The abstracts provided are as follows:

**PCV104**

**PREDICTORS OF CLOPIDOGREL USE AND ADHERENCE FOR PATIENTS WITH ACUTE CORONARY SYNDROMES IN A LARGE EMPLOYER-BASED CLAIMS DATABASE**

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**OBJECTIVES:** Dual-antiplatelet therapy with aspirin and thienopyridines is considered as the cornerstone in the treatment of acute coronary syndromes (ACS) undergoing percutaneous coronary intervention (PCI). Recent ACC/AHA/SCAI guidelines on PCI recommend the use of clopidogrel or prasugrel for the treatment of ACS patients undergoing PCI with drug eluting or bare metal stents for at least a year. However, little is known about the factors that predict the use and adherence of clopidogrel in ACS-PCI patients. This study examined the predictors of clopidogrel use and adherence in the employer-based MarketScan claims database. METHODS: 10,456, aged 18–65 years, hospitalized with a primary diagnosis of ACS and underwent PCI between January 1, 2005 and December 31, 2006, and had a prior 1-year insurance eligibility and drug information were identified. Adherence was defined as medication possession ratio (MPR) of ≥ 0.72. Baseline patient characteristics were conducted to identify the predictors of clopidogrel use and adherence. RESULTS: Overall, 92.8% of ACS-PCI patients received a prescription of clopidogrel and 66.8% of the clopidogrel users were adherent. Receiving PCI without stenting (OR = 3.3), comorbidities (OR = 1.50), diabetes (OR = 1.49), atrial fibrillation (OR = 1.87), and older age (OR = 1.01) were associated with decreased use of clopidogrel while prior use of clopidogrel (OR = 0.54) or other BASI (Beta-blocker, Antiplatelet agents, Statin, and ACE Inhibitor) (OR = 0.43) were associated with increased use of clopidogrel. Factors significantly associated with non-adherence of clopidogrel were: prior use of clopidogrel (OR = 1.41), prior hospitalization (OR = 1.34), chronic pulmonary disease (OR = 1.33), PCI without stenting (OR = 1.33), and diabetes (OR = 1.18). Older age (OR = 0.98) and prior use of other BASI medications (OR = 0.84) increased the adherence of clopidogrel. CONCLUSIONS: Prior use of clopidogrel and other heart medications, stenting, diabetes and other comorbidities affected the use and adherence of clopidogrel by ACS patients undergoing PCI. These findings may help programs that aim to improve thienopyridines adherence for increased effectiveness.

**PCV107**

**PATIENT ADHERENCE TO CHRONIC DISEASE MEDICATIONS IN A MEDICATION THERAPY MANAGEMENT PROGRAM**

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**OBJECTIVES:** 1) To evaluate adherence to chronic disease (Diabetes, Hypertension, and Heart failure) medications of patients enrolled in a Medication Therapy Management (MTM) program. 2) To determine the effect of adherence on the clinical outcomes of patients with diabetes and hypertension in the MTM program. **METHODS:** This was a retrospective, longitudinal study. Adherence data was obtained from an independent pharmacy participating in an employer sponsored Medication Therapy Management program. In the form of pharmacy refill records for 272 patients. Clinical data was obtained through patient chart reviews. Medication adherence was calculated using Medication Possession Ratio (MPR) and weighted average adherence was calculated for each class of medications. Pearson correlation was used to determine the association between adherence and changes in KCCQ and EQ-5D utility scores. RESULTS: Pearson correlation results indicated that MPR to diabetic medications was significantly correlated with age (r = 0.387, p = 0.000) and gender (r = −0.167, p = 0.021). Further, age was significantly correlated with number of deaths (r = 0.278, p = 0.000) among diabetic patients. However, there were no significant predictors of change in A1c among diabetic patients. Among hypertension patients, change in mean arterial pressure was significantly correlated with gender (r = 0.123 p = 0.037) and MPR (r = −0.146, p = 0.013). MPR was also found to be significantly correlated with gender (r = 0.148, p = 0.012, covariable age (r = 0.142, p = 0.016), and number of diuretics used (r = 0.016). Regression model for hypertension patients indicated that MPR (β = −0.136, p = 0.024) was a significant predictor of change in mean arterial pressure. CONCLUSIONS: Patients enrolled in an employer sponsored MTM program showed high weighted average adherence to most of the classes of diabetes, hypertension, and hyperlipidemia medications. This study also identified predictors of clinical outcomes associated with diabetes and hypertension.

