EFFECTS OF STATIN THERAPY ON HOSPITALIZATION AND MORTALITY IN PATIENTS WITH DIABETES: A RETROSPECTIVE COHORT STUDY

Tanguay, BA1,2; Banahan BF1; Pace FF

1University of Mississippi, University, MS, USA, 2University of Mississippi, Oxford, MS, USA

OBJECTIVES: Clinical practice guidelines suggest that to achieve greater reductions in cardiovascular risk, statin therapy should be prescribed for diabetic patients at earlier stages. The objective of this study was to assess the influence of statin therapy on diabetes-specific hospitalization and all-cause mortality in diabetic patients enrolled in a state Medicaid program. METHODS: This is a retrospective cohort study of patients with diabetes using Medicaid pharmacy and medical claims data. Patients aged 40 years or older with a diagnosis of diabetes, who had continuous coverage in a state Medicaid program from January 2001 to December 2004, and who had a diagnosis of diabetes in 2002 were included in the study and were followed up until December 2004. Statin therapy was measured in using pharmacy claims data of 2003 and statin use was defined as at least two filled prescriptions for statin medications in 2003. The primary outcomes of interest were diabetes-specific hospitalization and all-cause mortality in 2004. Multivariable regression analyses were performed to assess the impact of statin therapy on outcome measures. RESULTS: A total of 21,110 patients met our inclusion criteria. Among them, 76.6% were females and the mean age was 62.9 (±12.3) years. Less than 30% (28.7%) were prescribed statin medications in 2003. After controlling for baseline patient characteristics including age, gender, race, prior hospitalization, comorbidities (measured using Charlson comorbidity index), and use of insulin, oral hypoglycemic agents, and antihypertensive medications, in comparison to non-users, statin users were 29.1% less likely to have diabetes-specific hospitalizations (OR: 0.719; 95% CI: 0.628–0.824). The odds for all-cause mortality were also lower in statin users as compared to non-users (OR: 0.480; 95% CI: 0.327–0.705). CONCLUSIONS: The results of this study show that statin use rate is low among adults enrolled in a Medicaid program. Statin therapy in adult diabetic patients reduces diabetes-specific hospitalizations and all-cause mortality.

DIABETES/ENDOCRINE DISORDERS – Conceptual Papers & Research

PDB74

AN OPEN-SOURCE, INTERACTIVE MODEL TO ASSESS THE OUTCOMES AND ECONOMICS OF DIABETES INTERVENTIONS IN CANADA

Clarke K1,2,4,5; Hickman E1; Pourbaix D1; Mathias JJ1; Hurren DR1,2,3,6; Adams P7

1Cedar Associates LLC, Menlo Park, CA, USA; 2Novo Nordisk A/S, Bagsvaerd, Denmark; 3Novo Nordisk Canada Inc, Mississauga, ON, Canada

OBJECTIVES: Several decision-theoretic models exist to assess the long-term outcomes and economics of diabetic interventions. Since the models are proprietary, users are limited in their ability to critically review program code and modify inputs for all scenario/simulation. An open-source, interactive diabetes model will greatly facilitate users' ability to modify inputs specifically to simulate the strict guidelines of the Common Drug Review (CDR) agency. CONCLUSIONS: Since the models are proprietary, users are limited in their ability to critically review program code and modify inputs for scenario/simulation. A total of 623 patients were enrolled from 2 sites, Minnesota and New Mexico. The baseline survey included the following instruments: general health (SF-12); depression (PHQ-9); Diabetes Self-care Beliefs Questionnaire (DSBQ); health-related QOL, QOL, and empowerment (DISE-5); diabetes-specific depression (PDB77); Problem Areas in Diabetes (PAID); diet (RPS); physical activity (BRFSS); Readiness to Change; and hypoglycemia and hyperglycemia events (self-report). Several clinical measurements were also obtained (BMI, waist circumference, and A1c level). Data from the above sample were used to conduct a factor analysis. RESULTS: Factor analysis was performed using varimax orthogonal rotation using the survey and clinical variables. Five factors were identified for the sample of 588 patients with measures on all variables. The first factor related to “agreeable” personality characteristics from the DCP factor loadings, the second and fourth factors both related to poor physical health with the second factor including those items relating to empowerment and low A1c while the fourth factor included extraversion, low activity levels, and increased glycemic events. Factor three was high weight and waist circumference as well as low activity levels, and factor five was primarily readiness to change. Communality scores ranged from .317 to .829. CONCLUSIONS: Factor analysis can help explain underlying factors affecting patients with diabetes. Future analyses will use these factor scores to predict the effectiveness of DSME.

DIGESTIVE DISORDERS – Clinical Outcomes Studies

PGII

ASSOCIATION OF WARFARIN, NSAI ds, AND GASTROINTESTINAL BLEED

Smith K1,2,3,4,5,6,7; Brown S1; Maloni D1; Wolfhal T1

1University of Arizona, Tucson, AZ, USA; 2The University of Arizona, Tucson, AZ, USA

OBJECTIVES: To determine the association of gastrointestinal (GI) bleed over one year in a cohort of Medicaid/Medicare dual eligible (Duas) taking warfarin alone or warfarin & non-steroidal anti-inflammatory drugs (NSAIDS) and determine the annual health care costs for patients with GI bleed versus no GI Bleed. METHODS: Data were obtained from Arizona State Medicaid Agency from January 1, 2005 through December 31, 2005. Inclusion criteria consisted of Duas 65+ and 90+ years of age with at least two claims for warfarin, Duas were grouped as taking warfarin alone or warfarin plus NSAIDS. Factors examined included age, sex, race/ethnicity, membership, rural or urban residence, with adjustment for total number of prescription claims and comorbidities. Analysis was performed utilizing a logistic regression model to determine odds of GI bleed when taking warfarin alone or warfarin plus NSAIDS. Results: A total of 2916 patients met inclusion/exclusion criteria: 2538 taking warfarin alone and 378 taking warfarin plus NSAIDS. Males comprised 771 (30.4%) of warfarin and 88 (23.5%) of warfarin plus NSAIDS group. Mean age (SD) was 76 (6.8) and 74.0 (6.1) in the warfarin and warfarin plus NSAIDS respectively. There were 126 (5.0%) GI bleed events in the warfarin and 29 (7.7%) events in the warfarin plus NSAIDS group (p = 0.02). The odds ratio for GI bleed was 1.51 (0.98–2.33). Mean total annual health care costs (SD) were $13,232 (15,476) in