sociation between persistence with statins and risk of incident cardiac events. The most persistent users (PDC >= 80%) had a hazard ratio of 0.62 (95% confidence interval: 0.58-0.67) compared to non-persistent users (PDC <20%). Similar results were found when analyses were limited to patients with more than 5 years of follow up. An interaction analysis between persistence and other factors detected a stronger risk reduction among diabetic males. **CONCLUSIONS:** This large and unselected community-based study supports the results of several randomized controlled trials regarding the beneficial effect of persistent statin therapy against cardiac events among primary prevention patients.

PCV21
EFFECTS OF AZILSARTAN MEDOXOMIL VERSUS VALSARTAN AND OLMESARTAN MEDOXOMIL ON THE ACHIEVEMENT OF SYSTOLIC BLOOD PRESSURE GOALS AMONG HYPERTENSIVE PATIENTS WITH DIABETES

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OBJECTIVES: Healthcare Effectiveness Data and Information Set (HEDIS) defines controlled hypertension as systolic/diastolic BP (SBP/DBP) <130/80 mm Hg for patients with essential hypertension and diabetes. We estimated the percentage of diabetes patients with uncontrolled essential hypertension who would reach SBP goals with the angiotensin II receptor blockers (ARBs) azilsartan medoxomil, valsartan, and olmesartan medoxomil. **METHODS:** A Monte Carlo simulation model was created to estimate the number of patients with hypertension (SBP ≥130 mm Hg) and diabetes who would achieve SBP goal when treated with azilsartan medoxomil, valsartan, or olmesartan medoxomil for 12 months. A cohort of 100,000 hypothetical diabetes patients with uncontrolled hypertension was created from NHANES 1999–2006 and assigned a baseline SBP. Follow-up SBPs were generated by randomly sampling from the mean and SD of the percentage change from baseline to final visit in sitting office SBPs by using data from the diabetes subpopulation from the azilsartan medoxomil clinical trial program. Mean±SD relative changes in SBP were −10.36%±10.41, −4.58%±11.04, −5.16%±11.82% (F-test P<.001) for azilsartan medoxomil, valsartan,and olmesartan medoxomil, using the pooled efficacies across all dosages, respectively. We assessed goal attainment assuming that adherence was alternatively perfect and that 48% of patients receiving any ARB would discontinue treatment. **RESULTS:** Patient characteristics based on NHANES data were mean±SD age 56±13 years, 56% male, 23% with prior cardiovascular disease, baseline SBP 151±19 mm Hg. We estimated that 41.0% of patients receiving azilsartan medoxomil would achieve SBP goal vs. 26.8% for valsartan and 28.8% for olmesartan medoxomil, assuming perfect adherence; accounting for nonadherence, 21.2%, 13.9%, and 14.8% of patients would reach SBP goals, respectively. **CONCLUSIONS:** Our findings suggest that more diabetes patients treated with azilsartan medoxomil than with valsartan or olmesartan medoxomil are expected to reach SBP goal. Further analysis should address whether these differences in SBP translate into better HEDIS quality scores.

PCV22
META REGRESSION ANALYSIS TO INDIRECTLY COMPARE THE SAFETY AND EFFICACY OF DALTEPARIN TO ENOXAPARIN IN PATIENTS WITH UNSTABLE CORONARY ARTERY DISEASE

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OBJECTIVES: Low molecular weight heparins (LWMH) are indicated in unstable angina and non-Q-wave myocardial infacrtion. Even though both agents have demonstrated safety and at least comparable efficacy to unfractionated heparin (UH), there have been no head to head trials to assess comparative effectiveness. Meta analytic techniques were used to perform an indirect statistical comparison between dalteparin and enoxaparin in patients with unstable coronary artery disease (UCAD). **METHODS:** A literature search was conducted from January 1980 to November 2009 for randomized controlled trials evaluating dalteparin or enoxaparin for the prevention of myocardial infarctions (MI) and death in UCAD. Binary outcomes (e.g. MIs, death) for the LMWH relative to UH were statistically pooled using a fixed effects model. Using UH as the common control, an indirect statistical comparison between dalteparin and enoxaparin was performed using meta regression analysis with active drug (dalteparin or enoxaparin) as the primary independent variable. **RESULTS:** Six UH controlled enoxaparin (n=4) and dalteparin (n=2) trials met the inclusion criteria. The meta analysis of all trial data showed that patients treated with enoxaparin or dalteparin had an 11% relative risk reduction for MI compared to UH (RR = 0.89, p = 0.009). This benefit was achieved without a significant increase in the risk for major bleeding (RR = 0.98, p = 0.85), thrombocytopenia (RR = 1.14, p = 0.35) or death (RR = 0.95, p = 0.68). The indirect statistical comparison was unable to find significant differences between enoxaparin and dalteparin in terms of MI (p=0.67), major bleeds (p=0.79), thrombocytopenia (p=0.23) or death (p=0.10). **CONCLUSIONS:** Our findings suggest comparable safety and efficacy between dalteparin and enoxaparin when used to prevent MI and death in patients with UCAD. Therefore, treatment decisions should be based on other considerations, such as patient or physician preference, ease of administration and cost.

