impact of TEIs in patients after an acute coronary syndrome (ACS patients) and in patients with chronic heart failure (CHF patients). We developed multi-state Markov models to describe different states where TEIs may be prescribed. Model parameters and outcomes were extracted from a reanalysis of a recent randomized trial in ACS patients, and from a literature search in CHF patients. For both models, the study was conducted adopting the health care payer perspective and the horizon was one year. TEI incremental cost–utility ratios (ICURs) were expressed in 2011 €/QALY and US $/QALY for ACS and CHF patients, respectively. Base cases analyses were completed by univariate and probabilistic sensitivity analyses. RESULTS: TEI was more expensive and less effective than no intervention. Thus, the ICUR of all ACS patients suggests that TEIs were not cost-effective in the short term. In the subgroup of ACS patients with one risk factor and no previous history of ACS, however, the ICUR was 20,343 €/QALY. In this subgroup, the probabilistic sensitivity analysis also indicated that TEI was not cost-effective in a substantial number of simulated iterations. TEI was dominant—i.e., less expensive and more effective than no intervention—in the base cases analysis of CHF patients. In order to investigate these findings and to demonstrate if the short-term increased costs would be followed by a long-term cost saving, a long-term simulation was performed using a Markov cycle decision tree, where short-term disability costs were calculated using a Markov cycle model of the alternative interventions and results were presented for a one-year follow-up. TEI was associated with a decrease in the number of hospitalization, medication and other health services used per patient and in the proportion of days covered (PDC), where a PDC of 80 was considered adherent. Multi-variable linear regression was used to examine the relationship between cost and adherence, controlling for patient demographics (age, gender, and job type) and Charlson co-morbidity index. The results indicate that the median adherence to these cardiovascular medication classes was 67%, and 46% (N=4859) of the study population had a PDC<80. The average total medical/pharmacy costs were higher for the adherent patients, primarily due to their higher pharmacy costs. Individuals who were adherent to their cardiovascular medications had lower short-term disability costs ($1331/year) than did the non-adherent ($1828/year). CONCLUSIONS: In general, patients who were adherent to their statin/anti-hypertensive drug regimens had lower short-term disability costs than did the non-adherent. Employers concerned with the relationship between cardiovascular disease and employee costs should also consider the effect of adherence to statins and antihypertensives on short-term disability costs.

PCV46

HEALTH CARE RESOURCE UTILIZATION AND COSTS FOR ACROMEGALY: A RETROSPECTIVE STUDY IN A LARGE CLAIMS DATABASE IN THE UNITED STATES

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OBJECTIVES: Describe health care utilization and costs associated with acromegaly, a rare pituitary disorder that may result in considerable comorbidities and for which data on health care resource utilization and costs are limited. RETROSPECTIVE claims study in a US commercial health plan analyzed adults with an acromegaly-related diagnosis, procedure, or medication between July 2002 to June 2010. Subjects were observed for six months before their first acromegaly-related claim and until death or disenrollment. RESULTS: A total of 1056 subjects had mean (SD) age of 42 (17.2) years on their first acromegaly claim; 49% were male. Common comorbidities included hypertension (23.2%), diabetes (14.4%), and arthropathy (14.5%). Most common specialty office visits included neurology (66.4%), endocrinology (58.2%), and ophthalmology/optometry (45.8%). A majority of subjects (72.8%) visited a primary care physician (PCP). Average number of office visits per-year was 4.8 for PCPs, 2.1 for endocrinologists, 1.5 for neurologists, and 0.6 for ophthalmologists/optometrists. Proportion with any all-cause and acromegaly-related healthcare utilization included 99.9% and 96.7% with an ambulatory visit, respectively, 48.6% and 6.8% with an emergency room visit, and 45.9% and 25.4% with an inpatient admission. Total all-cause healthcare costs (medical+pharmacy) averaged $2255/pc-member-month. While pharmacy costs comprised 19% ($451/225) of total costs, ambulatory and inpatient costs comprised the higher proportion of total medical costs, 48.1% ($87/1,825) and 44.7% ($815/1,825), respectively. Of total all-cause health care costs, 44.6% was for total acromegaly-related care ($1,005/2.25). Of total acromegaly-related medical costs, 63.3% (498/787) was for acromegaly-related inpatient care. While acromegaly-related care was generally under-diagnosed, subjects in this study had substantial health care utilization and costs for acromegaly-related care. Subjects visited a PCP most often, suggesting that substantial disease management was provided by physicians who may only treat a few acromegaly patients during their medical careers. Future studies focusing on treatment patterns prior to confirmed acromegaly diagnosis may increase awareness and expedite diagnosis of this condition in an earlier stage.

