Creating a TOLAC Bundle for Women's Group of North Florida and Gainesville OB/GYN

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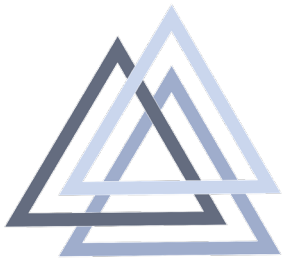
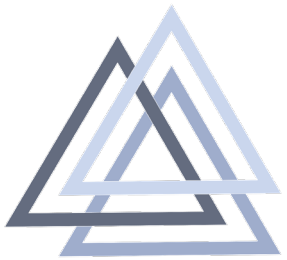


Disclosures

None



Learning Objectives

1. Identifying ideal TOLAC candidates

2. Learning ways to improve counseling in the outpatient setting

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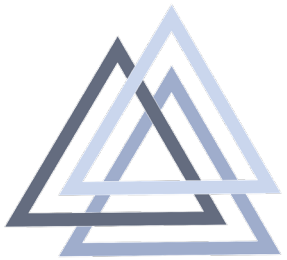
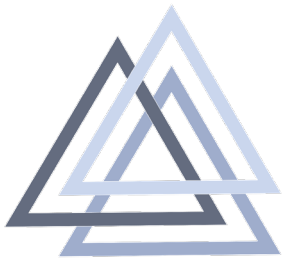


Background

- Trial of labor after C-section (TOLAC) can result in a vaginal birth after C-section (VBAC)
- VBAC has reduced maternal morbidity when compared to a repeat C-section
- However, a failed TOLAC is associated with increased maternal and perinatal morbidity/mortality than a repeat C-section



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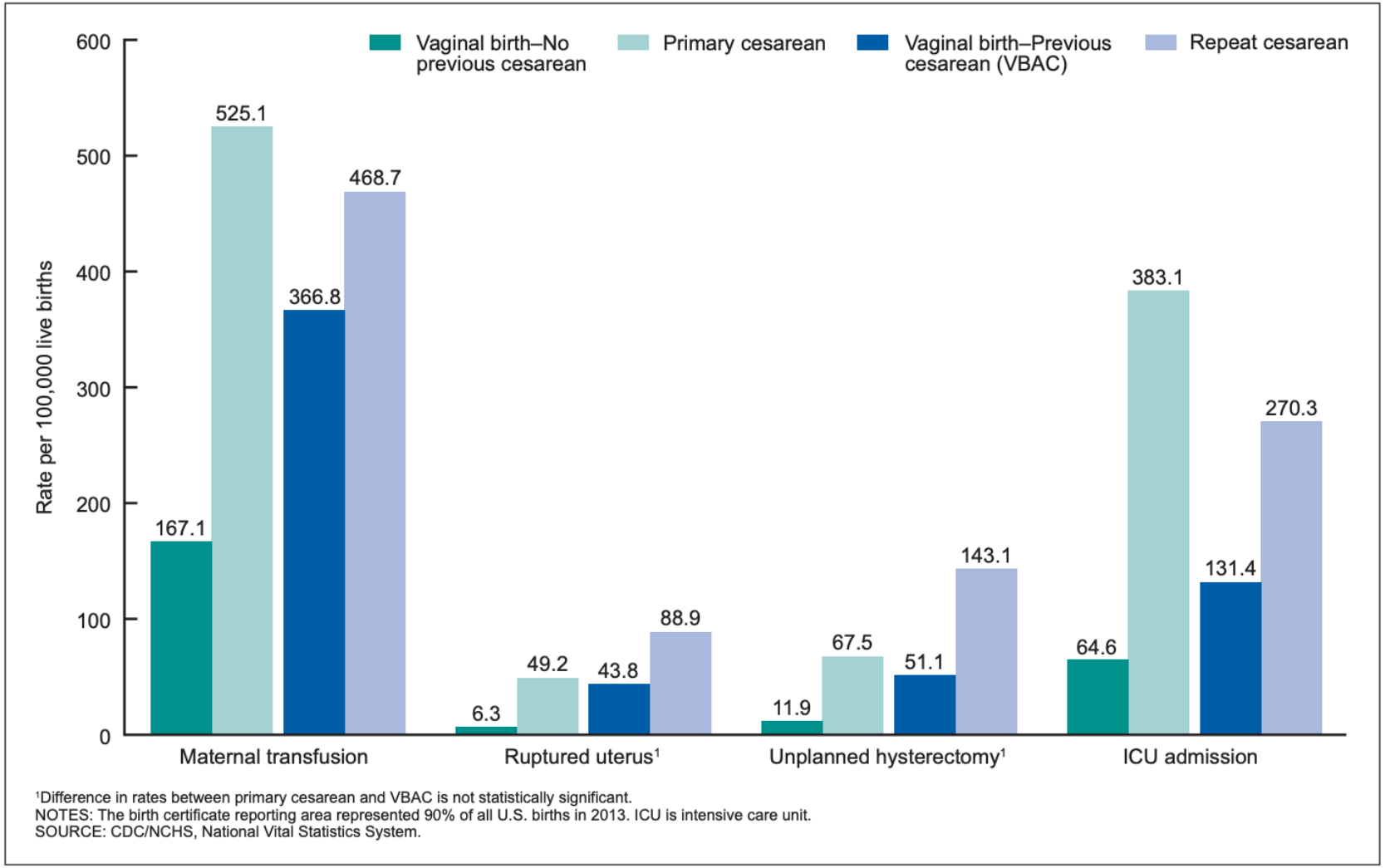

[1]Difference in rates between primary cesarean and VBAC is not statistically significant.
NOTES: The birth certificate reporting area represented 90% of all U.S. births in 2013. ICU is intensive care unit.
SOURCE: CDC/NCHS, National Vital Statistics System.

