



1. **Utility of Early Diabetes Screening in Pregnancy**-There is controversy surrounding early screening for diabetes during pregnancy. The *United States Preventive Services Task Force* cites insufficient evidence to balance the risks and benefits of early screening/treatment in pregnancy.(1) Some randomized controlled trials showed that early screening did not improve pregnancy outcomes while others showed modest improvement.(2-4) Early screening should optimally be performed at the initial prenatal visit; however, in reality, it often occurs well into the 2nd trimester. For example, in the Harper et al. randomized controlled trial, the average age at diagnosis in the early GDM group was 24 weeks vs. 27 weeks in patients randomized to routine screening; thus, the brief 3-week difference between study arms was likely an inadequate time horizon to achieve a clinically significant difference.(2) Another RCT of 800+ women diagnosed with GDM < 20 weeks gestation were randomized to immediate treatment vs. delayed/deferred treatment based on their GDM screening results at 24-28 weeks.(4) The average gestational age of OGTT in both groups was ~ 15 weeks gestation and they found a modest reduction in adverse neonatal outcome composite that was greater in people who were screened <14 weeks gestation, and no difference in risk for hypertensive disorders of pregnancy.(4) A meta-analysis of RCT's of early vs. routine screening found no difference in LGA overall, but there was a significantly lower risk of LGA with early screening (2.3% early vs. 9.1% routine: RR 0.29; 95% CI 0.09-0.90) in trials utilizing universal early screening of all patients. (5)
2. **Risk-Based vs. Universal Early Screening**-The *American College of Obstetricians and Gynecologists* published updated guidance on early screening in July, 2024 and they recommend risk-based early screening for "pregestational diabetes" in pregnancy rather than early "GDM."(3) The *American Diabetes Association (ADA) Standards of Care* recommends risk-based screening for pre-diabetes and early pre-existing diabetes <15 weeks gestation, but they also suggest consideration of universal screening at the first prenatal visit in patient who were not screened before pregnancy.(6) Given the population based prevalence of undiagnosed diabetes of 3-4%, rates of pre-diabetes up to 30-40%,(7) and the aforementioned meta-analysis showing a significantly lower risk of LGA with universal early screening,(5) we have elected to follow the ADA's guidance for universal early screening in pregnancy.(6)
3. **Optimal Early Screening Strategy**-There is a lack of consensus in the optimal screening strategy for early diabetes in pregnancy with professional organizations offering a variety of acceptable options,

including fasting blood glucose, 1-step testing, 2-step testing, and Hemoglobin A1c (A1c).^(3, 6, 8) In the absence of a clear evidence-based recommendation that one of these options offers advantages over the others, we will pursue the least cumbersome option with a universal A1c sent with initial prenatal labs. Of note, A1c is only validated up to <15 weeks gestation.⁽⁶⁾ However, we recommend a pragmatic approach and screening with A1c, even in patients presenting late to care after 15 weeks but before the routine screening window (24-28 weeks).

4. **Pre-Diabetes**-is defined as A1c 5.7-6.4%.⁽⁶⁾ While patients in this range are at significantly increased risk for Type 2 diabetes and associated morbidity, only those in the 5.9-6.4% range are at increased risk for adverse pregnancy outcomes.⁽⁶⁾ The ADA recommends consideration of nutrition counselling for patients in the 5.9-6.4% range and this group should be prioritized in case of limited availability for nutrition counselling, but it is reasonable to offer to all patients meeting pre-diabetes criteria given increased lifelong risk.⁽⁶⁾
5. **Postpartum Testing**-It is unknown whether early A1c \geq 6.5% reliably diagnosis type 2 diabetes in early pregnancy. In a small study of 121 patients, 16/18 patients with an early A1c \geq 6.5% were confirmed to have diabetes postpartum (positive predictive value 88.9%). Given a paucity of data in this area, we recommend a postpartum confirmatory OGTT for patients who screen positive for T2DM early in pregnancy by A1c \geq 6.5%.

References

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These algorithms are designed to assist the primary care provider in the clinical management of a variety of problems that occur during pregnancy. They should not be interpreted as a standard of care, but instead represent guidelines for management. Variation in practices should take into account such factors as characteristics of the individual patient, health resources, and regional experience with diagnostic and therapeutic modalities. The algorithms remain the intellectual property of the University of North Carolina at Chapel Hill School of Medicine. They cannot be reproduced in whole or in part without the expressed written permission of the school.