

## PCV12

**THE ECONOMIC BURDEN OF ATRIAL FIBRILLATION AND FLUTTER IN KOREA**Jo MW<sup>1</sup>, Kim EJ<sup>2</sup>, Kim HJ<sup>2</sup>, Yun SJ<sup>2</sup><sup>1</sup>University of Ulsan College of Medicine, Seoul, South Korea; <sup>2</sup>Korea University, Seoul, South Korea

**OBJECTIVES:** This study estimated the economic burden of atrial fibrillation & flutter (AF) in Korea with societal perspective. **METHODS:** We identified patients who had at least three national health insurance (NHI) claims record with a primary or a secondary diagnosis of AF (ICD-10 codes: I48) in 2007. Health sector costs of the stroke were measured from the NHI PUKclaims records. Patient and family costs were estimated as transportation and care-givers' costs when admitting the hospitals and visiting the outpatient clinics and care-givers' cost. The costs due to productivity loss were defined as patients and caregivers productivity loss associated with outpatient visits or hospitalizations. **RESULTS:** A total of 56,499 AF patients were identified with prevalence for treatment of AF. The total cost of AF in the nation was estimated to be 589 billion Korean won (KRW) which included health sector cost at 41 billion KRW, patient/family cost at 8 billion KRW and cost due to productivity losses at 540 billion KRW. The per-capita cost of stroke was 10 million KRW. **CONCLUSIONS:** AF is not only an important risk factor for stroke but also has significant economic burden as a single disease entity. The cost due to productivity losses were identified as the largest component of the overall economic burden.

## PCV13

**CAN WE REDUCE COST OF ILLNESS WITH MORE COMPLIANT PATIENTS? THE ESTIMATION OF EFFECT OF 100% COMPLIANT TO TREATMENTS OF DIABETES AND HYPERTENSION**Kockaya G<sup>1</sup>, Wertheimer A<sup>2</sup><sup>1</sup>Istanbul University Istanbul Medical Faculty, Istanbul, Turkey; <sup>2</sup>Temple University School of Pharmacy, Philadelphia, PA, USA

**OBJECTIVES:** The current study was designed to calculate the direct cost of non-compliance and the direct cost of undiagnosed diabetes and hypertension to US's health system. Understanding these expenses can inform screening and education budget policy regarding expenditure levels that can be calculated to be cost-beneficial. **METHODS:** The study was conducted in three parts. First, a computer search was performed to get the numbers required for calculations. Second, a calculation formulation was estimated for noncompliance and undiagnosed diabetes and hypertension. Third, calculation was undertaken in the light of the numbers and formulation previously obtained. **RESULTS:** Direct risk reduction caused by hypertension for stroke, heart attack, kidney disease and heart disease were calculated for 100% Compliant Strategy. Risk, case and cost reduction for 100% Compliant strategy were 32%, 8.5 million and US\$72 billion, respectively. Direct risk reduction caused by diabetes for eye diseases, kidney disease, stroke, heart disease, amputation were calculated for 100% Compliant Strategy. Risk, case and cost reduction were calculated for 100% Compliant Strategy were 19%, 1 million and US\$16.5 billion, respectively. **CONCLUSIONS:** The society; government, insurers, political and other stakeholders can spend up to these amounts in screening, education and prevention efforts in an effort to reduce these costly and traumatic sequelae of noncompliant diabetes and hypertension patients.