PCV5

SERVICE UTILIZATION, PREDICTORS AND COSTS AMONG HIGH-RISK PATIENTS WITH CARDIOVASCULAR DISEASE: USING REAL-WORLD DATA FROM THE AUSTRALIAN REGISTRY FOR ATRIAL FIBRILLATION

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OBJECTIVES: To quantify the utility utilization predictors and cost of cardiovascular disease using the Australian Registry for Atrial Fibrillation (ARFAF) registry. METHODS: This paper describes two-year cost data estimation using a bottom-up cost resource utilization approach, and provides cost data from 2011-2013, estimated using resource utilization based on types of vascular disease. The multivariate predictors of number of hospitalization, medication and other health services used per patient and related costs at two-year follow-up were examined using generalized linear models (GLM). Government reimbursement data from 2011-2013 was used to calculate direct healthcare costs. RESULTS: Overall 2873 of the total 6236 patients in the REGISTRY cohort were enrolled from Australia. The two-year follow-up data was available for 2856 (94%) patients with or at high risk of atrial fibrillation. In general, the mean (SD) direct expenditure over 24 months of follow-up per person was $7544 ($10,758). In the adjusted model, patients with coronary artery disease (CAD) and peripheral arterial disease (PAD) incurred +$12559 (95% CI $1199 to $2310) and
VARIATIONS OF HEALTH CARE CONSUMPTION IN MANAGEMENT OF ATRIAL FIBRILLATION PATIENTS IN THE ACUTE CARE SETTING: THE RHYTHM AF STUDY
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OBJECTIVES: There are few large trials devoted to atrial fibrillation (AF) management in the acute care setting, and no standardized strategy in place. METHODS: RHYTHM-AF is a prospective observational study fielded in 10 countries. Patients considered for cardioversion (electrical, ECV or pharmacological, PCV) were enrolled between May 2010 and April 2011 (n = 3397). We compared medical resource (MR) and median lengths of stay (LoS) calculated as discharge minus admission time. RESULTS: Patients’ serum haemoglobin and creatinine were measured most frequently in Spain (99.1%), followed by Spain (99.0%) and least in the Netherlands (49.7% and 96.7%). Thyroid hormone disorders were most often available in Germany (78.6%) and least in Spain (7.3%). Italy, France, Poland and UK performed transthoracic echocardiography commonly (55.5%, 67.7%, 72.1% and 70.4% respectively). Transoesophageal echocardiography was rarely administered, except in Germany (73.1%). Chest X-ray also varied from 95.2% (Spain) to 8.9% (Sweden). LoS varied by regions, with the highest LoS in France (114 hours) and the lowest in Spain (91%) at 53 hours and in France (81%) at 46 hrs. Among those on PCV, France (20%) and Australia (35%) had the highest LoS at 192 and 140 hrs, respectively, the Netherlands (23%) and Spain (79%) the lowest, at 5 and 10 hrs. CONCLUSIONS: There is regional variability in MR and LoS among AF patients. Several patient-, physician- and/or environmental- level factors may contribute to this variation. Further re-search examining factors which may contribute to and result from extensive hos-pital stays and diagnostic procedures and to assess whether the variability of these are associated with one another is warranted to further inform clinical practice and quality of care.

PHARMACY COST SHARING, ANTIPLATELET THERAPY UTILIZATION, AND HEALTH OUTCOMES FOR PATIENTS WITH ACUTE CORONARY SYNDROME
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OBJECTIVES: To examine how cost sharing for prescription drugs affects compli ance with antiplatelet therapy and subsequent health outcomes among patients with acute coronary syndrome (ACS). METHODS: A retrospective outcomes study using data from medical and pharmaceutical claims of patients enrolled at health plans offered by 26 large employers drawn from all regions of the country. A total of 14,325 patients were diagnosed as having ACS and underwent coronary stent implantation between 2002 and 2005. Each patient was followed up for a maximum of 2 years. Primary outcomes measures were adoption of outpa-tient antiplatelet therapy, adherence to outpatient therapy, hospital admissions, and healthcare expenditures. RESULTS: Patients with ACS who face higher co-insurance are less likely to adopt outpatient antiplatelet therapy within the first month after stent implantation (P < 0.01). Higher co-insurance is also associated with an increased number of ACS rehospitalizations (P < 0.01). For patients in health plans with higher co-insurance rates, expected costs from ACS hospitaliza-tions are $2796 (38%) higher in the first year after stent implantation (P < 0.01). CONCLUSIONS: Higher copayments for prescription drugs are associated with lower adherence to antiplatelet therapy and with higher likelihood of rehospital-ization among patients with ACS. As a consequence, total healthcare spending for patients with ACS increases by approximately $615 in the first year after stent implantation.

UNIT COSTS ESTIMATION OF POST-STROKE DYSPHAGIA PATIENTS IN THE USA
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OBJECTIVES: Dysphagia is a frequent complication occurring after stroke as a consequence of neurologic lesions at stroke in controlling swallowing reflexes. Unman-aged dysphagia has been associated with an increased risk of aspiration pneumo-nia and even mortality. Alongside morbi-mortality, dysphagia has also been shown to increase inpatient length of stay. This often leads to incremental inpatient costs of care directly or through its complications. This study aimed at gathering unit costs related to dysphagia for stroke patients. METHODS: A combined literature and expert-based costing study was carried out for the following dysphagia cost items: screening, severity staging, rehabilitation and pulmonary complications.

