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PRESCRIBING TRENDS FOR COMBINATION PRODUCTS IN THE TREATMENT OF TYPE-II DIABETES

Bilek JC1, Carlson A2, Morris LS1
1University of Minnesota, Minneapolis, MN, USA; 2Data Intelligence, Eden Prairie, MN, USA

OBJECTIVE: To examine prescribing trends of combination oral hypoglycemic therapy for patients with Type-II diabetes using prescription claims. METHODS: Prescribing trends were identified for patients using combination oral hypoglycemic agents for the treatment of diabetes during a three month period beginning November, 2003–January, 2004. Persons were considered newly treated with type II diabetes if there were no prescription claims for insulin or oral diabetes agents during a three month period prior to the first prescription for a combination product. Trends in patients already receiving oral hypoglycemic agents or insulin were identified if combination therapy was added after minimally three months of therapy or if oral hypoglycemic combination therapy was added to an existing treatment regimen during the three-month observation period. Current recommendations for use of combination therapy were compared to the results of prescribing trends obtained from administrative data.

RESULTS: On average, approximately 661,811 persons were identified with combination therapy on a monthly basis (211,922 in November, 2003; 227,981 in December, 2003; 221,908 in January, 2004). Of these, on average approximately 130,708 received metformin/rosiglitazone, 491,380 received metformin/glyburide, and 38,011 received metformin/glipizide. Several prescribing trends were observed for these agents. Despite literature to the contrary, the combination metformin/rosiglitazone was prescribed as initial therapy for 19% of patients receiving prescriptions for that product. Combination products were prescribed as initial therapy for 11% to 19% of patients depending on product. Almost 1% of patients received a combination product plus two or more agents on a monthly basis. A small number of patients received two combination products in their daily regimen. CONCLUSION: Approximately one-fifth of patients receive initial oral hypoglycemic therapy outside of current prescribing recommendations. The prescribing patterns observed from this data suggest the need for treatment regimen management and for plans to carefully study the economic impact of multiple regimen treatments.

PDB34

NEEDLESTICK INJURY IN NURSES Caring FOR PATIENTS WITH DIABETES

Pashos CL1, Nicklasson L2, Lee JM1, Botteman MF2, Cobden D1
1Abt Associates Inc, Lexington, MA, USA; 2Novo Nordisk Inc, Princeton, NJ, USA; 3Abt Associates Inc, Bethesda, MD, USA; 4PharMerit, Bethesda, MA, USA

Objective: To quantify the incidence and risk of needlestick injury (NI) in nurses caring for patients with diabetes. METHODS: Four hundred nurses caring for patients with diabetes in 381 hospitals throughout the United States reported data on their experience with NI, focusing on those occurring within the past year. If respondents experienced multiple NI during this period, detailed data were collected on the most recent event. RESULTS: Of the 400 nurses, 313 (78.3%) reported having ever had a NI, 110 (27.5%) reported having had a NI within the last twelve months, and 44 (40% of those 110) reported multiple NI. Nearly two-thirds of these injuries (n=73; 66.4%) were punctures that drew blood, resulting in one case of contracted hepatitis C. The cumulative annual incidence of NI events was 448 NI per 1000 nurses. Nurses reported the injury in adherence with existing policies in 21.8% of cases. Disposable syringes were involved in 88 (80%) of the events. In half of the injuries (n=55), the needle device was equipped with a safety feature that was ineffective, primarily because it was not fully activated (n=47; 85.5%) or it malfunctioned (n=2 to 5; 3.6% to 9.1%). NI most commonly occurred while nurses were injecting insulin (n=33; 30%). In the two weeks following their NI, 60.1% of nurses were more afraid of needle devices than before the injury and 41.8% felt anxious, depressed, or stressed. As a direct result of the NI, nurses missed 77 days of work. CONCLUSIONS: This study is the first to show the relatively high risk both of NI and of NI that draws blood among nurses injecting insulin with a disposable syringe. Additionally, this study reveals significant post-NI emotional distress, suggests significant under-reporting of NI to hospital officials, and demonstrates the need for a more effective needle safety device.

PDB35

FACTOR ANALYSIS AND PRELIMINARY VALIDATION OF INSULIN DELIVERY SYSTEM QUESTIONNAIRE

Hayes RP, Lenox SM
Eli Lilly & Company, Indianapolis, IN, USA

OBJECTIVE: For patients with type-1 diabetes, having a preferred insulin delivery system may lead to better compliance and better clinical and patient-reported outcomes. The purpose of this study was to assess the reliability and validity of the Insulin Delivery System Questionnaire (IDSQ), an instrument developed to measure overall insulin satisfaction and preference for an insulin delivery system. METHODS: The IDSQ was administered to 137 patients with type-1 diabetes at screening, baseline, crossover, and endpoint of a randomized, noninferiority, crossover trial designed to compare the glycemic control of injectable vs. inhaled insulin. Psychometric analyses included internal consistency (Cronbach’s alpha), factorial validity (principal component analysis with Promax rotation), discriminant validity (ANCOVA model with baseline score and other covariates), and responsiveness (t-tests). RESULTS: Exploratory factor analysis indicated that there were three factors accounting for 73% of the variance. All items loaded above >0.50 on either Factor one, lifestyle impact; Factor two, ease of dosing; or Factor three, satisfaction/preference with the exception of the “easy to control my blood sugar” (BG) item. Cronbach’s alpha coefficients calculated for the factors were 0.93, 0.86, and 0.86,