## PCV14

**COSTS OF INITIAL ISCHEMIC STROKE CARE**Kim SH<sup>1</sup>, Jo MW<sup>1</sup>, Kim EJ<sup>2</sup>, Kim HJ<sup>2</sup>, Yun SJ<sup>2</sup><sup>1</sup>University of Ulsan College of Medicine, Seoul, South Korea; <sup>2</sup>Korea University, Seoul, South Korea

**OBJECTIVES:** The purpose of this study is to estimate the cost of ischemic stroke after its diagnosis and compare to its consecutive monthly costs for 1 year. **METHODS:** The study subjects were patients with an initial diagnosis (ICD code: I63). The data were obtained from National Health Insurance Corporation data, National health and nutrition examination survey and national statistics. We analyzed costs in societal perspective. Stroke costs are classified into direct medical costs, transportation and caregiver costs. **RESULTS:** Ischemic stroke costs for the initial month were ten times as much as the costs for the following successive month after diagnosis. In the first month, medical costs accounted for almost 90% of the total stroke costs. Inpatient costs and outpatient costs are occupied 55%, 33%, respectively. **CONCLUSIONS:** The stroke costs after initial diagnosis are substantial. The effort to reduce stroke costs and early detection for stroke can reduce the burden to society.

## PCV15

**DIRECT MEDICAL COSTS FOR PULMONARY EMBOLISM AFTER ORTHOPEDIC SURGERY IN SLOVAKIA**Bielik J<sup>1</sup>, Lukac M<sup>2</sup>, Foltan V<sup>3</sup>, Tomek D<sup>4</sup>, Zatkó S<sup>5</sup><sup>1</sup>Faculty of Health, Trenčín, Slovak Republic; <sup>2</sup>Slovak Medical University, Bratislava, Slovak Republic; <sup>3</sup>Comenius University, Bratislava, Bratislava, Slovak Republic; <sup>4</sup>Slovak Society for Pharmacoeconomics, Bratislava, Slovak Republic; <sup>5</sup>General Health Insurance, Bratislava, Slovak Republic

**OBJECTIVES:** Orthopedic surgery is one of the highest risk factors for venous thromboembolism. The main objective of this retrospective database analysis was to examine direct medical costs for pulmonary embolism (PE) in patient undergoing orthopedic surgery in Slovakia from the payer perspective. **METHODS:** A retrospective database analysis of biggest health insurance company in Slovakia was conducted. Resources

used and their respective costs in connection with PE were collected for patients undergoing elective total hip replacement (THR) or elective total knee replacement (TKR) during the period from January 1, 2008 until January 1, 2009. All resources and costs were categorized in four groups: inpatient, outpatient, drugs and examinations. Costs in Euro were calculated with official exchange rate 30,126 Sk/f. Cost comparison between groups of patients with PE and without PE after orthopedic surgery was done. **RESULTS:** The group of 3008 patients (995 men and 2013 women) after elective orthopedic surgery was analyzed. There were 2325 patients with THR and 993 with TKR. Twelve cases of PE which were hospitalized, were identified in the whole group. Average direct medical costs for group of patients hospitalized for pulmonary embolism were €3909 with the following structure of costs: inpatient—€2442; outpatient—€168; drugs—€552; examinations—€747, respectively. **CONCLUSIONS:** Average direct medical costs for patients with PE after elective orthopedic surgery were €3909 in 2008. This is €724 more than the average direct medical costs for patients without PE.

## PCV16

**INPATIENT MANAGEMENT AND COSTS OF ACUTE CORONARY SYNDROMES IN FACULTY HOSPITAL: COMPARISON OF STEMI AND NON-STEMI**Ondrackova B<sup>1</sup>, Felsoci M<sup>2</sup>, Parenica J<sup>2</sup>, Spinar J<sup>2</sup>, Sulcova A<sup>1</sup>, Tomcikova D<sup>1</sup><sup>1</sup>Masaryk University, Brno, Czech Republic; <sup>2</sup>Faculty Hospital Brno, Brno, Czech Republic