**PCV108**

**PATTERNS AND PREDICTORS OF PERSISTENCE OF WARFARIN AND OTHER COMMONLY-UTILIZED CHRONIC MEDICATIONS AMONG PATIENTS WITH ATRIAL FIBRILLATION**


**OBJECTIVES:** We examined the patterns of persistence among warfarin and other common chronic medications in patients with atrial fibrillation (AF) and identified predictors of warfarin non-persistence. METHODS: We used a national, managed care claims database (January 1, 2005–December 31, 2007) to evaluate patterns of persistence in patients with AF. We examined those that filled a prescription for warfarin within 3 months following AF hospitalization discharge and had at least 12-month continuous data prior to and following the first fill. For comparison, we also evaluated patterns of persistence for other selected, chronically-prescribed medications, including branded, generic, once-, twice-, and thrice-daily medications. Non-persistence was defined as failure to refill the medication within 60 days from the run-out date of the prior prescription. Survival models were used to identify predictors of warfarin non-persistence. RESULTS: A total of 28,384 patients with AF were identified; 16,036 (56.5%) filled a warfarin prescription shortly following hospitalization for AF. A total of 33.5% of warfarin users were persistent on warfarin for at least 1 year. Among non-persistent patients, average time to non-persistence was 122 (SD 83) days from the first warfarin prescription. Persistence with pioglitazone, statins, glipizide, and once- and twice-daily carvedilol was similar to warfarin. While persistence with twice-daily carvedilol was similar to once-daily carvedilol shown elsewhere (60.1% vs 64.3%, p = 0.680), persistence of thrice-daily carvedilol was significantly worse than that of once-daily amiodarone (27.7% vs 51.9%, p < 0.001). Factors significantly associated with time to non-persistence with warfarin included age, gender, residence in the south and west regions, ischemic stroke, urinary tract infection, and warfarin out-of-pocket expense. CONCLUSIONS: Persistence of warfarin among patients with AF is consistent with other chronic medications. Per- sistence with thrice-daily, but not twice-daily therapy was worse than once-daily medication. Factors associated with non-persistence can be used to identify patients and target adherence programs.

**PCV110**

**DISCRIMINATORY POWER OF THE KCCQ IN ESTIMATING HEALTH UTILITIES IN HEART FAILURE PATIENTS**

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**OBJECTIVES:** Most economic evaluations of heart failure have been structured using New York Heart Association (NYHA) class to define mutually exclusive health states. With this structure, no utility (i.e. effectiveness) gains are measured in patients who experience important changes in health status but remain in the same NYHA class. We sought to evaluate whether the Kansas City Cardiomyopathy Questionnaire (KCCQ) summary score can further discriminate between patients with lower and higher health utilities within a given NYHA class. METHODS: Repeated measures of NYHA class, KCCQ, and EQ-3D utility scores were available from patients enrolled in HF-ACTION, a randomized trial evaluating the effectiveness and safety of exercise training in addition to usual care compared to usual care alone in patients with chronic heart failure. We used generalized estimating equations to regress utility scores on NYHA class and demographic characteristics and to evaluate the impact of adding the KCCQ summary score to the regression model. RESULTS: A total of 12,649 sets of assessments were available from 2,331 patients. The mean age of the study cohort was 59 years at baseline, 72% were male, 61% were white, and 32% were black. When controlling for age, gender and race, estimated utilities were 0.84 (95% CI: 0.81–0.87) for NYHA class I, 0.80 (95% CI: 0.78–0.83) for class II, 0.75 (95% CI: 0.72–0.78) for class III, and 0.65 (95% CI: 0.61–0.69) for class IV. A one-unit increase in the KCCQ summary score was associated with a 0.0044 (95% CI: 0.0042, 0.0045) increase in the utility weight, and its impact did not significantly vary across NYHA classes. CONCLUSIONS: Use of KCCQ summary score in addition to, or instead of, NYHA class may provide more discriminatory power in terms of estimating mental gains in quality-adjusted life-years afforded by interventions for heart failure.

**PCV111**

**ANALYZING THE RELATIONSHIP BETWEEN CHANGES IN PROS AND CLINICAL ENDPOINTS**

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**OBJECTIVES:** To demonstrate a simple, powerful, and flexible approach to modeling the relationships between patient-reported outcomes and clinical measures over time. METHODS: Data were from 2,331 patients enrolled in the HF-ACTION (Heart Failure and A Controlled Trial Investigating Outcomes of Exercise Training) trial. The patient-reported endpoint was the Kansas City Cardiomyopathy Questionnaire (KCCQ) overall score and the clinical endpoint was peak VO2. We compared three different ways of measuring the association between changes in the KCCQ and peak VO2. The first method (SIMPLE) computes change-from-baseline scores for each outcome. The second method (BLUP1) used a linear mixed-effects model for each outcome to derive the best linear unbiased predictions (BLUP) of changes from baseline. The third method (BLUP2) added 28 baseline covariates and their interactions with time to the mixed model and then obtained BLUPs. For all three methods...
we calculated Pearson correlations between changes in KCQ and Peak VO₂ at 3 and 12 months. Confidence intervals of r's were estimated via bootstrapping.

