

tified from the Clinical Practice Research Datalink (CPRD). From this cohort, three groups of patients were identified and counted for 2010, 2011 & 2012: Group 1 – very high-risk T2DM patients with CVD, TC  $\geq$  4.0 to  $<$ 5.0mmol/l and low-density lipoprotein cholesterol  $\geq$ 2.0mmol/l despite statin treatment; Group 2 – untreated patients, with a TC  $\geq$ 5.0mmol/l who were not prescribed any LLT after ceasing statin therapy; Group 3 – patients prescribed atorvastatin, rosuvastatin and/or ezetimibe with TC  $<$ 5.0mmol/l who previously had TC  $\geq$ 5.0mmol/l. Numbers were extrapolated to the population in England. **RESULTS:** Of the general population in England in 2012, 8, 200, 699 (15.4%) patients had a TC test recorded, with similar proportions in 2010 & 2011 (15.4% and 15.3% respectively). Among the three groups defined in this analysis, a total of 305, 261 patients eligible for ezetimibe were not included in the 2012 estimates by HSCIC. This represents an 80.0% increase of the original estimate of 381, 797 patients using the original HSCIC methodology, corresponding to 33, 753, 141, 619, and 129, 889 patients in Groups 1, 2 and 3, respectively. Hence a year-on-year increase in the estimated eligible population were observed compared to the original HSCIC estimate; 64.8% increase in 2010 and 75.7% increase in 2011. **CONCLUSIONS:** A significant and increasing number of high-risk patients eligible for ezetimibe were missed in the HSCIC estimates during 2010-2012.

#### PCV24

##### MORE THAN ONE IN TWO INSTANCES OF VENOUS THROMBOEMBOLISM (VTE) TREATED IN FRENCH HOSPITALS COULD HAVE OCCURRED DURING THE HOSPITAL STAY

Allaert FA<sup>1</sup>, Benzenine E<sup>2</sup>, Quantin C<sup>3</sup>

<sup>1</sup>CEN Biotech/CEN Nutrimet, Dijon, France, <sup>2</sup>university hospital, Dijon, France, <sup>3</sup>University hospital, Dijon, France

**OBJECTIVES:** describe the prevalence of venous thromboembolism (VTE), pulmonary embolism (PE) and deep vein thrombosis (DVT) without PE among all hospitalized patients and the percentages of those occurring during the hospital stays. **METHODS:** Statistics are issued from the national PMSI MCO databases which are encoded using the CIM10. The codes used for VTE are I801 to I809 for DVT and codes I260, I269 for PE... Any stay with the ICD-10 codes selected regardless of the Principal Diagnosis of Medical Unit Summaries and whatever its position (Principal, Related or Associated Diagnosis) was considered as a hospital-occurred thrombosis unless it was the Principal Diagnosis of the first Medical Unit Summary of the stay. To eliminate outpatient consultations or in day care, stays of  $<$  48 hours were excluded. The term of hospital-occurred is preferred to hospital-acquired VTE suggesting a nosocomial origin which can be the case or not. **RESULTS:** The results bear on the 18 683 603 hospital stays in 2010-2011. Out of 100 hospital stays involving VTE, for 40.3% VTE was the cause of hospitalization whereas 59.7% can be considered to have occurred during hospital-stay. These distributions are of 25.6% and 74.4% for DVT respectively 53.8% and 46.2% for PE. The age of patients varies little with whether VTE, DVT, and PE were hospital-occurred or not and are similar in men and women. The percentage of mortalities of these VTE is high and reaches 6.58% and the mortality from VTE, DVT, and PE is multiplied by a factor of 3 to 4 ( $p <$  .0001) when hospital-occurred. **CONCLUSIONS:** The high proportion of hospital-occurred VTE is an alarming situation that should question the quality of prevention and/or its effectiveness. VTE prevention policies must be strengthened in hospitals for the sake of patients and health care savings alike.

#### PCV25

##### RISK FACTORS ASSOCIATED WITH VENOUS THROMBOEMBOLISM RECURRENCE IN A EUROPEAN POPULATION

Hamilton M<sup>1</sup>, Gupta S<sup>2</sup>, Goren A<sup>3</sup>, Auziere S<sup>4</sup>, Claflin AB<sup>5</sup>, Reboul R<sup>4</sup>, Phatak H<sup>1</sup>

<sup>1</sup>Bristol-Myers Squibb Company, Princeton, NJ, USA, <sup>2</sup>Kantar Health, Princeton, NJ, USA, <sup>3</sup>Kantar Health, New York, NY, USA, <sup>4</sup>Kantar Health, Montrouge, France, <sup>5</sup>Pfizer, Inc., New York, NY, USA

