

# Reducing the Catheter Rate: Results from the DaVita / SCAN Health Plan Medicare Demonstration Project

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## INTRODUCTION

VillageHealth, a subsidiary of DaVita®, was selected by the Centers for Medicare and Medicaid Services (CMS) to participate in a 4-year demonstration project to improve health care delivery and access for ESRD patients. The project was structured as a Medicare Advantage Special Needs Plan (SNP) and is based on working with health-care providers to coordinate patient care, improve patient outcomes, and lower health-care costs.

VillageHealth provided disease management to all Medicare beneficiaries enrolled in the project; its health-plan partner, SCAN Health Plan, provided administrative services for the SNP.

**Objective:** To determine whether disease management services can decrease catheter rates and hospital admissions including AHRQ category: "Complications of devices among patients with end-stage renal disease."

## METHODOLOGY

- Data were obtained from dialysis patients in Riverside and San Bernardino counties, California, from April 2006 to June 2008.
- In a retrospective, case control study using patients as their own controls before implementation of disease management services (Table 1), catheter rate, hospitalization rate and costs were compared for all VillageHealth patients between baseline (Q2 2006) and 2 years after disease management services were implemented (Q2 2008).
- In a cohort study, correlation and regression analyses were performed between catheter and hospitalization rates for cohort patients with catheters at the beginning of the study.

## RESULTS

Table 1. Comparison in Case Control Study

	Q2 2006	Q2 2008	p-value
Admits per 1000	247	177	N/A <sup>1</sup>
Catheter Rate	21%	14%	p=0.08 <sup>2</sup>
PMPM Cost	\$321	\$227	N/A <sup>1</sup>

<sup>1</sup>Statistical significance test was not applied since this is an aggregate measure.

<sup>2</sup>Statistically significant at 90% confidence interval

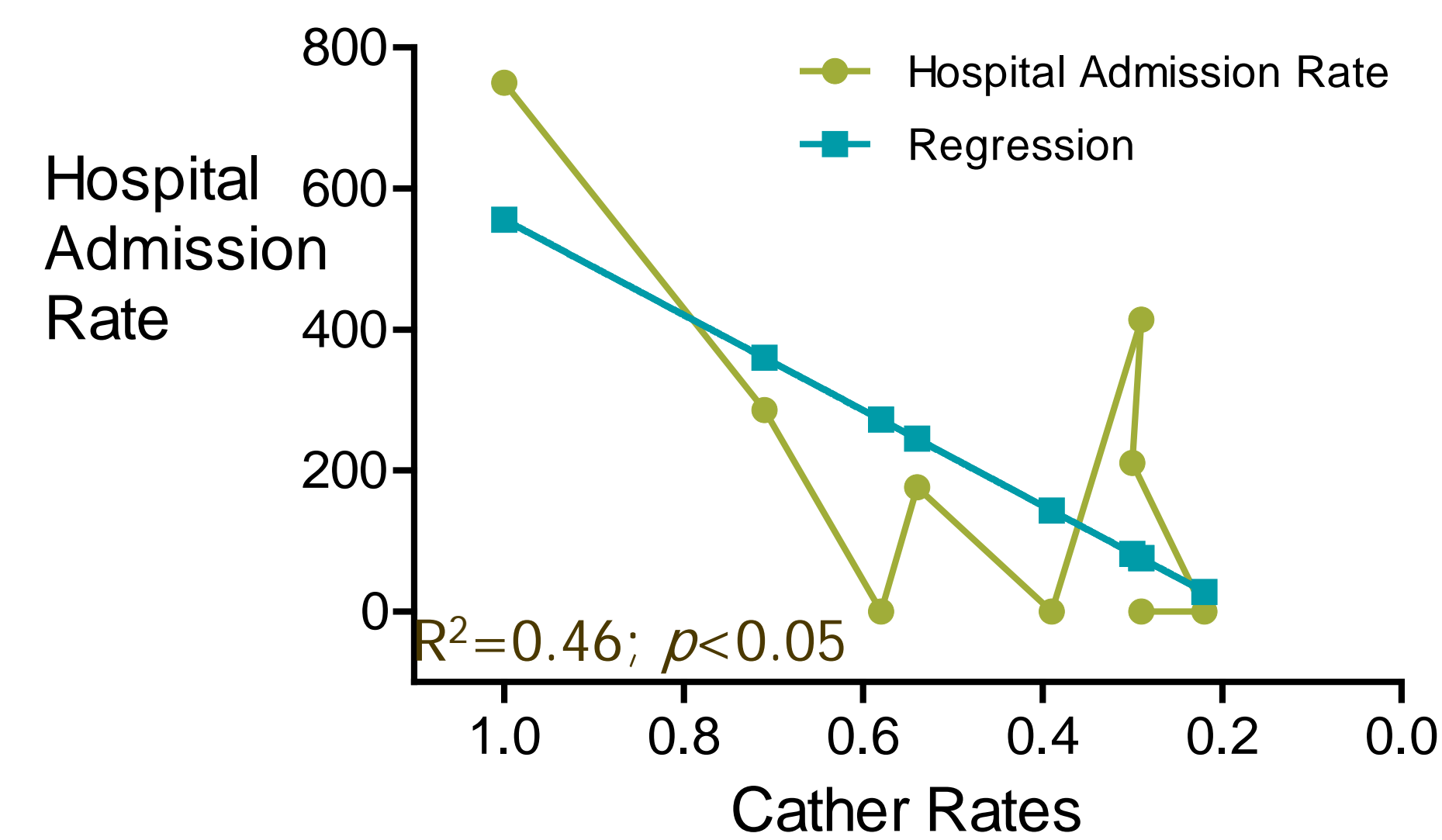


Figure 1. Correlation of Catheter Rates and Hospital Admissions for Cohort Patients.

