

# POLICY OPTIONS

## Implementation and Evaluation of Gestational Diabetes Care in General Practice: Development in “Beacon” General Practices

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### Policy context

Gestational Diabetes Mellitus (GDM) is a common pregnancy complication affecting 10-13% of pregnant women. It is the strongest single population predictor of type 2 diabetes mellitus (T2DM). GDM and T2DM are important and escalating problems worldwide. T2DM is presently the second highest contributor to the Australian burden of disease and poses an enormous economic burden projected to increase to almost A\$7billion by 2033. Women with a history of GDM are also at greater risk of a recurrence of GDM, cardiovascular disease and metabolic syndrome. Poor health outcomes also extend to offspring of mothers with GDM due to increased risk of obesity and abnormal glucose metabolism during childhood, adolescence and adulthood.

A general practitioner (GP) has a key role in providing postpartum and long-term preventative health care to these at-risk women. Women who have had GDM, and their infants, are even more likely to benefit from proactive care during this period and a number of guidelines cater to this group. International guidelines also highlight the importance of lifestyle modification, breastfeeding, contraception and risk counselling to improve health outcomes for these women and their infants.

There is no agreement among current Australian guidelines on whether screening for diabetes should be offered to all women or only to women with risk factors. It is acknowledged that using the new World Health Organisation (WHO) / International Association of Diabetes and Pregnancy Study Groups (IADPSG) criteria has the potential to increase the diagnosis of gestational diabetes in Australia, with resource implications. However, calculations of the prevalence in particular populations may increase or decrease with changes to both testing criteria and uptake, as well as changes in population demographics. For example,

- > A prospective study in Wollongong comparing the use of the previous Australasian Diabetes in Pregnancy Society (ADIPS) criteria with the WHO/ IADPSG criteria found that prevalence varied between the public and private sectors — 8.6% vs 9.1% (public sector), 10.5% vs 16.2% (private sector) and 9.6% vs 13.0% (overall)
- > An analysis of the Hyperglycemia and Adverse Pregnancy Outcome study (HAPO) sites in Australia using the WHO/ IADPSG criteria found a prevalence of gestational diabetes of 13.2% in Brisbane and 13.6% in Newcastle
- > An analysis of oral glucose tolerance test results from women in two Area Health Services in the Sydney area found that using the WHO/IADPSG criteria rather than the previous ADIPS criteria would increase rates of diagnosis and therefore affect the health service workload for management of gestational diabetes, and

- > In a cohort of Aboriginal and Torres Strait Islander women in Far North Queensland, gestational diabetes prevalence increased threefold over two years due to enhanced testing practices, but prevalence would have been lower if the WHO/ IADPSG criteria had been in place at the time.

Increased diagnosis also has implications for women. Gestational diabetes occurs across a continuum with a variety of potential threshold points. The risk of labelling a woman with gestational diabetes needs to be weighed against any potential benefits to the woman and baby, particularly if lifestyle advice is likely to be the first treatment option.

In 2011-2014, as part of the APHCRI Centre of Research Excellence in Primary Health Care Microsystems, we conducted research identifying the current practice among GPs for follow up care of women with prior GDM (extended to 12 months postpartum) including current knowledge and use of GDM evidence based guidelines <http://aphcri.anu.edu.au/aphcri-network/research-completed/improving-quality-and-sustainability-integrated-phc-gestational>. As the prevalence of GDM is expected to rise with the new criteria, and the GP has a key role in providing diabetes care to women in all forms, in 2015-2016 building on earlier research, we investigated the application of an established model of community care for complex diabetes to the growing GDM clinical need.

The 'Beacon' model uses a GPwSI, endocrinologist, and diabetes educator team, working within a bespoke community general practice to deliver high quality, Outpatient departments (OPD)-substitutable care with high efficiency. It is potentially thus highly relevant to a condition of increasing prevalence, where specialized care is required for significant numbers of women within tight timeframes. We piloted this approach for GDM management in Brisbane South, and described requirements for a GDM Beacon, generalizable nationally.

## Policy options

The heavy recent policy focus on better integrating care for Australians with diabetes via state governments, the Department of Health (DoH) and Council of Australian Governments (COAG) has leveraged significant interest in the Beacon, and identified solutions to some of the impediments to dissemination – particularly the silos of funding and human resource management separating hospital and community care.

The Federal Minister's response to the Primary Health Care Advisory Group (PHCAG) recommendations on 31 March identified trials of bundled payment for integrated chronic disease management to commence from 2017.

April 2016's COAG statement identified the importance of a shared health culture with a commitment to pooled funding, enabling infrastructure and governance as a priority for all levels of government.

Thus, an increasingly integrated framework for shared care between community and hospital providers should allow models such as the GDM Beacon to increase in viability and appeal.

## Key findings

Research previously undertaken in the Centre of Research Excellence in Primary Health Care Microsystems (<http://aphcri.anu.edu.au/aphcri-network/research-completed/improving-quality-and-sustainability-integrated-phc-governance>) identified

- > Southern Queensland GPs have excellent knowledge of the timing and practices around ordering follow-up Oral Glucose Tolerance Test (OGTT) for women with prior GDM, consistent with best practice guidelines. (OGTT between 6-12 weeks postpartum); A wide range of guidelines and sources informs follow up care of women. There is no one comprehensive Australian guideline. GPs most frequently identified the maternity hospital with which they collaborate as their main source of guidance; Chart audits demonstrated

that GPs are knowledgeable of the guidelines for timing and type of diabetes test and this translated into practice.

Building on this previous work, the trial of the 'Beacon-type' model of care for GDM showed the following,

- > The Beacon model is suitable for the management of GDM as well as complex adult diabetes.
- > However, the model requires a greater patient load than our pilot to deliver a viable business model. Further discussions with local general practices, the Mater Mother's Hospital, and local Primary Health Network should proceed to look at further development, with the projected increase in women now meeting diagnosis and treatment parameters. In particular, the pilot highlights the importance and challenges of a communication strategy to alert busy clinicians of new models of care and referral processes.
- > We drew on Tomoaia-Cotisel and colleagues framework to develop our commentary on the requirements and critical success factors for broader implementation of the 'Beacon' model. Three levels of context are identified (i) the practice setting (ii) the larger organisation and (iii) the external environment.
- > In the Australian context, attention to the following elements are critical,
  - The practice vision for advanced care in the community, employee and clinician mix and employment structure, attitude and training, patient numbers, clinician and management leadership and practice infrastructure are key to success
  - Larger organisational issues such as competing priorities, the degree of intervention integration with usual care, contractual arrangements, leadership style, and financial incentives were also key elements in underpinning the teamwork and reformed service model required.
  - The external environments such as the political environment, level of co-ordination with the community, and potential change in payment models have a major impact on Beacon uptake and dissemination.

Recent announcements from state and national governments regarding infrastructure support for better integrated care between community and hospital care offers promise that critical barriers to 'Beacon' care may be overcome.

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