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## Aim

To evaluate pregnancy outcomes based on different treatment modalities for gestational diabetes mellitus (GDM) with focus on metformin.

## Introduction

Metformin as treatment for gestational diabetes mellitus (GDM) is a matter of controversy. Concerns about the effects on neonatal birth weight (mainly small for gestational age) have been raised.

## Material and method

Prospective cohort study, data from the stepped wedge cluster randomized trial; Changing diagnostic criteria for GDM in Sweden – [www.cdc4g.se](http://www.cdc4g.se). Population was singleton pregnancies during 2018 from eight clusters. Pregnancy outcomes for women with metformin treated GDM compared to background population without GDM. Logistic regression analyzes with adjustments for potential confounders for all outcomes.

## Results

Of the 54 678 pregnancies included, 2 169 (4.0%) were diagnosed with GDM; of whom 1 076 (49.6%) were treated with diet only, 668 (30.8%) with metformin only, 116 (5.3%) with insulin only, and 309 (14.2%) with both metformin and insulin. Pregnancy outcomes are shown in Table 1 and Figure 1.

Table 1. Pregnancy outcomes for different treatment modalities for GDM.

	<u>Background, reference</u> (n= 52 509) N (%)	<u>Metformin GDM</u> (n=668) aOR	<u>Insulin GDM</u> (n=116) aOR	<u>Metformin &amp; insulin GDM</u> (n=309) aOR
Small for gest. age (10pc)	5 886 (11.2)	0.57 (0.41-0.79)	0.48 (0.21-1.09)	0.78 (0.51-1.18)
Large for gest. Age (90pc)	5 904 (11.3)	2.29 (1.88-2.78)*	2.47 (1.58-3.86)*	2.32 (1.76-3.07)*
Preterm (< 37 gest. wks)	2 322 (4.4)	1.79 (1.30-2.47)*	1.36 (0.59-3.13)	1.97 (1.26-3.08)*
Neonatal composite	733 (1.4)	1.46 (0.72-2.98)	3.03 (0.94-9.73)	N/A
Preeclampsia	1 370 (2.6)	1.60 (1.04-2.46)*	1.90 (0.69-4.24)	1.37 (0.70-2.70)
Cesarean section	9 402 (17.2)	1.56 (1.29-1.88)*	1.10 (0.68-1.77)	1.95 (1.51-2.52)*
Induction of labour	10 072 (19.2)	2.64 (2.23-3.13)*	4.78 (3.23-7.08)*	2.93 (2.30-3.74)*

\*statistically significant

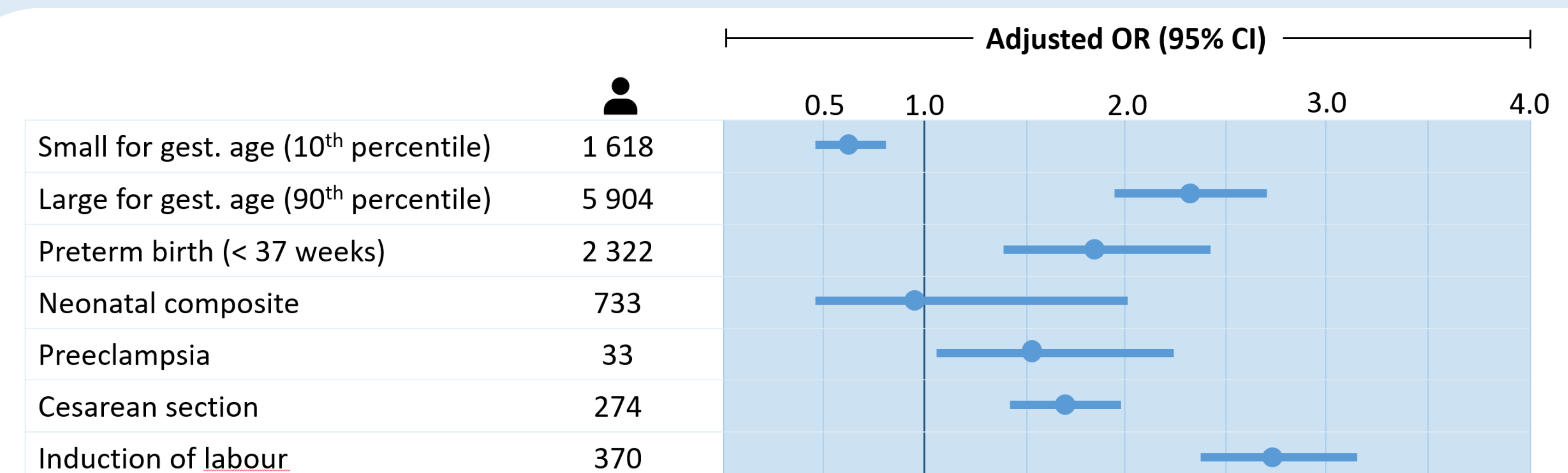


Figure 1. Pregnancy outcomes for metformin (with and without insulin) treated GDM compared to background population.

## Conclusion

These preliminary results show no increase in SGA for metformin treated GDM compared to background population.