

The DIAMOND Clinic: Establishing a dedicated clinic for pregnant women with extreme obesity



Western Health

Althea Askern¹, Glyn Teale²

1. Registrar, Obstetrics and Gynaecology, Western Health 2. Clinical Director, Women's and Children's, Western Health

Introduction

The **DIAMOND (Diabetes, Maternal Obesity, Nutrition and Diet) Clinic** was established following a review of poor pregnancy outcomes associated with missed growth restriction and delayed identification of complications in women with extreme obesity.

A multidisciplinary team including **obstetricians, midwives, endocrinologists, dietitians and physicians** provide care that includes:

- an increased number of scheduled visits
- psychosocial support
- specialised advice regarding dietary and physical activity recommendations
- access to physiotherapy and physical activity support (e.g. hydrotherapy)
- early screening and detection of maternal medical complications such as diabetes and hypertensive disorders of pregnancy
- close fetal surveillance and serial ultrasounds
- detailed delivery and postpartum care planning
- close links with the maternal fetal medicine unit

The DIAMOND Clinic

Referral Criteria:

- BMI ≥ 50
- BMI ≥ 40 with medical/obstetric complications
- History of bariatric surgery

Methods

Ethical approval was obtained to support a review of outcomes for women attending the DIAMOND clinic. Demographic and outcome data were captured through the Birthing Outcome System (BOS) database, for women who delivered between June 2016 to February 2018.

Patient Perspective

"...I was a part of the Diamond clinic and think this a wonderful idea for women who need a bit more care and compassion during an already difficult, stressful and exciting time. Knowing I was a part of this clinic made visits a lot less stressful. Just being included in this clinic I knew I was getting the best care possible..."

Discussion

The incidence of medical and obstetric complications in our cohort of women cannot be generalised to any population with a BMI >40 , because women were specifically recruited to the clinic if they had medical or obstetric complications. Importantly, the DIAMOND Clinic model was acceptable to patients, as evidenced by a high rate of attendance and positive feedback, and may improve patient engagement with antenatal care.

Conclusion

Our data confirm a high incidence of pregnancy complications in this group of women. The Diamond Clinic offers a model for antenatal care which could potentially be replicated at other services.

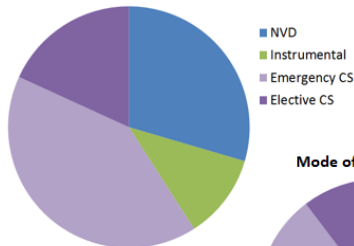
Results

141 women completed care through the DIAMOND Clinic
Their average BMI was **48.8**.

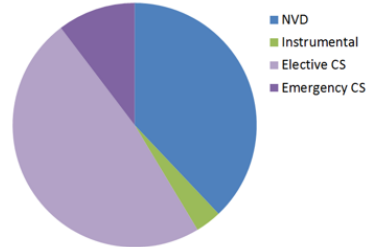
62 (44%) had a BMI ≥ 50

Only **3** women out of 171 women referred did not attend the clinic

Mode of Delivery: Primiparous



Mode of Delivery: Multiparous



86% of women planning a vaginal birth were induced (50% of all patients)

Diabetes

58% of women had diabetes in pregnancy

- 15% had pre-existing type 2 diabetes
- 31% had GDM on early GTT
- 11% had GDM on a GTT after a normal early GTT

Hypertension

33% of women had hypertension in pregnancy

- 12.9% had essential hypertension
- 7.8% developed preeclampsia
 - 3 required MgSO₄
 - 2 required preterm delivery

Growth

27% had a neonate with a birthweight $>90^{\text{th}}$ centile

6% had a neonate with a birthweight $<10^{\text{th}}$ centile

- Despite close ultrasound surveillance of fetal growth, only one of the cases of growth restriction were identified antenatally

Gestation at Delivery

- 15.6% of women delivered preterm (40% of these were spontaneous)
- Two women delivered beyond 40 weeks
- The average gestation at delivery was **37 weeks**

Special Care Admission

- 36% of babies were admitted to the special care unit

Fetal Death In Utero

- Two women had an FDIU - one at 20 weeks and one at 28 weeks; both were $<10^{\text{th}}$ centile for birthweight

Contact Althea.Askern@wh.org.au