separate models to calculate cost of illness for each selected disease. Medical resources included hospital stays, outpatient visits, ambulance service and reha-
bilitiation. RESULTS: Obesity-related and overweight-related expenses incurred by the state for treatment and management of patients were amounted to 10.2 billion rubles ($190.5 million) for stroke, 7.6 billion rubles ($141.9 million) for heart attack and 41.5 billion rubles ($777 million) for diabetes mellitus. This increase in costs and overweight associated with significant economic burden on Russia’s health care system. There is a striking direct relationship between the cost of care on stroke, heart attack, diabetes mellitus and obesity and overweight that leading to increasing significant economic and social losses.

PCV77 MEDICAL COSTS AND RESOURCES CONSUMPTION IN PATIENTS WITH ATRIAL FIBRILLATION: AN ITALIAN OBSERVATIONAL STUDY

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OBJECTIVES: The prevalence of atrial fibrillation (AF), a common form of cardiac arrhythmia, is rapidly rising in the developed world. Though several studies addressed the cost of illness, recent improvements in the disease management may have affected per capita medical resources consumption and costs, therefore it is desirable to provide updated estimates. This naturalistic study aimed at estimating costs and resource consumption related to AF from the perspective of the Italian Healthcare System in a large cohort of hospitalized cases. METHODS: Using healthcare administrative databases (HADB) of Lombardy, a region in Northern Italy (10 million dwellers), we identified the cohort of residents who underwent a first hospitalization with a diagnosis of AF between 2003 and 2009, after a wash-out period of 3 years. We followed them until 2010, death or emi-
gration. We extracted from HADB information on hospitalizations, drug prescrip-
tions and outpatient visits related with direct costs. We estimated mean annual resources consumption per 100 subjects and mean annual per capita costs through the baseline. RESULTS: Patients were 75 ± 12 years of age, 49% males, with a mean age of 75 years (±12 standard deviation) and a mean survival time of 5 years (95% confidence interval: CI): 5.0; 5.1) from baseline. Mean annual per-capita expenditure was 4008€ (95% CI: 3810; 4206), of which 65.2% were related to hospitalizations, 18.5% by drug prescriptions and 16.3% by outpatient visits. We estimated 84.7 hospital admissions, the main driver of costs, per 100 subjects per year (95%CI: 83.8; 85.6), of which 17.0 (95%CI: 16.8; 17.2) with an AF diagnosis. CONCLUSIONS: In line with literature, our results highlighted a high burden of AF, with large per capita healthcare expenditures and a high number of hospitalizations. Since AF has been described as an epi-
demic, increased attention should be devoted to the management of such disease.

PCV78 COSTS OF CARDIOVASCULAR (CV) EVENTS IN THE UNITED KINGDOM (UK) USING REAL-WORLD DATA

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OBJECTIVES: To determine direct medical costs of cardiovascular (CV) events in the UK: myocardial infarction (MI), ischemic stroke (IS), heart failure (HF), transient ischemic attack (TIA), unstable angina (UA), and revascularisation. METHODS: We used a retrospective, observational, population-based database, Clinical and Hospital Episode database to identify individuals with their first and, if present, repeated CV-related hospitalisations. Patients > 18 years receiving lipid-modifying therapy within 180 days before the CV event were followed for 36 months, death, or loss to follow up. Patients were classified as CV Low/Moderate Risk, CV High Risk and CV Event History. Baseline (12 months before first CV event), acute (first 6 months after-
ward) and long-term costs (subsequent 30 months, annually) were estimated by applying 2014 UK costs to drugs, hospitalisations and visits. Incremental CV event-related costs were calculated as the difference from baseline, reporting means across all cohorts and ranking cohort-specific means. RESULTS: There were 6,408 patients in CV Low/Moderate Risk, 17,685 in the CV High Risk, and 5,274 in CV Event History cohorts. Across the three cohorts, mean incremental CV event costs for revascularisation were £5,669 (£2,566-£10,034), £E10,227 (£5,987-£14,467), £E13,853 (£10,183-£17,523) and £E21,839 (£15,082-£28,600). Mean incremental long-term costs were as follows: HF £1,129 (£1,052-£1,206), MI £953 (£892-£1,016), TIA £793 (£730-£856), IS £933 (£871-£1,000) and revascularisation -£221 (-£411,-£539). Costs of CV Low/Moderate Risk cohort ranked the lowest, costs of CV High Risk and CV Event History costs were the primary drivers for both periods. CONCLUSIONS: Revascularisation and MI are the costliest CV events. The costs are the highest in the acute phase dur-
ing the first 6 months after a CV event and generally remain higher compared with pre-event periods. Using real-world evidence, the economic burden of CV patients in the UK is substantial.

