

Quality of Primary Care Follow-up for Women With Gestational Diabetes: A Cohort Study

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Introduction

Gestational diabetes mellitus (GDM) puts women at increased risk of developing type 2 diabetes later in life. NICE guidelines [1] therefore recommend routine follow-up of these women in the form of a fasting blood glucose test at six weeks post-partum and annually thereafter if results are normal. We investigate how well this follow-up is performed in England.

Background

GDM is defined as carbohydrate intolerance with onset or first recognition during pregnancy [2]. Approximately 3.5% of pregnancies in England and Wales are affected [3], although this figure is likely to rise following population trends in increasing obesity [4].

Previous studies in America, Canada and Europe show that follow-up screening rates are suboptimal [5]. Only one previous study has assessed UK GDM follow-up rates. This self-reporting survey study found that screening in England is also poor: only one third of general practitioners reported recalling women for long-term annual screening [6]. However, it has been shown that self-reporting surveys over-estimate screening rates [7] therefore these results should be treated with caution. We performed a cohort study to analyse this issue with more objective data.

Method

Data from the Quality Improvement in Chronic Kidney Disease (QUICKD) trial was used to identify a cohort of women with GDM from 127 primary care practices across England. The trial data comprised routinely collected GP records. All correctly coded cases of GDM identified between January 2006 and December 2009 were used as the short term follow-up cohort (N = 788). This group was followed up for six months to identify evidence of postpartum serum glucose testing. All correctly coded cases of GDM between January 1990 and December 2005 were used for the long term follow-up cohort (N= 718). Annual follow-up for this group was analysed over a five year period; between January 2006 and December 2010.

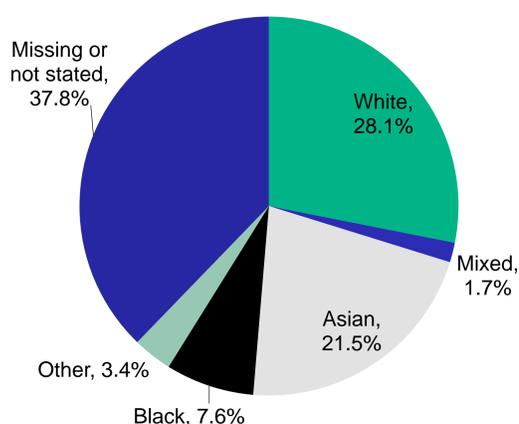


Figure 1. Ethnicity of participants

Results

The GDM cohorts were comprised of a diverse ethnic mix, with Asian women over-represented by a factor of 2.5 compared to the general population.

Short-term follow-up

Of 788 women who were eligible for short-term follow-up, only 146 (18.5%) had blood glucose testing within 6 months of delivery. Three women were found to have diabetes and seven to have abnormal glucose results (table 1). Significant regional differences were found in rates of short-term follow-up (figure 1).

Long-term follow-up

718 women were eligible for long-term follow-up. The rates of follow-up remained around 20% over the 5 year window. There was no significant increase in screening rates following the introduction of the NICE Diabetes in Pregnancy guidelines in 2008.

Outcome	Number of women
Not tested	642 (81.5%)
Normal	136 (17.3%)
Impaired fasting glucose	2 (0.3%)
Impaired glucose tolerance	5 (0.6%)
Diabetes	3 (0.4%)
Total	788 (100%)

Table 1. The outcomes of short term follow-up

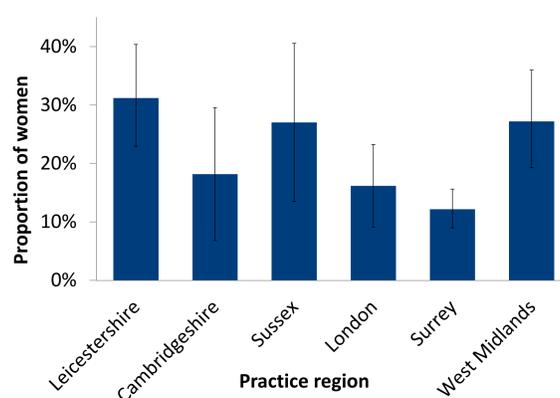


Figure 2. The proportion of women followed up by practice region.

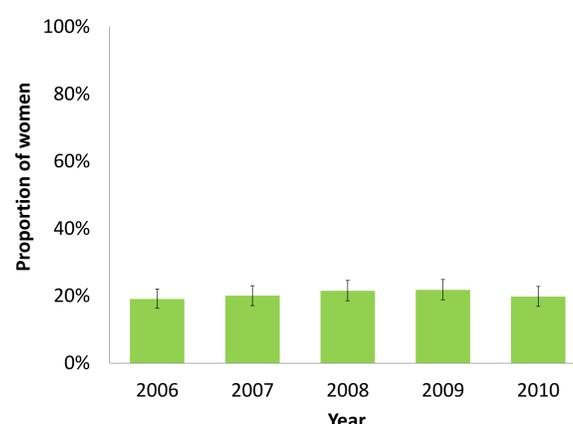


Figure 3. The outcomes of long term follow-up by year.



Discussion

This national cohort study demonstrates that rates of follow-up screening among women who have had GDM are poor. This is in keeping with the literature which shows only slightly better results in the US, Canada and Australia [5]. It builds on the single previous UK study by providing a more objective measure of screening rates.

The presence of significant regional differences implies that healthcare factors are highly influential on the rate of screening. Strategies to improve screening should, therefore, focus on healthcare factors such as:

1. Targeting GPs in the form of setting up computer alerts to aid annual recall for screening.
2. Inclusion of post-GDM screening in pay-for-performance targets (e.g. QOF).
3. Improved education of healthcare professionals and women regarding the importance of follow-up screening and how it should be done.

Further research

Additional investigation is needed to fully explain the regional variations in screening demonstrated here.

On-going audit of this situation is required to ensure that screening rates improve.

Conclusion

Postnatal monitoring of women with gestational diabetes is markedly suboptimal despite current recommendations. For those attending follow-up the number of new diabetes cases detected is significant. The importance of improving the quality of follow-up for women who have had gestational diabetes is evident.

References

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