PCV23
COMPARING THE EFFECTIVENESS OF ROSUVASTATIN AND ATORVASTATIN IN PREVENTING CARDIOVASCULAR OUTCOMES: ESTIMATES USING THE ARCHIMEDES MODEL

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OBJECTIVES: No major clinical trial has compared rosuvastatin with atorvastatin in preventing major adverse cardiovascular events (MACE). This study estimated the effectiveness of rosuvastatin 20mg (R20) versus atorvastatin 40mg (A40) and 80mg (A80) in preventing MACE in several higher cardiovascular risk patient populations using simulation. **METHODS:** The extensively validated and published Archimedes model was used to simulate head-to-head clinical trials in several populations [10-year Framingham risk score (FRS) > 5%, FRS >20%, EURO-SCORE ≥ 5, Diabetes, secondary prevention, and Acute Coronary Syndrome (ACS)] to estimate the occurrence of MACE (comprising MI, stroke, and cardiovascular death) over time. Patients (ages 45–70) based on the National Health and Nutrition Examination Survey were enrolled in trial simulations. Treatments were modeled and validated using biomarker and outcomes data from published trials. **RESULTS:** The number of patients in each arm ranged from 3,060 to 55,000, depending on the trial population. R20 reduced MACE more than A40 or A80 in all scenarios, with higher risk subgroups showing greater absolute benefit. In individual trial simulations, the 5 year relative risk (RR) of MACE for R20 versus A40 ranged from 0.90 to 0.92. Similarly, the 5 year RR of MACE for R20 versus A80 ranged from 0.93 to 0.95. Similar estimates were observed at 10 and 20 years. The 5-year number needed to treat (NNT) to prevent one MACE event with R20 vs. A40 and A80 decreased consistently with increasing baseline cardiovascular risk (for R20 vs. A40, NNT of 268 for FRS >5% and 55 for ACS). **CONCLUSIONS:** The model estimated that R20 lowers the risk of MACE more than A40 or A80. While simulation models cannot replace controlled clinical trials, this study bridges gaps in the evidence and helps identify cohorts that would benefit most from treatment with rosuvastatin rather than atorvastatin.

PCV24
EVALUATION OF THE CLINICAL FACTORS AND PREVENTIVE MEDICATIONS ASSOCIATED WITH THE LENGTH OF HOSPITAL STAY AMONG ISCHEMIC STROKE PATIENTS

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OBJECTIVES: Length of hospital stay (LOS) is a major cost component of hospital budgets. Accurate prediction of LOS has become increasingly important for health care systems, and reducing the LOS has the potential for large savings in the public hospital system. This study aimed to assess the factors associated with prolonged LOS of acute ischemic stroke taking into consideration demographic, risk factors, and clinical signs that can be assessed at the time of admission. Particular attention is paid on the impact of previous medication use on LOS. **METHODS:** A retrospective cohort study of all acute ischemic stroke survivors attending a hospital in Malaysia from May 1, 2008 to December 31, 2008. Long hospital stay was defined as a stay greater than or equal to the median of LOS. Data included demographic information, clinical information, risk factors, and previous medication use. SPSS version 15 was used for data analysis. **RESULTS:** Overall, 363 patients were studied. The median (interquartile range) of LOS was 69 (45-111) hours. The independent factors associated with prolonged LOS were a history of atrial fibrillation (P = 0.011), patients with moderate and severe Glasgow Coma Scale (P = 0.001), patients with higher body temperature (P = 0.015), patients with higher fasting or random blood glucose (P = 0.004), and patients without previous use of angiotensin converting enzyme inhibitor medication (P = 0.027). **CONCLUSIONS:** This study provided scientific data for the factors that could hamper the discharge, particularly before clinicians can evaluate the most effective, efficient, and acceptable methods of managing patients with acute ischemic stroke. Moreover, these variables are potentially preventable or treatable at admission time and would be ideal targets to reduce the burden of illness and healthcare costs of ischemic stroke.

PCV25
MANAGEMENT OF ACUTE ISCHEMIC STROKE AND ITS LONG TERM EVOLUTION IN THE UNITED STATES AND CANADA

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OBJECTIVES: Acute ischemic stroke (AIS) is a major public health concern and among the leading causes of death and disability in western societies. The management of AIS and its long term evolution in the USA and Canada was assessed through a literature search. **METHODS:** Medline was searched for the time period 1999-2010 to identify stroke cohorts and registries containing relevant data on AIS management and/or long term evolution. Subsequently, a ranking process was used to identify and select the most relevant references. **RESULTS:** A total of 680 references were retrieved (581 USA and 99 Canada). Publications from more than 80 distinct cohorts/registries/databases were analyzed and a final selection led to the identification of 43 publications for the USA and 25 for Canada. IS proportion among all strokes ranged from 43%-90% in hospital cohorts. 24%-33% of all stroke patients arrived at the hospital within 3 hour of symptom onset and rt-PA treatment was received in 1.1%-14% of all AIS patients. The majority of patients, i.e. 82%-100% underwent a CT/MRI scanning. In general, hospital setting and care characteristics were poorly documented and relatively few quality indicators of stroke management were targeted. For long term evolution outcomes, mortality was well documented (5%-17% 1 month, 17%-35% 3 months, 30%-37% 3 years, 37%-54% 5 years). AIS recurrence and cardiac events were described in few, mainly USA, studies. There was a lack of data on disability (modified Rankin Scale) evolution after 3 months and studies on depression were scarce. **CONCLUSIONS:** Hospital setting, characteristics of care, and long term evolution of disability are poorly documented in American and Canadian registries. New cohort and registry studies should specifically aim to generate real life data on ischemic stroke care that influence short and long-term clinical and associated economic outcomes.