PCV79 ESTIMATING THE ECONOMIC BURDEN OF STROKE IN SOUTH INDIA: A COST-OF-ILLNESS STUDY

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OBJECTIVES: The recently-observed trend towards the stroke patients in raises the economic concerns. Cost-of-illness (COI) analysis is the main method of providing an overall impact on the economic impact of a disease. The main objec-
tive of this study is to estimate the economic burden of stroke. METHODS: The economic burden of stroke was estimated from a societal perspective with an incidence in a population of 100 individuals per 100,000. Costs related to stroke were collected from clinical registries and 100 patients were included. In the cost calculations, both direct and indirect costs were esti-
mated. RESULTS: Men (78%) consumed more acute care in hospitals, than the women (22%). Younger patients (59%) brought a significantly higher burden on society with an amount of 39.2 million rupees per 100,000. CONCLUSIONS: The increased use of resources in health care 41% of patients who have hypertension and 45% of patients with alcohol and smoking habits have more prone to stroke rehospitalization. Patients with chronic conditions. This highlights the enormous importance, for our healthcare service, to invest more in pre-
vention. This cost analysis highlights the importance of clinical pharmacist to set up significant prevention programs on selected, high-risk population to reduce the incidence of stroke, which is mostly attributable to hospital and inpatient rehabilitation costs immediately after the acute episode.

PCV80 SYSTEMATIC LITERATURE REVIEW OF DIRECT HEALTH CARE COSTS FOR CARDIOVASCULAR EVENTS AMONG EUROPEAN PATIENTS WITH DYSLIPIDOSIS OR HIGH CARDIOVASCULAR RISK

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OBJECTIVES: To review the direct patient-level costs of selected cardiovascular events following medical care among patients with dyslipidosis or high cardiovascular risk. METHODS: A systematic literature review was conducted for the period between January 2000 and December 2015. MEDLINE and Embase database, conference abstracts from the American Heart Association, American College of Cardiology, European Society of Cardiology, European Atherosclerosis Society, International Society of the Pharmacoeconomics and Outcomes Research and a variety of other databases were searched to identify published articles reporting direct costs of one or more CVEs (angina, myocardial infarction, cardiac revas-
cularization, heart failure, ischemic stroke, acute coronary syndrome) in Europe. RESULTS: The study highlight wide variation in the sources and populations used to populate economic models in the literature and the substantial costs of CVEs despite event type or country of origin.

PCV81 ESTIMATING THE BURDEN OF DIABETES TO THE FRENCH NATIONAL HEALTH INSURANCE

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OBJECTIVES: The aim is to assess for 2012 the direct and non-directly cost of dia-
betes from a public payer perspective using a new (bottom-up) method and the French health insurance medico-administrative database (SNIRAM). METHODS: Using information about 60 millions of individuals from the general scheme insure-
ance database (86% of the 69 million individuals insured by all French insurance schemes), we identified people who received care for diabetes if they had an ICD-10 diagnosis for diabetes as a long-term chronic disease or at least 3 annual reimbursements for anti-diabetic drugs. Costs of all reimbursed expenditures (out-patient/inpatient care, disability/sickness benefits) were extracted per individual. To estimate the burden of diabetes, we identified expenditure items which were directly attributable to diabetes (anti-diabetic drugs, medical devices, hospitaliza-
tion with an ICD diabetes code). For other expenditures, we used an incremental approach and also economic costs from direct medical expenditures (inpatient care, rehabilitation costs immediately after the acute episode). For diabetes fr...
episodes involving inpatient care and complications could lower substantially the burden of diseases.

