IMPACT OF A 3-TIER PHARMACY BENEFIT ON UTILIZATION PATTERNS OF TOP 10 THERAPEUTIC CLASSES: A 15-MONTH FOLLOW-UP STUDY

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OBJECTIVES: While 3-tier pharmacy copayment structure is the most common pharmacy benefit design in 2002, limited published studies examine the value of such benefit design. This study evaluated the impact of changing from a 2-tier to 3-tier pharmacy benefit on drug costs, utilization and generic utilization rates of top 10 therapeutic classes.

METHODS: An employer group that has changed from a 2-tier ($5/$10) to 3-tier pharmacy benefit ($5/$15/$25) in 6/2000 and a managed health plan that has similar 2-tier pharmacy benefit and membership base were chosen respectively as the case and control for this study. Pharmacy claims data 12 months pre- and 15 months post 3-tier benefit implementation was evaluated. Top 10 therapeutic classes (TC ranked by total drug ingredient costs spent) of the case were identified at baseline. For each TC, net changes in drug ingredient costs per member per month (PMPM), drug utilization per member per year (PMPY) and generic utilization rates from baseline were calculated and adjusted for inherent TC trends using the control data.

RESULTS: During the 15-month follow-up period, reduction in PMPM costs occurred in 9 out of the 10 TC, with an average PMPM reduction of $0.36 per TC. Dramatic reductions in PMPM costs were observed on all TCs within 3 months post-implementation of 3-tier benefit; however, all TCs (except for acne medications) showed reduction in PMPM costs toward baseline values during the rest of the study period. Only modest reduction (0.07 PMPY) in prescription utilization was observed. Four TCs demonstrated marked improvement in average generic utilization rates (cephalosporins 8.7%, calcium channel blockers 6.2%, ACE inhibitors 5.0%, acne products 4.1%).

CONCLUSIONS: A 3-tier pharmacy benefit can reduce pharmacy expenditures and improve generic utilization rates of common drug classes. Further research to evaluate its impact on medical costs is warranted.

INTER-INSTITUTIONAL VARIABILITY IN PHARMACY COSTS, LENGTH OF STAY AND MORTALITY ASSOCIATED WITH CARDIAC TRANSPLANTATION AT ACADEMIC HEALTH CENTERS: A RETROSPECTIVE DATABASE ANALYSIS

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OBJECTIVE: When ranked by inpatient pharmaceutical cost, cardiac transplantation (DRG 103) consistently appears among the top 10 DRGs in the University HealthSystem Consortium (UHC) Clinical Database. This has implications for pharmaceutical budgeting and managed care contracting. The objective of this analysis was to assess inter-institutional variability in clinical and economic outcomes as measured by pharmacy costs, length of stay and mortality among heart transplant patients in UHC’s Pharmacy Clinical Database during calendar year 2000.

METHODS: Eight geographically diverse academic health centers were identified retrospectively from all 20 UHC Pharmacy Clinical Database participants as having submitted at least 5 heart transplant cases during calendar year 2000. Institutions were assessed for variability in pharmacy costs, length of stay (LOS) and mortality. Data were compiled from hospital discharge summaries, Uniform Billing Version 1992 data and charge description masters. Cost data were generated from converting institution-specific charge data using a ratio of cost-to-charges (RCC).

RESULTS: The total pharmaceutical cost for 232 patients from 8 institutions [range = 5–96 patients/institution] was $5,083,860. Across institutions the median pharmaceutical cost per patient, median LOS per patient and total mortality rate were $11,509 (range = $5,697–$32,763), 22 days (range = 10.5 days–105 days), and 10.3% (range = 0%–23.5%) respectively. Cardiovascular agents (17.6%), biologic and immunologic agents (16.7%), hematological agents (16.4%) and systemic anti-infectives (10.7%) comprised over 60% of total pharmaceutical cost. Variation in percent class cost of total pharmaceutical costs among institutions were 11.9%–28.4% in cardiovascular agents, 6.5%–38% in biologic and immunologic agents, 7.1%–27.5% in hematological agents, and 8.1%–11.7% in systemic anti-infectives.

CONCLUSION: There is considerable variation among institutions in pharmacy costs, length of stay and mortality. Further research into the drivers of pharmaceutical cost variation, resource utilization and clinical outcome is warranted.

EVALUATION OF DRUGS IN A THREE-TIER PRESCRIPTION DRUG BENEFIT CO-PAYMENT PRICING STRUCTURE

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One of the widely used pharmacy benefit management tools, to control drug expenditures, is three-tier drug co-payment.

OBJECTIVES: This study examines the effect of the three-tier drug co-payment, for the individual plan sponsor, on Per Member Per Month (PMPM) ingredient costs, PMPM utilization and ingredient cost per prescription of the preferred and non-preferred drugs.

METHODS: Prescription records, from January 1, 1999 to December 31, 2000 for members enrolled in a three-