HEALTH CARE AND DRUG UTILIZATION PATTERNS IN PATIENTS RECEIVING LONG TERM THIENOPYRIDINE THERAPY
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OBJECTIVES: Long-term antiplatelet therapy is typically considered standard of care for secondary prevention of cardiac events. The goal of this study was to examine patterns of use and total health care utilization in patients receiving clopidogrel.

METHODS: The study used a random subset of the PharMetrics Patient-Centric Database (2001–2002) representing 3 million commercially insured members. Inclusion criteria were: index prescription for clopidogrel preceded by a 3-month drug free pre-period, followed by a 6-month post-period. RESULTS: Of 11,000 patients included; mean age was 63.7; 58% were male; 74% were Health Maintenance Organization members. Common comorbidities included: diabetes 24%, myocardial infarction 16%, acute coronary syndrome 18%, angina 18%, coronary heart disease 57%, stroke/transient ischemic attack 24%. Pre-period resource utilization showed 33% had an Emergency Room (ER) encounter, 58% were hospitalized, 58% had a cardiologist encounter, 38% a general practitioner (GP) encounter. Mean total charges were $25,807. Percutaneous coronary intervention (PCI) was also common (38.6%). In the post-period, 24% had an ER encounter, 54% were hospitalized, 44% had a cardiologist encounter, 63% a GP encounter. Mean total charges were $17,357. PCI occurred in 8.4% during the post-period. Sixty-seven percent of patients received the index clopidogrel prescription within 7 days of an ER encounter. Mean length of clopidogrel therapy was 86 days. Patterns of use showed 67% stopped (not on clopidogrel 28-days prior to end of follow-up), 82% with a Gap (refills were > 14 days apart). Concomitant statin use occurred in 57% (atorvastatin 32%). CONCLUSIONS: As defined by an index prescription, substantial resources were used both pre and post-period and coronary intervention was common. Long-term adherence to clopidogrel was poor and did not meet current guidelines. Patients receiving clopidogrel had many comorbidities and were high utilizers of health care resources, suggesting the need for better guideline compliance and perhaps better treatments.

7309 HEALTH CARE RESOURCE UTILIZATION BY PATIENTS WITH ESSENTIAL HYPERTENSION
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OBJECTIVE: About 30% of US adult population suffers from hypertension and this rate is expected to increase in coming years. This study examined current therapeutic choices associated with treatment of essential hypertension. Hypertensive related and total health care resource utilization were also examined.

METHODS: Data from 2000 Medical Expenditure Panel Survey were retrospectively analyzed. Patients were identified by the ICD-9 CM code “401”, who were above 17 years of age and were not pregnant. All patients who received an anti-hypertensive also had a diagnosis of essential hypertension. Health care resource utilization was measured from ER, inpatient, physician, and prescription medicine expenses.

RESULTS: A total of 2894 patients were identified as diagnosed with essential hypertension. Patients in the study group were predominantly female (58%), caucasians (78%), and over 50 years of age (75%). Angiotensin Converting Enzyme inhibitors (ACE) and Calcium Channel Blockers (CCB) formed the major treatment choices for essential hypertension. The choice of treatment strategy differed with patient’s type of insurance. Only 25% of study group rated their general health as excellent or very good (SF–12). About 8% of the study population had at least one episode of stroke. Total health care expenses for the study group exceeded $15 million. The mean total health care expense for a single hypertensive patient was above $5000. Prescription anti-hypertensives were 23% of the total health care expenses. Physician and ER visits were found to be the major cost categories for the hypertension patients.

CONCLUSIONS: Health care resource utilization by hypertensive patients is expected to increase with the increase in the number of patients. CCBs and ACE inhibitors formed the treatment of choice for hypertension treatment. Prescription medicine expenses formed only a small percentage of the total health care expense.