PCV82
REAL WORLD EVIDENCE AND COSTS OF CHRONIC HEART FAILURE: FINDINGS FROM THE ARNO DATABASE
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OBJECTIVES: Patients with chronic heart failure (HF) in controlled trials do not fully represent real population followed in clinical practice. We wanted to give real world picture of epidemiology and hospitalization characteristics of patients with HF, by using the ARNO database. A total of 50,000 subjects. Evaluating the healthcare related costs over 1 year follow-up was performed. METHODS: Data come from ARNO database that includes in-habitants of 7 Local Health Authorities of the North and West of Italy. Patients data was selected at their admission for HF occurred over period of 5 years (January 1, 2008 to December 31 2012). To confirm diagnosis, all patients discharged alive should be prescribed typical treatment for HF. Clinical characteristics co-morbidities, treatment, need for re-hospitalization, total costs for NHS were calculated as hospitalizations, treatments and out-of-hospital speciality visits or examinations. RESULTS: 54,059 patients (2.2%) were admitted for HF. The major admitted was admitted in Internal Medicine/Geriatric Departments (69.5%). Of 54,059 patients, 41,413 were discharged alive and prescribed HF treatments. Need for re-hospitalization occurred frequently: 56.6% of patients were admitted at least once in 1-year follow-up, cardiovascular admissions accounted for just 51% of the total hospitalizations. All-cause 1-year mortality was 18.9%. Patient with HF generate a cost per year to NHS 7,429 (11,867 if first admission included). Cost per year were as follows: new hospitalization 36%, drug prescriptions 36%, visits/examinations 8%. CONCLUSIONS: Real world evidence in HF provides findings different from randomized clinical trials. Patients are older and more frequently females. Rate of use of treatments is not optimal. Cost of hospitalization remains high as hospitalizations are frequent. In nearly half cases, re-hospitalizations are due to non CV reasons, documenting relevant role of advanced age and co-morbidities. Costs for NHS are mainly driven by hospital costs.

PCV83
RESOURCE UTILIZATION AND TREATMENT COSTS OF STROKE IN PATIENTS WITH NON-VALVULAR ATRIAL FIBRILLATION IN SPAIN
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OBJECTIVES: Atrial Fibrillation (AF) is the most common arrhythmia in Europe. AF increases the risk of death and cost of care, and is the second leading risk factor for stroke. The study objective was to estimate the healthcare resource utilization and cost of patients with and without stroke. METHODS: Retrospective cohort study of patients newly diagnosed with NVAF from January 2003 to December 2013. Patients were identified using medical diagnostic codes ICD-9-CM (AT2 code) and recorded in the Servises Assistanciales database. HCRU included overall hospital admissions, out-patient consultations, home-care based, laboratory tests, and pharmaceutical treatments. Differences in annualized total costs (95% CI) per patient were calculated in € (2014 tariffs) by estimating HCRU in propensity-score matched cohorts of NVAF patients with and without stroke. RESULTS: Overall, 3,052 patients were included in the analysis. The incremental total cost of stroke per patient was 12,085€ (12,069-12,101) in the first year, and 6,384€ (6,377-6,391) for the entire follow-up period. Total cost of stroke per patient was 4.4 times higher than non-stroke patients during the first year after stroke, and 2.9 times higher for the entire follow-up. CONCLUSIONS: In Spain, NVAF patients with stroke consumed additional HCRU and treatment costs compared to patients without stroke. The burden of stroke was particularly important in the first year after stroke and the main drivers of the increased HCRU and costs.

PCV84
ANALYSIS OF IN-HOSPITAL RESOURCE USE AFTER AN ISCHEMIC STROKE
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OBJECTIVES: To investigate the resources used by ischemic stroke patients when hospitalized, and predict the relationship by stroke severity. Comparing a bottom-up costing approach with national top-down costs. METHODS: Data from five Belgian hospitals were requested for the years 2008 up to 2011 detailing the length-of-stay, ICD-10 diagnosis, severity and ATC drug class. Costs were retrieved in the database. The number of stays with ischemic stroke were retrieved in the database. The mean LOS was 11.298 days. In the first year after stroke, 59.2% were alive. Total cost was €25,557 vs. €12,721 in hospitalization, €24,953 vs. €11,298 in hospitalization, p<0.001 in both cases. CONCLUSIONS: The incidence of symptomatic DVT and PE reported in the literature could be confirmed based on this retrospective search. The incidence of DVT/PE increased dramatically both LOS and hospitalization costs in patients undergoing hip or knee surgery.

