HEALTH CARE RESOURCE UTILIZATION AMONG ADULTS WITH TYPE 2 DIABETES MELLITUS, HYPERTENSION, AND OBESITY

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A discrete event simulation model of a cardiac hospital with percutaneous coronary intervention (PCI) capability was built on analysis of time-stamped electronic medical record database (Cerner Health Factoid®). Additional data were obtained from PCI literature, TRITON TIMI-38 trial, hospital statistics, and expert opinions. ACS treatment options include PCI, coronary arterial bypass graft (CABG), or drug therapy. Three oral antiplaque dosing strategies for unstable angina (UA) and non-ST segment myocardial infarction (NSTEMI) were considered with loading dose given at PCI, minimum 2 hours prior, and minimum 6 hours prior to PCI. Facility occupancy, wait, PCI volume, and procedure duration were tracked. RESULTS: Pre-treatment strategy increased patients’ total time in the hospital for all ACS-PCI, with an average time of 114.96 hours with loading dose at PCI, 118.32 hours (p=0.92%) with minimum 2 hours prior, and 121.48 hours (p=3.85%) with minimum 6 hours prior. For UA/NSTEMI subgroup, total time in hospital was 129.04 hours with loading at PCI, 134.51 hours (p=4.24%) with minimum 2 hours prior, and 140.38 hours (p=8.79%) with minimum 6 hours prior. Pre-treatment time was mainly in pre-procedure time. Pre-treatment has no significant effect on procedure time or PCI-related complications. CONCLUSIONS: Pre-treatment strategy with oral antiplaque is likely to cause some inefficiency in hospital due to wait and longer total stay. This does not adversely affect congestion, occupancy, and staff hours. In CABG-bound patients, pretreatment leads to additional days due to recommended wait. The pretreatment strategy as a way to optimize antiplaque therapy in ACS-PCI entails efficiency costs.

CARDIOVASCULAR DISORDERS – Patient-Reported Outcomes Studies

CONCORDANCE AMONG THREE SELF-REPORTED MEASURES OF MEDICATION ADHERENCE AND COUNT OF TABLETS RECORDS IN COLOMBIAN HYPERTENSIVE PATIENTS

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OBJECTIVES: To evaluate the level of agreement among three previously validated self-reported medication adherence measures and count of tablets records METHODS: This was a cross-sectional study which included adult patients (40 and older) with hypertension disease enrolled continuously for 6 months in a private medical center. Random sequences of tests (communication of self-compliance (SC), Morisky-Green Test (MG) and knowledge of the illness (KI)) were used to estimate the adherence of antihypertensive medication. Threshold of 80% was used to determine adherence with count tablets. Concordances were assessed using Cohen’s kappa coefficient and prevalence-adjusted bias-adjusted kappa (PABAK). RESULTS: A total of 151 hypertensive patients were included in the study. A total of 65.5% of these patients have other comorbidities and 45.6% took more than 5 drugs per day. The prevalence of non-adherence, using a tablet count reference test, was 8%. Concordances in the fourfold table’s marginal totals we found high agreement of negative results (SC (0, 94), MG (0.60), KI (0.72)) but low Kappa (SC (k = 0.03); MG (k = 0.06), KI (k = 0.01)). The kappa values adjusted (PABAK) were SC (k=0.79), MG (k=0.06), KI (k=0.15). CONCLUSIONS: Because of the weak to moderate concordance found among validated measures of adherence, the selection of a useful adherence measure in clinical practice is difficult. These findings underscore the difficulty in both assessing patients’ medication-taking behavior and assessing and comparing the results of adherence research. The development of valid and reliable measures for easily assessing medication adherence behavior in clinical setting is needed.

PREDICTIVE MODELS TO IDENTIFY NON-ADHERENCE TO DYSLIPIDEMIC MEDICATIONS USING PHARMACY AND MEDICAL CLAIMS DATA FROM A COMMERCIAL HEALTH PLAN

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OBJECTIVES: To develop predictive models for medication compliance in dyslipidemia that will aid health care decision makers in targeting compliance intervention programs. METHODS: Pharmacy and medical claims data from a commercial health plan were analyzed for all currently enrolled members who received their first dyslipidemic medication between May 1, 2007 and April 30, 2008. Percentage of days covered (PDC) defined as days supply of dyslipidemic medication per 365 days. PDC < 80% was used to categorize non-compliant patients. Potential predictors included patient demographics, pharmacy utilization and medical conditions. Stepwise logistic regression was used to predict the odds of non-compliance. RESULTS: A total of 88,633 patients were included. Sixty-five percent of patients were non-compliant (PDC = 0.33; SD = 0.22). The most significant predictor of non-compliance was treatment with bile acid sequestrants (OR: 6.75; p < 0.0001, compared to statins). Significant predictors of non-compliance also included age category, increasing from an OR = 1.11 for age 45–55 to OR = 3.23 for age < 45 (p < 0.0001 for all estimates compared to age ≥ 65); prior diabetes diagnosis (OR: 1.11; p < 0.0001) and the number of unique medications used (OR: 1.969 per additional physician; p < 0.0001) and copayment categories (relative to no copayment). Compliance significantly improved by 12%, 12% and 6% for copay categories $5–$10, $10–$20, and $20–$30, respectively to no copayment (p < 0.01). CONCLUSIONS: The results may
be used by health care decision makers to identify patients who are most likely to be non-compliant with dyslipidemia therapy and help focus medication compliance efforts. A secondary analysis using corresponding lab data is projected.

