

# STUDY OF FETOMATERNAL OUTCOMES IN GESTATIONAL DIABETES MELLITUS ON INSULIN VERSUS METFORMIN

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## INTRODUCTION

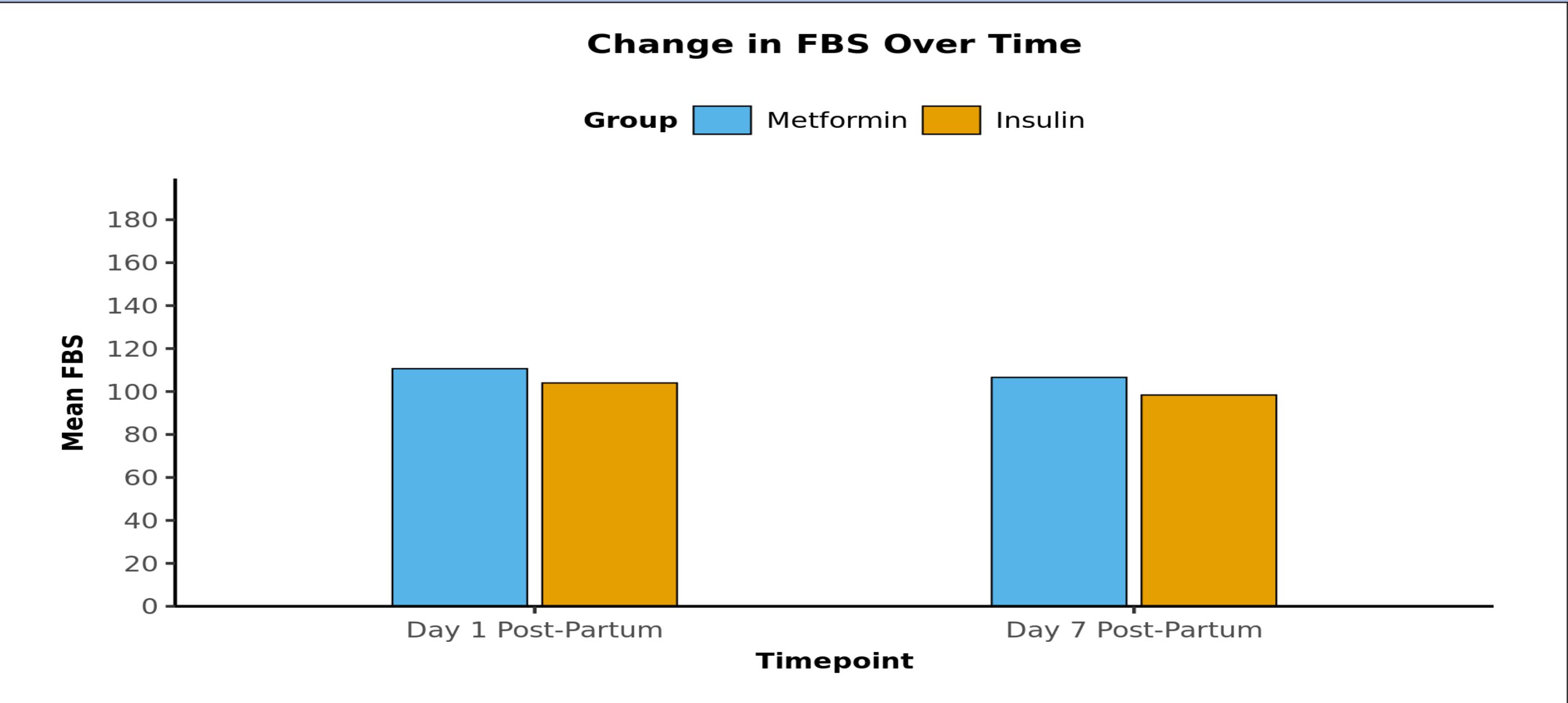
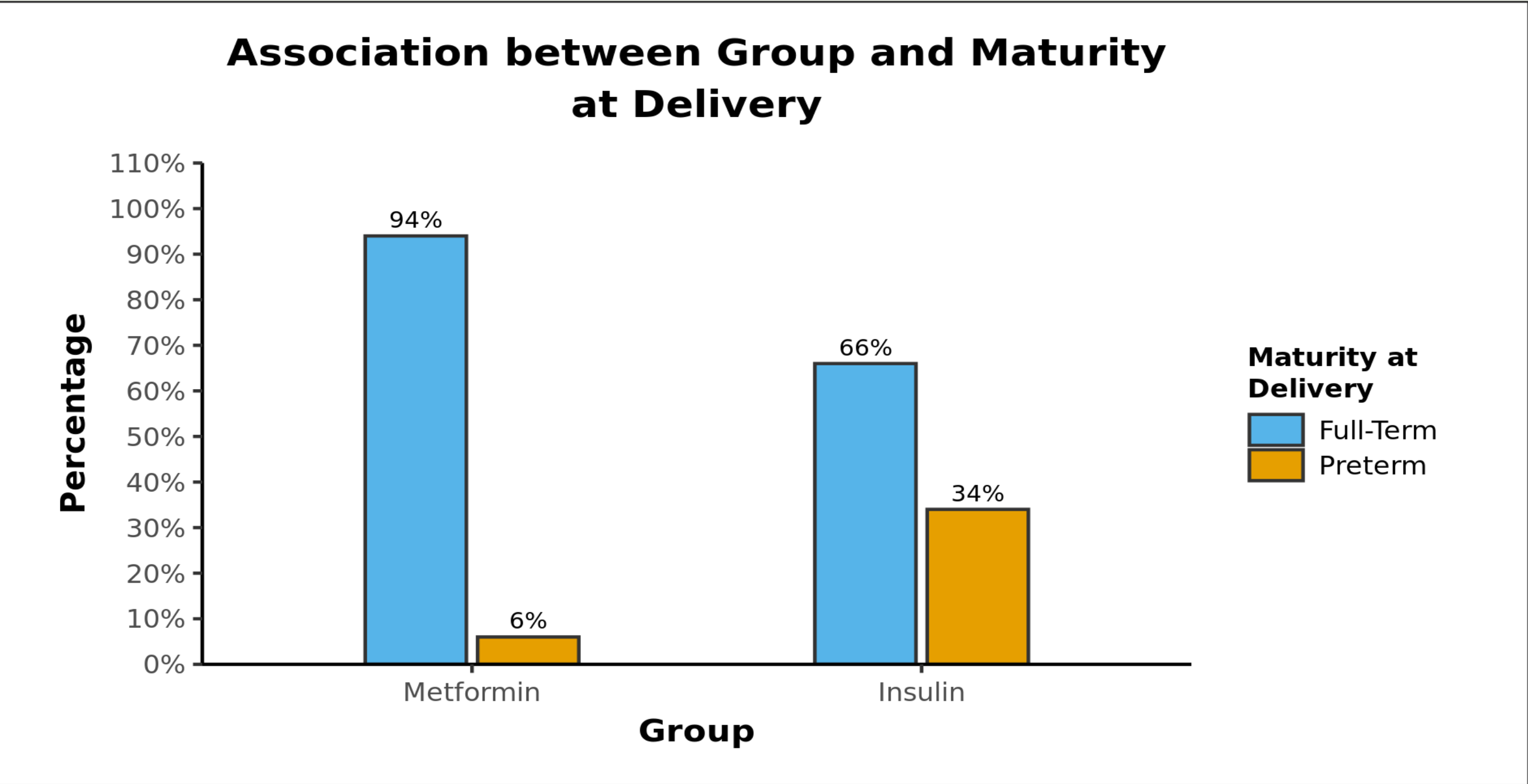
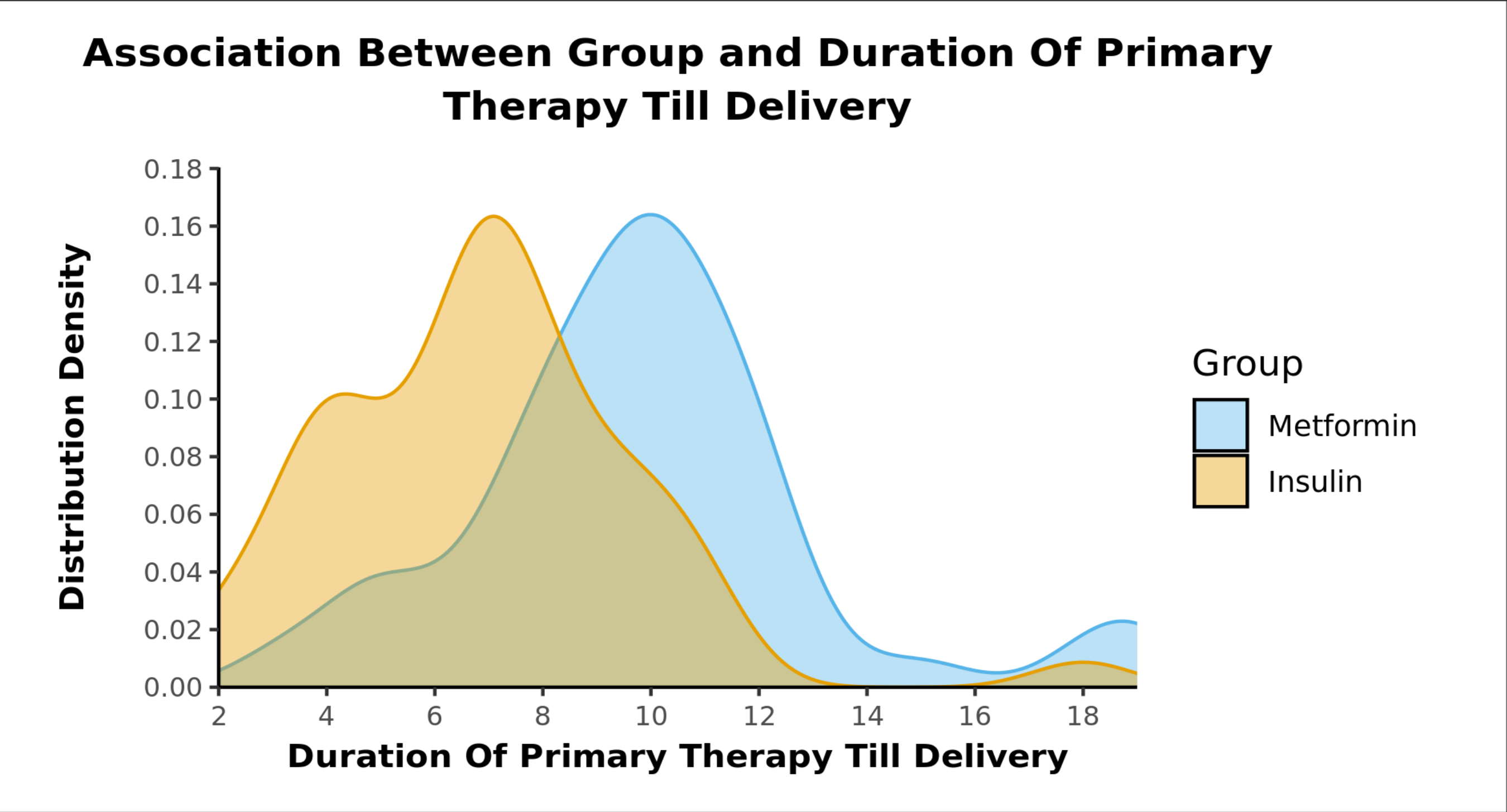
GDM is defined as carbohydrate intolerance of variable severity with onset or first recognition during the present pregnancy. Babies of GDM mothers are prone to various congenital anomalies like TGA, VSD, ASD, HMD, along with traumatic delivery and perinatal death. Metformin or Insulin therapy are the accepted management of pregnant women with GDM not controlled on MNT.

