

### PCV101 A REVIEW OF TREATMENT PATTERNS OF PATIENTS WITH PULMONARY ARTERIAL HYPERTENSION IN THREE EUROPEAN COUNTRIES

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**OBJECTIVES:** The aim of this study was to review the existing treatment patterns for patients diagnosed with pulmonary arterial hypertension in the UK, France and Germany. **METHODS:** IMS Disease Analyzer, a longitudinal patient database providing information from continuing physician-patient interaction on consultations, diagnoses and treatment within Primary Care, was used to review the treatment patterns for PAH patients in the UK, France and Germany over a two year period, in order to describe: 1) different therapies used; 2) combination therapies; 3) clinical and economic outcomes of different therapies; 4) dose and drug utilization patterns; and 5) resource utilization. **RESULTS:** In all three countries, the prevalence of PAH was found to increase with age, with two-thirds of PAH patients being 60 years of age or older, with more female than male patients being diagnosed with PAH. PAH patients were also found to have been prescribed at least one medication, with 23% in France, 15% in Germany and 56% of patients in the UK being prescribed between 3 and 6 medications. In the UK, most prescriptions were found to refer to diuretics, calcium channel blockers and anti-thrombotic agents. In France, most prescriptions referred to beta-blockers, angiotensin receptor blockers and diuretics. In Germany, most prescriptions referred to diuretics, calcium channel blockers and beta blockers. For PAH patients in both France and Germany the median number of days receiving therapy over the 2 year period was found to be 100 days, whereas in the UK, this figure rose to 500 days. **CONCLUSIONS:** Whilst there were many similarities in the sociodemographic profile of PAH patients, many differences in the treatment patterns for patients diagnosed with PAH in the UK, France, and Germany were found.

### PCV102 INFLUENCE OF COPAYMENT DIFFERENTIAL BETWEEN GENERIC AND PREFERRED BRAND PRESCRIPTIONS DRUGS ON GENERIC FILL RATE

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**OBJECTIVES:** To investigate the influence of member copayment differential between generic and preferred brand name prescription drugs on generic fill rate (GFR) within two drug therapy classes (antidepressants and antihypertensive). **METHODS:** This study was a retrospective observational cohort study using individual member as the unit of analysis. The antidepressant cohort was members who utilized an antidepressant (SSRI or SNRI). The antihypertensive cohort was members who had an antihypertensive claim (ACEI, ARBs, CCB, BB, and diuretics). All 2006 claims were analyzed and adjusted to 30-day equivalents. A total of 149,359 members with age  $\geq 22$  years, continuously enrolled, no benefit change, with a flat copayment commercial benefit plan, and had at least one claim were eligible for analysis. Medical claims were used to calculate Charlson severity of illness scores. A Tobit model to assess the influence of independent variables: copayment differentials, age, gender, income, generic copayment, number of unique medications taken, mail-order service use, specialty drug use, other maintenance drug use, Charlson score, on the GFR (dependent variable) was built for each cohort. **RESULTS:** Of 149,359 members, the antidepressant cohort comprised 22,484 (15.1%) members with an average 5.7 30-day antidepressant claims, mean \$16.40 copayment differential, and GFR of 51.8%. For the antihypertensive cohort 33,673 (22.5%) members had 8.6 antihypertensive 30-day claims, mean \$16.50 copayment differential, and GFR of 72.3%. Antidepressant Tobit model found the mean marginal effect of copayment differential on GFR was 0.005 ( $p < 0.001$ ) indicating a \$10 copayment differential increase is estimated to increase antidepressant GFR by 5% points. In the antihypertensive cohort, the mean marginal effect of copayment differential on GFR was 0.001 ( $p < 0.001$ ). When copayment differential increased by \$10 the estimated GFR increased by 1% point. **CONCLUSIONS:** There was a significant positive relationship between copayment differential and generic fill rate. However, the magnitude of the effect varied across different drug therapy classes.

### PCV103 ASSOCIATION BETWEEN COPAYMENT AND ADHERENCE TO STATIN TREATMENT IN A VETERAN POPULATION: A RETROSPECTIVE ANALYSIS

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**OBJECTIVES:** This study investigated the association between copayment and adherence to statin treatment in a veteran population at the Veterans Affairs San Diego Healthcare System (VASDHS). **METHODS:** This was a retrospective analysis of patients initiated on statin therapy and followed for 12 months to determine adherence. Patients who began a statin during the period of November 2006 to December 2007 were included. Patients who switched statin therapy or who were discontinued before 12 months were excluded. Eligibility was established if patients had at least two visits to their provider post-index date and one visit pre-index