**OBJECTIVES:** This study estimated venous thromboembolism (VTE) recurrence and associated risk factors in a European population, given limited data in this region. **METHODS:** This retrospective cohort study included data from physicians (376 general practitioners and 307 specialists) in France, Spain, Italy, and Germany, who completed case report forms (2,184 patient records) for the next 3-4 patients seen in consultation for any reason who had an initial VTE event 3 to 24 months prior (i.e., patients surviving 90 days since initial VTE). All Anderson & Spencer individual risk factors (plus gender, bleeding, and initial VTE type, but excluding previous VTE and bed rest  $>$ 3 days) were entered into a Cox proportional hazard model accounting for censored data and predicting VTE recurrence. Backward stepwise regression was used to select a reduced final model. **RESULTS:** Patients' mean age was 61.3 years (SD=14.3) and 47.4% were female. Of 2,184 patients, 379 developed recurrent VTE over 1,298 person-years of follow-up. The final model included: age=40+ (91.6%) vs. 18-39 years, varicose veins (26.4%), history of heart failure (5.9%), congestive respiratory failure (1.3%), arthroscopic knee surgery (2.2%), central venous line (0.9%), chemotherapy (6.1%), and orthopedic (3.1%) surgery. Significant, independent predictors of recurrence were: varicose veins (hazard ratio [HR]: 1.4; 95% confidence interval [CI] 1.1-1.8), central venous line (HR: 3.2; CI 1.5-6.8), congestive respiratory failure (HR: 2.4; CI 1.2-4.6), and heart failure (HR: 1.5; CI 1.1-2.2). Other factors, including age=40+, knee surgery, chemotherapy, orthopedic surgery, and type of VTE (e.g., deep vein thrombosis vs. pulmonary embolism) did not exhibit significant associations with recurrence of VTE. **CONCLUSIONS:** VTE recurrence is high in this European population and associated with several independent risk factors. Targeted anticoagulant treatment post-initial VTE plus longer term prevention of recurrence are needed, including attention to risk factors that help differentiate patients more likely to experience recurrence.

#### PCV26

##### REAL WORLD INCIDENCES AND HOSPITAL COST OF VENOUS AND PULMONARY THROMBOEMBOLIC EVENTS IN FRANCE

Bouee S<sup>1</sup>, Emery C<sup>2</sup>, Samson A<sup>3</sup>, Bailly C<sup>4</sup>, Cotté FE<sup>4</sup>

<sup>1</sup>Cemka, Bourg la Reine, France, <sup>2</sup>Cemka, Bourg La Reine, France, <sup>3</sup>Paris-Dauphine University, Paris, France, <sup>4</sup>Bristol-Myers Squibb, Rueil Malmaison, France

**OBJECTIVES:** To estimate the cumulative incidence and hospital cost for venous and pulmonary thromboembolic events in a real world setting in France. **METHODS:** We conducted a retrospective analysis of the EGB database, a 1/97th random sample of the whole National health insurance database records linked to hospitalizations. All patients hospitalized in 2010 and 2011 with a diagnosis of deep vein thrombosis (DVT) or pulmonary embolism (PE) were included. Inpatients were identified through principal diagnosis of hospitalization stay. Outpatients with a DVT were identified by 1) an echo Doppler exam, 2) preceded or followed by a low molecular weight heparin or fondaparinux delivery (+/-7 days), and 3) a subsequent Vitamin K antagonists delivery (0 to 7 days). Incidences and annual hospital cost of DVT and PE were estimated and extrapolated to the overall French population, and cumulative proportions of recurrences were calculated. **RESULTS:** For 2011, the estimated crude incidences were 141/100,000 (91,650 patients) for DVT, and 79.4/100,000 for PE (51,610 patients in France). Mean age of patients was 67.0+/-17.2 years for PE and 64.1+/-17.7 years for DVT. A majority of patients were females (57% in both groups). After index event (PE/DVT), the cumulative proportions of venous thromboembolic recurrences were 2.6% at 1 month, 3.7% at 3 months, 5.1% at 6 months and 6.7% at 12 months. The cumulative proportions of death after a PE and a DVT first event were 0.2% at 1 month, 1.1% at 3 months, 2.6% at 6 months and 6.2% at 12 months. Annual hospital cost of venous and pulmonary thromboembolic events was estimated at 712 million € (362 million € for DVT and 350 million € for PE). **CONCLUSIONS:** In 2011, around 143,000 patients suffered from venous and pulmonary thromboembolic events in France. Hospitalized events accounted for an important burden in France.

