Preconception Counseling for Women With Diabetes

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"Quality Improvement Success Stories" are published by the American Diabetes Association in collaboration with the American College of Physicians, Inc., and the National Diabetes Education Program. This series is intended to highlight best practices and strategies from programs and clinics that have successfully improved the quality of care for people with diabetes or related conditions. Each article in the series is reviewed and follows a standard format developed by the editors of *Clinical Diabetes*. The following article describes the efforts of a U.S. Airforce diabetes specialty clinic to improve the delivery of preconception counseling to women with diabetes who are of childbearing potential.

Describe your practice setting and location.

The Diabetes Center of Excellence (DCOE) is a U.S. Air Force diabetes specialty clinic located at Wilford Hall Ambulatory Surgical Center at Joint Base San Antonio in Lackland AFB, Tex. Patients are U.S. Department of Defense beneficiaries, including individuals who are on active military duty or retired from the military and their dependents. The DCOE embraces a multidisciplinary approach in which several individuals interact with patients at each encounter (1).

Describe the specific quality gap addressed through the initiative.

Despite evidence-based guidelines published in 2006 regarding preconception counseling (PCC), the rates of PCC remain dismal in women of childbearing age with diabetes. One study found that only 25% of women received PCC (2). PCC is an integral part of diabetes management for women of childbearing potential. It covers topics including the importance of glucose control, healthy eating, the need for medication changes, baseline laboratory values, and the need for a retinal exam before getting pregnant (3); it also stresses that glycemic control should be maintained for at least 6 months before pregnancy to avoid maternal and fetal complications.

The DCOE explored the following question: among women of childbearing potential in the DCOE, how many report that they received PCC?

How did you identify this quality gap? In other words, where did you get your baseline data?

In January and February 2014, questionnaires were developed and distributed to women at each clinic encounter to determine whether they received PCC. Women were asked their age and the date of their last menstrual cycle. Those who reported having no menstrual cycle within the past year were instructed to stop. Women with potential for pregnancy were asked, "Has anyone in the DCOE discussed with you the importance of good sugar control before getting pregnant or preventing pregnancy if you have poor sugar control?"

Summarize the initial data for your practice (before the improvement initiative).

Twenty-seven women were identified as being of childbearing potential; only seven of them reported receiving PCC (30%) despite documentation in the

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electronic health record by providers stating that PCC had been provided in the past (Supplementary Figure S1).

What was the time frame from initiation of your quality improvement (QI) initiative to its completion?

After identifying the scope of the problem, DCOE staff, including certified diabetes educators (CDEs) and providers (fellows and a nurse practitioner) created a brochure (Supplementary Figure S2), which included space to develop a written PCC plan with patients. The brochure was discussed and distributed before reassessment.

A prompt on the Microsoft Excel–based NoteWriter was added to remind staff to address PCC with women of childbearing potential (Supplementary Figure S3). Conditional formatting was used to turn the prompt red for female patients <50 years of age. When a provider relays the information in the brochure and discusses a PCC plan with a patient, the box is checked and the prompt turns black.

Questionnaires were re-distributed from January through March of 2015. Thirty-eight women were identified as being of childbearing potential, and 28 (74%) reported having received PCC.

Describe your core QI team. Who served as project leader, and why was this person selected? Who else served on the team?

One of our CDEs served as project lead. Our team included our licensed vocational nurses, CDEs, and providers (fellows and a nurse practitioner).

Describe the *structural* changes you made to your practice through this initiative.

DCOE staff developed a brochure to facilitate discussion and made reference materials available to patients. The brochure covered maternal and fetal risks, discussion points on target blood glucose and A1C levels, medications, consultations and laboratory tests, and recommendations for birth control until preconception goals are reached. The brochure was distributed to clinic patients to review with providers.

Describe the most important changes you made to your *process* of care delivery.

This initiative was conducted as part of the DCOE's efforts to provide exemplary patient care based on the American Diabetes Association's *Standards of Medical Care in Diabetes*. Perceptions of PCC differed between providers and patients. Providers documented having PCC conversations with female patients of childbearing age, but patients did not always indicate that they received this counseling. Adding a reminder prompt made providers more accountable for providing the information in the brochure to patients and discussing a PCC plan.

It is essential to frame this conversation in a way that ensures the patient is aware she is being provided specific PCC information; otherwise, the patient may not identify or recall the conversation as such when asked. Supplementing the education provided orally with a brochure and personalized plan reinforces the significance of the information.

Summarize your final outcome data (at the end of the improvement initiative) and how it compared to your baseline data.

In 2014, before the intervention, only 7 of 27 women of childbearing potential (30%) reported receiving PCC. In 2015, after the intervention, 28 of 38 women of childbearing potential (74%) reported receiving PCC.

What are your next steps?

The DCOE continues to use the brochure to engage women in conversations about PCC. We believe the brochure facilitates meaningful conversations about PCC and can be used in other practice settings.

What lessons did you learn through your QI process that you would like to share with others?

Perceptions of PCC differed between providers and patients. Providers documented having PCC conversations with female patients of childbearing potential; however, patients did not always indicate that they received this counseling. Thus, it is essential to frame the conversation in a way that ensures the patient is aware she is being provided specific PCC information. Supplementing education provided orally with printed information such as a brochure and with a personalized plan can reinforce the importance of the information.

DUALITY OF INTEREST

No potential conflicts of interest relevant to this article were reported.

AUTHOR CONTRIBUTIONS

A.L.H. was lead author by organizing the team, contributed to discussion, and provided clinical perspective concerning the use of the NoteWriter. N.A.W. and E.C. developed and conducted the process improvement project; thus, they were responsible for describing the gap and initiative. J.L.W. analyzed data, contributed to the discussion, and reviewed and edited the manuscript. C.C.M. assisted with the background research. T.J.S. contributed to the discussion and provided clinical perspective concerning the use of the NoteWriter. All authors reviewed and edited the manuscript. J.L.W. is the guarantor of this work and, as such, had full access to all the information reported and takes responsibility for the integrity of the data and the accuracy of the report.

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