date. Adherence was defined as a medication possession ratio (MPR)  $\geq 80\%$ . Independent variables included: age, gender, ethnicity, BMI, number of medications, baseline lipid panel, percent service connection, and comorbid conditions. Service connection defines level of medical and prescription coverage benefit and awarded based on disability, socioeconomic and military-service factors. Non-parametric continuous data was evaluated using the Mann Whitney-U. Categorical data was evaluated using the Pearson Chi-squared test. Logistic regression model was used to determine predictors of adherence. **RESULTS:** A majority of the cohort ( $N = 6890$ ) was 63.7 ( $\pm 11.23$ ) years old, male (95.6%), Caucasian (19.4%), taking simvastatin (84.6%), and had hypertension (73.0%). Statistically significant differences were seen in all variables between the adherent and nonadherent groups at baseline with few exceptions. Nonadherent patients had an MPR of 55% compared to adherent patients MPR of 95% ( $p < 0.0005$ ). No difference in adherence found between non-service connected patients and those service connected ( $p = 0.449$ ). Patients who were older (OR = 1.01, 95%CI: 1.002-1.014), had higher percent service connection (OR = 1.00, 95%CI: 1.000-1.004), and high quantity of medications (OR = 1.05, 95%CI: 1.032-1.064) were more likely to be adherent. **CONCLUSIONS:** Copayment had no effect on adherence. However, patients who had a higher percentage service connection were more likely to be adherent to their statin medication.

### PCV104 ANALYSIS OF ANGIOTENSIN-CONVERTING-ENZYME INHIBITORS IN THE US MEDICAID PROGRAM FROM 1991 TO 2007

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**OBJECTIVES:** Angiotensin-converting-enzyme (ACE) inhibitors have been widely used for treatment of hypertension, heart failure, diabetes mellitus and kidney disease. The purposes of this study was to describe the utilization and spending trends of ACE inhibitors and assess market-share competition between brand-name and generic drugs in the US Medicaid Program. **METHODS:** Since captopril, the 1st ACE inhibitor, introduced in 1981, there are 22 brand-names including 10 combination drugs are available in the market. Multiple generic ACE inhibitors are available including benazepril, captopril, enalapril, fosinopril, lisinopril, moexipril, perindopril, quinapril, and ramipril. National Medicaid pharmacy data were extracted from CMS from 1st quarter 1991 to 3rd quarter 2007 in order to obtain quarterly total prescription numbers and reimbursement amounts. The per-prescription reimbursement as a proxy of drug price was calculated for all study ACE inhibitors. The market-shares were calculated based on proportion of total prescriptions numbers. **RESULTS:** By 2005, the expenditure for ACE inhibitors reached to \$490.5 million (\$248 million for brand drugs and \$242.5 million generic drugs). But it had been seen a sudden drop on the utilization of both brand-name and generic ACEIs since 2006 quarter 1 because of implementation of Medicare PartD. The average per-prescription reimbursement for brand-name ACE inhibitors increased overtime from \$35.2 in the first quarter of 1991 to \$67.1 in the third quarter of 2007, whereas per-prescription reimbursement for generics decreased from \$31.5 in 1996 to \$22.4 in 2007. After the generics entry, the market share of brand-name drugs dropped from 100% in 1991 to 12.6% in 2007. **CONCLUSIONS:** Generic reimbursement prices decreased due to their competitions, while the brand-name drug prices increased overtime regardless new entry counterparts. There is a dramatic competition in market share between brand-name and generic drugs in Medicaid program.

### HT4 IN PROMETHEUS' SHADOW: EPIDEMIOLOGICAL AND ETHICAL PERSPECTIVES ON OUTCOMES OF CARDIOPULMONARY RESUSCITATION

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**OBJECTIVES:** Cardiopulmonary resuscitation (CPR), a life-saving technology developed mid-20th century, was intended to prevent sudden, unexpected death. Since then, CPR has increasingly been performed on terminal patients with irreversible illness treated in acute care settings. The objectives were to: synthesize the literature estimates of survival following CPR delivered in acute care hospitals; identify predictors of survival; and contextualize the findings in terms of ethics of end of life care. **METHODS:** We conducted a comprehensive literature review using PUBMED to identify studies in which survival after CPR was reported for adult patients treated in hospitals. **RESULTS:** The literature yielded 130 studies reporting survival after CPR. The most common outcomes were return of spontaneous circulation (52% of studies, arithmetic mean survival 43% (range 12% to 100%)) and survival to hospital discharge (64% of studies, arithmetic mean survival 15% (range 0% to 40%)). Diagnoses with lower rates of survival included metastatic cancer, sepsis, renal failure, pneumonia, stroke, diabetes and AIDS. **CONCLUSIONS:** While heterogeneity in study populations and outcomes invalidated summary estimates, all studies showed that only a minority of patients undergoing CPR survived even to hospital discharge. Current use of CPR in many hospitalized patients likely does not achieve consensus goals, to: preserve life, restore health, and limit disability. Reviving terminally ill patients or those with major co morbidities should involve consideration of the efficacy, preferences of patients and caregivers, and burdens imposed. However, unlike Prometheus who was punished for stealing fire from Zeus and handing it to mankind, the burden of CPR is carried by