OBJECTIVES: Major bleeding in acute coronary syndrome (ACS) patients has a significant impact on clinical outcomes. The economic costs associated with these events have not been assessed. This study was undertaken to estimate the costs associated with major bleeds in ACS patients in the hospital setting.

METHODS: A retrospective chart review was undertaken in a French hospital to identify ACS patients with the following bleeding events: intracranial haemorrhage (ICH), puncture site or excessive surgical bleeds (PSB), blood transfusion requiring 2 or more units, or decrease in Hb > 3g/dL (DHb). Patient age, reason for admission, extended length of stay (LOS) attributed to the bleed, ward type, and resources to manage the bleed were collected. RESULTS: 48 cases were analysed, 52% were males, with an average age of 72.5 years. The reasons for hospital admission were 39.6% non-ST-segment Elevation Myocardial Infarction (NSTEMI), 43.8% ST-segment Elevation MI (STEMI) and 10.4% unstable angina (UA). The distribution of hemorrhagic events were 40.4% DHb, 27.7% transfusions, 21% PSB, 8.5% GI and 2.1% RP bleeds. The mean length of stay (LOS) was 8.5 days across all patients. Extended 6.5 day mean LOS (76% of total stay) was found for 20 patients. The number of extra days varied by type of bleed. 80% of PSB patients had extended stays compared to 50% of GI bleed, 38% of transfusion and 21% DHb patients. Ultrasound was the most common additional procedure followed by endoscopy. Applying unit costs from France for procedures, transfusions, and extended LOS resulted in additional costs of €1709 for DHb, €3245 for transfusions, €2116 for GI, €4091 for RT and €6585 for PSB. CONCLUSION: Hospitalised ACS patients with bleeding complications have increased mean resource use and 41% have extended LOS leading to an estimated additional average €3185 for the hospital stay.

CARDIOVASCULAR DISEASE—Health Care Use & Policy Studies

ESTIMATING THE IMPACT OF MANDATORY SWITCH FROM ATORVASTATIN TO SIMVASTATIN IN NORWAY

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OBJECTIVES: The Norwegian Government changed the reimbursement criteria for statins June 1, 2005. Simvastatin was deemed first-line statin except when otherwise medically justified. Further, eligible treated patients were to be switched from atorvastatin to simvastatin within one year, with recommendations to double the mg dose. The objective of this analysis was to estimate the: 1) impact of statin on lipid control and CV events, and 2) cost effectiveness of non-switching vs switching in statin therapy.

METHODS: Prescription data were obtained from a Norwegian Institute of Public Health report of national pharmacy prescription registry data. Average reduction in total cholesterol was estimated based on dose distribution of atorvastatin pre-switch and simvastatin post-switch according to product labeling. CV events, costs, and QALYs were estimated from a lifetime Markov model applying Framingham risk equations and Norwegian epidemiologic data, assuming a primary prevention population. Event costs were based on Norway DRG costs; drug costs on current and future treatment costs, assuming two years to generic atorvastatin. Discounting was 3% per annum. RESULTS: Following June 1, 2005, 50,616 patients were identified who switched from atorvastatin to simvastatin; 38% to a lower potency dose. Dose distribution for atorvastatin was 40.4%/44.4%/12.6%/2.5% for 10/20/40/80 mg, respectively. Post-switch simvastatin distribution was 9.4%/45.4%/39.9%/5.2% for 10/20/40/80 mg, with an estimated 8.6% absolute loss in total cholesterol reduction. This could lead to 30 additional CV events per 1000 patients, and 0.12 QALYs lost. The incremental cost effectiveness ratio for non-switching versus the switching policy is estimated to be €8526 per QALY saved. CONCLUSION: Following the policy in Norway, a considerable portion of patients were switched to a simvastatin dose with lower cholesterol lowering effect and a consequent increased CV risk. Maintaining patients on established statin therapy may have been a more cost-effective approach in this setting.

ATTITUDES AND BELIEFS OF PHYSICIANS ABOUT HYPERCHOLESTEROLEMIA IN SPAIN: THE PRACTICE STUDY

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OBJECTIVES: To assess the attitudes and beliefs of physicians about hypercholesterolemia and its treatment in Spain.

METHODS: An observational, cross-sectional questionnaire survey was performed in 2006. 22 cardiologists, 23 endocrinologists, 22 internists and 21 primary care physicians were included. Their attitudes and beliefs about hypercholesterolemia and its treatment were assessed by means of 7-items Likert scales and ordinal categorical variables. RESULTS: Eighty-eight physicians were included in the study, 77% were over 40 years of age and mainly working in urban areas (82%). A total of 97.7% agreed that national guidelines and target levels for LDL-c management are clear, and 11.3% considered they are difficult to apply due to the frequent changes in the LDL-c target level. A total of 48.2% agreed that statin monotherapy is sufficient to make most of patients get to LDL-c goal and, for patients not reaching LDL-c goal, 82.7% agreed they would consider trying a combination therapy, 81% increasing the statin dose, and 21.7% switching to another statin. When they were asked to state the most frequent reason that made patients with lipid-lowering therapy not getting to cholesterol goal, 60.2% referred to the patient’s lack of compliance, 35.2% to the lack of compliance with diet/exercise, and 31.8% to the insufficient dose or efficacy of pharmacologic therapy. A total of 63.2% agreed that compliance is reduced because patients take too many drugs, and 97.7% agreed that fixed dose of combination therapies would increase patient compliance. CONCLUSION: Despite the high degree of knowledge about the recommendations for LDL-c target levels among physicians and the limited additional efficacy obtained by titrating the statin dose, over half of physicians believe that statin monotherapy is enough to achieve LDL-c target levels, and mainly attribute to the patient’s lack of compliance the low proportion of patients achieving LDL-c target levels.