infusion etc.). In measuring the number of tests conducted and time per test, i.e. laboratory efficiency, we found that the use of regadenoson versus adenosine and dipyridamole could reduce the overall test time by 18 and 17 minutes respectively. Assuming a baseline of 39 pharm-stress MPI tests per week for both adenosine and dipyridamole, the time saved per test using regadenoson translates into potentially servicing additional 330–366 patients per year. CONCLUSIONS: Due to its weight-independent calculation and its administration via a rapid injection, the use of regadenoson may result in direct savings of laboratory personnel time and labor and the potential for increased patient throughput versus adenosine or dipyridamole. These time savings could lead to increased laboratory efficiencies (scheduling additional tests per week or reorganizing staff more efficiently).

PCV74

PREDICTED REDUCTION IN HOSPITAL DAYS AND ASSOCIATED COSTS AMONG MANAGED CARE PRIMARY AND SECONDARY RISK MIXED DYSLIPIDEMIA PATIENTS TREATED WITH FIXED DOSE NIACIN EXTENDED-RELEASE AND SIMVASTATIN COMBINATION THERAPY

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OBJECTIVES: Compare predicted incremental reduction in hospital days and associated costs in managed health care (MHC) mixed dyslipidemia patient cohort treated with fixed-dose niacin extended-release and simvastatin (NER+S) therapy. METHODS: Two hypothetical formularies were modeled, a baseline formulary which did not include NER+S and an adjusted formulary which did. Other lipid therapies included all marketed branded medications. The model was developed using product labeling, clinical trial results, national prescription claims data, and a risk equation derived from the HealthCore Integrated Research Database to estimate the incidence of cardiovascular disease (CVD) events and associated hospital days avoided among patients achieving and not achieving optimal lipid values for LDL-C, HDL-C, and triglycerides (TG). Study patients included those aged ≥18 years with sub-optimal baseline LDL-C ≥ 100 mg/dL, HDL-C ≤ 40 mg/dL for males; ≤ 50 mg/dL for females, and/or TG levels ≥ 150 mg/dL for females/diabetics; ≥ 200 mg/dL for males/non-diabetics. A cost-effectiveness analysis was performed over three years evaluating the incremental cost per hospital-day avoided after addition of NER+S to current formulary. RESULTS: Among 1,000,000 patients, 529,620 primary and secondary risk patients (52.96%) aged ≥ 18 years were identified. Mean age at baseline was 54 ± 11 years and 45% was female. Over 3 years, there was reduction of 157 hospital days after addition of NER+S versus current formulary (54,839 vs. 54,997 days) along with a reduction of $4,888,916 in total costs (sum of health plan costs, copayment, drug-monitoring costs, and CVD-event related costs) [$1,337,787,345 vs. $1,342,676,261], thus achieving an incremental cost-saving of $31,041 per hospital day avoided. CONCLUSIONS: The MHC database-based model predicts that treating sub-optimal HDL-C and TG beyond achievement of optimal LDL-C goals may result in health care resource savings to a MHC organization after the addition of NER+S to a managed care formulary.

CARDIOVASCULAR DISORDERS – Patient-Reported Outcomes Studies

PCV75

IMPACT OF MEDICATION ADHERENCE ON CARDIOVASCULAR DISEASE-RELATED HEALTH CARE COST AMONG PATIENTS TREATED WITH FIXED DOSE COMBINATION VERSUS MULTI-PILL COMBINATION THERAPIES AMONG DYSLIPIDEMIA PATIENTS IN A MANAGED CARE POPULATION

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OBJECTIVES: Assess the impact of optimal medication adherence on total cardiovascular disease (CVD)-related total health care cost (THC) among dyslipidemia patients initiating fixed dose combination (FDC) therapy versus multi-pill combination (MPC) therapies in a managed care setting. METHODS: Study patients ≥ 18 years were identified as newly-initiating on FDC [Advicor®: niacin extended release (NER) + lovastatin] or MPC's [simvastatin + NER (NER/S), lovastatin + NER (NER/L)] between January 1, 2000-June 30, 2006 [index date], with a minimum 6 months pre- and 12 months post-index health plan eligibility from a managed care database. Multivariate generalized linear model was used to estimate association between optimally adherent patients [Medication possession ratio (MPR) ≥ 80%] and one-year post-index CVD-related THC [sum of emergency room, inpatient, outpatient, and medication costs] and sub-optimally adherent patients (MPR < 80%) after controlling for key demographic (age, gender) and clinical variables (FDC and MPC cohorts, comorbidity burden and number of non-dylipidemia medications). RESULTS: A total of 8988 patients (6638 FDC; 1687 NER/S; 663 NER/L) were identified. Those initiating FDC therapy were significantly younger [mean (SD) ages of 51.9 (10.5) vs. 56.0 (9.8) years, p < 0.0001] and had significantly lower baseline Deyo-Charlson comorbidity scores (0.43 ± 0.88 vs. 0.59 ± 1.06; p < 0.0001) versus MPC patients. At one year post-index, average MPR was higher among FDC patients versus both NER/S and NER/L patients (0.54 ± 0.35 vs. 0.50 ± 0.35 and 0.47 ± 0.34, respectively; p < 0.01). After controlling for differences in baseline variables, multivariate regression showed that patients with optimal adherence (MPR ≥ 80%) had a 40% decrease in annual CVD-related THC versus sub-optimally adherent patients [Estimate: 0.601, 95% CI: 0.427 – 0.845); p = 0.003]. CONCLUSIONS: Optimal medication adherence among

dyslipidemia managed care patients showed reduced CVD-related THC versus patients showing sub-optimal adherence. Further studies on early initiation of FDC therapy targeting residual risk in dyslipidemia patients are warranted.

