

were site-stratified. Overall mean A1c's were 8.1 for MIN and 7.6 for ABQ. Using winter as the referent season, we observed differences in amplitude of seasonal change across the 2 sites with spring, summer, and fall values for MIN/ABQ parameter estimates of -0.32/-0.09, -0.31/-0.14, -0.18/-0.08 ( $p < .0001$ ). In site-controlled models with terms for daylight and temperature, only temperature remained a significant predictor ( $p = .004$ ); the stratified model for ABQ showed a retrograde estimate for light (0.02,  $p = 0.31$ ) which may be explained by ABQ's later peak A1c date of March 1, compared to December 31 for MIN. **Discussion:** The trends observed in this study reflect those published previously and indicate a strong seasonal element to A1c scores with latitudinal amplification. LOESS plots reveal two distinct "humps" starting at the solstice and ending early October where the slope of the line flattens for ABQ, and reverses for MIN from the equinoctial peak. ABQ's late A1c peak is also close to the spring equinox, suggesting that perhaps 12-hour days act as an independent signal above and beyond the greater trend of increasing or decreasing daylight.

**Keywords:** A1c; Seasons; Diabetes

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CA6-01:

### A System-based Intervention to Improve Postpartum Diabetes Screening Among Women with Gestational Diabetes

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**Background/Aims:** Postpartum diabetes screening is recommended for women with gestational diabetes (GDM); up to 36.0% of them will have glucose abnormalities after delivery. To improve the <60% rate of postpartum diabetes screening in Kaiser Permanente Northwest, we conducted a multifaceted process improvement project. **Methods:** The intervention included revision of protocols used to guide outpatient care provided to pregnant patients with types 1, 2, and gestational diabetes, and revision of electronic order entry tools; development of an electronic reminder system to trigger phone calls to patients who had not completed postpartum glucose testing within 3 months after delivery; and a series of 60 minute educational sessions for clinicians, nurses, and medical assistants conducted between January and April 2009. The pre-implementation population was GDM-affected deliveries July 1, 2007—June 30, 2008 ( $n = 200$ ) and the post-implementation population was GDM-affected deliveries July 1, 2009—June 30, 2010 ( $n = 179$ ). Two main outcomes were evaluated: 1) clinician orders for either a fasting blood glucose (FBG) test or 2-hr oral glucose tolerance test (OGTT) placed between one month before to 3 months after delivery, and 2) a completed FBG or 2-hour OGTT performed between 14 days after delivery and December 31, 2008 (pre-implementation) or December 31, 2010 (post-implementation). Because patient characteristics did not differ significantly between the pre- and post-implementation populations, an unadjusted Cox Proportional Hazards model was used to evaluate test completion. **Results:** The prevalence of GDM was 3.8% in pre- (200/5250) and post- populations (179/4765). The proportion of women who received an order for a postpartum glucose test within 3 months of delivery increased from 77.5% (155/200) to 88.8% (159/179) ( $p = .004$ ); the proportion completing the test Within 3 months of delivery increased from 53.5% (107/200) to 60.3% (108/179) ( $p = .18$ ). When including tests completed beyond the first 3 months postpartum (through December 2008 pre- and December 2010 post-implementation), women in the post-implementation group had a significantly higher rate of test completion (59.5% [119/200] vs. 71.5% [128/179],  $p = 0.01$ , Hazards Ratio 1.37, 95% CI 1.07 to 1.7. **Discussion:** Rates of postpartum diabetes testing among women with recent GDM can be improved with system changes and reminders to women.

**Keywords:** Diabetes; Gestational Diabetes

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CA6-02:

### Collaborative Goal Setting and HbA1c Control Among Patients With Diabetes

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**Background/Aims:** Helping patients set and follow up on goals may be an effective way to help patients improve their confidence (self-efficacy) and commitment to improve diabetes self-management. We evaluate associations among patient-reported use of collaborative goal setting with clinicians, patient-reported self-efficacy, and clinical control (measured by HbA1c) among patients with diabetes. **Methods:** A cohort of insured patients aged 18+ years with diabetes who initiated oral mono-therapy between 2000-2005 was surveyed in 2008. The survey included the 3 collaborative goal-setting items from the Patient Assessment of Chronic Illness Care (PACIC), a 4-item measure of self-efficacy, measures of socio-demographics, age of diabetes onset, and height/weight. Survey data were joined with automated laboratory and encounter data for the 12 months prior to and following survey administration. A structural equation model (SEM), using path analysis and adjusting for baseline patient characteristics (including HbA1c and diabetes-related co-morbidities and complications), was fit to investigate relationships among collaborative goal setting, self-efficacy and HbA1c control. **Results:** Completed surveys were available for 1070 patients ( $n = 956$  mail and  $n = 114$  telephone; 77% response rate). Survey respondents were on average 68 years, half were female, 60% white, 31% black, and 57% reported low self-efficacy. On average, patients reported engaging in collaborative goal setting with their clinicians 'sometimes' (mean = 3.1, range 1 [never]-5 [always]). At baseline, mean HbA1c was 7.2%, with 22%  $\geq 8\%$ . Results from the SEM did not support a direct relationship between the collaborative goal setting factor (Cronbach Alpha=0.83) and HbA1c control, but did support an indirect relationship (asymmetric distribution of products 95% CI = -0.02, -0.002) with increases in collaborative goal setting positively associated with a greater likelihood of average or high self-efficacy (beta,  $p < 0.01$ ), and average or high self-efficacy associated with lower follow-up HbA1c level (-beta,  $p < 0.01$ ). These relationships persisted after controlling for baseline HbA1c and other patient characteristics. **Discussion:** While collaborative goal setting between patients with diabetes and their clinicians is not directly associated with better clinical control, it is associated with improved self-efficacy, which in turn, is associated with improved clinical control.

**Keywords:** Diabetes; Goal-setting

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CA6-03:

### Reduced Risk of Incident Microvascular and Macrovascular Events Under Diabetes Bundle Management

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**Background/Aims:** Diabetes Mellitus (DM) is a common condition associated with increased risk of microvascular and macrovascular complications. Aim: To determine if a primary care model for DM using a 9 component all-or-none bundle (Bundle) of measures improved microvascular and macrovascular complications compared to usual care (Non-Bundle). **Methods:** In 2006 a diabetes system of care using a Bundle of measures was implemented for some members of the Geisinger Health Plan. A cohort of 4097 primary care patients using the diabetes bundle system of care is matched with a cohort of Non-Bundle care patients to balance the baseline characteristics. The cumulative risk of incident microvascular and macrovascular complications is obtained by a weighted Cox proportional hazard model, in which individual post-bundle exposure is adjusted by inverse probability weighting (IPW). **Results:** 4097 patients with Bundle care were compared to Non-Bundle patients for the first three years after implementation of bundle management. The adjusted hazard ratios for myocardial infarction (MI) (HR: 0.78, 95% CI: 0.67-0.92), stroke (HR: 0.78,