

The Influence of a Specialty Pharmacy on Secondary Hyperparathyroidism Control among Prevalent Hemodialysis Patients

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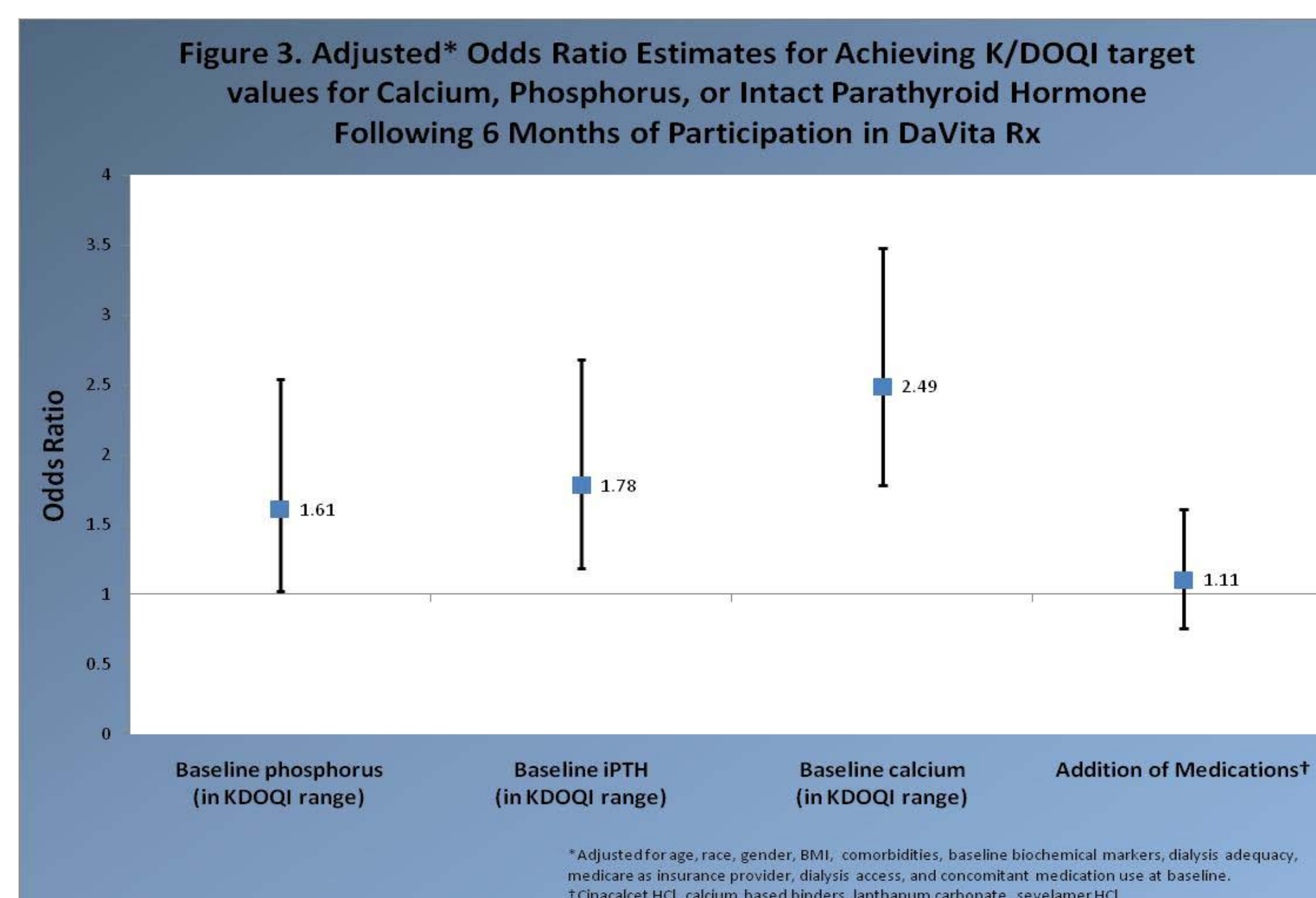