TOBACCO COST-EFFECTIVENESS ANALYSES AND THE PAYER: IS THE SHORT TERM LONG OVERDUE?
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OBJECTIVE: Despite overwhelming evidence that tobacco cessation interventions are cost-effective, only 24% of employer-sponsored health plans offer any coverage for tobacco-use treatment. One reason may be that health plans fear that they won’t recoup projected savings because of member turnover, which averages 10–20% annually. The objective of this study was to assess whether the cost-effectiveness literature provides health plans with the information they need to make tobacco treatment coverage decisions.

METHODS: We performed a comprehensive search for all cost-effectiveness analyses of tobacco cessation interventions published in 1980 or later. Two readers independently reviewed 23 analyses and recorded several items including: 1) the perspective of the analysis; 2) whether medical cost savings were assessed; 3) the time-frame over which the medical costs were calculated; and 4) whether comprehensive program implementation costs were included.

RESULTS: Of the 23 analyses reviewed, 13 described the cost-effectiveness of potentially reimbursable services or medications from the payer’s perspective. However, of the 13, only two incorporated medical cost offsets from smoking cessation. Neither described the cost implications over the short term nor did they include the program costs that are of interest to payers. CONCLUSIONS: Published cost-effectiveness information for tobacco treatments is not presented in a way that is useful to health plans. Providing information in a manner more useful to managed care organizations, emphasizing short term cost savings, could lead to better coverage of tobacco treatment.

MEDICARE EXPENDITURES IN RELATION TO FUNCTIONAL HEALTH STATUS POST-STROKE FOR A NATIONALLY-REPRESENTATIVE SAMPLE OF MEDICARE BENEFICIARIES FROM 1996 TO 2000
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OBJECTIVES: 1) Using Medicare Current Beneficiary Survey (MCBS) develop a retrospective cohort of Medicare beneficiaries with incident stroke; and 2) determine Medicare expenditures in relation to health status and time since stroke.

METHODS: We used longitudinal MCBS surveys linked to Medicare claims from 1996 to 2000. The MCBS reports data from in-home interviews on a nationally-representative sample of approximately 17,000 Medicare beneficiaries each year. It contains detailed information on beneficiaries’ socio-demographic characteristics and general health status and time since stroke.
health and functioning, and is limited to Medicare claims. For each year of MCBS sample, individuals with incident stroke were identified from primary or secondary diagnoses on inpatient claims records using ICD-9 codes 433, 434, 436, and 437. Following stroke, three measures of health status including general health, activities of daily living (ADL), and instrumental activities of daily living (IADL) were determined and indexed to the stroke date. Medicare expenditures for all health care services during the same period as health assessments were determined from billing records and indexed. Severity measures including comorbidities, length of hospital stay, and nursing-home admissions were determined from billing records. Analyses included descriptive statistics and bivariate analyses using t-tests and chi-square with significance level of 0.05. RESULTS: We identified 1125 beneficiaries with an incident stroke. Lower levels of health on all three measures of health status were associated with higher mean (SD) expenditures: $6756 ($1432) for fair to poor health compared to $2739 ($6500) for good to excellent health; $6519 ($11,373) for 3 or more ADL limitations compared to $3899 ($13,782) for less limitations; and $5988 ($9019) for 3 or more IADL limitations compared to $4774 ($13,413) for less limitations. Overall, expenditures showed declining trends post-stroke. CONCLUSION: Preliminary findings suggest that health status and time since stroke affect expenditures. Multivariate analyses using generalized estimating equations will be conducted to confirm these findings.

PCV27 HOSPITALIZATION COSTS AND LENGTH OF STAY IN POST-MI PATIENTS WITH HEART FAILURE
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OBJECTIVES: Clinical trials indicate that the development of heart failure (HF) impacts post-myocardial infarction (MI) prognosis. There is little information available on the economic burden of HF in post-MI patients, outside of a clinical trial setting. This study examines and compares the impact of developing HF on cost of care and length of stay (LOS) in patients hospitalized for MI using alternative models for estimation.

