A MODEL-BASED ANALYSIS OF THE EFFECTS OF INTENSIFYING LIPID-ALTERING THERAPY ON DIRECT MEDICAL COSTS OF CORONARY HEART DISEASE EVENTS IN A SECONDARY PREVENTION POPULATION IN THE UNITED STATES
Zhang B1, Friedman M2, Charland SL2, Burge RT3, Simko RJ2, Menzin J1
1Boston Health Economics, Inc, Waltham, MA, USA, 2Abbott Laboratories, Abbott Park, IL, USA
OBJECTIVES: To assess the effects of various lipid-modifying strategies on direct medical costs of coronary heart disease (CHD) events among a representative patient cohort with established CHD. METHODS: Model-based analysis, using data from clinical trials, published literature, and national databases to project CHD medical costs (emergency, inpatient, and outpatient) over 5 years. The analysis focused on hypothetical cohorts of 10,000 CHD patients (50 years of age or older) with any abnormal lipid parameter (LDL-C, HDL-C, Non-HDL-C, and/or TG). The expected number of CHD events was calculated using the Framingham Heart Study equation for secondary prevention. Age, sex, and coronary risk-factor data for patients with CHD were obtained from a nationally-representative US health survey. Direct medical costs were expressed in SUS 2006, discounted annually at 3%. The drugs of interest included simvastatin (S) alone and fixed-dose extended release niacin/simvastatin (ERN/S), allowing an evaluation of increasing doses of S or adding a second agent to S. RESULTS: Direct medical costs of CHD events over 5 years are estimated to be approximately $3436 per patient for patients treated with 20 mg of S. These costs would decrease by 8.8% with 1000/20 mg of ERN/S. Compared to more aggressive lipid therapy with 40 mg of S, 1000/40 mg of ERN/S would decrease CHD costs by 9.1%. Relative to a maximum dose of 80 mg of S, the maximum dose of ERN/S (2000/40 mg) would reduce CHD event costs by 11.2%. CONCLUSION: Intensifying lipid-modifying therapy with fixed-dose ERN/S combinations would further reduce direct medical costs of CHD events more effectively than S monotherapy in a secondary prevention population. Further research on the cost-effectiveness of intensifying dyslipidemia treatment is warranted.

EVALUATING GENDER DIFFERENCES IN HEALTHCARE RESOURCE USE AND OUTCOMES AMONG ELDERLY PATIENTS WITH CONGESTIVE HEART FAILURE
Bharal M1, Zyczynski T1, Linstaedt A1, Kennedy L1, Gemmen EK1
1Quintiles Strategic Research & Safety, Falls Church, VA, USA, 2GE Healthcare, Princeton, NJ, USA
OBJECTIVES: Examine gender differences in resource use, expenditures and mortality among U.S. Medicare patients following discharge from a hospital admission for congestive heart failure (CHF). METHODS: Analyses were conducted on national 5% sample of Medicare claims from January 1999 to December 2001. A cohort that had an initial hospitalization with a primary diagnosis of CHF was identified. Resource use at one year preceding and following the initial CHF admission was compared among males and females. Separate multivariate regression models were developed by gender to assess the factors associated with outcomes. Models included variables for patient characteristics, comorbidity, compliance with routine care and resource use in the year prior to CHF admission. RESULTS: A majority of the 34,540 CHF patients were white (86%), one-half were 80 years or older and approximately 58% were female. Male CHF patients had a higher Charlson comorbidity score compared to females (4.27 vs. 3.99; p < 0.0001). Females were more likely than males to have an inpatient readmission within 365 days (58.6% vs. 41.2%; p = 0.016), an emergency department visit within 180 days preceding (58.3% vs. 41.7%; p = 0.0019) and following CHF admission (57.7% vs. 42.3%; p = 0.035), physician office visits within 365 days preceding (58.5% vs. 41.5%; p = 0.0001) and following CHF admission (57.7% vs. 42.3%; p = 0.0001). Females were also more likely than males to die within 60 days (56.3% vs. 43.7%; p = 0.0009), 90 days (56.5% vs. 43.5%; p = 0.006), 180 days (56.2% vs. 43.8%; p = 0.0001) and 365 days (56.1% vs. 43.9%; p < 0.0001) of the initial CHF admission. In multivariate models, factors associated with health care resource use, expenditures and mortality had similar trends in both gender models. CONCLUSION: There appears to be gender differences in resource use and outcomes among CHF patients. Effort to better target interventions, diagnostic and therapeutic, among patients at higher risk of adverse outcomes carries potential for cost-effective management of CHF patients.

A MODEL-BASED ANALYSIS OF THE EFFECTS OF INTENSIFYING LIPID-ALTERING THERAPY ON DIRECT MEDICAL COSTS OF CORONARY HEART DISEASE EVENTS IN A SECONDARY PREVENTION POPULATION IN THE UNITED STATES
Zhang B1, Friedman M2, Charland SL2, Burge RT3, Simko RJ2, Menzin J1
1Boston Health Economics, Inc, Waltham, MA, USA, 2Abbott Laboratories, Abbott Park, IL, USA
OBJECTIVES: To assess the effects of various lipid-modifying strategies on direct medical costs of coronary heart disease (CHD) events among a representative patient cohort with established CHD. METHODS: Model-based analysis, using data from clinical trials, published literature, and national databases to project CHD medical costs (emergency, inpatient, and outpatient) over 5 years. The analysis focused on hypothetical cohorts of 10,000 CHD patients (50 years of age or older) with any abnormal lipid parameter (LDL-C, HDL-C, Non-HDL-C, and/or TG). The expected number of CHD events was calculated using the Framingham Heart Study equation for secondary prevention. Age, sex, and coronary risk-factor data for patients with CHD were obtained from a nationally-representative US health survey. Direct medical costs were expressed in SUS 2006, discounted annually at 3%. The drugs of interest included simvastatin (S) alone and fixed-dose extended release niacin/simvastatin (ERN/S), allowing an evaluation of increasing doses of S or adding a second agent to S. RESULTS: Direct medical costs of CHD events over 5 years are estimated to be approximately $3436 per patient for patients treated with 20 mg of S. These costs would decrease by 8.8% with 1000/20 mg of ERN/S. Compared to more aggressive lipid therapy with 40 mg of S, 1000/40 mg of ERN/S would decrease CHD costs by 9.1%. Relative to a maximum dose of 80 mg of S, the maximum dose of ERN/S (2000/40 mg) would reduce CHD event costs by 11.2%. CONCLUSION: Intensifying lipid-modifying therapy with fixed-dose ERN/S combinations would further reduce direct medical costs of CHD events more effectively than S monotherapy in a secondary prevention population. Further research on the cost-effectiveness of intensifying dyslipidemia treatment is warranted.