THE ECONOMIC BURDEN OF ATRIAL FIBRILLATION AND FLUTTER IN KOREA
Jo MW1, Kim EJ2, Kim HJ1, Yun SJ3
1University of Ulsan College of Medicine, Seoul, South Korea; 2Korea University, Seoul, South Korea

OBJECTIVES: This study estimated the economic burden of atrial fibrillation & flutter (AF) in Korea with societal perspective. METHODS: 4,000 patients who had at least three national health insurance (NHI) claims recorded 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 PUClaims records. Patient and family costs were estimated as transportation and caregiver’s costs when visiting the hospitals and visiting the outpatient clinics and care-giver’s 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 5,699 AF patients were identified with prevalence for treatment of AF. The total cost of AF in the nation was estimated to be 5.89 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.

CAN WE REDUCE COST OF ILLNESS WITH MORE COMPLIANT PATIENTS? THE ESTIMATION OF EFFECT OF 100% COMPLIANT TO TREATMENTS OF DIABETES AND HYPERTENSION
Kockays G1, Werthermaier A2
1Istanbul University Istanbul Medical Faculty, Istanbul, Turkey; 2Temple 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 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 formula was estimated for noncompliance and undiagnosed diabetes and hypertension. Third, calculation was undertaken in the light of the numbers and formulation previously obtained. RESULTS: A total of 56,499 AF patients were identified 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 care unit (ICU) and revascularization procedures in patients hospitalized with STEMI or non-STEMI were identified for noncompliance and undiagnosed diabetes and hypertension.

COSTS OF INITIAL ISCHEMIC STROKE CARE
Kim SH1, Jo MW2, Kim EJ2, Kim HJ3, Yun SJ3
1University of Ulsan College of Medicine, Seoul, South Korea; 2Korea University, Seoul, South Korea

OBJECTIVES: The purpose of this study is to estimate the total 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.

DIRECT MEDICAL COSTS FOR PULMONARY EMBOLISM AFTER ORTHOPEDIC SURGERY IN SLOVAKIA
Bielik J1, Lukas MP2, Fottian V3, Tomak D4, Zatko D5
1Faculty of Health, Trnava, Slovak Republic; 2Slovak Medical University, Bratislava, Slovak Republic; 3Comenius University, Bratislava, Bratislava, Slovak Republic; 4Slovak Society for Pharmacoconomics, Bratislava, Slovak Republic; 5General 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 examination. Costs in Euros were calculated with official exchange rate 30,126 Sk/E. 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 683 PE which were hospitalized 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—€532; examinations—€747, respectively. CONCLUSIONS: Average direct medical costs for patients with PE after elective orthopedic surgery were €3909 in 2008. This is 7242 more then the average direct medical costs for patients without PE.

NON-STENT MANAGEMENT OF PULMONARY EMBOLISM AFTER ELECTIVE ORTHOPEDIC SURGERY IN SLOVAKIA FROM THE PAYER PERSPECTIVE

INPATIENT MANAGEMENT AND COSTS OF ACUTE CORONARY SYNDROMES IN FACULTY HOSPITAL: COMPARISON OF STEMI AND NON-STEMI
Ondrackova B1, Felsoci M2, Parenica J2, Spinjir J3, Sulcova A1, Tomcikova D1
1University of Ulsan College of Medicine, Seoul, South Korea; 2Korea University, Seoul, South Korea; 3University of Ulsan Hospital, Seoul, South Korea

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 of ACS 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 include flat rate of admission, examinations, stay in monitored bed, drugs and particularly costs of coronary angiography and percutaneous coronary intervention (PCI) (25,155K = 1EUR). RESULTS: Total 385 patients (mean age 63.9 years; 75.6% male; 61% hypertensive) were evaluated, 54.3% of patients with STEMI and 45.7% 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; recanalization PCI with stent implantation was in 71.9% of patients (68.2% STEMI and 34.9% 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 €5397.5 (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.

ESTIMATING COST OF INPATIENT CORONARY ANGIOGRAPHY USING STEP DOWN METHOD AT UNIVERSITY KEBANGSAAN MALAYSIA MEDICAL CENTER
Aminudin S1, Ahmad S1, Nur AM1
1University Kebangsaan Malaysia Kuala Lumpur, Malaysia, 2UNUSIH, 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 managers, 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 (CardLab) was calculated using the step down methodology. Cost of the inpatient Coronary Angiography is calculated by summation of CardLab cost and cost of inpatient episode of care. RESULTS: Cost of Inpatient Coronary Angiography PE which ranges from RM 1007 to RM 16,697 (mean = RM 5,110.89, SD RM 2,798.06). Cost per procedure in CardLab 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 cost and time-consuming procedure. This can help devising strategies for better utilisation of scarce health-care resources.