Recommendations- Antenatal

Question1. Does antenatal expression of breastmilk reduce the risk of neonatal hypoglycaemia?

PICO (Population, Intervention, Comparison, Outcome): Should antenatal expression of breastmilk vs. no expression of breast milk be used for preventing neonatal hypoglycaemia?

Recommendation 1:

Expression of breastmilk may be considered after 36 weeks' gestation in pregnant women whose baby is likely to be at risk of neonatal hypoglycaemia and who have no contraindications. [Conditional recommendation]

Justification: Moderate to very low certainty of evidence suggests that antenatal expression of breastmilk may lead to a small reduction in neonatal hypoglycaemia, a moderate increase in fully breastfeeding at hospital discharge, and a moderate decrease in the duration of the initial hospital stay.

The acceptability of this practice varies due to some women experiencing difficulties and discomfort with antenatal expression.

Antenatal expression of breast milk may encourage mothers to breastfeed, and have an additional positive effect on their hinengaro (mental health) through providing nutrition for their baby.

Implementation considerations: Breast pumps are not appropriate for antenatal expression; hand expression suffices for this purpose.

Expression of breastmilk should not be considered in at risk pregnancies. For contraindications consult local guidelines, lead maternity carer (LMC), diabetes specialist, obstetrician or lactation consultant.

Monitoring and evaluation: Nil.

Research priorities:

Studies are needed on:

The effects of expressing milk on maternal well-being, including factors such as stress from the inability to express colostrum.

Health equity: Provide mother and the whānau she wishes to involve with resources and support for antenatal expression of breastmilk that align with their cultural values. Ensure whānau have access to reliable refrigeration or freezer for storing expressed breastmilk.

Evidence to decision table: refer to Appendix G

Question 2. Does tight maternal glycaemic control reduce the risk of neonatal hypoglycaemia?

PICO: Should tighter maternal glycaemic control during pregnancy in women with diabetes vs. less-tight maternal glycaemic control during pregnancy be used for preventing neonatal hypoglycaemia?

Recommendation 2:

Tighter glycaemic control during pregnancy is suggested for women with diabetes. Follow recommendations of the national guideline – "Testing for, diagnosing and managing gestational diabetes (diabetes of pregnancy) Te whakamātau, te tautohu me te whakahaere i te mate huka hapūtanga"(1). [Conditional recommendation]

Justification: Low certainty evidence showed that tight maternal glycaemic control during pregnancy compared to less tight had little to no effect on neonatal hypoglycaemia, but resulted in a small reduction in mortality and morbidity, and admissions to (neonatal intensive care unit (NICU).

However, adverse effects for mothers when using tight targets should be considered. Women may have difficulty in adhering to tighter glycaemic targets.

Implementation considerations: See the national guideline "Testing for, diagnosing and managing gestational diabetes (diabetes of pregnancy) Te whakamātau, te tautohu me te whakahaere i te mate huka hapūtanga"(1).

Monitoring and evaluation: The the national guideline "Testing for, diagnosing and managing gestational diabetes (diabetes of pregnancy) Te whakamātau, te tautohu me te whakahaere i te mate huka hapūtanga"(1) suggests that tight targets are frequently harder to achieve, which may explain poor adherence to tight targets (1). Monitoring of adherence is recommended.

Research priorities:

Studies are needed on:

1. The effect of tight maternal glycaemic control on neonatal hypoglycaemia and long-term childhood outcomes.
2. Factors influencing adherence to tight glycaemic control targets in pregnancy and how whānau can be supported to achieve these, particularly in specific populations.
3. Patient values and preferences surrounding tight glycaemic control in pregnancy.
4. The cost-effectiveness of employing tight glycaemic control in pregnancy.

Health Equity: Gestational diabetes occurs at higher rates in Māori, Pacific, Asian, and Indian populations. Health professionals working alongside these population groups need to work towards tight glycaemic control in a pro-equity approach to improve outcomes. Health professionals should ensure that glycaemic targets are based on clinical guidelines and individual patient needs prioritising those who are most affected by issues such as access and systemic privilege, to avoid potential harm and ensure equitable care.

Evidence to decision table: refer to Appendix G

Question 3. Does tight intrapartum glycaemic control reduce the risk of neonatal hypoglycaemia?

PICO: Should tight intrapartum glycaemic control vs. less tight or no intrapartum glycaemic control be used for neonatal hypoglycaemia?

Recommendation 3:

For intrapartum glycaemic control, follow recommendations of the national guideline "Testing for, diagnosing and managing gestational diabetes (diabetes of pregnancy) Te whakamātau, te tautohu me te whakahaere i te mate huka hapūtanga"(1). [Conditional recommendation for either opition]

Justification: Very low certainty of evidence showed potential benefit in reducing neonatal hypoglycaemia and admission to NICU, but also potential harm including increased caesarean section and reduction in exclusive breastfeeding.

Implementation considerations: Tighter glycaemic control during labour may be more relevant for women with type I and type II diabetes than women with GDM. Clinical decision-making should determine the appropriate level of intrapartum control and monitoring on an individualised basis.

Monitoring and evaluation: Nil.

Research priorities:

Studies are needed on:

The effects of tight glycaemic control during labour for women with Type I and Type II diabetes, and GDM, including short-term and long-term maternal and neonatal/childhood outcomes. Given the potential iatrogenic harms associated with this treatment approach, separate recommendations may be necessary for each group.

Health Equity: People living in rural areas face challenges in accessing specialised care. Although women with diabetes often give birth at specialist centres, some may not have received a timely diagnosis during pregnancy, potentially leading to inequitable access to appropriate care and interventions. The responsibility lies with the system to facilitate equitable access, removing barriers rather than placing the burden on whānau.

Evidence to decision table: refer to Appendix G

References:

1. Te Whatu Ora Health New Zealand. Testing for, diagnosing and managing gestational diabetes (diabetes of pregnancy): Te whakamātau, te tautohu me te whakahaere i te mate huka hapūtanga. Forthcoming 2024.