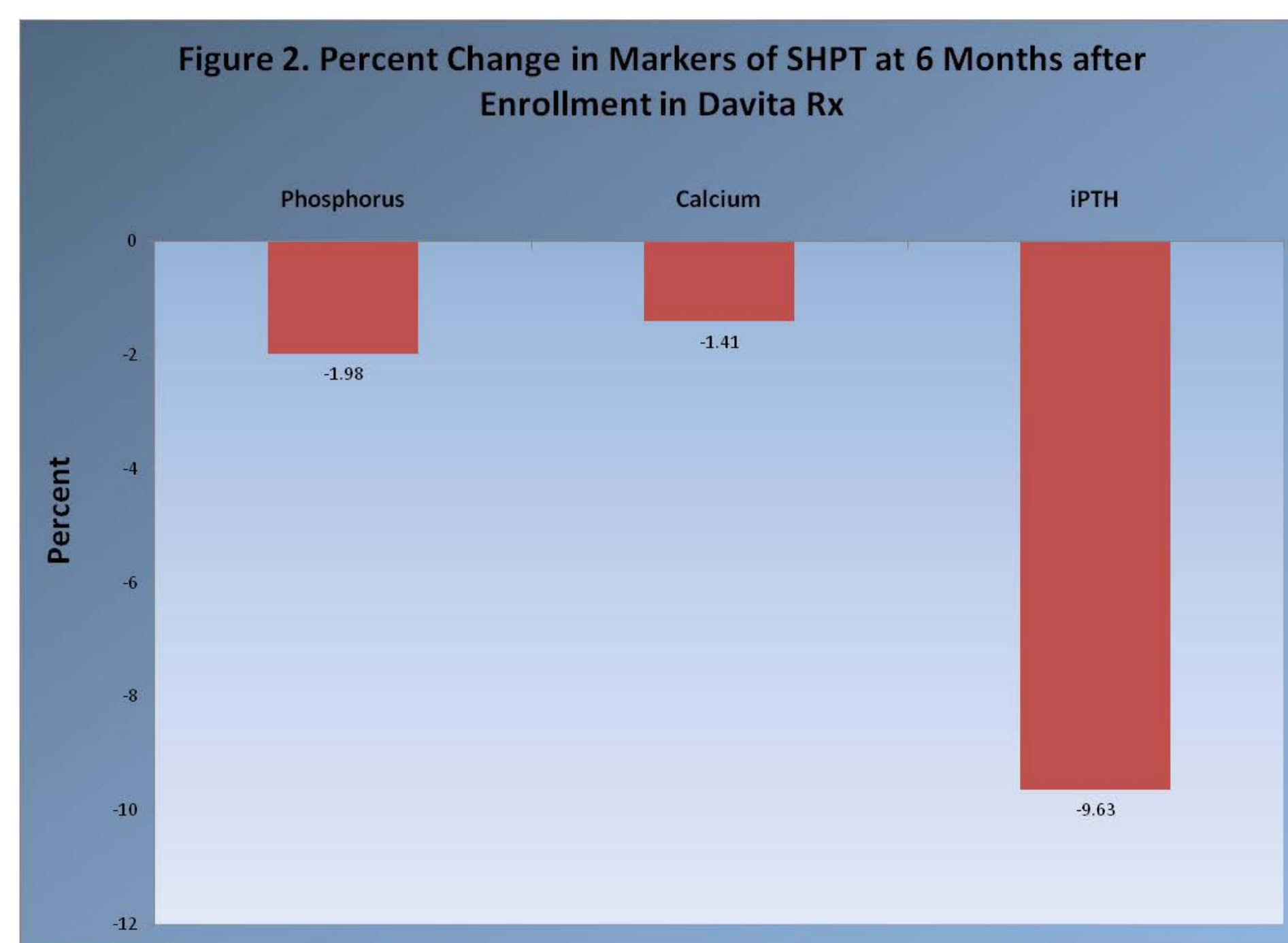
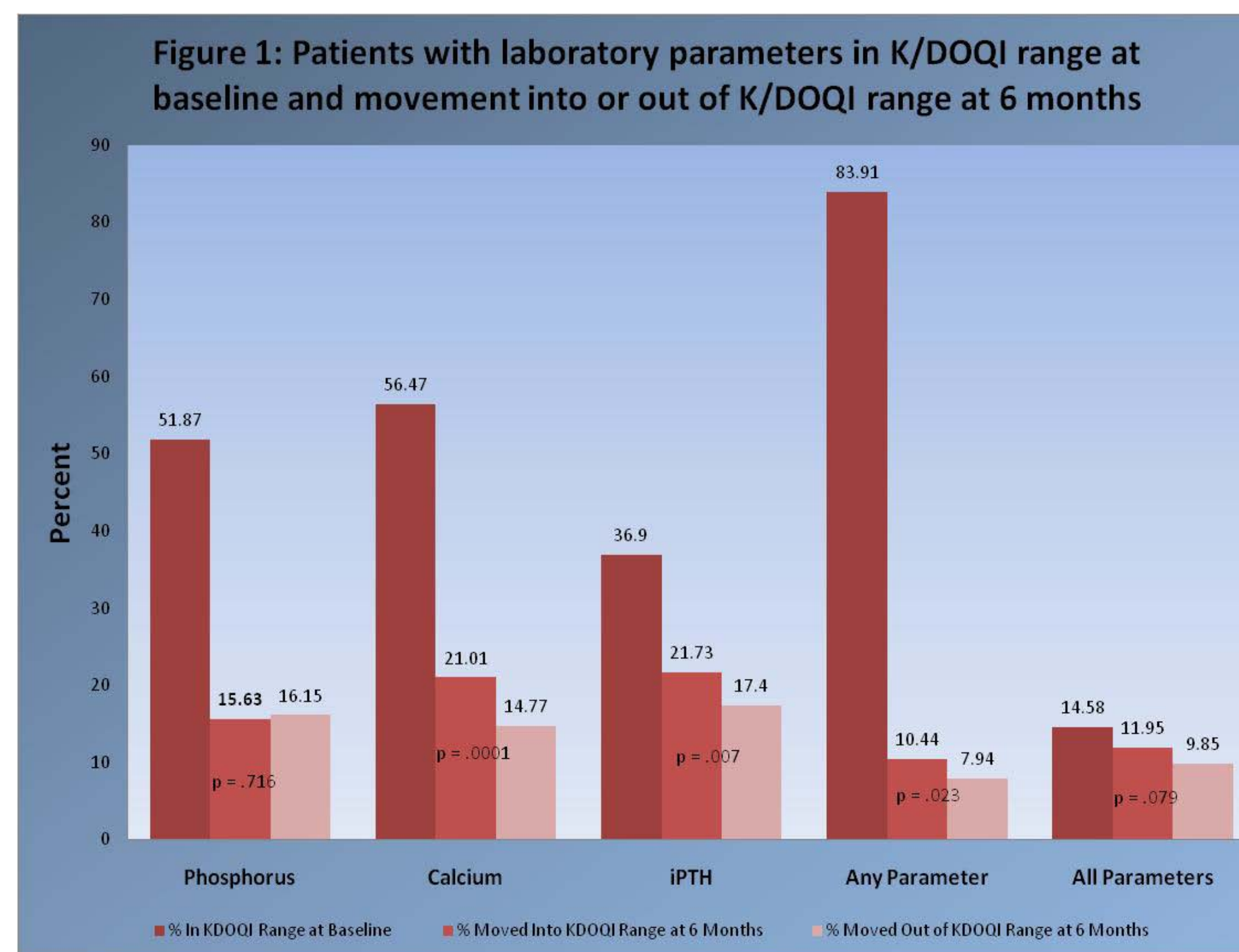
INTRODUCTION

