405 citations. Two reviewers independently examined each citation and abstract. We conducted three levels of review resulting in 94 papers for full review. Data were analyzed using qualitative and quantitative methods, including a meta-analysis using a random effects model (REM) and Mantel-Haenszel (MH) summary estimate. REM was chosen because of common research design involved randomized controlled trials (RCTs) (60/94, 64%). Seventy-two (77%) studies involved interventions that sought to directly improve medication compliance, 12 (13%) had to do with interventions to improve compliance through a multidisciplinary process, 3 (5%) involved interventions to indirectly improve compliance through changing physician practice, and 5 (5%) were other types. Thirteen studies (14%) involved the use of a theoretical framework to guide the research. A meta-analysis was conducted of RCTs of educational interventions, (N = 6). The REM showed a trend toward statistical significance with a risk ratio of 0.83 for non-compliance (95% CI: 0.68–1.01, p = 0.05). The MH summary estimate was statistically significant with a risk ratio of 0.83 for non-compliance (95% CI: 0.75–0.92, p = 0.00), favoring patients who received educational interventions to improve compliance. However, the X2 test for heterogeneity was significant; p = 0.020 and p = 0.016 respectively. CONCLUSIONS: Our analysis indicated that most interventions focused on directly improving medication compliance. The meta-analysis illustrated educational strategies provide a significant benefit in reducing non-compliance in patients using antihypertensives. The small sample size may have contributed to the observed heterogeneity and require additional investigation. Our findings have implications for designing future research and implementing educational interventions.

**PCV60 MEDICATION ADHERENCE AND CARDIOVASCULAR DISEASE-RELATED HEALTH CARE RESOURCE UTILIZATION AMONG PATIENTS TREATED WITH FIXED DOSE COMBINATION VERSUS MULTI-PILL COMBINATION THERAPIES: A 2002 STUDY IN PATIENTS WITH DYSLIPIDEMIA IN A MANAGED CARE POPULATION**

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OBJECTIVES: To evaluate the impact of medication adherence on total health care resource utilization (THR) among dyslipidemia patients initiating fixed dose combination (FDC) therapy versus multi-pill combination (MCP) therapies in a managed care population. METHODS: Using claims data from the HealthCore Integrated Research Database, study patients 218 years were identified as newly-initiating on FDC [Advicere®: niacin extended release (NER) + lovastatin] or MCPs [simvastatin + NER (NERs), lovastatin + NER (NERL)] between January 1, 2000–June 30, 2006 [index date], with a minimum 6 months pre- and 12 months post-index health plan eligibility. Adherence was measured using medication possession ratio (MPR): MPR > 0.90 indicates negative binomial regression was used to estimate association between study cohorts and one-year post-index cardiovascular disease (CVD)-related THR (sum of emergency room, inpatient, and outpatient visits) after controlling for differences in baseline age, gender, THR, Deyo-Charlson comorbidity index (DCI) score, number of non-dyslipidemia medications, and post-index adherence. RESULTS: Among study patients [9884 patients (6638 FDC; 1687 NERs; 663 NERL)], those initiating FDC therapy were significantly younger [mean (SD) ages of 51.9 (10.5) vs. 56.2 (9.8) years, p < 0.0001], comprised of fewer males (73.0% vs. 81.5%; p < 0.0001), and had significantly higher DCI scores (0.43 vs. 0.38 vs. 0.39 vs. 1.06; p < 0.0001) versus MCP patients. During one-year follow-up, average MPR was higher among FDC patients versus both NERs and NERL patients (0.54 ± 0.35 vs. 0.50 ± 0.35 and 0.47 ± 0.34, respectively; p < 0.01). Controlling for post-index adherence, multivariate regression analysis indicated that FDC patients had 25% increase in MCP patients CVD-related THR versus MCP patients [IRR: 0.819, 95% CI: 0.761–0.882; p < 0.0001] CONCLUSIONS: FDC-initiated patients showed improved medication adherence and reduced CVD-related THR versus MCP-initiated patients in this managed care population. Further studies on clinical and economic impact of improved adherence to FDC dyslipidemia therapy are warranted.

