

Online Supplementary Material

Nicholson JM, Yeager DL, Macones G. A preventive approach to obstetric care in a rural hospital: association between higher rates of preventive labor induction and lower rates of cesarean delivery. *Ann Fam Med*. 2007;5:310-319.

<http://www.annfammed.org/cgi/content/full/5/4/310/DC1>

**Supplemental Appendix 1. Upper Limit of the Optimal Time of Delivery (UL-OTD) Calculation Sheet**

**A. Uteroplacental Insufficiency (UPI) Risk Factors**

Risk Factor	Odds Ratio	Time Units, days	
History of chronic hypertension	1.8	6	
Gestational diabetes	2.0	7	
Type 1 diabetes	2.4	10	
Sickle cell trait	1.5	3	
Elevated AFP level	1.4	3	
Cigarette use	1.3	2	
Size less than dates ( $\leq 3$ cm)	1.6	4	
Advanced age ( $\geq 35$ years) at delivery	1.8	6	
Anemia (1st trimester Hgb $\leq 11.0$ g/dL)	1.6	4	
		Total UPI time units	
<b>UL-OTD-upi* = (41 weeks – Total UPI time units) =</b>			

\* UL-OTD-upi indicates upper limit of the optimal time of delivery based on uteroplacental insufficiency risk factors.

**B. Cephalopelvic Disproportion (CPD) Risk Factors**

Risk Factor	Odds Ratio	Time Units, days	
High BMI ( $\geq 30$ kg/m <sup>2</sup> ) at conception	1.3	2	
Short stature ( $\leq 62$ in)	1.8	6	
Excess weight gain ( $\geq 30$ lb)	1.8	6	
Size greater than dates ( $\geq 3$ cm)	1.7	4	
Gestational diabetes	1.8	6	
Type 1 diabetes	2.4	10	
Previous assisted (vacuum/forceps) vaginal delivery	2.2	9	
Previous macrosomia ( $\geq 4,000$ g)	2.0	7	
		Total CPD time units	
<b>UL-OTD-cpd† = (41 weeks – Total CPD time units) =</b>			

† UL-OTD-cpd indicates upper limit of the optimal time of delivery based on cephalopelvic disproportion risk factors.

**Final UL-OTD:** The lesser of the 2 UL-OTD values (UL-OTD-upi vs UL-OTD-cpd), but always 38 weeks or greater.

AFP = -fetoprotein; Hgb = hemoglobin; BMI = body mass index.

## Online Supplementary Data

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Explanation for use: The calculation of the UL-OTD for each patient is relatively quick and easy. A patient's clinical history is considered, and risk factors that she has are circled. (Odds ratios indicate the odds of uteroplacental insufficiency or cephalopelvic disproportion in patients with the risk factor. They are provided for reference only and are not used in calculations.) Risk factors are usually in either the uteroplacental insufficiency or the cephalopelvic disproportion category; only gestational diabetes and type 1 diabetes are in both. Every circled risk factor has an associated number of days, which are quickly identified. The number of days in each risk group are totaled and subtracted from 41 weeks', 0 days' gestation. This calculation gives a category-specific UL-OTD for each risk category. The final UL-OTD is the lesser of the 2 category-specific UL-OTDs, but it is never less than 38 weeks', 0 days' gestation. If a patient has not entered spontaneous labor 5 to 6 days before her final UL-OTD, then she is scheduled for preventive labor induction so that she enters labor before her final UL-OTD. If a patient has a modified cervical Bishop score of less than 6, then she is offered prostaglandin E<sub>2</sub> before the start of oxytocin. See also Supplemental Appendix 2. X-Factors and Timing of Induction.