METHODS: Claims data for patients hospitalized with a principal diagnosis of MI between 1998 and 2000 were used to compare cost of care and LOS between those with and without HF at initial hospitalization. Patients with a diagnosis of HF in the 6-months preceding the MI were excluded. Total hospitalization costs and LOS were analyzed for 15,160 patients using OLS, log-OLS and generalized linear models (GLM). Bootstrapping was used to obtain variances for cost estimates. Age, gender, type of MI, death, Medicare/non-Medicare, and comorbidities were included as covariates in the models. RESULTS: Comparing post-MI patients who develop HF during initial hospitalization (N = 2968) to those without HF at initial hospitalization (N = 12,192) the mean incremental cost and incremental LOS were $12,192 (SD = 0.13) respectively using the GLM. Based on several diagnostic tests, GLM was found to be the best estimator as long as the link function used is appropriate. Log-OLS estimates were biased both due to heteroscedasticity and the inappropriateness of log-transformation. OLS estimates were both biased and inefficient especially for costs. CONCLUSIONS: Patients who develop post-MI HF during initial hospitalization for MI have significantly higher hospitalization costs and increased LOS as compared to patients without post-MI HF. Treatments aimed at preventing or delaying the onset of post-MI HF could result in significant cost savings.

PCV28 AN ARB COST-EFFECTIVENESS MODEL IN TREATING MILD-TO-MODERATE HYPERTENSION
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OBJECTIVE: The model compares—from a health system’s perspective—the cardiovascular events avoided and costs of six angiotensin receptor blockers (ARBs) in treating mildly-to-moderately hypertensive patients. METHODS: The model considers three potential differences in effectiveness among ARBs: 1) office cuff systolic blood pressure (SBP) reduction; 2) 24-hour ambulatory systolic blood pressure (ABP), and 3) non-compliance. The model uses point estimates of SBP reductions from published trials and meta-analyses identified from Medline and searches of retrieved literature published after 1996. RESULTS: Over a 5-year timeframe in a representative hypertensive population, ARBs reduce cardiovascular events by 15% to 25% at a yearly cost of $185 to $301 per treated patient or $34,914 to $90,487 per event avoided. The NNT to avoid one event varies from 37.6 to telmisartan 62.2 for valsartan. Over 5-years, relative to telmisartan, the model predicts 547 (olmesartan) to 1052 (valsartan) more cardiovascular events per 100,000 hypertensive patients. Telmisartan generates cost savings relative to all ARBs. Assuming no difference between ARBs in cuff SBP reduction, the effects of ABP and non-compliance alone favor telmisartan by 398 to 696 events. The model is sensitive to factors that substantially impact cardiovascular risk like patient age and is more sensitive to ABP differences than to noncompliance. CONCLUSIONS: Small differences in SBP reduction between ARBs may produce meaningful differences in the number of cardiovascular events avoided. Telmisartan’s smooth ABP profile and reduced consequences from non-compliance relative to other ARBs enhance its effectiveness.

PCV29 COST EFFECTIVENESS ANALYSIS OF THERAPY MODIFICATION AFTER FAILING STATIN TREATMENT
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OBJECTIVE: A literature search revealed a lack of information on how to treat patients who have failed to meet goal LDL level on statin therapy. The purpose of this retrospective, cohort study was to compare the cost-effectiveness of increasing the statin dose, changing to a different statin, adding an alternative therapy to the statin, changing to a different therapy, or not making any changes. METHODS: Medical charts of patients (n = 64) in a lipid clinic were utilized to gather patient demographics, CHD risk factors, treatment history, and laboratory values. Effectiveness was measured by whether the patient met goal LDL levels. Intervention costs included the cost of the medications, physician visits, and laboratory tests. RESULTS: The lowest total average cost occurred when the statin was changed to an alternative therapy ($96.39), followed by changing to a different statin ($131.40), increasing the statin dose ($134.69), making no change in therapy ($137.95), and adding an additional therapy to the statin ($153.03). The probability of a patient meeting LDL