**PCV81 MEASURING THE IMPACT OF SOCIO-DEMOGRAPHIC CHARACTERISTICS ON PATIENT PERSEVERANCE IN CHRONIC MARKETS**

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OBJECTIVES: Although patient finances are widely studied as predictors of adherence, claims databases rarely include variables other than copay and insurance coverage. Linking personal income, level of education, and ethnicity to prescription data can enhance analyses of socioeconomic factors and adherence. We compared perseverance in chronic markets – statins and oral antidiabetics (OADs) – by income, ethnicity, and in linked administrative databases. METHODS: Using IMS’s LifeLink longitudinal prescription database (LRs), linked to commercial socio-economic data, we selected 145,370 patients initiating statins and 57,079 patients initiating OADs after a minimum 12 month clean period. LRs captures 62% of prescriptions claims contributed by retail pharmacies in the US. Cox proportional hazards models compared persistence by income, education, ethnicity, and age of method of payment. RESULTS: Mean days of statin persistence was higher for patients with household income <$20,000 (364 days) vs. for patients with income $75,000/year household income ($20,000) (144 days) (p < 0.001). Patients with very low income (<$20K) were more frequently on Medicaid or over age 65; these very low income patients had higher persistence (150 days) than patients with income of $15–40,000/year (144 days) (p < 0.005). Persistence also increased with level of education (graduate school = 154 days vs. high school = 147 days, p = 0.001) and differed by ethnicity (Caucasian = 150 days, Hispanic = 127 days, African American = 124 days; p < 0.001). Similar trends were observed with OADs. CONCLUSIONS: Patients with higher household income demonstrate slightly improved persistence, while patients with very low income, but subsidized managed care benefits, also have higher average persistence. Non-persistence also are found with higher levels of education and across ethnic groups.

**PCV82 FRACTION OF NURSING HOME ADMISSION AND INCREMENTAL COST ATTRIBUTABLE TO NON ADHERENCE TO ANT HYPERTENSIVE MEDICATIONS**

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OBJECTIVES: We estimated the relationship between nursing home admission and non-adherence to antihypertensive medications. We calculated the incremental proportion of nursing home admission that was due to non-adherence, and the annual incremental cost of the proportion of nursing home admission due to non-adherence. METHODS: We calculated adherence scores in a cohort of 225,624 subjects with hypertension from the MarketScan® database. We used a generalized linear model with a binomial distribution and a log link to estimate adjusted relative risks of nursing home admission. We calculated the fraction of nursing home admission attributable to non-adherence. RESULTS: We showed that non-adherence to antihypertensive medications increases the risk of nursing home admission. Among non-adherent subjects, 10.8% were admitted to nursing homes. In the general population of community-dwelling elderly subjects, 1.9% of nursing home admissions were attributable to non-adherence to antihypertensive medication. Extending these results to the United States elderly (age ≥ 65) population with hypertension, we found that annually 28,372 subjects were admitted to nursing homes in 2002 because of non-adherence to antihypertensive medications. In 2002, the cost of nursing home admission due to non-adherence was estimated to be $17.1 billion. CONCLUSIONS: Anti-hypertensive medication non-adherence was a risk factor for elderly transitioning to long-term care facilities. Since non-adherence may be viewed as a proxy for lack of adherence in general, our results show the potential benefits related to interventions that could provide social support to elderly patients, such as assistance with medication administration.

**PCV83 FACTORS AFFECTING ADHERENCE TO ANTIHYPERTENSIVE MEDICATION IN A NIGERIAN POPULATION**

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OBJECTIVES: Poor adherence to antihypertensives severely compromises the effectiveness of the treatment. The aim of this study was to measure adherence to antihypertensive therapy and to determine the factors that are associated with poor adherence in a sample of hypertensive patients in Nsukka, a semi urban town located in South-Eastern Nigeria. METHODS: A cross sectional, household survey was conducted in Nsukka. Adherence to antihypertensive medications was assessed on participants that were above 35 years of age. Patients self-reports about the number of pills taken over the prescribed period were used to estimate adherence as a percentage. In addition, Moksony Medication Adherence Scale (MMAS) was used in order to increase the strength and consistency of patient’s self-report on adherence. RESULTS: A total of 756 participants were screened for hypertension. Forty-seven persons were hypertensive. Mean adherence to hypertension medications was 70.7% ± 37.9%. Mean adherence score was correlated to MMAS score (r = 0.401, p < 0.05). Educational status, making a medication a habit, and experience of side effects were independently correlated to adherence. Multiple linear regression showed that for every increase in educational status, adherence increased by 12.1%. Also making medication a habit increased adherence by 35.09%. However, experience of side-effect decreased adherence by 20.1%. CONCLUSIONS: These factors identified as correlates of adherence to antihypertensives in the study population could be used to design interventions to improve adherence to hypertension medications in Nigeria.

**PCV84 FLUSHING ASSESSMENT TOOL (FAST): PSYCHOMETRIC PROPERTIES OF A NEW MEASURE ASSESSING FLUSHING SYMPTOMS**

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OBJECTIVES: A common side effect of niacin therapy is flushing characterized by warmth, redness, itching, and/or tingling. The FAST was developed to assess flushing symptoms and clinical impact on patients. This study evaluated the psychometrics and minimal important difference (MID) of the FAST. METHODS: A randomized, double-blind, parallel group, multicenter, placebo (PBO)-controlled prospective 6-week study evaluated the FAST. 269 patients with dyslipidemia were randomized (1:1:1) to niacin extended-release (NER) at various doses (750,000/mg/year), placebo, or PBO. Patients completed the FAST electronic daily diary. RESULTS: FAST test-retest reliability during the first 2 weeks among stable subjects was demonstrated for mean overall flushing severity using patient/physician-rated overall treatment effect (OTE) ratings (intraclass correlation coefficients of 0.75 and 0.76). Over the 6 week treatment