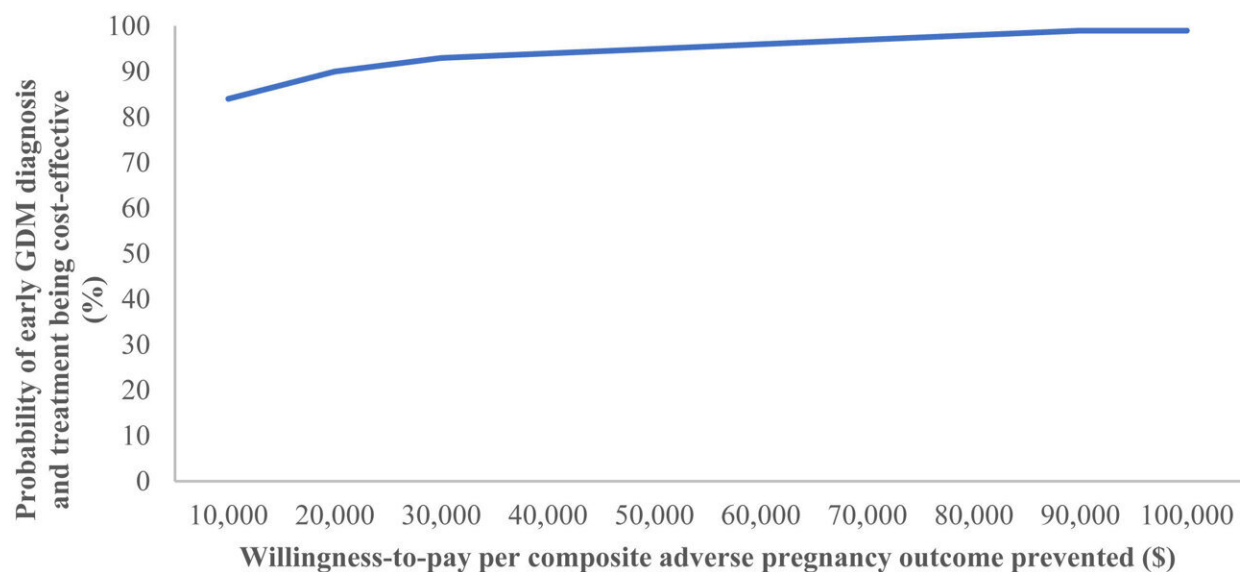


# Early gestational diabetes treatment shown to reduce birth complications, health costs for those at higher risk

April 30 2024



Cost-effectiveness acceptability curve (CEAC) showing the probability of early GDM diagnosis and treatment being cost-effective among women with risk factors for hyperglycemia in pregnancy for different ceilings of willingness-to-pay (WTP) compared with usual care for composite adverse pregnancy outcome. Credit: *eClinicalMedicine* (2024). DOI: 10.1016/j.eclinm.2024.102610

New research led by Western Sydney University has shown that treatment of gestational diabetes from early pregnancy can not only reduce birth complications among babies and mothers, but can also

reduce health costs by up to 10%.

Published in *eClinicalMedicine*, the [new study](#) explored whether [treatment](#) of [gestational diabetes](#) before 20 weeks' gestation among patients at a higher risk is cost effective.

Through a randomized controlled trial performed at 17 hospitals in Australia, Austria, Sweden and India, the study recruited 802 women with a diabetes risk factor before 20 weeks' gestation, who had gestational diabetes by the World Health Organization definition.

Lead author Distinguished Professor David Simmons, from Western Sydney University's School of Medicine and Translational Health Research Institute, said it had previously been unknown whether to treat gestational diabetes earlier than the current recommended approach of intervening at 24–28 weeks' gestation. However, this new study provides the evidence of the health and economic benefits.

"Our new research shows that diagnosing those affected, early in their pregnancy, reduces birth complications, improves quality of life, and reduces costs. This new analysis has now filled a major knowledge gap likely affecting millions of pregnancies globally every year," said Distinguished Professor Simmons.

"Testing for gestational diabetes is currently offered routinely later in pregnancy for all [expectant mothers](#), with those at a higher risk tested earlier on to exclude undiagnosed type 2 diabetes. The findings support that earlier screening and treatment of gestational diabetes is improving [health outcomes](#) and is cost saving."

Following on from the research team's previous randomized control trial study that found that the diagnosis and treatment of pregnant women with early gestational diabetes mellitus (GDM) improved pregnancy

outcomes, this new study assessed the cost-effectiveness of early GDM diagnosis and treatment.

Distinguished Professor Simmons said these new findings from the trial showed significant reductions in the costs of time for the babies born in the [neonatal intensive care unit](#) and special care nursery. In addition, the study emphasizes these improved health outcomes, for mothers and their babies, were linked to cost savings as another positive benefit from early treatment.

"Our findings not only showed that screening for early gestational diabetes and treating it early is cost effective, but also showed that slightly higher diagnostic glucose cut-offs than we are currently using for the diagnosis of gestational diabetes can be significantly cost reducing by over \$2,500 per woman screened, and that diagnosing before 14 weeks of pregnancy might save over \$5,500 per woman screened.

"In the meantime, it's really important that we now use these new findings to review the existing guidelines for gestational diabetes, agree on the best diagnostic cut-offs and start protecting mothers and babies as soon as we can."

The research team recommends further confirmatory trials and long-term follow-up studies of offspring.

**More information:** Mohammad M. Haque et al, Cost-effectiveness of diagnosis and treatment of early gestational diabetes mellitus: economic evaluation of the TOBOGM study, an international multicenter randomized controlled trial, *eClinicalMedicine* (2024). [DOI: 10.1016/j.eclinm.2024.102610](https://doi.org/10.1016/j.eclinm.2024.102610)

Provided by Western Sydney University

Citation: Early gestational diabetes treatment shown to reduce birth complications, health costs for those at higher risk (2024, April 30) retrieved 29 June 2024 from

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