RESULTS: The SIMPLE method produced a wider distribution of change scores than the other two methods. However, compared to BLUP-1 and BLUP-2, the SIMPLE produced lower correlations between changes in KCQ and Peak VO₂ at both 3 and 12 months: At 3 months, SIMPLE r (95% CI) was 0.16 (0.11, 0.21); BLUP-1 r = 0.18 (0.13, 0.24) and BLUP-2 r = 0.09 (0.01, 0.19). At 12 months, SIMPLE r = 0.32 (0.23, 0.38), BLUP-1 r = 0.27 (0.20, 0.35), and BLUP-2 r = 0.21 (0.13, 0.28). CONCLUSIONS: Compared to the SIMPLE approach, the BLUP approach had the following advantages: 1) uses all of the longitudinal data available; 2) estimates with reasonable assumptions about missing data; 3) accommodates nonlinear and differing longitudinal trajectories for the PRO and clinical measures; and 4) minimizes the influence of noisy data.

PCV112 RESPONSESIVENESS OF AF6, A NEW, SHORT, VALIDATED, AF-SPECIFIC QUESTIONNAIRE—SYMPTOMATIC BENEFIT OF DC CARDIOVERSION

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OBJECTIVES: The aim was to measure responsiveness on symptoms of a direct current cardioversion (DC) in patients with atrial fibrillation (AF) with a new, short, validated AF-specific questionnaire, the AF6. METHODS: One hundred and eleven patients (89 men, 22 women) were included in the study. Their symptoms were screened before and 12 ± 3 days after DC, using AF6, consisting of 6 items, representing the most common symptoms and experiences of patients in an AF clinic. Symptoms were analyzed in the whole study population as well as in clinical responders and non-responders, using sinus rhythm (SR) at follow-up as a clinical anchor. RESULTS: The total mean score in the study population decreased, (18 ± 24.7 to 12.4 ± 13.6, p < 0.0001) and in responders (n = 56), (22 ± 14 to 12 ± 12, p < 0.01), but not in non-responders (n = 55), 14 ± 9 vs. 14 ± 11, NS. The highest scoring items were: ‘breathing difficulties upon exertion’ and ‘tiredness due to atrial fibrillation’, and they were also the most frequently scoring items (80% and 83%, respectively). The other items of the scale were present in 65%, 64%, 48% and 36% of the patients. ‘Worry/anxiety due to atrial fibrillation’ was present in 48% of the patients, scoring high when present. ‘Breathing difficulties at rest’ was the least and the lowest scoring item. Effect sizes ranged from 0.7 to 2.2 in responders from 0.2 to 0.85, and in non-responders from 0.17 to 2.1, indicating highest scores consistently relating to ‘tiredness due to atrial fibrillation’. CONCLUSIONS: AF6 demonstrated adequate responsiveness to change, and effect sizes were mostly moderate, in responders moderate to high. The symptom scores measured by AF6 decreased significantly after DC cardioversion, especially in responders in terms of SR, confirming, that SR is an important clinical anchor.

PCV113 IMPACT OF STROKE ETIOLOGY ON CARE NEED AND LONG-TERM OUTCOMES

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OBJECTIVES: Stroke is the second leading cause of death worldwide and a major cause of long-term disability. Increasingly, stroke outcomes research is following clinical practice and not only considers all strokes together but divides them into various risk-profile subtypes. Following this approach, we performed a population-based study of all residents of Erlangen, Bavaria, Germany, to determine the risk profile distribution of defined populations using the highest scores consistently relating to ‘tiredness due to atrial fibrillation’. CONCLUSIONS: AF6 demonstrated adequate responsiveness to change, and effect sizes were mostly moderate, in responders moderate to high. The symptom scores measured by AF6 decreased significantly after DC cardioversion, especially in responders in terms of SR, confirming, that SR is an important clinical anchor.

PCV114 HEALTH-RELATED QUALITY OF LIFE AMONG WOMEN WITH CORONARY ARTERY DISEASE TREATED WITH PSYCHOTROPIC MEDICATIONS

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OBJECTIVES: Recent studies have found that the use of psychotropic medications in women with coronary artery disease (CAD) led to long-term adverse outcomes such as cardiovascular adverse events. This study examined the effect of psychotropic medication use on the health-related quality of life (HRQoL) of women with CAD.

