Variability in Cinacalcet Prescription Across US Hemodialysis Facilities

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Supplemental Table 1: Associations of patient cinacalcet prescription with patient case-mix variables

Patient characteristic	APD	95% CI
Age, per 10 years older	-2.0%	(-2.9%, -1.2%)
Time on dialysis, per 1 year longer	3.3%	(2.9%, 3.7%)
Black race, vs. other	11.2%	(7.5%, 14.9%)
Male gender, vs. female	-1.2%	(-5.5%, 3.1%)
Post-dialysis weight, per 1 kg higher	1.2%	(0.5%, 1.9%)

Shown are the associations between the prevalence of patient cinacalcet prescription and each patient-level covariate as an adjusted prevalence difference (APD) with 95% confidence interval (CI). The estimated associations are estimated using linear mixed-effects models and adjusted for facility chain affiliation and the other patient-level variables listed in the table.

Supplemental Table 2. Associations of three facility-level aggregate exposures with patient cinacalcet prescription, adjusted for additional facility variables

Facility-level exposure	Model 3 APD	Model 3 95% CI	Model 3 + facility setting APD	Model 3 + facility setting 95% CI	Model 3 + facility profit status APD	Model 3 + facility profit status 95% CI	Model 3 + DPM region APD	Model 3 + DPM region 95% CI
Facility % black patients								
<7 (ref)	0%	(ref)	0%	(ref)	0%	(ref)	0%	(ref)
7-31	4.2%	(0.5%, 7.9%)	4.2%	(0.5%, 7.9%)	4.2%	(-0.4%, 8.8%)	2.9%	(-1.1%, 6.9%)
31-57	5.4%	(-1.2%, 12.0%)	5.5%	(-1.1%, 12.1%)	5.4%	(-1.8%, 12.6%)	3.1%	(-4.3%, 10.5%)
57+	7.8%	(0.8%, 14.8%)	7.9%	(0.9%, 14.9%)	7.8%	(0.6%, 15.0%)	6.6%	(0.1%, 13.2%)
P-value for linear trend		0.03		0.03		0.04		0.06
Facility % patients <65 years old								
<38 (ref)	0%	(ref)	0%	(ref)	0%	(ref)	0%	(ref)
38-49	2.7%	(-1.8%, 7.2%)	2.7%	(-1.8%, 7.2%)	3.0%	(-1.9%, 7.9%)	2.2%	(-2.9%, 7.3%)
49-64	3.0%	(-2.5%, 8.7%)	3.0%	(-2.6%, 8.7%)	3.1%	(-2.6%, 8.7%)	3.5%	(-2.0%, 9.0%)
64+	7.3%	(-0.1%, 14.7%)	7.3%	(-0.1%, 14.7%)	7.3%	(-0.1%, 14.7%)	6.8%	(-1.0%, 14.7%)
P-value for linear trend		0.06		0.06		0.06		0.08
Facility % patients on dialysis ≥3 years								
<41 (ref)	0%	(ref)	0%	(ref)	0%	(ref)	0%	(ref)
41-48	5.7%	(0.3%, 11.0%)	5.6%	(0.3%, 11.0%)	5.7%	(0.04%, 11.4%)	6.4%	(0.9%, 11.8%)
48-56	6.0%	(-1.3%, 13.3%)	5.9%	(-1.4%, 13.3%)	6.0%	(-1.2%, 13.3%)	6.8%	(0.4%, 13.2%)
56+	11.9%	(2.4%, 21.4%)	11.9%	(2.4%, 21.4%)	11.9%	(2.4%, 21.4%)	12.5%	(2.7%, 22.3%)
P-value for linear trend		0.02		0.02		0.02		0.01

Shown are the associations between the prevalence of patient cinacalcet prescription and each exposure (using separate models) as an adjusted prevalence difference (APD) with 95% confidence interval (CI). The first quartile of each facility-level exposure is treated as the reference group, and the estimated associations are adjusted using linear mixed-effects models. Model 3 (from Table 3 in the main analysis) includes adjustments for facility chain affiliation, facility rural location, facility size, and the patient's age, race (black vs. other), vintage, sex, body mass index, and body surface area, underlining excluding the patient-level covariate corresponding to the facility-level exposure of interest; e.g., excluding black race when estimating the association between facility percentage black patients and the outcome.

Supplemental Table 3. Associations of three facility-level aggregate exposures with patient cinacalcet prescription, adjusted for additional patient variables

