

mentioned a reference that actually indicated that dichotomization of the continuous adherence variable was inappropriate. **CONCLUSION:** MPR and gap between refills were the most commonly used measures of medication adherence. Almost one third of the studies used dichotomous measures. A medication adherence of 80% of the therapy was typically indicated as the cut-point between adherence and non-adherence. There is no accepted clinical or pharmacological rationale for medication adherence threshold selection. The use of continuous variables to measure medication adherence is recommended.

PHP4**THE IMPACT OF COPAYMENTS OR BRAND NAMED DRUG ON MEDICATION PERSISTENCE**

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OBJECTIVE: To examine the impact of copayments or brand named drug as well as other factors on medication persistence from a large U.S. employer. **METHODS:** We analyzed medical and pharmaceutical claims data from 2002 through 2006 for new users prescribed a single agent for either three antihypertensive (angiotensin converting enzyme inhibitors, beta blockers, and calcium blockers) or two anti-diabetic (biguanides and sulfonylureas) therapeutic classes. Nonpersistence with medication was measured using three methods: medication possession ratio (MPR) <0.8; number of days to the first drug coverage gap of ≥ 15 days; and number of days to drug discontinuation (≥ 90 days gap). Logistic regression and Cox proportional hazard models were performed to evaluate the association between the potential risk factors and the likelihood of medication nonpersistence. **RESULTS:** A total of 1422 members with 12 months claim data following the first drug filled were identified. Fifty-four percent were male with a mean age 52.8 ± 8.0 years, and 44% initially used a brand named drug. The logistic regression results revealed that increasing age per year (OR = 0.966; 95% CI = 0.952–0.979), PPO (OR = 0.424; CI = 0.261–0.689) or HMO insurance (OR = 0.440; CI = 0.262–0.739) as compared to conventional fee for service coverage were less likely to have MPR < 0.8. Management workers (OR = 1.475; CI = 1.113–1.954) were more likely to have MPR < 0.8. MPR < 0.8 was not associated with use of an initial brand named drug, comorbidities, or health care utilization in the six months prior to initiating medication therapy. The Cox models showed that the risk for a gap increased 1.1% (HR = 1.011, CI = 1.004–1.019), and medication discontinuation increased 0.9% (HR = 1.009, CI = 1.003–1.014) with each \$1 increase in initial drug copayments. **CONCLUSION:** Younger employees, management workers, conventional fee for service insurance coverage, and an increase in initial copayments are factors predictive of greater risk for noncompliance with medications. These data may be helpful for employers when making drug benefit design decisions.

PHP5**ADHERENCE AND SWITCHING WITH DRUGS USED FOR THE PROPHYLAXIS OF ORGAN REJECTION**

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OBJECTIVE: The purpose of this study was to quantify the extent of nonadherence and to determine the rate of switching across organ rejection drugs. **METHODS:** Blinded prescription data from 35 national retail pharmacy chains was analyzed for 13,250 patients taking sirolimus, cyclosporine, and tacrolimus. Cumulative drug consumption (total days supply) during the one

year follow up period was employed as the measure of adherence. Kaplan Meier estimates of survival (persistence) curves were used to assess the time to discontinuation and to calculate the one-year rate of discontinuation. Baseline patient characteristics, including age, gender, geographic region, median income, index quantity dispensed, population density, co-pay, and index refill and days supply prescribed were analyzed. **RESULTS:** Adherence data across these drugs showed that sirolimus, cyclosporine, and tacrolimus patients on average obtained 5.5 (± 4.5), 5.2 (± 5.4), and 6.5 (± 5.3) fills, and 170.8 (± 132.9), 159.2 (± 163.96), and 194.8 (± 159.6) days supply of medication over 12 months, respectively. At day 60, 41% of sirolimus, 44% of tacrolimus, and 52% of cyclosporine patients discontinued therapy. After 6 months, 68% of tacrolimus and sirolimus and 77% of cyclosporine patients discontinued therapy. The rate of switching to another agent was 6.5% for sirolimus, 1.4% for tacrolimus, and 1.1% for cyclosporine at month 6, and 10.9%, 2.3%, and 1.8% at month 12, respectively. **CONCLUSION:** Even though organ transplant drugs are vital for transplant patients, 68% to 77% of patients discontinue therapy after 6 months. Research has showed that nonadherence to immunosuppressive therapy is the leading cause of organ rejection, organ loss, and death. Efforts to maintain patients on these drugs are needed in the beginning of and throughout treatment to avoid organ rejection.

PHP6**PREDICTORS OF NONCOMPLIANT COST-CUTTING BEHAVIORS AMONG ADULTS IN THE UNITED STATES**

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OBJECTIVE: To determine the demographic, insurance, and health status predictors of noncompliant cost-cutting behavior among U.S. adults. **METHODS:** Data were from quarters one and two of the 2007 National Health and Wellness Survey (NHWS), an internet-based study of the health care attitudes, behaviors, disease states, and outcomes of a demographically representative sample of adults age 18+. Noncompliant cost-cutting behaviors were defined as taking less medication than prescribed, cutting tablets in half, or buying fewer tablets. Logistic regression analysis was used to determine the demographic, insurance, and health status predictors of noncompliant cost-cutting behavior. **RESULTS:** Of the 42,010 NHWS respondents, 12% reported some noncompliant cost-cutting behavior, more specifically 7% reported taking less medication than prescribed, 6% reported cutting tablets in half, and 2% reported buying fewer tablets. Significant predictors of greater likelihood of noncompliant cost-cutting behavior include being non-white (OR = 1.182, $p < 0.001$), having a college degree (OR = 1.094, $p = 0.009$), having individual or family insurance purchased directly (OR = 1.300, $p < 0.001$), purchasing medications outside the U.S. (OR = 3.862, $p < 0.001$), number of physical comorbid conditions (OR = 1.176, $p < 0.001$), having a psychiatric condition (OR = 1.620, $p < 0.001$), currently smoke (OR = 1.137, $p < 0.001$), and body mass index (OR = 1.006, $p = 0.007$). Significant predictors of lesser likelihood of noncompliant cost-cutting behavior include age (OR = 0.996, $p = 0.001$), having insurance through the Veteran's Administration (OR = 0.514, $p < 0.001$), and having Rx coverage (OR = 0.808, $p < 0.001$). Gender, marital status, annual income greater than \$50,000, number of adults in household, and insurance through employer, Medicaid, or Medicare were not significant predictors of non-compliant cost cutting behavior. **CONCLUSION:** There are several significant predictors of noncompliant cost-cutting behavior. Knowing these predictors may help in targeting cost