METHODS: Analysis was conducted using the 2007 Medical and Expenditure Panel Survey (MEPS) database, which is nationally representative of the US civilian non-institutionalized population. Female patients aged ≥ 18 years were included in this analysis. CAD patients were identified using a combination of International Classification of Diseases (ICD-9) diagnosis codes. HRQoL was measured using the Physical Component Summary (PCS-12) and Mental Component Summary (MCS-12) of the SF-12-Form Version 2 (SF-12). HRQoL and sociodemographic characteristics of female CAD patients who used at least one psychotropic medication were compared with those who did not use any psychotropic medications. Bivariate comparisons were made using t-tests for continuous variables and chi-square tests for categorical variables. Analysis of covariance (ANCOVA) was used to conduct a test of the association of HRQoL with psychotropic use after adjusting for age, race, education, marital status, insurance status, and the number of medical conditions in 2007. RESULTS: Of the 4,253,569 women with CAD in the US, 1,312,413 (30.9%) took psychotropic medications. Women taking psychotropic medications reported a significantly higher number of medical conditions compared to non-users (13.25 vs. 9.51, p < 0.0001). The mean unadjusted differences in PCS-12 and MCS-12 scores between psychotropic drug users versus non-users suggested worse scores among women taking psychotropic medications (PCS-12: −4.93, p = 0.03 and MCS-12: −9.46, p = 0.0008), and this trend in differences continued after adjusting for covariates (PCS-12: −2.23, p = 0.26 and MCS-12: −7.51, p = 0.0034). CONCLUSIONS: Consistent with findings of long-term adverse outcomes from previous studies, psychotropic medication use among women with CAD was associated with significantly worse HRQoL.

PCV115 A SYSTEMATIC REVIEW OF QUALITY OF LIFE ASSESSMENT OF PATIENTS SUFFERING FROM THORACIC AORTIC DISEASES

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OBJECTIVES: To review studies assessing the quality of life associated with thoracic aortic diseases (TADs) and their treatment with Open Aortic Repair (OAR). Therapeutics Endovascular Aortic Repair (TEVAR) or medical management (MM). METHODS: PubMed and EMBASE were searched covering terms related to TADs and patient reported outcomes/quality of life. The search was limited to articles in English and to studies relating to humans. However, no time period was specified so as to enable a broad search. The studies obtained were analysed qualitatively. RESULTS: Eight studies met the criteria. Published 1998 and 2009, four dealt with aneurysms, two with dissections and two more with one of the TADs; all of them were based on assessment of quality of life after treatment rather than on the disease itself. Only one study covered emergency versus elective surgery. The number of patients was very small in all studies, ranging from 75 to 11. Mean follow-up varied from 7 to 76 months. The most commonly used instrument was the SF-36. Two studies also used the Hospital Anxiety and Depression Score (HADS) in addition to the SF-36. One study adopted the SQUEDQUAL questionnaire; another study had recourse to the Illness Intrusiveness Rating Scale (IIRS) and the Karnofsky Activity Scale (KAS), which lacked information on proper validation for this target population. All in all, none of the study subjects showed the quality of life assessment appropriately, particularly with regard to the follow-up period, the lack of pre-operative assessment and lack of direct comparison between interventions. Lastly, there were no utility assessments to be found, which would be essential to arrive at QALY values and thus take the process economic analysis forward. CONCLUSIONS: The studies available so far do not provide evidence of the quality of life associated with TADs, as well as conclusive evidence of the quality of life associated with OAR; TEVAR and/or MM.

PCV116 HEALTH-RELATED QUALITY OF LIFE OF DIABETES PATIENTS WITH AND WITHOUT MACROVASCULAR COMORBIDITIES IN THE UNITED STATES

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OBJECTIVES: Diabetes mellitus has been defined as one of the global epidemics of chronic diseases by the World Health Organization. Patients with diabetes are at an increased risk of developing macrovascular disease. The purpose of this study was to examine the marginal impact of macrovascular comorbidities on the health-related quality of life (HRQoL) of patients with diabetes in a United States nationally representative sample. METHODS: Using the pooled Medical Expenditure Panel Survey (MEPS) 2001 and 2003 data, a nationally representative adult sample (age ≥18) was included in the study. The HRQoL outcomes included the SF-12 physical component summary (PCS) score, SF-12 mental component summary (MCS) score, EQ-5D preference-based index score, and visual analog scale (VAS). Ordinary least square regressions were used to identify the relationship between macrovascular disease conditions and PCS and MCS after controlling for age, sex, race, ethnicity, education, marital status, health insurance, proxy response, and number of other comorbid categories. Due to the distributions of the EQ-5D preference-based index and VAS score, censored linear deviations estimator (CLAD) regressions were employed. All statistics were adjusted using the proper sampling weight from the MEPS. RESULTS: PCS, MCS, EQ-5D index, and VAS scores for patients with diabetes were 40.5, 48.5, 0.75, and 66.6, respectively for the sample. Compared to diabetes patients without macrovascular comorbidities (N = 2,809), those with macrovascular comorbidities (N