

Letters

A call to reconsider the new diagnostic criteria for gestational diabetes mellitus

We read the article by Nethery and colleagues¹ with great interest, having noted a similar dramatic increase in the incidence of gestational diabetes in Australia, coincident with widespread adoption of the 1-step test using the International Association of Diabetes and Pregnancy Study Groups (IADPSG) criteria. Although the authors did not examine clinical or health system effects from the change in diagnostic practice, they noted that, “Health system costs may increase, with a need for more endocrinologists, diabetes nurse educators or dietitians; additional sonograms; or more intensive monitoring during labour, delivery and the postpartum period.”

Several large randomized controlled trials (RCTs) have shown that, despite the new diagnostic processes detecting more disease, the clinical outcomes for the pregnant person and baby may not be improved²⁻⁴ and there may be net harm. Possible harms from the widened definition of gestational diabetes, not mentioned in the current report, include life disruptions and psychosocial burdens for families, more invasive forms of delivery and potential harms to the infant from restricted diets and the use of insulin, including an increased risk of the infant being small for gestational age, and neonatal hypoglycemia.

The IADPSG criteria have resulted in 3 related changes in diagnostic practice, namely the use of 1-step instead of 2-step testing, lowered diagnostic thresholds and the requirement of only 1 abnormal

test out of multiple testing episodes for a diagnosis. Each change is likely to have contributed to a widened disease definition including milder abnormalities.⁵ Using “fair umpires” such as clinical outcomes to adjudicate in an RCT comparing new and old diagnostic criteria, we found significant overdiagnosis associated with the new criteria.⁶ We estimated that about 57% of people with gestational diabetes according to the new diagnostic practices, may be overdiagnosed.⁶ Applying that estimate to data in the current report, more than 7800 pregnant people may have been overdiagnosed in 2019 alone (57% of 13 743, using the 1-step test in 2019, shown in Table 1 of the article by Nethery and colleagues¹).

The authors’ comment that, “increased diagnosis rates of gestational diabetes could have long-term public health cost savings or reduced morbidity from decreases in cardiometabolic diseases or metabolic effects on the offspring,” appears speculative considering available evidence. The consequences of small-for-gestational-age infants can also have long-term consequences. In the face of known harms and only hypothetical benefits, practitioners, guideline authors and policy-makers should urgently reconsider the new diagnostic criteria for gestational diabetes.

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References

1. Nethery E, Law MR, Kotaska A, et al. The effect of changing screening practices and demographics on the incidence of gestational diabetes in British Columbia, 2005–2019. *CMAJ* 2023;195:E396-403.
2. Pillay J, Donovan L, Guitard S, et al. Screening for gestational diabetes: updated evidence report and systematic review for the US Preventive Services Task Force. *JAMA* 2021;326:539-62.
3. Brady M, Hensel DM, Paul R, et al. One-step compared with two-step gestational diabetes screening and pregnancy outcomes: a systematic review and meta-analysis. *Obstet Gynecol* 2022;140:712-23.
4. Crowther CA, Samuel D, McCowan LME, et al. Lower versus higher glycemic criteria for diagnosis of gestational diabetes. *N Engl J Med* 2022; 387:587-98.
5. Doust JA, Bell KJL, Glasziou PP. Potential consequences of changing disease classifications. *JAMA* 2020;323:921-2.
6. Bell K, Doust J, Sanders S, et al. A novel methodological framework was described for detecting and quantifying overdiagnosis. *J Clin Epidemiol* 2022;148:146-59.

Competing interests: Katy J.L. Bell and Paul P. Glasziou are chief investigators and Jenny A. Doust is an associate investigator for Wiser Healthcare. No other competing interests were declared.

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