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The design of a group diabetes prevention program focused on gestational diabetes mellitus (GDM)

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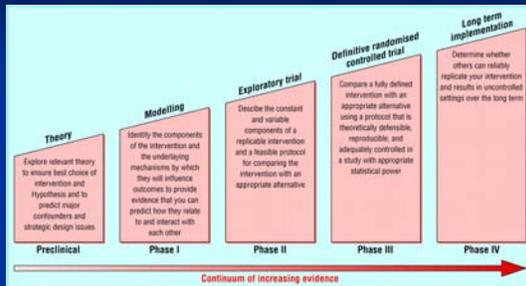
Background

- Gestational diabetes mellitus (GDM) is characterised by glucose intolerance of variable severity that begins or is first diagnosed during pregnancy. (Hoffman 1998)
- Seven-fold ↑ risk of T2DM compared with women who have had a normoglycaemic pregnancy (Bellamy 2009)
- GDM prevalence is increasing
 - ↑ risk mother and baby

Hoffman et al MJA;1998;169(2):95-7
Bellamy et al The Lancet; Vol 373 May 23, 2009



A Framework for development and evaluation of RCT's for complex interventions to improve health



Campbell, M et al. *BMJ* 2000;321:694-696



Evidence for lifestyle modification for prevention of T2DM

- Lifestyle modification can reduce risk of T2DM in high-risk individuals by 58%
 - Tuomilehto et. al. *New Engl J Med* 2001;344:1343-1350
 - Knowler et. al. *New Engl J Med* 2002;346(6):393-403
- Benefits of lifestyle modification program sustained
 - Lindstrom J, et. al. *Lancet* 2006;368:1673-9
- GGT DPP – Australian intervention study in primary care
 - Laatikainen T, Dunbar JA, et. al. *BMC Public Health* 2007;7:249
- Victorian *Lifel Taking Action on Diabetes Program* 2007-2011
 - Evaluation RCT (Commence July 2009)
- Sub-study of women with GDM in the US DPP – Incidence of T2DM 71% higher in women with a history of GDM; lifestyle intervention or therapy with metformin reduced this risk by 50%
 - Ratner RE et. al. *Journal of Clinical Endocrinology Metabolism*. 2008;10:1210
- The current study will contribute to evidence on the feasibility of a targeted program to prevent women with history of GDM from developing T2DM



Aim

- To interview women with GDM to determine their interest in joining a group diabetes prevention program (DPP) post-partum



Method

- Convenience sample, women with GDM, identified from Royal Women's Hospital records
 - 42 women were invited to join study while waiting for regular appointments in the hospital diabetes clinic waiting room
- 86% response rate (n=36)
- Semi-structured interview
- The program was described and examples of program activities shown



Demographics of the sample

- Participants were aged 24 - 45 years (median 31 yrs)
- 53% of participants had family history of T2DM
- 25% were expecting their first child
- 36% were born in Australia
- Language spoken at home:
 - 36% English only
 - 39% English & another language
 - 9% A language other than English primarily
- 75% were university or TAFE educated



How the program was explained to the women

- Six fortnightly sessions of 1 ½ hours each
- Groups of 8-15 women
- Provides support for women with GDM to take charge of their lifestyle and prevent T2DM
- Fill in diaries of eating and physical activity
- Plan to make changes
- Group provides support



Image: Royal Women's Hospital Information Service (2008) Managing Gestational Diabetes

Results – Interest in program?

YES: 31 (86%)

Main reason: to learn about healthier eating habits

'I'd like to learn more about food; types to buy and cook. I really want foods that are convenient and easy'

'I need to learn more about diet, cooking and reading shopping labels'

NO: 5 (14%)

Main reasons: time constraints
already made changes

'I'm too busy and it's too hard to get here as I need to rely on others to drive me'

'I'm pretty clear about what I need to change and I've made lots of changes since I was diagnosed with GDM'



Results – preferred time of day for the program

MORNING: 17 (47%)

AFTERNOON: 8 (22%)

EVENING: 7 (20%)

Main reason related to childcare issues:

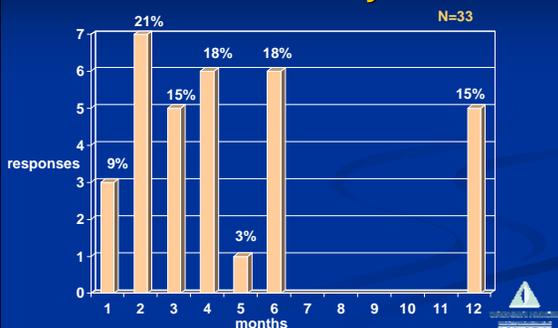
- 'Daughters are at school and child care so I'll be more free [sic] to attend in the mornings'*
- 'I can have kids looked after and have time to plan my day and travel if the program is in the afternoon'*
- 'After work, my husband can look after the baby'*

One woman said:

- 'It's my first baby and I just don't know when would be the best time'*



Earliest preferred time to attend course after baby born



Travel

- 17 (47%) travelled 30 minutes or less to get to the hospital
- 8 (22%) between 30-60 minutes
- 7 (19%) 60 minutes or more
- 4 (12%) no response
- Half of women travelled to the diabetes clinic by private car and half by public transport



Women were interested in the program, yet they had several barriers to attendance

Results – what would help you to attend the DPP?

- 18 (50%) would use childcare at the hospital if it was offered and affordable
- 9 (25%) indicated that assistance with transport to/from the course would be helpful
- 6 (17%) indicated that a reduced cost of parking would be helpful

Issue	Recommendations
Access to childcare	<ul style="list-style-type: none"> ■ Free or subsidised childcare at hospital
Transport difficulties	<ul style="list-style-type: none"> ■ Individual phone contact to assist with transport planning ■ Provide 6-day public transport pass ■ Provide free or subsidised parking
Program timing	<ul style="list-style-type: none"> ■ Flexible program start between 3-12 months post delivery ■ Offer programs in morning, afternoon and evening

Acknowledgements

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