Table 1: Rates of Outcomes Following Elective Induction of Labor at 40 Weeks or Expectant Management

	eIOL	EM	p value
Cesarean Delivery	24.55	34.59	<0.001
Neonatal Death	0.01	0.04	0.024
Operative Vaginal Delivery	6.92	7.55	0.003
Shoulder Dystocia	1.15	1.41	0.006
5 min Apgar <7	0.44	1.06	<0.001
NICU Admissions	5.31	7.11	<0.001
Neonatal Asphyxia	0	0.03	0.011
Neonatal seizures	0.04	0.12	0.003
NRDS	1.95	2.31	0.003
Scalp Injury	3.94	4.51	0.001
Chorioamnionitis	1.79	7.75	<0.001
Endomyometritis	0.71	1.39	<0.001

396 Medication adherence in women with gestational diabetes and its effect on pregnancy outcomes

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OBJECTIVE: Treatment of gestational diabetes (GDM) is associated with improved pregnancy outcomes. Obstacles to taking prescribed medications can lead to non-compliance. The objective was to determine the challenges that lead to low medication adherence and whether this increases the rate of adverse pregnancy outcomes in women with GDM.

STUDY DESIGN: A prospective, observational study was performed of women with GDM treated with metformin, glyburide or insulin at a tertiary care center. Women greater than 16 weeks gestation and treated for a minimum of 2 weeks were included. Women with pre-DM were excluded. Women completed a validated survey, MMAS-8 (low: score <6 and high: score 7-8), to identify women with low and high medication adherence. Information resulting in medication compliance was collected. The primary outcome was neonatal birth weight >4,000g. Secondary outcomes included factors with medication adherence, adherence rates for each medication and neonatal outcomes.

RESULTS: Of 79 women who met study criteria, 42 reported high and 37 reported low adherence. Birth weight >4,000g were similar in each group, (low: 16.2% vs. high: 7.1%, p = 0.292). Women prescribed metformin had the highest rate of high adherence (38.1%) and women on glyburide had the highest rate of low adherence (46%). The rate of neonatal hypoglycemia was significantly higher in women with low adherence compared to high adherence, (low: 70.3% vs high 42.9%, p = 0.023). There were similar rates of induction of labor, cesarean section, NICU admissions, and neonatal respiratory complications. There were no cases of shoulder dystocia, Erb's palsy, or major neonatal morbidities. Obstacles to medication adherence were documented in 14% of women including prescription error, insurance difficulties and delay in dispensing the medications. Adverse effects to medication were reported in 10-20% of women.

CONCLUSION: Although there were no differences in neonatal birthweight between groups, low medication adherence was associated with neonatal hypoglycemia. Challenges to compliance with prescribed medications occurred in 14% of GDM women and up to 1 in 5 women reported a medication side effects. Further studies are needed to investigate patient-specific and system-level strategies to improve medication adherence in women with GDM.

397 Neonatal risks associated with maternal glucose intolerance in the absence of gestational diabetes

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OBJECTIVE: To determine whether mild maternal glucose intolerance in the absence of diabetes is associated with neonatal complications, independent of maternal BMI.

STUDY DESIGN: This is a secondary analysis of the prospective cohort study, Nulliparous Pregnancy Outcomes Study: Monitoring Mothers-to-Be (nuMoM2b). Women were included if they had any testing for glucose intolerance. Women were excluded if they had a diagnosis of gestational or pregestational diabetes or if they delivered preterm. The exposure of interest was maternal glucose intolerance, defined as any of the following: HbA1c ≥5.7%, elevated 1 hour glucose tolerance test (GTT) >135 and <200, fasting glucose ≥92, or any random glucose measurement ≥200. The primary outcome of interest was a composite of adverse neonatal outcomes including LGA birthweight >97%ile, hypoglycemia requiring treatment, and shoulder dystocia. Bivariate analyses compared women with glucose intolerance to women without glucose intolerance across demographic and clinical factors (Table 1). Odds ratios for the outcome of interest were compared between exposed and unexposed women using multivariable logistic regression to adjust for possible confounders (Table 2). Stratified analyses assessed the interaction of maternal BMI using the Mantel-Haenszel test and Taurone's test of homogeneity.

RESULTS: Of the 7,680 women included, 6624 (86.25%) had no glucose intolerance and 1056 (13.75%) met criteria for glucose intolerance. In bivariate analyses, women with glucose intolerance were older, less likely to be non-Hispanic black, and more likely to be overweight. Multivariable analyses revealed a significant increase in odds of LGA and shoulder dystocia among infants of women with glucose intolerance (OR 1.66, 95% CI 1.04-2.67 and OR 1.71, 95% CI 1.08-2.70, respectively). There was no difference between the groups in the primary composite neonatal outcome (OR 1.12, 95% CI 0.62-2.00). Stratified analyses demonstrated no difference in these associations by BMI category, indicating an independent relationship between glucose intolerance, LGA, and shoulder dystocia.

CONCLUSION: Maternal glucose intolerance without a diagnosis of diabetes may still predict clinically significant neonatal complications.