

C-C2-03:

The Risk for Diabetes Mellitus Among Women with Gestational Diabetes: A Population-Based Study in Israel

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Background and Aims: to determine the incidence of postpartum diabetes mellitus (DM) in the years following a diagnosis of gestational diabetes (GDM) and to determine whether severity of GDM is associated with developing diabetes. **Methods:** a retrospective cohort study was performed among 185,340 pregnant women who had glucose challenge test (OGCT) or 3-h oral glucose tolerance test (OGTT) in a large HMO in Israel. Subsequent diagnosis of diabetes was ascertained by using an automated DM registry. **Results:** a total of 11,259 subjects were diagnosed as suffering from GDM comprising 6.07% of the cohort. During a total follow-up period of 946,978 Person-Years there were 1065 (1.74 per 100 Person-Years) and 1118 (0.12 per 100 Person-Years) diagnoses of postpartum DM among GDM and non-GDM women, respectively. After 10 years of follow-up, 16% of the GDM population developed diabetes mellitus, compared with 1% among the non-GDM population. GDM was associated with an 8-fold higher risk of postpartum DM after adjusting for important confounder such as socioeconomic status and BMI. Among women with GDM history, diabetes risk increased with number of abnormal OGCT values and among women with Type A2 GDM. **Conclusions:** GDM, and particularly severe GDM, are important predictors of future development of DM.

Keywords: Postpartum diabetes mellitus, Gestational diabetes, Development of diabetes among women

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PS2-15:

Coding for Obesity in a Health Plan Claims Database

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Background and Aims: The Centers for Disease Control estimated the obesity rate in New Mexico for 2008 to be 25.2%. Sources estimate the following associations between obesity and type 2 diabetes (80%); cardiovascular disease (70%); hypertension (26 %). Yet obesity is infrequently coded as a secondary diagnosis among providers submitting claims. This study examines the frequency with which obesity is documented on claims forms, the relationship between age, gender, and obesity coding, and the relationship between obesity coding and healthcare utilization. **Methods:** Lovelace Health Plan (LHP) claims for calendar year 2008 were queried to identify a diagnosis of obesity documented with an ICD-9 code. Of 4,559,975 claims, 559,672 (12.3%), were for individuals who had a secondary diagnosis of obesity. Outpatient, inpatient, emergency, and total claims per patient were compared for patients with and without a diagnosis of obesity by age and gender. A comparison of major diagnostic categories taken from primary diagnoses for patients with and without coded obesity was also made. **Results:** Mean annual claims for patients coded for obesity equaled \$10,983, compared to \$5,924 for patients not coded for obesity. For males coded for obesity, the mean annual claims paid were \$12,165, compared to \$10,409 for females. The figures increased as the age of the patient increased for both patients coded and not coded for obesity. For three major diagnostic categories Endocrine, Metabolic Diseases, (OR=2.5), Skin Diseases (2.0), and Circulatory Diseases (2.0), the odds of having a claim submitted for patients coded for obesity were at least double. **Conclusions:** The prevalence of patients coded for obesity in LHP claims is far lower than the estimated prevalence in New Mexico. Obesity is associated with greater utilization of health care. The odds of patients being coded for obesity are at least double for endocrine, skin, and circulatory diseases. This study describes an association that is assumed to be causative, since obesity is preventable and reversible. However, further studies need to be conducted to determine

accuracy of coding. Perhaps incentives for providers to code for obesity should be considered.

Keywords: Obesity coding, Healthcare utilization, Accuracy of coding
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PS2-17:

Diabetes Social Support Feasibility Pilot Study: Utilizing Mobile Technology and Self-Identified Supporters to Enhance Self-Monitoring of Blood Glucose

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Background and Aims: Self-monitoring of blood glucose (SMBG) is associated with improved glycemic control among patients with type 2 diabetes, however, the practice of daily self-monitoring is not optimal. Telecommunications technology may improve adherence to recommended self-management practices by remotely transmitting automated reminders to motivate patients, and utilizing social networking for peer support. The purpose of this pilot study is to demonstrate the feasibility and usability of mobile technology and the potential added value of social support to improve SMBG frequency and glycemic control among adults with type 2 diabetes. **Methods:** Adults 25-74 years of age with type 2 DM and an average HbA1c > 8.0% were recruited from Kaiser Permanente Georgia (KPGA) and Oakhurst Medical Center (OMC, a community health clinic) to participate in a 3-month study using wireless technology. Enrollment sessions with presentations on SMBG techniques, use of the wireless technology, and motivational coaching to enhance social support were conducted in November 2009. During the subsequent 3-months, both diabetes patients and their self-selected supporters will receive text messages to their cell phones summarizing a patient's SMBG frequency and levels. Participants and their supporters will attend a disenrollment session in February 2010 when feasibility and usability will be assessed in focus groups. **Results:** 6 of 161 eligible diabetes patients at KPGA and 9 of 28 eligible diabetes patients at OMC, and their self-selected supporters, consented to participate. The average age of diabetes patients was 49.3 years. 86.7% (N=13) were African-American; and 33.3% (N=5) were male. Five days after enrollment, 60% (N=9) of patients had connected their wireless transmitters and had current blood glucose data. Follow-up phone calls will be made to ensure that all participants are connected to the wireless technology within 10 days of the enrollment session. **Conclusion:** Integrating mobile telecommunications technology with chronic disease management may empower patients in their own self-care and ease the burden on health care providers. Our study will evaluate the potential for studying the use of wireless mobile technology in a larger randomized controlled trial and will obtain participant comments on what changes might improve participant compliance.

Keywords: Self-monitoring of blood glucose, Telecommunications technology and health, Self-selected supporters

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PS2-18:

Extreme Childhood Obesity is Associated with Increased Risk for Gastroesophageal Reflux Disease in a Large Population-Based Study

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Background and Aims: Gastroesophageal reflux disease (GERD) is associated with esophagitis and esophageal adenocarcinoma in adults and may persist from childhood. Childhood obesity may increase risk for GERD. Therefore, we investigated whether moderate and extreme obesity is related to a higher odd for GERD in children of different age groups. **Methods:** For this population-based, cross-sectional study, diagnosis of GERD, and measured weight and height were extracted from electronic medical records