

December 2003. Patients were stratified into 2 cohorts: those receiving OAB pharmacotherapy, including long-acting tolterodine or immediate- or extended-release oxybutynin and those receiving non-pharmacologic management. Patients were matched 1:1 by the estimated propensity score for OAB pharmacotherapy using a logistic regression model incorporating selected demographic and clinical characteristics. Differences in direct medical costs during follow-up were assessed using descriptive statistics (Wilcoxon rank-sum tests) and multivariate statistical techniques to adjust for differences in demographic and clinical characteristics. **RESULTS:** A total of 1681 matched pairs were identified. Patients' mean  $\pm$  SD age was  $78 \pm 8$  years; 60% were women. After matching, all initial differences in patient characteristics were not significant. Mean  $\pm$  SD OAB-related costs ( $\$244 \pm \$1763$  for PT vs  $\$857 \pm \$4438$  for NPM;  $p < 0.0001$ ) and infection-related costs ( $\$860 \pm \$6265$  for PT vs  $\$1044 \pm \$6918$  for NPM;  $p < 0.0001$ ) were significantly higher in the NPM cohort compared with the PT cohort while depression-related ( $\$245 \pm \$2755$  for PT vs  $\$229 \pm \$2319$  for NPM;  $p = \text{NS}$ ) and fall/fracture-related costs ( $\$380 \pm \$3115$  for PT vs  $\$554 \pm \$4142$  for NPM,  $p = \text{NS}$ ) were similar. Pharmacy costs were higher in the PT cohort, but total direct costs (OAB-related and unrelated) were higher in the NPM group ( $\$11,580 \pm \$23,452$  for PT vs  $\$12,941 \pm \$21,938$  for NPM;  $p = \text{NS}$ ). After adjusting for prognostic factors, total direct costs were significantly higher for NPM patients in multivariate analyses ( $p = 0.0091$ ). **CONCLUSIONS:** Elderly patients receiving OAB pharmacotherapy appear to have lower annual direct medical costs compared with patients receiving non-pharmacologic management. Careful consideration should be given to the selection of OAB treatment options from both clinical and economic perspectives.

#### PUK4

##### ELEVATED INTACT PARATHYROID HORMONE LEVELS AND HEALTH CARE COSTS AND UTILIZATION: RETROSPECTIVE COHORT OF PATIENTS WITH CHRONIC KIDNEY DISEASE

Johnson ES<sup>1</sup>, Smith DH<sup>1</sup>, Thorp ML<sup>2</sup>, Yang X<sup>3</sup>, Neil N<sup>4</sup>

<sup>1</sup>Center for Health Research, Kaiser Permanente Northwest, Portland, OR, USA, <sup>2</sup>Kaiser Permanente Northwest, Portland, OR, USA, <sup>3</sup>Kaiser Permanente Center for Health Research, Portland, OR, USA, <sup>4</sup>Ovation Research Group, Highland Park, IL, USA

**OBJECTIVES:** The National Kidney Foundation's Kidney Disease Outcomes Quality Initiative Guidelines (K/DOQI) recommend monitoring intact parathyroid hormone levels (iPTH) among patients with chronic kidney disease (CKD) whose GFR falls between 15 and 59 mL/min/1.73 m<sup>2</sup>. Target ranges for iPTH levels in CKD are based on expert opinion: patients in stage 3 should not exceed 70 pg/mL; patients in stage 4 should not exceed 110 pg/mL. We investigated the shape of the relation between iPTH levels and health care costs to offer evidence. **METHODS:** We assembled a cohort of 830 HMO members (1998–2004) with stage 3 or 4 CKD (using K/DOQI criteria) and an iPTH test to measure health care costs in the year following their index iPTH test. Costs were assigned by applying standard unit costs to utilization. We compared the ratio of costs (geometric means) for quintiles of iPTH using natural log-transformed, linear regression. **RESULTS:** Costs increased for patients who exceeded one of the K/DOQI cut-offs for "elevated" iPTH (110 pg/mL), but costs in the highest quintiles of iPTH were comparable to those in the lowest quintiles. Compared with patients at or below the 20th percentile of iPTH (3 to 55 pg/mL), we identified the following levels of relative excess (or lower) cost: Percentile (GFR);95% CI;Range 21st to 40th (56–99); +25%; –18% to +89% 41st to 60th (100–144); +50%; –2% to +131% 61st to 80th (145–228); +1%; –47% to +30%.

