Australia is faced with an epidemic of diabetes mellitus, and its burden extends to people of childbearing potential. Approximately 2,000 Australian pregnancies are affected by pre-existing diabetes each year. There is an increasing prevalence of pre-existing type 2 diabetes in pregnancy, which is attributable to rising obesity, advanced maternal age, and higher proportion of at-risk ethnicities in the Australian population. First Nations people continue to be disproportionately affected, with rates of pre-existing diabetes in pregnancy being three-to-fourfold higher.

Inadequately controlled diabetes contributes to adverse pregnancy outcomes and reduces fecundability. The risk of congenital malformations increases linearly with the degree of hyperglycaemia during organogenesis. Further confounding the care of women with pre-existing diabetes is that approximately 40% of pregnancies in Australia are unplanned. Importantly, several medications used to manage diabetes are considered teratogenic. Currently, this includes semaglutide.

Semaglutide improves glycaemic control and is considered a cornerstone of obesity management. Since its listing on the Australian pharmaceutical benefits scheme in 2020, prescriptions have increased significantly with nearly 2 million scripts dispensed in 2023. However, its use in pregnancy is classified as category D according to the Therapeutic Goods Australia: there is at least suspicion of causing irreversible fetal damage. This recommendation is largely attributed to animal studies demonstrating increased mortality and congenital abnormalities; however, major congenital malformations have yet to be demonstrated in observational human studies. Additionally, it has been speculated that semaglutide may not cross the placenta due to its high molecular weight, thus minimising direct fetal exposure. Due to its long half-life, semaglutide should be discontinued for at least 2 months prior to pregnancy. However, discontinuation of semaglutide may risk acute loss of glycaemic control during a critical growth period. Rebound weight gain may also ensue upon discontinuation, with maternal obesity being associated with additional adverse pregnancy outcomes.

This case reviews the care of a primiparous 41-year-old female reviewed in the diabetes in pregnancy clinic for pre-conception management of her type 2 diabetes. Her background is also significant for clinical obesity, subfertility, severe obstructive sleep apnoea, and non-cirrhotic metabolic-associated steatohepatitis. This QIDC submission will explore the evidence informing the recommendation to withhold semaglutide pre-conception, balancing the potential for adverse outcomes against the need for maternal glycaemic control and weight management.