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**Patient Adherence and Medication Cost-sharing**

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**Background:** The objective of this study was to estimate the effects of medication cost-sharing on adherence with antihypertensives among adults with hypertension.

**Methods:** This longitudinal study consisted of a 2-year (baseline/follow-up) analysis using the 2001-2002 MarketScan Research database, person-level claims from employer-sponsored health plans. The study population consisted of 5,249 individuals with at least 2 inpatient/outpatient claims with diagnoses of hypertension (ICD-9-CM 401.xx-405.xx), aged 41 to 65, and receiving incident antihypertensive treatment with ARBs or diuretics. Medication cost-sharing was measured as the index prescription copay relative to the expected copay and stratified into three spending levels: higher than average, average, and lower than average. Other measures included age, gender, geographic residence, Charlson comorbidity, type of health plan, and baseline spending levels for prescription drugs, outpatient services, and inpatient services. Discontinuation was defined as switching to another antihypertensive class, gaps between refills exceeding 90 days, or terminating all antihypertensive therapy. Survival analysis regression models were used to calculate adjusted hazard rate ratios of persistence with each drug class by cost-sharing levels.

**Results:** The mean age of the population was 52 years, 66.7% were female, and 18.4% had a Charlson comorbidity score of 1 or more. Average copayments were \$18 (SD 12.1) for ARBs and \$6 (SD 4.6) for diuretics. Average duration of therapy ranged from 8.1 months for ARBs to 7.3 months for diuretics. The hazard models showed that among individuals taking ARBs persistence improved by 7% to 16% ( $p < .05$ ) with lower than average or average cost-sharing relative to higher than average cost-sharing, controlling for other measures. In contrast, cost-sharing level had no influence on persistence with diuretics.

**Conclusions:** Higher than average medication cost-sharing were associated with reduced adherence with ARBs but not with diuretics. These findings demonstrate that level of cost-sharing may disrupt the use of essential medications but the effect is selective and may relate to the magnitude of the increased copay.