These costs were primarily estimated based on medical fees and technical proce-dures billing. 2011 US unit costs and charges according to Medicare perspective were estimated. RESULTS: Early bedside screening and Speech Language Patholo-gist (SLP) based clinical assessment ranged between USD 16-26 and USD 40-105 respectively. Instrumental severity staging by either Videofluoroscopy, or Fiberop-tic Endoscopic Evaluation (with sensory testing or not) was estimated to fall be-tween USD 390 and USD 4942. Swallowing rehabilitation and tracheotomy mediated by an SLP is charged around USD 94. Inpatient costs related to aspiration pneumonia secondary to post-stroke dysphagia were estimated to range between USD 19,509 - 22,714.

CONCLUSIONS: This study demonstrated the potential economic benefits of any intervention aiming at reducing the risk of aspiration when considering the high costs of associated pneumonia.

CARDIOVASCULAR DISORDERS – Patient-Reported Outcomes & Patient Preference Studies
PCV69

VARIANCE IN MEDICATION ADHERENCE BY PATIENT BEHAVIORAL SEGMENT: A MULTI-COUNTRY STUDY IN HYPERTENSION
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OBJECTIVES: The objective of this study was to determine the prevalence of patient behavioral segments and medication adherence levels by segment for a hyperten-sive patient population. METHODS: Members from MediGuard.org and other on-line patient panels in the UK, Germany, Italy, and Spain were invited to participate in a web-based survey that included: a patient segmentation instrument developed by MediGuard.org based on linguistic analysis of published MARS-5 adherence instrument. Subjects were screened to have a diagnosis of hypertension and treatment with at least one anti-hypertensive agent. RESULTS: 353 patients completed the on-line survey in August/September 2011 and were categorized against three different behavioral domains: control orientation [176 (50%) internal, 177 (50%) external, emotion focused (209 (59%), worry focused (272 (77%)] N = negative), and agency or ability to act on choices [227 (64%) H = high agency, 126 (36%) L = low agency]. Domains were grouped into 8 different clusters with EPH and IPH arising as the most common (88 respondents (25%) in each cluster). The prev-alence of other behavior clusters ranged from 6% (22 respondents, INH) to 12% (41 respondents, IPL). The proportion of patients defined as adherent (scored 25 on MARS-5) varied sharply across the segments: 51% adherent (45 of 88 respondents) for the EPH vs. 8% adherent (2 of 25 respondents) classified as INL. Side effects, being employed, and stopping medicine because the patient got better were all significant in a post-hoc analysis of adherents, a prob regression model. CONCLUSIONS: By categorizing patients into worldview segments, we identified wide differences in adherence that can be used to prioritize interventions and to customize adherence messages.

PCV70

EXAMINING MEDICATION ADHERENCE AND LOW DENSITY LIPOPROTEIN-CHOLESTEROL (LDL-C) GOALS AMONG TRICARE BENEFICIARIES RECEIVING STATIN THERAPY FOR SECONDARY PREVENTION OF CORONARY HEART DISEASE IN US MILITARY TREATMENT FACILITIES
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OBJECTIVES: To examine statin adherence and LDL-C targeted treatment goals (TTGs) among TRICARE beneficiaries receiving treatment for secondary prevention of coronary heart disease (CHD) at US Military Treatment Facilities (MTFs). METHODS: Retrospective cohort database study examining TRICARE beneficiaries 18-75 years of age, receiving medical services for a primary CHD event at an MTF between Jan-1-2004 and Dec-31-2008. Of the 20,658 MTF patients receiving statin-therapy for CHD, 3,676 had an LDL-C value recorded during subsequent 6-month (M6), 12-month (M12) and 18-month (M18) periods. TTGs were defined using ATPIII- NCEP Guidelines (i.e., LDL-C value<100mg/dL). Drug adherence was measured using the Medication Possession Ratio (MPR) at M6, M12, and M18. Persistence was measured at time t = 35% (gap in therapy at M6, M12, M18). Beneficiary status, comorbidities, statin switching, dosage titrations and other lipid lowering therapies. Logistic and Cox regressions were conducted to assess predictors of TTG and adherence/persistence. RESULTS: The CHD cohort was 75% male, mean age 58.8 (SD=9.3) years. The percent of patients adherent (MPR>0.80) with statin- therapy was 85% at M6, 79% at M12, and 78% at M18. Older diabetic patients were more adherent and at TTG. Adjusting for covariates, adherent patients were more likely to be at TTG in M6, M12, and M18 (OR=1.98[1.62-2.42], 2.69[2.32-3.12] and 2.93[2.44-3.52], respectively). Overall mean persistence to statins was 330 (SD=199) days. Estimated 68% of patients were persistent at M6, 50% at M12, and 47% at M18. Patients at TTG were less likely to experience a gap in therapy at M6, M12, and M18 (OR=0.830-0.890). We also observed a positive link between statin adherence and TTGs among secondary prevention patients with frequent LDL-C monitoring in the MHS. Patients with better adherence to statin-therapy were more likely to be at TTG, compared to non-adherent patients. Further study is needed to assess generalizability to all MHS secondary prevention patients.