Our estimates controlled for age, sex, most recent estimated GFR (MDRD), annual cost before the index iPTH value, and mortality. **CONCLUSIONS:** iPTH levels predict cost, but not in the expected dose-response relation; future studies should explore why the rates of utilization were lower among patients with the highest levels of iPTH.

#### URINARY/KIDNEY—Health Care Use & Policy Studies

##### PUK5

##### EPOETIN ALFA AND DARBEPOETIN ALFA DOSING PATTERNS IN ANEMIC PRE-DIALYSIS CHRONIC KIDNEY DISEASE PATIENTS

Mody S<sup>1</sup>, Padmanabhan V<sup>2</sup>, McKenzie RS<sup>1</sup>, Bookhart B<sup>1</sup>

<sup>1</sup>Ortho Biotech Clinical Affairs, LLC, Bridgewater, NJ, USA, <sup>2</sup>Ortho Biotech Products, L.P., Bridgewater, NJ, USA

**OBJECTIVE:** To evaluate current epoetin alfa (EPO) and darbepoetin alfa (DARB) dosing patterns from 2004–2005 in anemic pre-dialysis chronic kidney disease (CKD) patients receiving care in nephrology clinics. **METHODS:** A random panel of approximately 250 nephrologists was requested bimonthly to review the medical records of their last two anemic pre-dialysis CKD patients seen who were currently receiving an erythropoiesis-stimulating therapy (EST). Data on patient demographics, co-morbid conditions, CKD status, EST dose, and frequency of administration were collected every 2 months to evaluate changes over time. **RESULTS:** A total of 943 patient charts were reviewed from November 2004 through September 2005 (EPO: 528; DARB: 415). Patient demographics, comorbid conditions, baseline hemoglobin, and renal function were similar between groups. Weekly and extended ( $\geq$ Q2W) dosing patterns were seen in both groups (EPO: QW, 47%; Q2W, 32%; Q4W, 15%; Other, 5%; DARB: QW, 23%; Q2W, 41%; Q4W, 33%; Other, 3%). The mean weekly doses over the course of the study (EPO: 10,302 units; DARB: 47 mcg) corresponded to a dose only ratio (units EPO: mcg DARB) of 219:1, resulting in mean weekly costs of \$125 and \$205 for EPO and DARB (based on 2005 wholesale acquisition costs), respectively. These weekly cost differences were observed in patients both under and over the age of 65. **CONCLUSIONS:** DARB was associated with a higher mean weekly EST cost compared to EPO. These analyses can guide healthcare providers and decision makers in recognizing real-world dosing patterns and costs of ESTs for the treatment of anemic pre-dialysis CKD patients.

##### PUK6

##### EVALUATING THE OUTCOME AND COST ASSOCIATED WITH A TAMSULOSIN REAUTHORIZATION PROGRAM

Binkley JR, Hendley YG, Christopher MLD, Stull MA, Morreale AP, Plowman BK, Boggie DT

Veteran Affairs San Diego Healthcare System (VASDHS), San Diego, CA, USA

**OBJECTIVE:** A reauthorization program was implemented to apply updated VA guidelines to identify patients that may be maintained on less costly, equally efficacious alternatives for treatment of benign prostatic hypertrophy. Study objective is to assess patient safety, effectiveness and costs incurred to direct formulary policy post implementation. **METHODS:** This retrospective outcome and utilization analysis extracted patient, prescription, and resource data specific to VASDHS. Eligible patients required a current prescription for tamsulosin and a reauthorization request submitted between March and July 2005. Denied requests underwent a retrospective chart review of the 90-days following the submission while 90-day drug and resource cost estimates were applied to those requests approved. Outcomes of denials were reviewed for safety and effectiveness.