



**Keywords:** Gestational diabetes mellitus; Early GDM; First trimester pregnancy; Hyperglycaemia in pregnancy

## Discussion

Gestational Diabetes Mellitus (GDM) has short and long-term implications for both maternal and fetal health. The incidence of GDM is increasing rapidly worldwide [1]. Universal screening and treatment of GDM from 24 weeks gestation is well-established, however, uncertainty remains regarding the diagnostic accuracy as well as risks and benefits of treatment for women diagnosed with GDM earlier in pregnancy. Evidence is established for the diagnosis of GDM in women from 24 to 32 weeks gestation, based on the HAPO study which showed a robust linear association between increasing plasma glucose levels and a range of adverse pregnancy outcomes [2]. Additional treatment trials such as the Australian ACHOIS study and American Network study confirmed that intervention for GDM in women between 24 to 34 weeks gestation reduces serious perinatal and maternal fetal complications [3,4]. Following publication of the HAPO study data,

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**Received:** January 18, 2021; **Accepted:** February 01, 2021; **Published:** February 08, 2021

**Citation:** Kuehn J, Wynne K (2021) Understanding the Significance of Hyperglycaemia in the First Trimester of Pregnancy. J Clin Diabetes 5: 115.

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service with a FPG 5.1-5.6 mmol/L in the first trimester of pregnancy demonstrated that persistent hyperglycaemia, defined by IADPSG/WHO diagnostic criteria, occurred in 42% after 12 weeks gestation; double the rate of our background population GDM incidence of 17% [18]. A diagnosis of 'early GDM', concurrent obesity and advanced maternal age were all risk factors for a GDM diagnosis occurring in the second and third trimester of pregnancy. Unexpectedly, the neonates of women who were diagnosed with GDM later in pregnancy (86% of whom were treated medically with metformin and/or insulin) had a

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