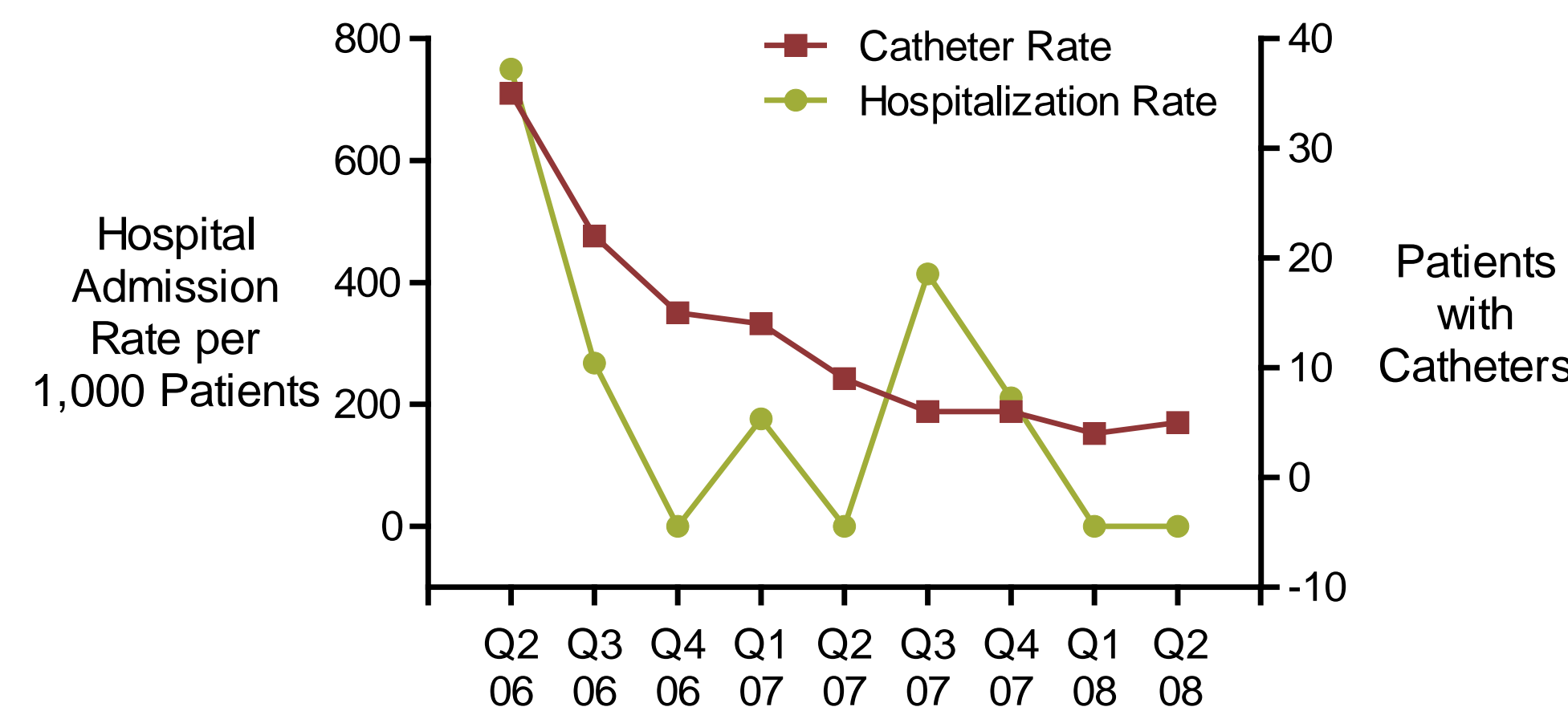


Figure 2. Catheter Rates and Hospital Admissions for Cohort Patients.

## CONCLUSIONS

- Device complication was the most common reason for hospitalization.
- The hospitalization rate and PMPM cost both decreased with a statistically significant drop in the catheter rate in the retrospective, case control analysis (Table 1).
- The correlation coefficient for catheter rate and hospitalization rate was 0.67705. Linear regression analysis: Hospitalization\_rate = -120.6 + 676.3 \* Catheter\_Rate (p=0.045 significant at 90% Confidence Interval; Figure 1).
- Catheter use and hospital admissions declined at similar rates (Figure 2).

## KEY LEARNINGS

- ✓ Disease management services reduced catheter rates, which resulted in fewer hospital admissions from device-related complications.
- ✓ Coordinating patient care in this manner improves patient outcomes and reduces health-care costs through reduced catheter rates and fewer hospital stays.

Note: This is a VillageHealth analysis, not an official CMS analysis. CMS will conduct an independent evaluation.

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