disease and strokes), and for myocardial infarctions (MI) specifically, occurring during the use of the initially prescribed statin were compared between different statins using multivariate Cox-regression analysis. RESULTS: Included new statin users started with simvastatin (32824 (35%), atorvastatin (30849 (33%), pravastatin (19652 (21%), or rosuvastatin (8710 (9%)). Average doses were 23 mg, 19 mg, 35 mg and 11 mg respectively. Thirty-five (percent) were considered to be at increased risk of cardiovascular events due to pre-existing CVD or diabetes. The median duration of follow up and initial statin therapy were two years and 48 weeks respectively. The incidence per 100 person years of fatal and non-fatal CVD and MI respectively were 3.2 and 0.4 for rosuvastatin, 4.5 and 0.6 for atorvastatin, 4.1 and 0.7 for simvastatin, and 6.5 and 1.0 for pravastatin. Different multivariate models and adjustment methods were used to study whether the observed differences could be explained by bias or confounding. None of these adjustments or models altered the observed risk differences substantially. CONCLUSION: We observed substantial differences in incidence rates of hospitalisations for cardiovascular events between users of different statins, independent from dosing and preferences in prescribing of statins. The lowest incidence of hospitalizations due to cardiovascular events were observed among users of rosuvastatin followed by atorvastatin, simvastatin and pravastatin. These findings suggest that the greater LDL-C reductions offered by rosuvastatin may translate into additional benefits in lower rates of cardiovascular events.

MULTIPLE REGRESSION ANALYSIS MODEL PREDICTED DIASTOLIC BLOOD PRESSURE
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OBJECTIVES: 1.) To find efficiency Hierarchical Stepwise Multiple Regression Analysis model that predict diastolic blood pressure. 2.) To find correlation between calories burnt by exercise, compliance, eating behavior score, hypertension knowledge and diastolic blood pressure. METHODS: A cross-sectional clinical and survey study by face to face interview with questionnaire was employed to investigate relationship between health behavior factors namely—calories burnt by exercise, compliance, eating behavior score, smoking, drinking, demographic data and diastolic blood pressure of 200 hypertensive patients at Adisorson Hospital selected by convenient sampling. RESULTS: Total sample size (n = 200, 100%) of hypertension patients, mostly 113 (56.50%) were female, 87 (43.50%) were male with average age 57.29 ± 13.16 years, Average BMI 27.52 ± 3.84, Average total calories burnt per week 1749.68 ± 3948.43, Average compliance score 7.85 ± 2.12, Average hypertension knowledge score 7.06 ± 0.58, Average eating behavior score 6.91 ± 1.97, and average Diastolic 94.11 ± 11.11. Compliance score and hypertension knowledge had significantly correlated with Diastolic (r = 0.97, −0.13, p < 0.01). Hierarchical stepwise Multiple Regression Analysis confirmed that 3 factors—calories burnt by exercise, compliance score and age were significantly predictors of Diastolic (Beta = 0.56, 0.42, 0.05, p < 0.01, R Square = 0.86). CONCLUSION: Hierarchical Stepwise Multiple Regression Analysis confirmed that calories burnt by exercise, compliance and age were three significantly factors predicted diastolic blood pressure.
increased to 42.6% by 2005. In 2000, 89.5% of all AMI patients was treated with thrombolysis as primary intervention, 7.8% underwent PCI, and 2.6% CABG; by 2005 these percentages changed to 21.1%, 73.1%, and 5.8% respectively. We compared the 30-day and one year mortality by intervention groups. In 2005 without any intervention it was 27.5% vs 37.8% (30 days and 1 year), in the PCI group 6.1% vs 9.7%, in the thrombolysis group 14.8% vs 18.7% and in the CABG group 6.4% vs 12.3%. The 30-day mortality is independent of gender but depends on age. The chance of 30-day survival decreases due to diabetes and cancer (OR: 0.885 and 0.60, respectively), shock (OR: 0.06) and resuscitation (OR: 0.07). Survival is significantly better in case of hypertension (OR: 1.4).

CONCLUSION: Administrative data proved to be appropriate tools to develop quality indicators, thus its results can be very useful in improving health care.