- Created in 2005, DaVita Rx provides tailored prescription drug services to patients with ESRD, including medication delivery to patients in DaVita[®] clinics.
- The effect of integrated pharmacy support on management of secondary hyperparathyroidism (SHPT) in the setting of chronic hemodialysis is unknown.
- The purpose of this study was to determine the changes in control and management of SHPT associated with enrollment in the integrated, specialty pharmacy, DaVita Rx.

METHODOLOGY

- We performed a retrospective analysis of patients undergoing hemodialysis in DaVita clinics before 09/01/2004 and who were also enrolled in DaVita Rx (n=1603). Using patients as their own controls, outcomes while using DaVita Rx were compared to outcomes without Davita Rx.
- We compared control of SHPT according to K/DOQI definitions for individual DaVita Rx participants prior to and after their enrollment into DaVita Rx using the average calcium (Ca), phosphorus (P), and intact parathyroid hormone (iPTH) levels during the 3 months prior to enrollment (baseline) and at 6 months (+/- 45 days) post-enrollment (Table 1).
- Change in SHPT control was assessed using the McNemar test and logistic regression.

Table 1. Baseline Characteristics of DaVita Rx Patients	
Baseline Measure	DaVita Rx Patients (n=1603)
Patient Characteristics	
Age (years) (Mean, SD)	55.87 (14.26)
BMI kg/m ² (Mean, SD)	28.42 (8.28)
African American (%)	36
Medication Use (%)	
Cinacalcet HCl	37.7
Calcium-Based Binders	43.2
Lanthanum carbonate	19.5
Sevelamer HCl	63.7
Labs (Mean, SD)	
iPTH (pg/mL)	445.59 (513)
Calcium (mg/dL)	9.23 (0.66)
Phosphorus (mg/dL)	5.55 (1.40)
CaxPhos (mg ² /dl ²)	51.09 (12.80)
Hemoglobin (g/dL)	12.25 (1.16)
Albumin	3.95 (0.34)
Kt/V	1.68 (0.30)
URR (%)	74.52 (5.43)
Past Medical History (%)	
History of Myocardial Infarction	15
History of CHF	59
History of Peripheral Vascular Disease	69
History of Cardiovascular Disease	73
Access type in use (%)	
Fistula	39
Graft	31
Catheter	30
Hospitalizations (Mean, SD)	
Number of hospitalizations in past 6 months	0.48 (1.09)



RESULTS

- Baseline control of Calcium, Phosphorus, and iPTH was present in 56.5, 51.9, and 37% of patients, respectively. Control of any of these parameters was present in 83.9% (Figure 1).
- Control of Calcium was more likely to improve (21.0%) vs. worsen (14.8%), $p = <0.0001$, following 6 months of participation in DaVita Rx. Similarly, control of iPTH was more likely to improve (21.7%) vs. worsen (17.4%), $p = 0.007$, following 6 months of participation in DaVita Rx (Figure 1).
- Control of any of these parameters (Ca, P, or iPTH) was more likely to improve (10.4%) vs. worsen (7.9%), $p = .02$ (Figure 1).
- Although net clinical performance results for Phosphorus did not change (Figure 1), mean Phosphorus levels declined following 6 months of participation in DaVita Rx (Figure 2)
- iPTH mean values decreased by 9.6% following 6 months of participation in DaVita Rx (Figure 2).
- After adjustment, results were not due to an increase in the number of prescriptions to manage SHPT (Figure 3).

KEY POINTS

- ✓ Participation in DaVita Rx was associated with a significantly greater proportion of patients with improved control of SHPT.
- ✓ Participation in DaVita Rx may provide clinical benefit for patients with ESRD.

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