OBJECTIVE: To determine if certain diagnoses and comorbidities influence the risk of hospitalization for angina patients.

METHODS: Study was conducted using IMS HEALTH’s LifeLink™ database, a U.S. employer claims database consisting of more than 1.8 million covered lives, with linked medical and pharmacy claims for employees, dependents, and retirees from 1991 forward. Patients were diagnosed with angina in the period March 1, 1999 to February 29, 2000. Unstable angina patients were placed in a single cohort. Stable angina patients were further classified based on the presence of hypertension, congestive heart failure (CHF), diabetes, or other heart disease in the 36 months preceding their angina diagnosis.

RESULTS: 125,453 patients met the inclusion criteria—32,672 with unstable angina and 92,781 with stable angina. Patients with unstable angina were significantly more likely to be hospitalized (53.3%) than patients with stable angina (27.3%) (p < 0.001). When comparing unstable to stable angina patients with comorbid conditions, patients with unstable angina were more likely to be hospitalized than stable angina patients, regardless of the combination of comorbidities in stable angina patients (odds ratios between 1.20 and 10.47). Stable angina patients with comorbid hypertension, diabetes, and CHF had the highest likelihood of hospitalization compared to unstable angina patients, but still were significantly less likely to be hospitalized (OR = 0.83, 95% CI = 0.79, 0.87). Unstable angina patients had the highest likelihood of hospitalization compared to patients with stable angina and no comorbidities (OR = 10.47, 95% CI = 9.76, 11.22). Among stable angina patients, hospitalization rates were highest for patients with comorbid CHF (ranging from 36.6% for patients with CHF only to 48.7% for patients with CHF, hypertension, and diabetes).

CONCLUSIONS: Patients with unstable angina were significantly more likely than stable angina patients to be hospitalized, even if the stable angina patients had a number of complicating comorbid conditions. Presence of unstable angina greatly increased the risk of hospitalization.

ECONOMIC EVALUATION OF THREE MARKET LEADING HMG-CO-A REDUCTASE INHIBITORS
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The National Institutes of Health’s Adult Treatment Panel III (ATP-III) guidelines define the population of hypercholesterolemic patients for whom drug therapy is suggested. A wide body of evidence indicates that elevated low-density lipoprotein (LDL-C) is a major risk factor for coronary heart disease (CHD). Thus, the ATP-III guidelines target LDL-C levels for reduction in hypercholesterolemic patients in an effort to reduce CHD risk. The drug of choice is an HMG-CoA Reductase Inhibitor (statin), which has demonstrated effectiveness in reducing LDL-C.

OBJECTIVES: To determine if the relative cost-effectiveness of the three most commonly prescribed statins is affected by the initial LDL-C and ATP-III goals.

METHODS: A Monte Carlo simulation was used to model therapeutic course to target using data from published trials including (pre-treatment LDL-C distributions, expected LDL-C reduction by drug and dose and ATP-III LDL-C goals). Data from this model were entered into a cost-effectiveness analysis model in Data 4.0 (TreeAge Software, Inc, 2001). One-way sensitivity analyses were conducted upon pre-treatment LDL-C distribution, statin performance, and costs of: drugs, time away from work/home, office visits, laboratory tests and mono-therapy failure.

RESULTS: Atorvastatin dominated the model, having the lowest drug cost and failure rate, regardless of initial LDL-C level or ATP-III guideline goal. Base case (mean LDL-C 188.9mg/dl [SD 24.0] and goal LDL-C of 100mg/dl) cost-effectiveness ratios for atorvastatin, simvastatin and pravastatin were $/(US) 1,721, $/(US) 3,641 and $/(US) 22,029 respectively. Alternative case (mean LDL-C 149.6mg/dl [SD 16.8] and goal LDL-C of 100mg/dl) cost-effectiveness ratios for atorvastatin, simvastatin and pravastatin were $/(US) 965, $/(US) 1,552 and $/(US) 2,498 respectively.

CONCLUSIONS: Atorvastatin was the most cost-effective treatment among the tested statins. Cost-effectiveness rankings were insensitive to all tested variables. Cost-effectiveness was primarily determined by the performance characteristics of each drug and drug cost.

COST-EFFECTIVENESS ANALYSIS OF THE ARCTIC SUN™ MODEL 100 FOR TEMPERATURE MANAGEMENT IN OFF-PUMP CORONARY ARTERY BYPASS SURGERY
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It is well known that surgery performed under general anesthesia commonly results in hypothermia. Surgical hypothermia is a serious, but preventable, condition. It is becoming increasingly important, however, to provide decision-makers with evidence of the cost-effectiveness as well as the clinical benefit of preventive measures.

