



## Blood Sugar Monitoring in GDM: Patient Perspectives

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### Abbreviations

CGM: Continuous Glucose Monitor; CDSS: Clinical Decision Support Systems.

### Editorial

Blood sugar monitoring is an integral part for management of Diabetes Mellitus. Blood sugar control is important for good peri-natal and maternal outcome to avoid adverse perinatal outcomes. The frequency of monitoring has to be intense to achieve this irrespective of whether the patient is on OHA or Insulin. The recommended targets of optimal control blood Sugar include fasting sugar of  $\leq 95$  mg/dl; post-prandial values at one hour  $\leq 140$  mg/dl and 2 hour values  $\leq 120$  mg/dl [1]. The frequency of monitoring is daily when it is uncontrolled, and the usual recommendation is weekly or biweekly depending on the clinical profile of the pregnant women.

Home monitoring is cost effective but the fear of self-pricking makes them to monitor their blood sugars infrequently resulting in suboptimal control of blood sugars. Costs of blood sugar estimation more frequently are another reason. Awareness and importance of frequent or continuous blood sugar monitoring during pregnancy is lacking among public and Pregnant women in India [1,2].

Self-monitoring with glucometer is the standard method and the maternal fetal outcomes like Caesarean section, birth weight were optimum in the group who used blood sugar monitoring by glucometer [3].

### CGM

A continuous glucose monitor (CGM) is a small sensor which picks up interstitial glucose every 5 minutes and eliminates the need for finger pricks. The participants in the metformin versus Insulin trial of Rowan expressed that frequent finger prick test for monitoring the blood sugar is the most difficult part of managing their Diabetes [1]. The users should have smart phone and also should be able to afford the cost of monitoring blood sugar through this. It is said that the cost is almost similar to the multiple readings of a glucometer. The disadvantage is that it needs to be replaced every 7 to 14 days. CGM in pregnancy has been shown to achieve reduction in maternal HbA1c, improvement in maternal time in blood glucose target range, reduction in the proportion of fetuses born large for gestational age, neonatal admissions lasting over 24 hrs, neonatal hypoglycaemia and length of stay in hospital [4].

Dose adjustments of Insulin with continuous glucose monitoring can be achieved by Insulin Pumps. Insulin pumps can be used during pregnancy for type 1, type 2, or gestational diabetes. Newer glucose sensing technologies, which simultaneously sense the glucose in blood and deliver adjusted or required dose are the need of the hour for pregnant diabetics. They eliminate the need for regular fingerpick glucose testing, these technologies play an important role in achieving goals of therapy: near normal glycaemic control, reduced hypoglycaemia rates and improve quality of life. In high income countries, they are now part of routine antenatal diabetes care – predominantly in women with pre-gestational diabetes and type 1 diabetes [4,5].

Artificial Intelligence driven Clinical Decision Support Systems (CDSS) are the latest which can predict glucose trends and suggest evidenced-based treatments with real-time adjustments as the pregnancy advances. In the digital health, mobile health applications (mHealth) are facilitating patient education and self-management through real-time tracking glucose levels, diet and exercise [6]. Remote monitoring improves the quality of care for pregnant women with Diabetes and results in good maternal and perinatal outcomes.

## References

1. Rowan JA, Hague WM, Gao W, Battin MR, Moore MP (2008) Metformin versus insulin for the treatment of gestational diabetes. *New England Journal of Medicine* 358(19): 2003-2015.
2. Morampudi S, Balasubramanian G, Gowda A, Zomorodi B, Patil AS (2017) The Challenges and Recommendations for Gestational Diabetes Mellitus Care in India: A Review. *Front Endocrinol (Lausanne)* 56.
3. Dong W, Li Y, Sun JJ, Chen LH, Guo J, et al. (2020) Do patients with gestational diabetes mellitus and their own blood glucose meter have better pregnancy outcomes than those not using a glucose meter? *Medicine (Baltimore)* 99(51): e23793.
4. Crabtree TS, Gazis A (2020) Insulin pumps and diabetes technologies in pregnancy: an overview for the obstetrician. *Obstetrics, Gynaecology & Reproductive Medicine* 30(4): 126-129.
5. Wollitzer AD, Zisser H, Jovanovic L (2010) Insulin pumps and their use in pregnancy. *Diabetes Technol Ther* 12(1): S33-36.
6. Murrin EM, Saad AF, Sullivan S, Millo Y, Miodovnik M (2024) Innovations in Diabetes Management for Pregnant Women: Artificial Intelligence and the Internet of Medical Things. *Am J Perinatol*.