**OBJECTIVES:** The incidence of acute coronary syndrome (ACS) in the Czech Republic is 3248 cases/million/year (CZECH registry) and belongs to the most frequent causes of hospitalizations. The aim was to assess and compare costs and length-of-stay in patients with STEMI and non-STEMI in the Faculty Hospital in the Czech Republic from payer's perspective. **METHODS:** Retrospectively tracked data were clinical characteristics, medication, stay in standard cardiology unit (SCU) and/or intensive care unit (ICU) and revascularization procedures in patients hospitalized with STEMI or non-STEMI in specialized center for patients with ACS. Inpatient care costs include flat rate of admission, examinations, stay in monitored bed, drugs and particularly coronary angiography and percutaneous coronary intervention (PCI) (25.5CZK = 1EUR). **RESULTS:** Total 385 patients (mean age 63.9 years; 75.6% male; 61% hypertensive) were evaluated, 54.5% of patients with STEMI and 45.5% of patients with non-STEMI. 15.1% of patients had MI in anamnesis and 9% of patients were treated previously PCI. The coronary angiography was performed during hospitalization in 95% of patients; revascularization by PCI with stent implantation was in 71.9% of patients (86.2% STEMI and 54.9% non-STEMI;  $P < 0.001$ ); 10.9% were treated by coronary-artery bypass (5.2% STEMI and 17.7% non-STEMI;  $P < 0.001$ ). The mean length-of-stay was 5.7 days (5.9 days STEMI and 5.5 days non-STEMI;  $P = 0.033$ ) with mean total cost €3597.5 (€4288.7 STEMI and €2768.0 non-STEMI;  $P < 0.001$ ). 77.1% of patients were in need of ICU on an average 2.3 days. The mean rate of PCI was €3380. **CONCLUSIONS:** Acute coronary syndromes present substantial medical, social, and economic burden worldwide in particular due to high prevalence and expensive treatment procedures. In our study the cost of PCI formed around 85% of a total inpatient cost in both STEMI and non-STEMI.

## PCV17

**ESTIMATING COST OF INPATIENT CORONARY ANGIOGRAPHY USING STEP DOWN METHOD AT UNIVERSITY KEBANGSAAN MALAYSIA MEDICAL CENTER**Ahmed Z<sup>1</sup>, Aljunid S<sup>2</sup>, Nur AM<sup>1</sup><sup>1</sup>University Kebangsaan Malaysia, Kuala Lumpur, Malaysia; <sup>2</sup>UNU-IIGH, Kuala Lumpur, Malaysia

**OBJECTIVES:** Cardiovascular diseases are the leading cause of morbidity and mortality in the world. Coronary angiography remains the corner stone in the management of CVD, and the gold standard for CAD diagnosis. The coronary angiography is performed to diagnose the presence and severity of CAD. Globally, diagnostic cardiac catheterization ranks as the sixth most commonly performed health-care procedure with total charges exceeding \$4 billion annually. This high volume makes the coronary angiography a subject of interest to all health-care manager, health economist and clinicians. The Objective of this study is to utilize the Step Down costing methodology for estimating the cost of Coronary Angiography at UKMMC. **METHODS:** This is a cross sectional study, using random sampling with 303 patients who have undergone Coronary Angiography as inpatient at UKMMC, between January 2003 till December 2005. The sample is grouped using International Refined DRG (IR-DRG) to assign DRG to each patient. Step down costing is done to cost these Coronary Angiography patients using Clinical Cost Modeling (CCM) software Ver. 2.1. Costing tool gives us the cost per day of stay in the Cardiology ward. Once related to the Length of Stay (LOS) cost of entire inpatient care episode were estimate. The cost of a procedure at the catheterization lab (CathLab) was calculated using the step down methodology. Cost of the inpatient Coronary Angiography is calculated by summation of CathLab cost and cost of inpatient episode of care. **RESULTS:** Cost of Inpatient Coronary Angiography at UKMMC ranges from RM 1007 to RM 16,697.26 (mean = RM 5,110.89, SD RM 2,798.06). Cost per procedure in CathLab is estimated to be RM 384. The total cost of treatment for 303 patients is RM 82,115. **CONCLUSIONS:** Step Down Costing using the CCM is an easy way estimating the cost of one of the high volume procedure. This can help devising strategies for better utilization of scarce health-care resources.