Improving control: Preconception care in diabetes

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Women with pre-existing diabetes have an increased risk of poor outcomes in pregnancy compared with women without diabetes. Preconception planning has been shown to improve these risks, and the provision of adequate preconception care for women with pre-existing diabetes is a key recommendation made by the Confidential Enquiry into Maternal and Child Health (CEMACH, 2007) and NICE (National Collaborating Centre for Women's and Children's Health [NCCWCH], 2008). It has been shown that poor glycaemic control during preconception and in the first weeks of pregnancy is associated with congenital malformations and miscarriage (Kitzmiller et al, 1991). Preconception care should, therefore, include advice on improving glycaemic control to an HbA_{1c} target of <6.1% (NCCWCH, 2008).

The diabetic pregnancy clinic at the Countess of Chester NHS Foundation Trust was audited between July 2005 and June 2006 as part of a continuous prospective diabetes pregnancy audit programme (the North West Diabetic Pregnancy Audit; Young et al, 2008). The results highlighted poor rates of preconception planning compared with peer hospitals, and further analysis confirmed that only 13% of people with type 1 or type 2 diabetes attending the diabetes antenatal clinic had received preconception care.

Implementing change

In order to improve preconception care a multidisciplinary approach was used, involving education as well as service changes. A nurse-led preconception clinic was established in 2006, which was held on demand with no waiting list. The clinic offered smoking cessation advice, optimisation of glycaemic control, folic acid supplementation, and medication review to avoid potentially teratogenic drugs. A primary care education programme was delivered to GPs and practice nurses at locality meetings and educational half-days. This information was reinforced by a clinical governance bulletin that was delivered electronically to all GP surgeries. At secondary care level, a prompt was added to the diabetes clinic proforma as a reminder to discuss preconception issues with all women of child-bearing age, and written information based on CEMACH recommendations was developed.

The effects of these interventions were assessed via a re-audit between July 2007 and June 2008, and demonstrated that there was a significant rise (13% to 44%) in the proportion of women with diabetes receiving preconception care (P=0.012). The mean HbA_{1c} level (measured at the first appointment with the diabetes antenatal team when pregnant) of the women who had attended the specialist preconception clinic was 6.6±0.2%, compared with 8.5±0.2% for those women who had not received preconception care; this difference was highly significant (P<0.0001). Women who attended the preconception clinic also had higher levels of folic acid supplementation and booked their pregnancies earlier (the booking appointment was defined as the first contact with the diabetic antenatal team when pregnant).

Conclusions

The results of this initiative confirm that proactively educating people with diabetes and healthcare professionals improves the rates of preconception planning. We have shown that early intervention by a multidisciplinary team can improve diabetes preconception care, and this in turn improves glycaemic control, facilitates earlier booking and increases folic acid use. Our results also demonstrate the effectiveness of a continuing audit cycle (the North West Diabetic Pregnancy Audit) as a tool to improve patient care. ■

Confidential Enquiry into Maternal and Child Health (2007) *Diabetes in Pregnancy: Are we Providing the Best Care? Findings of a National Enquiry: England, Wales and Northern Ireland.* CEMACH, London

Kitzmiller JL et al (1991) Preconception care of diabetes. Glycemic control prevents congenital anomalies. *JAMA* **265**: 731–6

National Collaborating Centre for Women's and Children's Health (2008) *Diabetes in Pregnancy: Management of Diabetes and its Complications from Preconception to the Post-natal Period. NICE CG063.* Royal College of Obstetricians and Gynaecologists, London

Young RJ et al (2008) The North West Diabetic Pregnancy Audit: a practical system for multi-centre diabetic pregnancy audit. *Diabet Med* **25**: 496–500

The IMPROVE™ Control Campaign

The Global Task Force on Glycaemic Control is a group of physicians and specialists in the field of diabetes from around the world that is working in collaboration with Novo Nordisk with the ultimate aim of identifying and developing practical solutions to the global problem of poor glycaemic control in people with diabetes. Since early 2008, the *Journal of Diabetes Nursing* has featured articles and submissions under the banner of IMPROVE™ Control – a global public awareness campaign focused on the need for improved control, which forms part of the Task Force's work. Throughout 2009, the journal will continue to bring you articles on the barriers to good glycaemic control, and submissions from *you*, our readers, outlining the strategies you have used to help people with diabetes improve their control.

For example, perhaps you have implemented a new educational session in your area that has helped break down barriers to control, or maybe you have set up a new referral pathway that has helped improve HbA_{1c} levels. The *Journal of Diabetes Nursing* would like to help you share your practical solutions for improving control, no matter how big or small, with other nurses working in diabetes. We encourage you to take part in this global initiative by calling 020 7627 1510, or emailing james@sbcommunicationsgroup.com.