TITLE: Preventing and responding to increasing incidence of Gestational Diabetes Mellitus (GDM) in Eastern Health Catchment

BACKGROUND

The Commonwealth Department of Health estimates GDM is increasing in Australia with around 12 – 14% of pregnant women (about 17 000 women every year) developing GDM. (Department of Health, 2015) (NDSS, 2016). This condition is largely preventable.

As at December 2016, there were 1282 women in the Eastern Health catchment with GDM on the NDSS register. Once diagnosed, GDM is managed by monitoring blood glucose levels and by adopting a healthy eating plan and doing regular physical activity. Women who have GDM are at significant risk of developing type 2 diabetes as well as complications with pregnancy and labour. Babies of women who have had GDM have increased risk of obesity, insulin intolerance and diabetes.

With the increasing incidence of GDM in the region there is a need to consider and trial interventions that could reduce the impact of GDM on the health system, as well as develop an effective secondary and tertiary response.

The aim of the project was to better understand the prevalence of GDM in at risk population groups in the EMR with a focus on the Eastern Health catchment (Knox, Manningham, Maroondah, Whitehorse and Yarra Ranges local government areas and the knowledge within the community of GDM; research and analyse the evidence of effective prevention and management initiatives, and develop and trial interventions that may address some of the findings.

METHOD

The Inner East PCP formed and led partnership comprising Eastern Health, Carrington Health, Eastern Melbourne PHN, DHHS and Diabetes Victoria - the Diabetes Initiative Steering Committee (DISC) to guide this work.

METHOD

The GDM project had two phases.

The specific objectives of **Phase 1** were to:

- Identify the incidence of GDM for particular population groups in the EMR
- Conduct a literature review of health promotion and early intervention evidence and best practice for GDM
- Identify existing initiatives, services and referral pathways to prevent and manage GDM in the catchment
- Better understand community knowledge about GDM prevention and management
- Develop an understanding of GP awareness and application of new GP guidelines for GDM screening and management, skills and confidence in treating GDM
- Identify service pressures and gaps and recommend strategies to respond to them

The deliverable for Phase 1 was a report of the findings with recommendations for future work to impact on the prevalence and improve systems to support women with GDM.

The methodology for this project included statistical analysis, literature review, key informant interviews with health professionals and community workers, consultation with peak diabetes organisations, and interviews/focus groups with community members diagnosed with GDM.

In **Phase 2** of the project, Carrington Health and Eastern Health implemented or further scoped some of the recommendations from Phase 1.

Carrington Health researched a suite of strategies within a community setting to provide support for women during and after pregnancy to manage GDM and reduce risk. Carrington Health investigated the potential for an online service delivery model and digital strategies framework suitable for community health, such as a specific website and text messages. While the resources and timeframe did not allow for development and testing of the model, the project enabled identification of what some e-based service solutions for women might look like in response to a 'How Might We?" question, including recommendations for a third phase to develop and test a prototype. It was recommended that Carrington Health could work in partnership with Eastern Health and/or other GDM specific partners working in the m-health area to progress this work in the future.

Eastern Health aimed to improve the coordination of care for women with GDM who are in shared care by improving communication with general practitioners. With 5000 births annually at Eastern Health and 705 (14%) of these diagnosed with GDM, Eastern Health aimed to improving communication with GPs regarding screening, diagnosis, and management of their patient's with GDM to improve outcomes for them. Consultation with Eastern Health key staff identified that the solution had to be quick and easy for Eastern Health doctors to complete and received by GP's in a timely way. A flow chart of the current and optimal processes was prepared and the software vendor identified the technical specifications required. The project developed an automated, electronic letter for GPs within the Eastern Health BOS software, and set up a secure message delivery system for letters and discharge summaries for GPs. The project also involved testing and monitoring of the systems developed, and training of clinicians and administrators.

OUTCOMES

Phase 1 of the GDM project improved understanding of GDM in the Eastern Health catchment and what interventions could be successful for future impact on the prevalence of GDM as well as Type 2 Diabetes.

The findings from the literature review and consultation led to a number of recommendations:

1. Improve support within the health system for women during and after pregnancy to manage GDM and reduce risk such as a range of antenatal and postnatal support and education options regarding healthy eating, weight control and lifestyle changes.
2. Build the capacity of general practitioners to support women at risk by supporting GPs to identify at risk women and order timely glucose tolerance tests; and supporting GPs to identify and provide appropriate information and counselling services to high risk women.
3. Improve systems integration to ensure identification and management of women at risk of and with GDM is optimal including reviewing registration and GP referral processes for obstetric care to ensure high risk women are identified, tested and monitored;

Improving coordination of care for women in shared care arrangements; and reducing confusion regarding post-delivery glucose tolerance tests.

4. Address the obesogenic environment.

In **Phase 2**, **Carrington Health** explored and provided further insights (refer report) into mobile health solutions that could be used to implement actions from the first recommendation.

Eastern Health addressed recommendation 3 which will improve the clarity of the roles of relevant care providers and ensure that no patients fall through the cracks of service delivery.

Benefits are, if high risk patients are identified early, there may be less patients placed on insulin management. As the system changes have only recently been implemented, it is too early for data evidence of these changes.

The work completed at Eastern Health is also transferable to other areas of Eastern Health that communicate patient diagnoses and discharge summaries with GPs.

Future work could be considered in line with the recommendations and action plan developed in Phase 1. DISC could now take carriage of the recommendations and provide leadership for implementation and evaluation. Further resources and funding would be required to implement the recommendations.

The report from Phase 1 has been presented and distributed to DISC and DHHS, and is available on the IEPCP website. It has also been promoted through DHHS Primary Health News. Phase 2 reports will be distributed to DISC and DHHS with summaries provided on the IEPCP website.

Based on Phase 2 findings, Carrington Health recommends prototyping and testing m-health solutions using a co-design approach. The report indicates potential for a partnership with Eastern Health Obstetrics and Endocrinology Departments as the central care providers for women with GDM attending public health services in the Eastern Region. Community Health is plays a significant role in delivery of community based Type 2 diabetes interventions and support and could expand this to GDM in the future. In addition, Carrington Health has other service types (eg: perinatal, outreach etc.) that could provide transferable interventions for addressing GDM.

While the Eastern Health component of Phase 2 is now complete, there are still a number of systems changes that could be further developed to better support GPs and women with GDM in the future.

The IEPCP was best placed to coordinate the GDM project with the right mix of skills and partnerships to ensure the deliverables were achieved.

The IEPCP has excellent skills in research, project management, collaboration, and partnership development to ensure the success of the project. IEPCP has been a member of DISC since its inception and has well-established relationships with other DISC members to ensure the level of support required for successful implementation. The IEPCP also has expertise in population health-prevention, bringing a different focus to most DISC members, which provided insights to the evidence and interventions researched in Phase 1. As a non-service provider, the IEPCP also had the level of objectivity and oversight required without an organisational stake in the outcomes.

The key lessons learned from this work are:

- The importance of partnerships and collaboration in researching health issues and exploring solutions. The DISC provided an excellent springboard for this work with the relevant partners already working in collaboration. This provided an environment of cooperation and learning which would have taken a considerably longer amount of time without DISC.
- Learning from current and past work and research is vital to be able to understand what has been tried, tested and is successful in impacting on the issue.
- It is vital to ensure that lived experience of the issue is at the forefront of any solutions developed. It is easy to come up with solutions that work for service providers but critical to know what will work for people that are affected by the issue directly. For example, the women with GDM consulted for this project were clear that online and mobile solutions would be much more accessible to provide support for them than attending physical groups.