

Evidence Assessment: Summary of a Systematic Review

Who is this summary for?

For doctors and other health personnel, administrators and managers of health facilities, and stakeholders involved in the management of diabetes

Reminder systems for women with previous gestational diabetes mellitus to increase uptake of testing for type 2 diabetes or impaired glucose tolerance

Key findings

- Compared with no reminder, a postal reminder was two to four times more likely to encourage women who had experienced gestational diabetes mellitus to take a blood glucose test three months after delivery.
- There was no difference if the reminder was sent to the woman only, the physician only or to both the woman and the physician.

Background

Some women experience high blood glucose concentrations during pregnancy (termed gestational diabetes mellitus). Although these high blood glucose concentrations usually normalise immediately after birth, women who have experienced GDM are at an increased risk of developing type 2 diabetes in the future. It is therefore important that they are regularly tested for higher than normal blood glucose levels (to detect type 2 diabetes or 'impaired glucose tolerance' which is a prediabetic state sometimes preceding type 2 diabetes), starting in the months after they have given birth. However, for a variety of reasons, many women do not get their blood glucose tested after experiencing GDM.

Question

What is the effect of reminder systems to increase the uptake of testing for type 2 diabetes or impaired glucose tolerance in women with a history of gestational diabetes mellitus (GDM)?

Reminder systems for women with previous gestational diabetes mellitus in Cameroon:

The prevalence of gestational diabetes in Cameroon varies from 5 to 17%. Some approaches are currently used to improve the management of gestational diabetes like training of health care providers, development of education materials, introducing individual education sessions for women with gestational diabetes mellitus and their families and screening for diabetes around six weeks postpartum. No reminders systems are used in Cameroon.

	What the review authors searched for	What the review authors found
Studies	Randomised controlled clinical trials (RCTs).	One four-arm randomised controlled clinical trials met the inclusion criteria.
Participants	Women with a diagnosis of GDM in the index pregnancy	Women with a diagnosis of GDM in the index pregnancy
Interventions	Reminders of any modality (post, email, phone (direct call or short SMS text) to either women with a history of GDM or their health professional, or both.	Three months after eligible women had given birth, postal reminders were sent to the woman only, to the physician only, and to both the woman and physician. Women and physicians were contacted three times during the one-year post-study survey follow-up: women were contacted by telephone twice and by mail once, and physicians were contacted by fax, telephone and mail. The duration of follow-up was up to one year after giving birth
Controls	<ul style="list-style-type: none"> • A different kind of reminder. • No reminder 	The control group in this study did not receive any reminder
Outcomes	<p>Primary outcomes</p> <ul style="list-style-type: none"> • Proportion of women having their first OGTT (> 6 weeks to ≤ 6 months, > 6 months to ≤ 12 months, > 12 months) after giving birth. • Proportion of women having a blood glucose test other than an OGTT (> 6 weeks to ≤ 6 months, > 6 months to ≤ 12 months, > 12 months) after giving birth. • Proportion of women diagnosed with type 2 diabetes or showing impaired glucose tolerance or impaired fasting glucose after giving birth. • Health-related quality of life. <p>Secondary outcomes</p> <ul style="list-style-type: none"> • Diabetes-associated morbidity. • Death from any cause. • Adverse events. • Blood glucose concentrations. • HbA1c levels. • Appropriate referral or management, or both. • GDM recurrence in the next or any subsequent pregnancy. • Depression or depressive symptoms, anxiety, distress (as reported by authors). • Self-reported lifestyle changes (e.g. increase in exercise or physical activity, 	<p>The outcomes reported were:</p> <ul style="list-style-type: none"> • Proportion of women who underwent an OGTT within one year of giving birth. • Proportion of women having a blood glucose test other than an OGTT after giving birth. • Performance of other postpartum screening tests (venous fasting glucose, venous random glucose, HbA1c or any combination of these).

	dietary modification, weight loss strategies). <ul style="list-style-type: none"> • Body mass index (BMI) or body weight. • Need for insulin or other glucose-lowering medications after giving birth. • Breastfeeding. • Women's views of the intervention. • Health professionals' views of the intervention. • Costs or other measures of resource use. 	
Date of the most recent search: 1 June 2013		
Limitations: This is a moderate quality systematic review, AMSTAR =08/11		
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Table 2: Summary of findings

Reminder systems for women with previous gestational diabetes mellitus to increase uptake of testing for type 2 diabetes or impaired glucose tolerance			
Population: Women with previous gestational diabetes mellitus			
Settings: University-affiliated tertiary centre			
Intervention: Postal reminders for women or physicians, or both			
Comparison: No reminder (usual care)			
Outcomes	Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
Proportion of women having their first OGTT after giving birth			
Postal reminder to woman and physician	4.23 [1.85-9.71]	116 (1)	Low
Postal reminder to woman	3.87 [1.68-8.93]	111 (1)	Low
Postal reminder to physician Follow-up: up to 1 year	3.61 [1.50-8.71]	66 (1)	Low
Proportion of women having a blood glucose test other than an OGTT after giving birth: fasting blood glucose			
Postal reminder to woman and physician	1.57 [1.01-2.44]	116 (1)	Low
Postal reminder to woman	1.78 [1.16-2.73]	111 (1)	Low
Postal reminder to physician Follow-up: up to 1 year	1.69 [1.06-2.72]	66 (1)	Low

Applicability

The included study was conducted in a Canadian university hospital setting. Some of these interventions can be applied in low resource settings.

Conclusions

There is low quality evidence that reminder systems increase the uptake of testing for type 2 diabetes or impaired glucose tolerance in women with a history of gestational diabetes mellitus (GDM).

Prepared by

M. Vouking, C.D. Evina, L. Mbuagbaw, P. Ongolo-Zogo: Centre for the Development of Best Practices in Health, Yaoundé, Cameroon. Available at www.cdbph.org

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