## AIM

Comparison of fetomaternal outcomes in GDM on Metformin and Insulin.

## METHODS

It was a Randomised Comparative Study. Sample size was taken to be 100. Women between 18-35 years of age diagnosed with GDM between 20-34 weeks of gestation were chosen who failed to attain euglycemia with MNT and exercise for 2 weeks. They were divided into 2 groups with Group 1 given Metformin 500mg BD to a maximum of 2gms/day, and if uncontrolled BS, Insulin was added. Group 2 was given Insulin to a maximum of 1 unit/kg wt and if BS was not controlled, then Metformin was added. And thereby both the groups were followed to analyse BS control and fetomaternal outcomes.



## RESULTS

FBS and PPBS at Day 7 post initiation of therapy was found to be lower in Metformin group than Insulin, significant difference between PPBS levels in the two groups( $p \leq 0.05$ ). None of the subjects in the Metformin group required additional Insulin to be added for the control of blood sugar levels.

16 subjects in the Insulin group required add on Metformin after Insulin was given at a maximum dose of 20IU, for control of BS.

The mean SD of POG at delivery in the Metformin group was 38.10 while in Insulin group was 36.82

The mean (SD) of duration of primary therapy till delivery in the Metformin group was 9.86 while in the other group was 6.92 94.0% of the newborns in the Metformin group were full term as compared to 66% in the Insulin group.

The mean birth weight in the Metformin group was 2.74, while in the Insulin group was 2.61

There was no significant difference in the trend of FBS over time in the two groups.

## DISCUSSION

Metformin was found to be started at a higher BS level, the Day7 BS level were controlled as compared to Insulin on Day 7 of initiation of therapy, required no add on of Insulin to it in any patient, and having better fetomaternal outcomes as compared to Insulin like Birth weight and term deliveries.

Thus from this study it can be inferred that Metformin is a better drug than Insulin in BS control and fetomaternal outcomes in treatment of GDM women.