PCV76

RELATIONSHIP BETWEEN HEALTH LITERACY, OUTCOME EXPECTATIONS, EFFICACY EXPECTATIONS AND MEDICATION ADHERENCE

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OBJECTIVES: The purpose of this study was to test the theoretical model of whether patient's efficacy expectations and outcome expectations mediate the relationship between health literacy and medication adherence. In addition, the relationships between patients' demographic variables and their health literacy skills, outcome expectations, efficacy expectations and medication adherence were evaluated METHODS: A survey composed of four validated instruments along with questions related to patient's demographic information was utilized. The four validated instruments assessed functional health literacy (S-TOFHLA), medication related outcome expectations and efficacy expectations and medication adherence (MARS). The questionnaire was pretested by conducting a pilot study of 21 patients with hypertension at a community health clinic. RESULTS: In the main study 200 patients with hypertension completed the self-administered survey. Path analysis was used to test the theoretical model. Age had statistically significant associations with health literacy scores (ñ = −0.17, p = 0.015), efficacy expectations (ñ = 0.23, p = 0.004), and medication adherence (ñ = 0.27, p = <0.0001). In addition, number of prescriptions taken daily and insurance (t = −5.30, p = <0.001) had a statistically significant association with medication adherence (ñ = 0.16, p = 0.024). Health literacy was only variable that was statistically correlated with income (ñ = 0.21, p = 0.003) and level of education (ñ = 0.29, p = 0.001). Path analysis indicated that medication adherence was significantly associated with age and efficacy expectations, which also was related to health literacy level, age and income. Health literacy was also a significant predictor of outcome expectations. Gender, level of education, and income were the only demographic variables significantly associated with health literacy scores. CONCLUSIONS: The results of the study suggested that health literacy had an impact on medication adherence through efficacy expectations.

PCV77

EVALUATION OF AN EDUCATIONAL ANTIHYPERTENSIVE MEDICATION ADHERENCE TOOL: IMPACT ON ANTIHYPERTENSIVE ADHERENCE AND BLOOD PRESSURE CONTROL

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OBJECTIVES: Poor adherence to antihypertensive therapy increases patient risks of cardiovascular events. The objective of this study was to measure the effectiveness of an individualized educational program on medication adherence and blood pressure (BP) control. METHODS: This was a six-month, longitudinal study with a prospectively identified intervention group and a retrospective control group. The Scott & White Health Plan enrollment and claim databases and EMR were utilized to identify continuously enrolled patients aged 18 years or older, diagnosed with hypertension, and treated with valsartan, aliskiren, or a fixed-dose combination of valsartan/hydrochlorothiazide or amlodipine/valsartan for at least three months prior to study enrollment. Patients meeting the inclusion criteria were invited to participate in the prospective intervention arm of the study, while those with geographic limitation served as controls. The intervention group received monthly personalized information about hypertension and treatment. A power analysis determined 150 participants would be required in each arm to detect a 3% change in MPR. The intervention and control groups were matched based on demographic characteristics and Charlson Comorbidity Index score. All interval data were analyzed using paired t-tests, while categorical data were analyzed using chi-square tests. RESULTS: A total of 159 patients enrolled into the study (60% female; mean [SD] age, 62 [12.6] years). Analysis of 95 matched patients showed no significant mean (SD) change in MPR (86% [0.2] to 83% [0.25] vs. 85% [0.24] to 82% [0.29]; P = 0.8), systolic BP (137.2 [15.1] to 136.3 [15] vs. 132.2 [14.8] to 136 [16.4] mmHg; P = 0.2) and diastolic BP (72.6 [9.8] to 73.7 [13.1] vs. 72 [10.2] to 70.8 [10.5] mmHg; P = 0.5) for the intervention and control groups, respectively. CONCLUSIONS: Our preliminary analysis showed no significant change in medication adherence and blood pressure. A complete analysis is necessary to determine the impact of the educational tool.

PCV78

INTERVENTIONS TO IMPROVE MEDICATION COMPLIANCE IN HYPERTENSION: QUALITATIVE AND QUANTITATIVE SYSTEMATIC REVIEW

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OBJECTIVES: The objective of this systematic review was to evaluate the impact of interventions to improve medication compliance in patients on antihypertensive medications. METHODS: CINAHL, EMBASE, all EBM Reviews and MEDLINE electronic databases were searched for articles published January 1979 through February 2007 using MeSH keywords relevant to patient compliance and intervention type, yielding