PCV96

IMPACT OF MEDICARE PART D ON ADHERENCE AND PERSISTENCE WITH STATIN MEDICATIONS FOR TEXAS DUAL-ELIGIBLE BENEFICIARIES

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OBJECTIVES: To compare dual-eligible patient out-of-pocket costs, adherence (medication possession ratio), persistence, and average number of gap days in therapy before and after the implementation of Medicare Part D. METHODS: This study employed a quasi-experimental, repeated measures design. Study population included 1734 Texas dual-eligible beneficiaries who had prescriptions filled in Texas independent community pharmacies between January 2005 and September 30, 2006. RESULTS: Average patient out-of-pocket costs increased from $0.39 per claim under Medicaid to $13.36 per claim under Medicare Part D. Patient MPR increased from 75.71% during the Medicaid period to 79.37% during the Medicare period. Linear mixed model analysis showed that patients with a more comprehensive gap coverage were less likely than those with a more limited gap coverage to be adherent with only generic medication coverage (OR 0.662, p = 0.0001, 95% CI 0.601–0.728) and beneficiaries who had no drug coverage (N = 6,063), or generic and brand drug coverage ($21.62 to $49.72) or generic only coverage ($22.22 to $42.04), but did not reach the catastrophic phase in 2008. Adherence was measured by a medica
dication possession rate and persistence increased and average number of gap days in therapy decreased. CONCLUSIONS: These results suggest that dual-eligible benefici
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y's medication utilization increased after implementation of Medicare Part D. Based on these results it can be concluded that higher out-of-pocket costs for dual-eligible beneficiaries under Medicare Part D did not have a negative impact on their drug adherence and persistence.

PCV97

ANALYSIS ON THE EFFECTS OF MEDICARE PART D COVERAGE GAP ON STATIN MEDICATION ADHERENCE

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OBJECTIVES: To investigate the impact of the coverage gap in the Medicare Part D program on statin medication adherence. METHODS: A pharmacy claims database from a national pharmacy benefit management company was used for this retrospec
tive analysis. The sample includes Medicare Part D patients 65 years and older who 1) used statins in both 2007 and 2008, and 2) entered the coverage gap (donut hole), but did not reach the catastrophic phase in 2008. Adherence was measured by a dumm
y variable indicating whether the proportion of days covered was greater than or equal to 0.8. A difference-in-differences regression analysis was used to evaluate the effect of the coverage gap by comparing adherence to statins before and after the start of the donut hole. RESULTS: A total of 26,686 patients were identified. Beneficiaries were mostly women (55.5%) with an average age of 75 years. Patients in the study were divided into three groups based on level of coverage in the donut hole: no coverage (N = 4,984), generic drug coverage (N = 6,063), or generic and brand drug coverage (N = 15,639). After patients entered the donut hole, the average 30-day co-payment for statin medications increased notably for beneficiaries who had no drug coverage ($21.62 to $49.72) or generic only coverage ($22.22 to $42.04), but decreased for those with generic and brand drug coverage ($20.12 to $16.63). Com
pared to beneficiaries with both generic and brand medication coverage, beneficiaries with no coverage (OR = 0.381, p < 0.0001, 95% CI 0.305–0.465) and beneficiaries with only generic medication coverage (OR = 0.662, p < 0.0001, 95% CI 0.601–0.728) were less likely to be adherent to statin medications after entering the donut hole. CONCLUSIONS: Medicare beneficiaries with no coverage or generic only coverage were less likely than those with a more comprehensive coverage gap to be adherent to statins after entering the donut hole.

PCV98

ADHERENCE TO LIPID LOWERING THERAPIES AS A PREDICTOR OF CHOLESTEROL OUTCOMES: A LITERATURE REVIEW

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OBJECTIVES: Despite the benefits of lipid lowering therapies (LLT), adherence to LLT remains poor. This review aims to summarize and assess evidence from prior research on the association between adherence to LLT and cholesterol outcomes (cholesterol levels and/or goal attainment). METHODS: We searched PubMed data
dbase for research articles written in English and published between January 1, 2000 and December 31, 2009 using combinations of the following terms: “adherence,” “compliance,” “persistence,” and “lipid lowering”. Retrieved articles were included for review if they met the criterion of adherence/compliance as a predictor of cholesterol outcomes (e.g., LDL-C, HDL-C, or TC). RESULTS: The automated literature search yielded 527 studies, 8 of which met the inclusion criteria. Despite that a majority of studies examined adherence to LLT, only a few included cholesterol outcomes. A total of 519 studies were excluded: 340 for being off topic, 3 for having no adherence measure, and 174 for having no cholesterol measures reported as an outcome. This review initially sought to quantify the effect of adherence on cholesterol outcomes; however, adherence measures and methods varied greatly and an automated extraction form was used to record details on study design, objectives, randomization, (cholesterol levels and/or goal attainment). CONCLUSIONS: The automated literature search yielded 527 studies, 8 of which met the inclusion criteria. Despite that a majority of studies examined adherence to LLT, only a few included cholesterol outcomes. A total of 519 studies were excluded: 340 for being off topic, 3 for having no adherence measure, and 174 for having no cholesterol measures reported as an outcome. This review initially sought to quantify the effect of adherence on cholesterol outcomes; however, adherence measures and methods varied greatly and an automated extraction form was used to record details on study design, objectives, randomization, (cholesterol levels and/or goal attainment).