PCV85
AN EPIDEMIOLOGICAL EVALUATION OF THE INCIDENCE OF DEEP VENOUS THROMBOSIS AND PULMONARY EMBOLISM (DVT/PE) AFTER NEUROSURGERY IN TURKEY AND THE IMPACT OF IN-HOSPITAL DVT/PE REPLACEMENT SURGERY AND OF ITS IMPACT ON THE AVERAGE LENGTH OF STAY AND HOSPITALIZATION COST
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OBJECTIVES: Various published sources report an incidence of symptomatic deep venous thrombosis (DVT) and pulmonary embolism (PE) in patients undergoing hip or knee replacement ranging between 0.3% and 2.3%. This study aimed at assessing the in-hospital incidence of DVT/PE after major orthopaedic surgery in Belgium and the impact of these complications on the length of stay and hospitalization costs using retrospective data. METHODS: The incidence of DVT/PE, the average hospitalization costs and the average length of stay (LOS) among patients hospitalized for hip or knee replacement surgery were estimated using the longitudinal IMS Hospital Disease Database (year 2013), including data (diagnoses, procedures, costs) on 24% of Belgian hospital beds. Stays were searched based on ICD-9-CM codes corresponding to hip replacement (81.51-81.52-81.53) and knee replacement (81.54-81.55). The impact of DVT/PE was identified with ICD-9 codes 451.1-451.2-453.4. The impact of a DVT/PE event was analyzed through three regression models. RESULTS: 7,160 stays with hip replacement and 6,223 stays with knee replacement were retrieved in the database. The number of stays with a DVT/PE episode was respectively equal to 22 and 43 within the two subgroups, resulting in an incidence of 0.3% and 0.7% with hip replacement and 0.6% in patients with knee replacement. LOS of patients with a DVT/PE episode was more than twice as high after both hip (35.84 vs. 13.59 days; p<0.001) and knee (31.2 vs. 9.9 days; p<0.001) replacement. Hospitalization costs were more than double in case of DVT/PE complication (<25,557 vs. <12,721 in hip replacement; <24,953 vs. <11,298 in knee replacement; p<0.001 in both cases). CONCLUSIONS: The incidence of symptomatic DVT and PE reported in the literature could be confirmed based on this retrospective search. The incidence of DVT/PE increased dramatically both LOS and hospitalization costs in patients undergoing hip or knee surgery.

PCV86
DIRECT TREATMENT COSTS OF STROKE IN TURKEY
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OBJECTIVES: Stroke is the second leading cause of death globally and the survivors are faced with long-term disability. Stroke survivors are also under the risk of recurrent events. We examined the impact of health care costs and treatment strategies on health care system. The aim of this study was to determine the direct economic cost of stroke from the payer perspective in Turkey. METHODS: A multi-dimensional approach was used to estimate the direct costs of stroke in Turkey. First a large dataset covering 5 years data for 2000 emergency department stroke admissions from a university hospital was analyzed. The data set covered information on the severity of the disease, socioeconomic status of the patients and also the medical procedures applied during the hospital stay. Second, the actual invoices of the same patients hospitalized in 2014 were analyzed. Third, a form was designed to explore the treatment strategies, medical procedures and resource requirements of stroke outpatients and inpatients. The form was applied to an expert panel and the resources determined by the panel were priced by the Social Security Institution’s official price list. RESULTS: According to the expert panel part of the study, annual outpatient and monitoring costs were €1,807,587 and €11,298, respectively. Total annual cost of stroke patient was calculated as €7,444,11 TL in Turkey. CONCLUSIONS: The study showed that stroke treatment increases the healthcare budget. Outpatient and monitoring costs constituted %24 of total costs whereas inpatient costs constituted %76 of total costs.

PCV87
LOCAL COST STUDY OF TREATMENT OF VENOUS THROMBOEMBOLISM IN TURKEY
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OBJECTIVES: Venous thromboembolism (VTE) is a common disorder, with about 1 per 1,000 people per year in the general population. Approximately two-thirds of cases belong to the classification venous thrombosis (VVT), the formation of a thrombus in a deep vein, usually of the lower limbs. Among one third of VTE cases present as pulmonary embolism (PE), occurring when dislodged thrombi (from a VVT) travel to the lungs. PE can cause sudden death and those who survive an episode occasionally require intensive care, with recovery taking several weeks or months. The