#### PCV27

##### COGNITIVE FUNCTION AND NON-ADHERENCE TO ANTIHYPERTENSIVE MEDICATIONS

Li SS, Brondolo E, Dalrymple N, Schupf N, Kronish IM  
Columbia University, New York, NY, USA

**OBJECTIVES:** Non-adherence to blood pressure medications is common, present in 30-50% of patients, and known to be associated with an increased risk for major cardiovascular events and increased health care costs. Prior research suggests that impaired cognitive function is associated with medication non-adherence. Our aim was to determine if easily administered measures of cognitive function can be used to identify hypertensive patients at increased risk of medication non-adherence. **METHODS:** A convenience sample of 101 primary care patients (n=101) with uncontrolled hypertension was enrolled from two hospital-based clinics in ethnically diverse communities of New York City. Patients with overt dementia as noted by their primary care doctors were ineligible. Subjects completed three brief cognitive tests ( $\leq$  5 minutes to complete each one): Trail Making Test-A, Trail Making Test-B, and the Symbol Digit Modalities Test. The primary outcome was adherence based on percentage of doses taken as prescribed, measured by a 4-compartment electronic pillbox (MedSignals). Multivariable logistic regression was used to determine if impaired cognitive function was associated with poor adherence after adjusting for age, gender, ethnicity, education, and total blood pressure medications. **RESULTS:** Patients who were classified as impaired when screened by Trail Making Test-B had a three-fold (OR=2.91, 95% CI, 1.02-8.35) increased likelihood of non-adherence compared with those who were not impaired, adjusting for age, education, gender, ethnicity, and number of BP medications ( $p = .05$ ). Trail Making Test-A and Symbol Digit Modalities Test were non-significant predictors of adherence in both adjusted and unadjusted analyses. **CONCLUSIONS:** Trail Making Test-B, a measure of executive function, may be a useful screening tool to identify patients without overt dementia who are at risk for non-adherence to anti-hypertensive medications. The findings from this study may provide an opportunity to identify a tailored approach to medication adherence interventions.

#### PCV28

##### RETROSPECTIVE ANALYSIS ON HOSPITALIZATION AND HEALTH CARE COSTS, ACCORDING TO SERUM URIC ACID LEVELS IN PATIENTS FROM A SAMPLE OF ITALIAN LOCAL HEALTH UNITS

Degli Esposti L<sup>1</sup>, Saragoni S<sup>1</sup>, Buda S<sup>1</sup>, Desideri G<sup>2</sup>, Borghi C<sup>3</sup>

<sup>1</sup>ClicCon Srl, Ravenna, Italy, <sup>2</sup>L'Aquila University, L'Aquila, Italy, <sup>3</sup>Policlinico S. Orsola, University of Bologna, Bologna, Italy

**OBJECTIVES:** Hyperuricemia is an independent risk factor for gouty arthropathy, renal disease, atherosclerosis and cardiovascular diseases (CVD). The objective of this study was to explore the relationship between serum uric acid (SUA) levels and hospitalization events and assess health care costs. **METHODS:** A retrospective analysis using a large administrative database and a clinical registry containing laboratory results was performed. Subjects, aged  $\geq$  18, were assigned to one of the 4 groups based upon the first SUA measurement between October 1, 2010 and September 30, 2011:  $\leq$ 6 mg/dl [good-control],  $>$ 6 mg/dl and  $\leq$  7 mg/dl [fair-control],  $>$  7 mg/dl and  $\leq$  8 mg/dl [poor-control],  $>$  8 mg/dl [very-poor-control]. We calculated incidence rates to estimate the risk of hyperuricemia-related and CVD hospitalizations occurred until December, 2012. A Poisson regression model was used to assess the relationship between the number of CVD hospitalizations and SUA level. Total annual costs included all the pharmacological treatments and the direct costs due to hospitalizations and outpatient services. **RESULTS:** Of 52,822 patients included, SUA level was  $\leq$  6 mg/dl -good-control- for 33,638 (63.7%) patients and  $>$  6 mg/dl -suboptimal-control- for 19,184 patients (36.3%), of whom 60.7% with fair-control, 25.8% poor-control and 13.5% very-poor-control. Compared with good-control group, suboptimal-control patients showed an increased risk of hyperuricemia-related hospitalizations (unadjusted rate was 1.02 vs 0.43 per 1000 person-years,  $p <$  0.001) and of CVD hospitalizations (unadjusted rate 5.09 vs 3.17 per 100 person-years,  $p <$  0.001; adjusted incidence rate ratio 1.22,  $p <$  0.001). Over one year, the mean total cost was: €2,077.43 in good-control patients; €2,079.87 in fair-control patients; €2,296.39 in poor-control patients; €3,295.41 in very-poor-control patients. **CONCLUSIONS:** The 36.3% of the patients in this study sample were at sub-optimal SUA control ( $>$ 6mg/dl). This analysis indicates that higher hyperuricemia-related and CVD hospitalizations as well as total health care costs resulted associated with higher SUA levels.