INFLUENCE OF FAMILY STRUCTURE ON EMERGENCY ROOM UTILIZATION OF DIABETIC MOTHERS

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OBJECTIVE: This study is designed to determine if single diabetic mothers utilize emergency room services more frequently when compared to coupled mothers. METHODS: Medical Expenditure Panel Survey (MEPS) data from 2002–2005 were used in this cross-sectional analysis. Mothers were included if they had been told they had diabetes by a health care professional. Chi-square analysis was used to determine differences between single and coupled mothers in regards to sociodemographic characteristics. Simple logistic regression was used to determine if single diabetic mothers were more likely to visit the emergency room than coupled mothers. Multivariate logistic regression model was used to adjust for age, income, race, insurance status, and education. The complex survey design of MEPS including sampling strata, primary sampling units, and personal weights were reflected in the analysis. An alpha level of 0.05 was used to determine statistical significance, and all analysis were performed using SAS. RESULTS: Single diabetic mothers were significantly more likely to be black, and come from lower income groups. Coupled diabetic mothers were significantly more likely to have a degree beyond high school, and to have private insurance. Before adjustment for covariates, single diabetic mothers were 2.3 times as likely to use emergency room than coupled mothers (p < 0.05). After adjustment for covariates, single diabetic mothers were 1.9 times as likely to visit the emergency room (95% confidence interval: 1.15–3.14). CONCLUSION: Among diabetic mothers, being single is a significant risk factor in determining emergency room utilization. Further research is needed to determine what factors place single diabetic mothers at greater risk for emergency room use. Future interventions designed to decrease emergency room use in diabetics may be targeted to single mothers.

INCREASED HOSPITALIZATIONS BY CHILDREN WITH TYPE 2 DIABETES

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OBJECTIVE: Type 2 diabetes has been reported with increasing frequency among children aged 17 or younger (hereafter referred to as “children”) in the United States (US). However, while it is known that the prevalence of type 2 diabetes among children is growing, there is little information about their hospital use. This study is purposed to study the trend of hospitalizations with type 2 diabetes among children between the year 1997 and 2003 in the US. METHODS: The study was based on the Kids Inpatient Database (KID), a nationally representative probability sample of the US. The numbers of hospitalization made by children with type 1 diabetes were 2209, 4232, and 3840 in the year 1997, 2000, 2003, respectively. Adjusting for the growth of population size, the rate of hospitalization with type 2 diabetes was 2.5 times larger in 2003 compared to 1997. During the same time period, the number of hospitalization made by children with type 1 diabetes was 33,504, 35,541, and 36,439. This growth of the hospitalization rate was the same as that of the children population in US. Therefore, adjusting for the population size, the rate of hospitalization with type 1 diabetes remained the same. CONCLUSION: Given that the symptoms of type 2 diabetes take a long time to develop, even small numbers of hospitalizations are alarming. Furthermore, unlike that of type 1 diabetes, the hospitalization with type 2 diabetes was rapidly on the rise. With a continuous increase in obesity among children, the burden of type 2 diabetes is a growing public health concern.

DIABETES/ENDOCRINE DISORDERS—Patient-Reported Outcomes

A RETROSPECTIVE ANALYSIS OF MEDICATIONS ADHERENCE AND ASSOCIATED HEALTH CARE COST FOR THE DIABETIC PATIENTS

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OBJECTIVE: Determine the adherence to diabetes medications in the treatment of diabetic patients and associated health care cost. METHODS: The study sample from a large PBM claims database from January 1, 2005 through December 31, 2006. Patients were included if they had diagnosis of diabetes, received at least 1 diabetes medication and were continuously enrolled during the study period. Medication adherence rates were measured as percentage of days that the patient possessed any available diabetic drug from July 1, 2005 to July 1, 2006. Each study member was placed into 1 of 3 mutually exclusive adherence category, defined as 0 ≤ MPR < 0.5 (non-adherent group), 0.5 ≤ MPR < 0.8 (partially adherent group), 0.8 ≤ MPR ≤ 1 (adherent group). Descriptive analyses were conducted within each category to assess the patient characteristics and health care costs; Multivariate regression models were conducted to determine the impact of adherence on the health care costs controlling for confounding factors. RESULTS: A total of 4262 patients were included. Non-adherent, partially-adherent and adherent patients accounts for 12.9%, 19.1% and 68.2% respectively. The average diabetes-related medical care costs in the 18 months post-index period decreased as the adherence level increased. The average overall medical care costs in the 18 months post-index period also decreased as the adherence level increased. The average overall health care costs of partially adherent group and adherent group are both lower than non-adherent group. After controlling for patient characteristics, comorbidities, and health care cost in the six months pre-index period the multivariate regression showed low drug adherence level was significant predictors of both higher diabetes-related medical care costs (p < 0.001) and higher overall total medical care cost costs (p < 0.001). CONCLUSION: Non-adherent diabetic patients have higher diabetes-related and overall medical care cost than partially adherent diabetic patients and adherent diabetic patients. Investment in disease management programs to promote adherence with medication regimen may needed for these non-adherent diabetic patients.

SYSTEMATIC REVIEW OF ADHERENCE, COMPLIANCE AND QUALITY OF LIFE IN TYPE 2 DIABETES PATIENTS

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To evaluate the quality of life as an outcome of adherence and compliance in type 2 diabetes and to predict the barriers and strategies to improve adherence. Data were obtained by search-
METHODS: Classical Test Theory, using Factor Analysis of responses to the PBMH has desired psychometric properties. Research on the structure actual treatment effectiveness as a result of patient concerns measured under controlled, clinical-trial conditions may over-estimate the importance of all ADDQoL items. In a structured survey, experts rated the importance of all ADDQoL and additionally important items, and suggested attributes that might be described using sets of related items. A CS was developed consisting of five independent attributes, with each question containing a description based on the item content of the respective attribute and four sentences describing severity levels. Maintaining this format, the wording in the CS was further modified based on additional input from experts and RA after each pilot. The final attributes were: Physical Ability & Energy, Relationships, Mood & Feelings, Enjoyment of Diet, and Satisfaction with Management of diabetes. Results of the third pilot indicated Infit and Outfit MNSQ for the five attributes ranging between 0.88 and 1.10. Person and Item reliabilities were 0.65 and 0.92, while the respective separation ratios were 1.36 and 3.34. Severity levels used were supported by Rating Scale Diagnostics indicated by RA. CONCLUSION: Results of the statistical analyses indicate that the PBMH has desired psychometric properties. Research on the estimation of a utility scoring algorithm and validation testing of this PBMH is ongoing.