75+	4,519	10%	1.114	4,570	9%	362	3%	1.066	363	2%
F < 45	2,565	6%	0.974	3,039	6%	902	7%	0.998	1,054	7%
F 45-54	3,445	7%	1.016	3,895	8%	814	6%	1.116	896	6%
F 55-64	4,730	10%	1.121	5,117	10%	1,378	10%	1.089	1,507	10%
F 65-74	4,569	10%	1.169	4,617	9%	1,176	9%	1.162	1,201	8%
F 75+	4,619	10%	1.156	4,654	9%	570	4%	1.162	570	4%
*Represents all d	data from 2008	3-2010.								

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Figure 1. All Allowable and Inpatient Claims in 2008 and 2009 for the Demo and Medicare 5% Sample\*

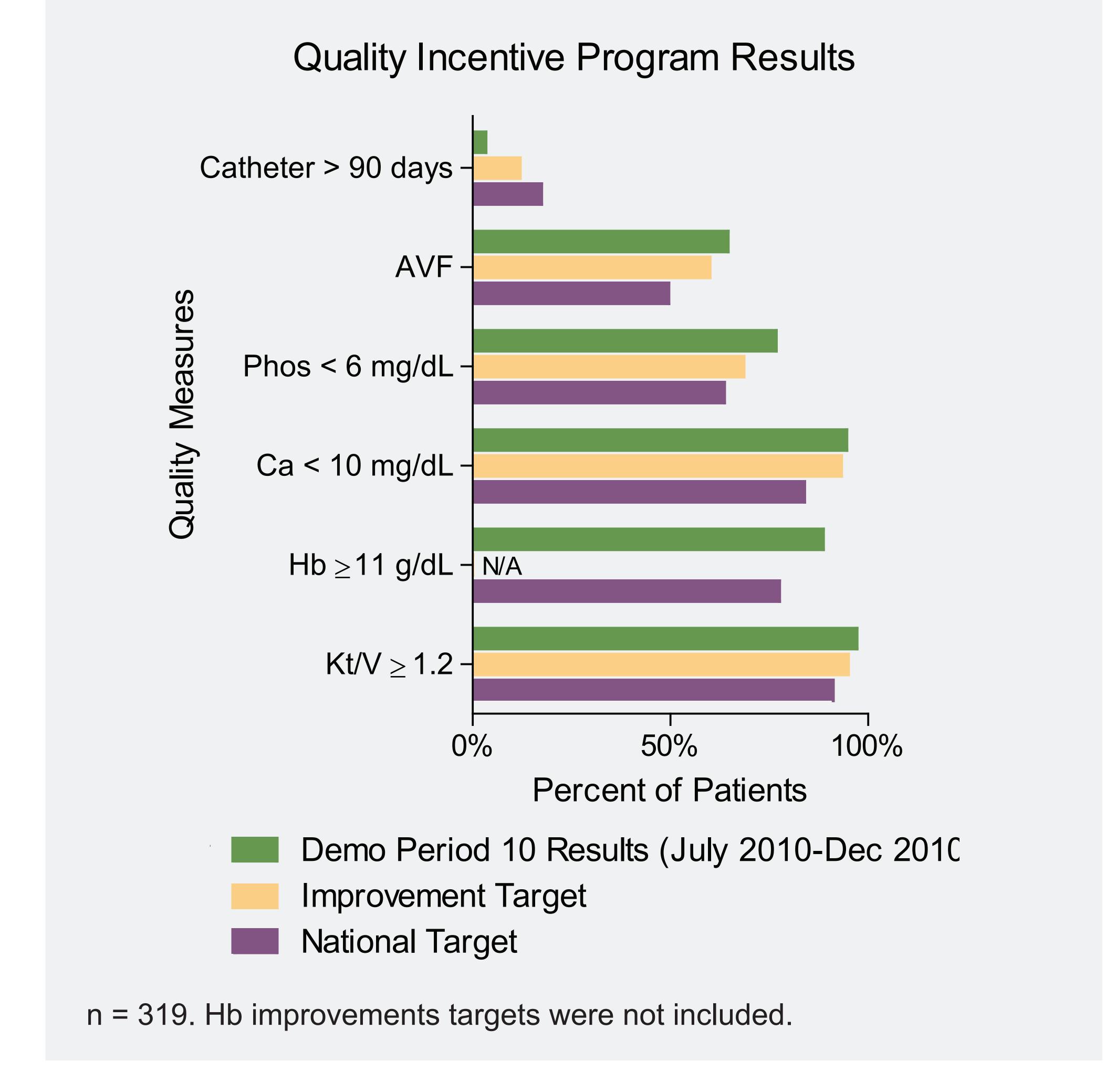


\*Shown on a per member per month basis. The diamonds represent the median costs and error bars indicate 25th and 75th percentiles.

Table 2. Comparison of Allowable Charges for ESRD Demovs Medicare 5% Sample

	Year			
	2008	2009	2010	
Demo allowed charges vs Medicare FFS				
All Services	95%	90%	89%	
Inpatient Services	93%	82%	82%	
Dialysis Services	102%	102%	102%	
All Other Services	88%	86%	82%	

Figure 2. QIP Results for Period 10 (July 2010–December 2010)
Compared to the Improvement Targets and National Targets



- Overall, Demo medical costs per member per year (PMPY) were 5% lower than FFS in 2008 (p = 0.270), 10% lower in 2009 (p < 0.01) and an estimated 11% lower in 2010 (Table 2, Figure 1).
- Inpatient costs PMPY were lower than Medicare FFS (by 7% in 2008 and 18% in 2009; p=0.10 and p < 0.0001, respectively).
- Demo participants achieved QIP targets, hitting 9 of 11 QIP targets in the 1st half of 2008, and all 11 targets from the 2nd half of 2008 through 2010 (Figure 2).

## Conclusions

- Demo participants experienced lower overall costs compared to their FFS counterparts while meeting QIP targets.
- A significant portion of the savings may be attributed to lower hospitalization costs due to the focus on integrated care management in the Demo program.

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