Facility-level exposure	Model 3		Model 3A (PTH)		Model 3A (Calcium)		Model 3A (IV vitamin D use)		Model 3A (All)	
	APD	95% CI	APD	95% CI	APD	95% CI	APD	95% CI	APD	95% CI
Facility % black patients										
<7 (ref)	0%	(ref)	0%	(ref)	0%	(ref)	0%	(ref)	0%	(ref)
7-31	4.2%	(0.5%, 7.9%)	4.9%	(0.9%, 9.0%)	4.2%	(0.5%, 8.0%)	1.9%	(-2.2%, 6.0%)	2.9%	(-1.3%, 7.0%)
31-57	5.4%	(-1.2%, 12.0%)	5.6%	(-1.3%, 12.6%)	5.5%	(-1.1%, 12.1%)	1.6%	(-4.3%, 7.4%)	2.4%	(-3.7%, 8.5%)
57+	7.8%	(0.8%, 14.8%)	8.7%	(0.8%, 16.6%)	7.9%	(0.9%, 15.0%)	3.4%	(-3.8%, 10.6%)	4.9%	(-2.9%, 12.6%)
P-value for linear trend		0.03		0.04		0.03		0.4		0.3
Facility % patients <65 years old										
<38 (ref)	0%	(ref)	0%	(ref)	0%	(ref)	0%	(ref)	0%	(ref)
38-49	2.7%	(-1.8%, 7.2%)	0.7%	(-4.3%, 5.7%)	2.6%	(-1.9%, 7.2%)	4.8%	(0.1%, 9.6%)	2.7%	(-2.4%, 7.8%)
49-64	3.0%	(-2.5%, 8.7%)	0.8%	(-5.5%, 7.0%)	2.9%	(-2.8%, 8.6%)	2.4%	(-3.2%, 7.9%)	0.5%	(-5.6%, 6.6%)
64+	7.3%	(-0.1%, 14.7%)	7.7%	(-0.01%, 15.5%)	7.2%	(-0.2%, 14.6%)	5.9%	(-1.4%, 13.2%)	6.4%	(-1.2%, 14.0%)
P-value for linear trend		0.06		0.06		0.07		0.2		0.2
Facility % patients on dialysis ≥3 years										
<41 (ref)	0%	(ref)	0%	(ref)	0%	(ref)	0%	(ref)	0%	(ref)
41-48	5.7%	(0.3%, 11.0%)	3.8%	(-1.8%, 9.4%)	5.6%	(0.2%, 11.0%)	7.4%	(2.1%, 12.7%)	5.4%	(0.02%, 10.9%)
48-56	6.0%	(-1.3%, 13.3%)	4.9%	(-3.2%, 12.9%)	6.1%	(-1.3%, 13.4%)	5.2%	(-1.9%, 12.2%)	4.3%	(-3.4%, 12.1%)
56+	11.9%	(2.4%, 21.4%)	12.0%	(1.6%, 22.3%)	12.1%	(2.6%, 21.6%)	11.0%	(1.9%, 20.0%)	11.2%	(1.5%, 20.9%)
P-value for linear trend		0.02		0.03		0.02		0.03		0.04

Shown are the associations between the prevalence of patient cinacalcet prescription and each exposure (using separate models) as an adjusted prevalence difference (APD) with 95% confidence interval (CI). The first quartile of each facility-level exposure is treated as the reference group, and the estimated associations are adjusted using linear mixed-effects models. Model 3 (from Table 3 in the main analysis) includes adjustments for facility chain affiliation, facility rural location, facility size, and the patient's age, race (black vs. other), vintage, sex, body mass index, and body surface area, <u>excluding</u> the patient-level covariate corresponding to the facility-level exposure of interest; e.g., excluding black race when estimating the association between facility percentage black patients and the outcome.

Supplemental Figure 1. Geographic regions, as defined in the DOPPS Practice Monitor (DPM).
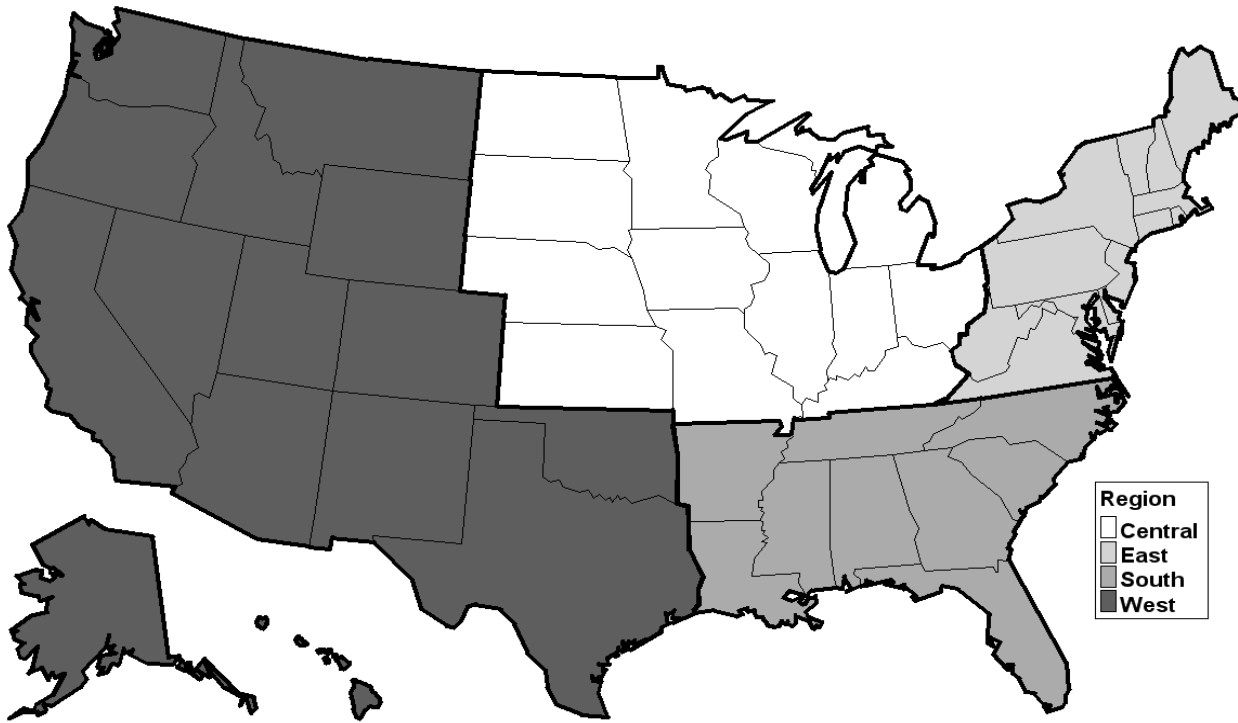
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