

Appendix 1. Investigators and Study Personnel

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Silver RM, Rice MM, Grobman WA, Reddy UM, Tita ATN, Mallett G, et al. Customized probability of vaginal delivery with induction of labor and expectant management in nulliparous women at 39 weeks of gestation. *Obstet Gynecol* 2020;136.

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Appendix 2. Baseline Characteristics by Inclusion or Exclusion From the Secondary Analysis

Baseline characteristics	Assigned to elective induction of labor at 39 0/7-39 4/7 weeks			Assigned to expectant management		
	Included in the analysis (n=2153)	Excluded from the analysis because not electively induced 39,0-39,4 (n=538)	P*	Included in the analysis (n=2508)	Excluded from the analysis because not expectantly managed (n=140)	P*
Age, years	24 (20-28)	24 (21-29)	0.02	24 (20-28)	23 (20-29)	0.42
Age ≥ 35 years	85 (4.0)	19 (3.5)	0.65	116 (4.6)	10 (7.1)	0.17
Race or ethnic group			0.04			0.001
Black	492 (22.9)	128 (23.8)		583 (23.3)	21 (15.0)	
White	960 (44.6)	204 (37.9)		1133 (45.2)	57 (40.7)	
Asian	53 (2.5)	20 (3.7)		88 (3.5)	4 (2.9)	
Hispanic	594 (27.6)	173 (32.2)		641 (25.6)	57 (40.7)	
Other, unknown, or more than one race	54 (2.5)	13 (2.4)		63 (2.5)	1 (0.7)	
Private insurance	1004 (46.7)	235 (43.7)	0.22	1102 (43.9)	57 (40.7)	0.45
Height, m	1.63 (1.57-1.68)	1.60 (1.57-1.66)	<0.001	1.63 (1.57-1.68)	1.60 (1.57-1.65)	0.04
Weight at randomization, kg	81 (72-94)	78 (71-91)	0.004	81 (71-93)	82 (71-93)	0.95
History of pregnancy loss before 20 weeks	475 (22.1)	120 (22.3)	0.90	648 (25.8)	35 (25.0)	0.83
Conception assisted by ovulation induction, artificial insemination, or in vitro fertilization	64 (3.0)	12 (2.2)	0.35	61 (2.4)	3 (2.1)	1.00
Modified Bishop score at randomization	4 (2-5)	4 (2-5)	0.01	4 (2-5)	4 (2-5)	0.85
Modified Bishop score at randomization < 5	1409 (65.4)	324 (60.2)	0.02	1691 (67.5)	92 (65.7)	0.67

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Data are median (interquartile range) or n (%) unless otherwise specified.