RISK OF MAJOR BLEEDING DURING CONCOMITANT USE OF ANTIBIOTIC DRUGS AND COUMARIN ANTICOAGULANTS

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OBJECTIVES: To quantify and qualify the risk of major bleeding associated with the use of antibiotic drugs during coumarin anticoagulant therapy in daily practice. METHODS: Data for this retrospective cohort study were obtained from the PHARMO Record Linkage System, including, among others, linked drug-dispensing records and hospital records for over three million individuals in defined areas of The Netherlands. The study cohort included all users of acenocoumarol or phenprocoumon, aged 40–80 years, for the period 1996–2004. All patients were followed until the end of their last coumarin dispensing, hospitalisation for bleeding, death, or end of study period. Number of days on coumarins alone, and number of days on coumarins in combination with each antibiotic drug during follow-up, were determined for each patient. We analysed antibiotic drugs for which at least five patients experienced a bleeding at least two weeks after anticoagulant therapy commenced, and which fell within the risk period of a single antibiotic drug. RESULTS: Respectively, 52,102 acenocoumarol and 7,885 phenprocoumon users met the inclusion criteria for the study cohort and contributed 139,159 patient-years of follow-up. During follow-up 838 patients (1.4%) were hospitalised for bleeding while taking coumarins. The antibiotic drugs for which at least five coumarin users had a bleeding were doxycycline, amoxicillin, amoxicillin/clavulanic acid, ciprofloxacin and cotrimoxazole. Each of these antibiotic drugs was associated with an increased risk of bleeding. Incidence rates ranged from 5.2 major bleedings per 10,000 doxycycline-dispensings to 11.2 major bleedings per 10,000 cotrimoxazole-dispensings during coumarin use. Corresponding relative risks for major bleeding, adjusted for gender and age, ranged from 2.6 (95% CI 1.4–4.8) for doxycycline to 5.3 (95% CI 2.4–11.8) for cotrimoxazole. CONCLUSION: Doxycycline, amoxicillin, amoxicillin/clavulanic acid, ciprofloxacin and cotrimoxazole are the main antibiotic drugs associated with an increased risk of major bleeding during coumarin anticoagulant therapy in daily practice.

CHARACTERIZATION, RISK FACTORS, CLINICAL OUTCOMES, AND ECONOMIC CONSEQUENCES OF BLEEDING ASSOCIATED WITH CARDIAC SURGERY: A SYSTEMATIC LITERATURE REVIEW

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OBJECTIVES: To characterize epidemiological risk factors, review clinical outcomes, and overall costs associated with treating bleeding related to cardiac surgery, and identify areas for further research. METHODS: A systematic literature search was performed (1996-March 2007) using terms designed to identify publications describing epidemiology and associated risk factors, clinical outcomes, and economic impact of bleeding in cardiac surgery patients. Studies were identified through electronic Medline® and PubMed® searches. Manual review of bibliographies within these papers allowed identification of additional articles. RESULTS: A total of 36 (epidemiology: n = 13, clinical outcomes: n = 14, and economic burden: n = 9) papers [manual search: n = 12] were included for review. Incidence of bleeding associated with major cardiac surgical procedures varied widely, ranging from 0.4%–19.0%, partly attributable to the types of cardiac operations as well as to differences in the definition of bleeding. Pre-operative smaller body mass index, use of anti-thrombotic drugs, nonelective surgery, increased age, and redo procedures were associated with bleeding, while embolic events were found to be major complications. Costs associated with bleeding requiring transfusion ranged from $397 (blood products only) to $10,225 per patient (all treatment costs), with hospital LOS as the major cost contributor. Mean cost of open-heart surgeries [including coronary artery bypass graft (CABG) and valve replacements] range from $25,057 to $79,795, with patients undergoing CABG found to have an incremental cost of $3,866 associated with bleeding. Primary pharmacological treatments for bleeding among cardiac surgery patients included anti-fibrinolytics and procoagulants. CONCLUSION: Post-operative bleeding remains a central clinical outcome in cardiac surgery with significant economic impact despite improvements in peri-operative bleeding management. Sufficient information on recent cost estimates as well as differences in bleeding costs associated with various cardiac procedures is lacking. Further research investigating the economic consequences of bleeding associated with cardiac surgery is warranted.

CARDIOVASCULAR DISEASE—Cost Studies

IMPACT OF CHANGES IN REIMBURSEMENT SYSTEM ON THE BUDGET FROM THE PAYER’S AND PATIENT’S PERSPECTIVE

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OBJECTIVES: Introduction. The polish system of medication reimbursement is based on positive list. The government decides which medication could be reimbursed by adding or removing it from the list. Additional tool for reimbursement control is the “medication refund limit” (MRL). The same MRL per DDD is set for each INN separately or for group of medication, which have the same indication, form and dose. The payer (National Fund of Health) partially refunds the cost of medication below the MRL. The difference between the MRL and price is paid by patient. In 2006 the government changed the MRL and official prices for some medication. The aim is to assess the impact of