OBJECTIVE: Using the hospital perspective, the outcomes and cost-effectiveness of the Arctic Sun Model 100 for the prevention of hypothermia in patients undergoing off-pump coronary artery bypass surgery is explored.
METHODS: Data for the cost-effectiveness analyses were obtained from a case control study and two randomized controlled trials comparing the surgical outcomes related to temperature control using the Arctic Sun versus the current surgical warming methods. The incremental cost-effectiveness per hypothermia case avoided was calculated by measuring the extra costs to the hospital for achieving an extra unit of effectiveness by using the Arctic Sun.

RESULTS: Using the definition of hypothermia as a temperature less than 36°C, there were three cases (5%) of post-operative hypothermia out of 58 for patients warmed using the Arctic Sun method. Using the standard of care, 23 out of 48 patients (48%) were hypothermic. The treatment costs for preventing post-operative hypothermia includes $60 in variable costs for the standard of care. Costs for using the Arctic Sun for preventing post-operative hypothermia included $350 in variable costs and $9.85 in allocated annual fixed costs (total treatment cost—$359.85 per patient). Subtracting the relative cost to treat 100 patients using the standard of care ($6,000) from the relative cost of warming 100 patients using the Arctic Sun ($35,985) yielded an incremental cost effectiveness of $697.33 per post-operative hypothermia case avoided by using the Arctic Sun.

CONCLUSION: Use of the Arctic Sun™ is both effective and cost-effective in preventing post-operative hypothermia during OPCAB procedures.

COST OF ILLNESS AND RESOURCE UTILIZATION FOR PATIENTS SUFFERING MYOCARDIAL INFARCTION, WITH AND WITHOUT DEPRESSION

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Approximately 1.5 million individuals experience a myocardial infarction (MI) each year in the United States. Of these, 20% develop major depression (MDD) and are at increased risk of re-infarction, overall morbidity and mortality.

OBJECTIVE: The objective of this study was to compare the health care costs and resource utilization for patients diagnosed with MI + MDD with patients with MI only, MDD only and a control group having neither condition.

METHODS: Claims data for all patients at least 40 years of age from a large HMO in the Southeast US were analyzed retrospectively. Patients were selected for study if they had an incident event of MI, MDD, or MI+MDD during a one-year recruitment period. Age and sex matched patients having neither MI nor MDD during the recruitment period served as the control group. Patients were followed for two years from their dates of recruitment. Patients were included in the MI+MDD group only if they had at least six months of data for analysis. Only patients with drug charges were included for final evaluation.

RESULTS: Compared with $6,877 for patients in the control group (n = 436), mean total costs were statistically different for each group, including $13,982 for MDD patients (n = 296), $35,589 for MI patients (n = 98), and $37,835 for MI+MDD patients (n = 53). Significant differences between the groups were found for the number of hospitalizations, length of hospital stay, outpatient visits, types of prescribed medication, and number of filled prescriptions. Other significant differences between groups included their need for therapeutic drug assays, particularly digoxin, and cardiovascular laboratory procedures, particularly the use of devices to monitor for arrhythmia.

CONCLUSION: The cost of illness and resource utilization for patients who had MI+MDD are much greater than patients having MI or MDD alone. Early recognition of patients with MI+MDD is warranted.

QUALITY OF LIFE QUESTIONNAIRES VALIDATION IN ESSENTIAL HYPERTENSIVES FROM AN ECONOMICALLY DISADVANTAGED COMMUNITY

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Validity and clinical relevance of the quality of life (QL) measures developed in Western civilization societies may quite differ from those in countries experiencing socioeconomic hardships.

OBJECTIVES: We aimed to validate the set of QL questionnaires in essential hypertensives (EH) from Belarusian population.

METHODS: Internationally recognized, self-administered, culturally non-specific, and professionally translated into Russian questionnaires were used: the General Well-Being Adjustment Scale (GWBAS), Duke Health Profile (DHP), Giessen Somatic Complaints Questionnaire (GSCQ). The QL assessment was carried out in 212 EH without concomitant diseases (100 males; mean age 48.5 ± 12.3 years; BMI 30.3 ± 13.3 kg/m²; SBP 168.4 ± 26.6 mmHg, DBP 105.4 ± 13.3 mmHg) and in 57 age-, gender- and BMI-matched healthy subjects.

RESULTS: Cronbach’s coefficient alpha more then 0.7 was determined for GWBAS subscales (range 0.67–0.84; mean 0.77) excepting “self-control”, for GSCQ (range 0.54–0.86; mean 0.74) excepting “gastric complaints”, but not for DHP (range 0.47–0.68; mean 0.57). Correlation matrix revealed significant and the highest Spearmen correlation coefficients of GWBAS subscales scores with corresponding DHP and GSCQ subscales scores, excepting GWBAS subscale “vitality”. The total well-being