

Audit of newly introduced gestational diabetes mellitus management pathway supported by midwife led metformin prescription 2021-2022

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INTRODUCTION

Gestational Diabetes Mellitus (GDM) is a condition of hyperglycaemia in pregnancy secondary to increased insulin resistance. 3800 women are diagnosed with GDM in New Zealand annually¹. GDM carries significant risk of adverse maternal and foetal outcomes without timely, effective management. The cornerstone of management is diet and exercise. However, those women for whom lifestyle measures are insufficient to achieve satisfactory blood glucose levels, may require treatment with metformin +/- insulin².

Increasing prevalence of GDM with limited physician hours led us to explore alternative management of GDM patients, rather than seeing all in High-Risk Medical Obstetric Clinic (HRMOC). Remote management of diabetes during COVID19 aided this.

A Midwife Led Metformin Prescription (MWLMP) pathway to manage GDM was introduced December 2021.

MIDWIFERY PRESCRIBING GUIDELINES AND LEGALITY

Midwifery council prescribing guidelines and hospital legal advice were consulted.

The 1990 Nurses Amendment Act amended the Medicines Act 1984 to enable midwives to prescribe prescription medicines. The New Zealand College of Midwives (NZCOM) expects midwives to have appropriate knowledge regarding what they are prescribing. It is not expected that Midwives prescribe for all antenatal, labour, and postnatal events. NZCOM expects Midwives to recognise and action any knowledge deficit they may have regarding prescribing^{3,4}.

Legal advice was sought from the CDHB corporate solicitor to provide reassurance to midwives involved.

From a legality perspective midwives can prescribe medications to “women (and their new-born infant(s)) that are under their care, in accordance with their scope of practice as defined by the Midwifery Council”. The four key points to this are^{3,4}:

1. The midwife is registered
2. They are working within their scope of practice
3. Legal requirements around prescribing are met (correct documentation)
4. The employer has no competencies issues surrounding the midwife prescribing

Necessary prescribing education was delivered to outpatient diabetes midwives and metformin prescribing guidance written (figure one and two)⁵. The process of the pathway was explained at clinical governance meetings. Here questions and queries were addressed by physicians and managerial staff. Physicians were also accessible for advice during clinics or via telephone/email. There is ongoing review of the pathway at clinical governance meetings.

OBJECTIVES

To audit the implementation of MWLMP pathway, reviewing data 6 months before and after implementation. Results may be used to predict future workload and resource allocation.

METHODS

Data were extracted from patients’ electronic hospital records. Three GDM management pathways were observed; Dietitian led management, MWLMP and HRMOC.

Data regarding MWLMP 6 months before and after December 2021 were compared.

RESULTS

424 women with GDM were managed from June 2021-June 2022 in our department. 121 women obtained satisfactory glycaemic control with lifestyle and dietary measures, via the dietitian led pathway. 70 women were treated with metformin monotherapy and 233 women were treated with insulin +/- metformin (chart one).

Data from June 2021- December 2021, before implementation of MWLMP showed 24 women received metformin monotherapy. All of these women were seen in HRMOC and had their metformin prescription provided by a physician. In comparison, between December 2021 and June 2022 after implementation of MWLMP, 46 women received metformin monotherapy. Of these women only 20 were seen in HRMOC and had their prescription provided by a physician. The remaining 26 women received their prescription from an outpatient diabetes midwife.

Management of GDM June 2021 to June 2022

- Dietitian/Lifestyle – 29%
- Metformin – 16%
- Insulin + Metformin – 55%

Figure One

Comparison of metformin prescriptions pre and post implementation of MWLMP

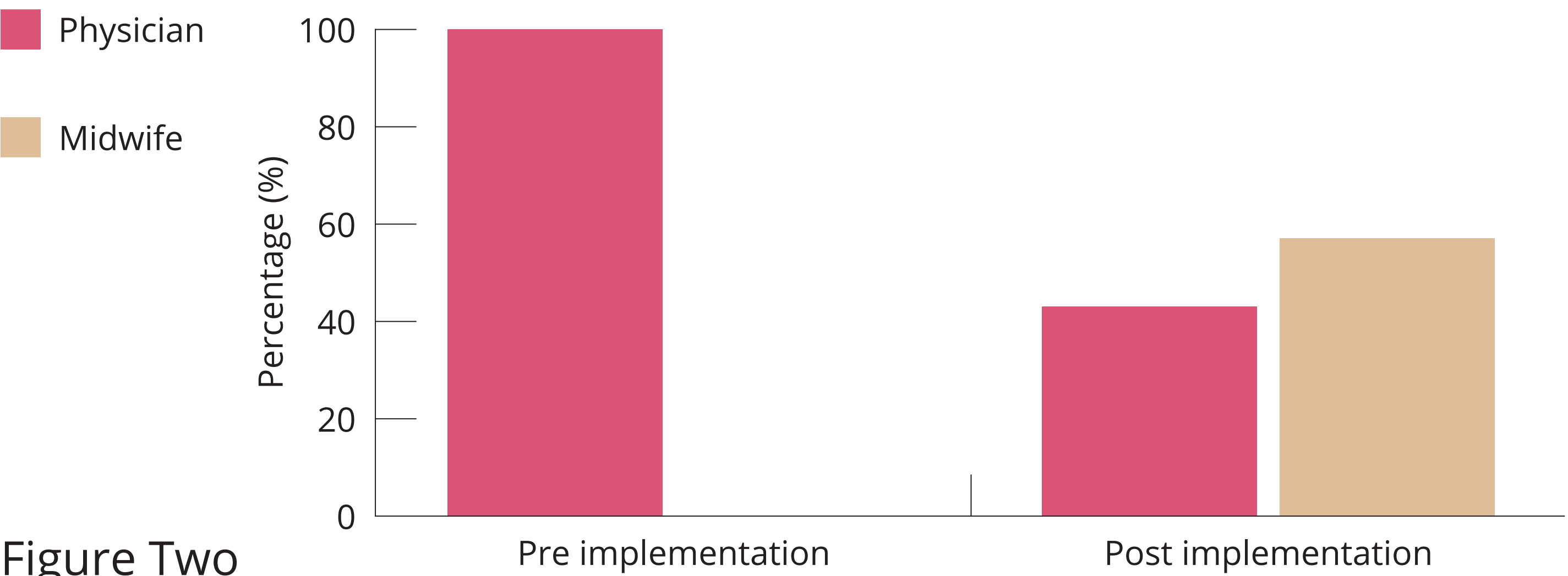


Figure Two

DISCUSSION AND CONCLUSIONS

424 women were referred to our unit during this 12-month period. Normally most would have seen a physician +/- midwife in HRMOC and prescriptions would be provided by the physician. Following the introduction of MWLMP, our data concludes that workload on physician clinic was reduced.

Despite the pathway, some women were still seen in clinic by a physician. Reasons for this included: an initial lag period for midwifery training and education, other medical history contributing to high-risk pregnancy, patient preference for physician reassurance or women requiring addition of insulin to achieve satisfactory glycaemic control.

Midwife led metformin prescription was a novel concept in our unit, particularly because we do not currently have a nurse prescriber on the team. Overall the introduction of MWLMP has resulted in timely management of GDM, freeing up physician appointments for those with high risk pregnancies.

References

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