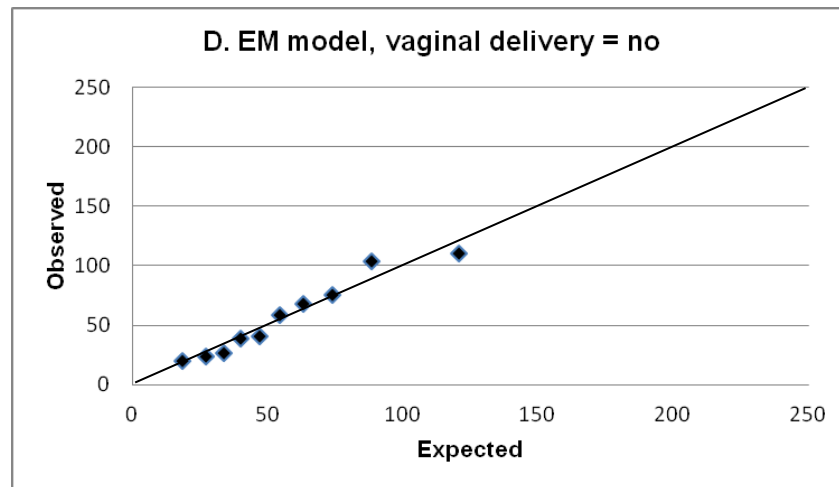
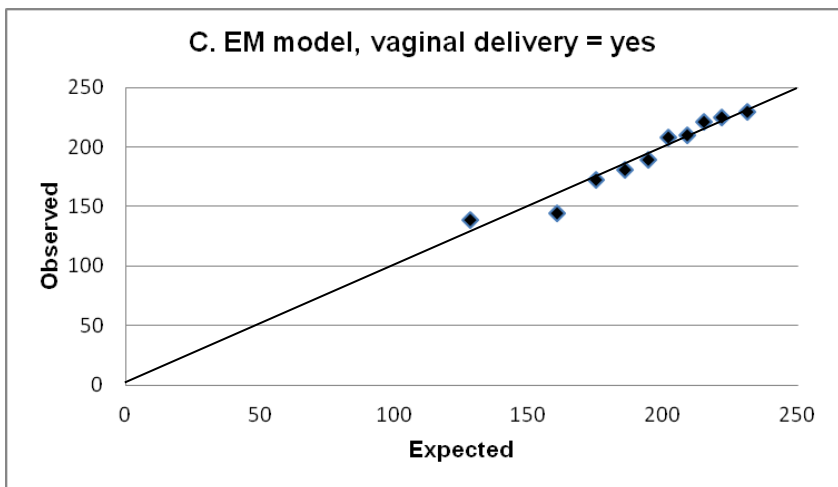
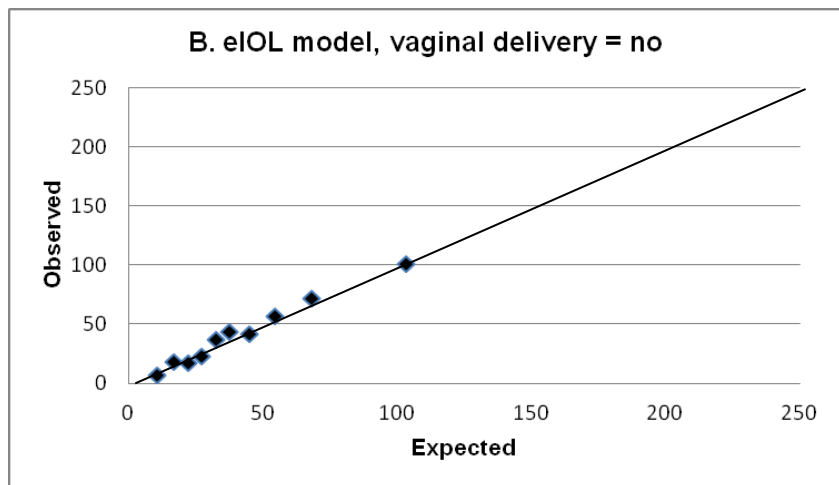
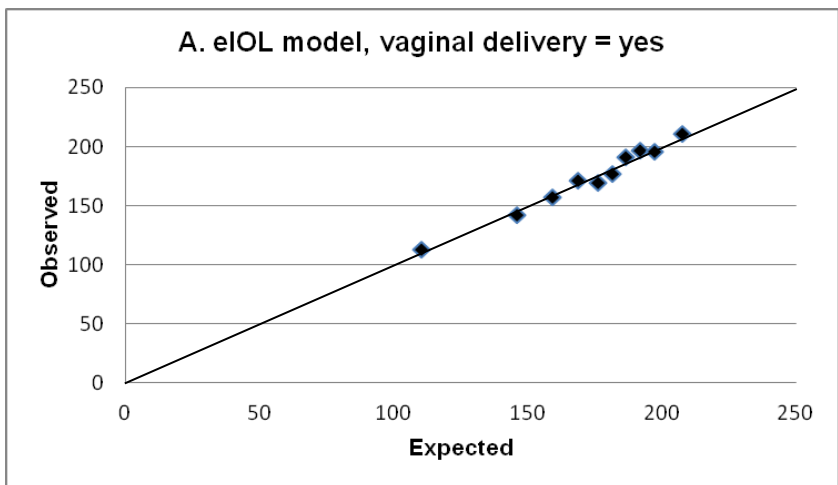
* Based on the χ^2 or Fisher's exact test for categorical variables and the Wilcoxon rank sum test for continuous variables..

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Appendix 3. Graphical displays of the observed and expected number of patients in each partition of the Hosmer-Lemeshow test: elective induction of labor (eIOL) model (Figures A-B); expectant management model (EM) (Figures C-D).



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Appendix 4. Logistic Regression Equations to Determine the Percent Probability of Vaginal Birth for an Individual Low-Risk Nulliparous Pregnancy at 39 Weeks of Gestation With Elective Induction of Labor (eIOL) and With Expectant Management (EM)

Probability of vaginal delivery with eIOL 39 0/7-39 4/7 weeks of gestation equation*

$$p(\text{vaginal delivery}) = \{1 - [1 / (1 + \{\text{EXP}[-9.4313 + (-0.0681 * \text{maternal age in years}) + (8.6742 * \text{maternal height in meters}) + (-0.0261 * \text{maternal weight in kilograms at 38 weeks of gestation}) + (0.2141 * \text{modified Bishop score at 38 weeks})]\})]\} * 100$$

Probability of vaginal delivery with EM started at 39 0/7 weeks of gestation equation*

$$p(\text{vaginal delivery}) = \{1 - [1 / (1 + \{\text{EXP}[-5.5357 + (-0.0679 * \text{maternal age in years}) + (5.9541 * \text{maternal height in meters}) + (-0.0227 * \text{maternal weight in kilograms at 38 weeks of gestation}) + (0.2140 * \text{modified Bishop score at 38 weeks})]\})]\} * 100$$

* Use whole numbers for maternal age in years and modified Bishop score at 38 weeks and use up to two decimal places for maternal height in meters and maternal weight at 38 weeks of gestation in kilograms.

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