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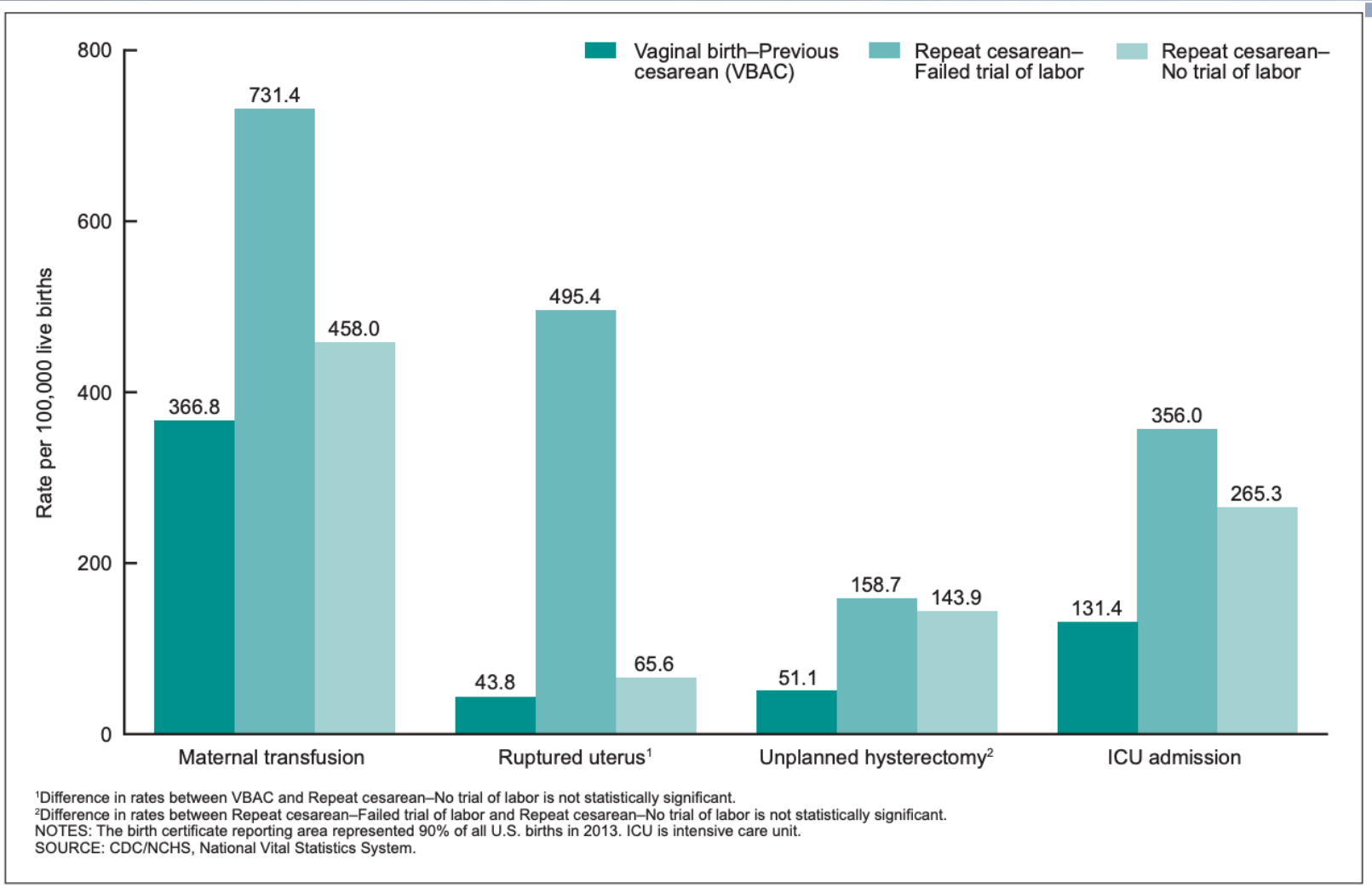

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Background

Table 2. Composite Neonatal Morbidity From Elective Repeat Cesarean Delivery and Trial of Labor After Previous Cesarean Delivery in Term Infants

Neonatal Risks	ERCD (%)	TOLAC (%)
Antepartum stillbirth	0.21	0.10
Intrapartum stillbirth	0–0.004	0.01–0.04
HIE	0–0.32	0–0.89
Perinatal mortality	0.05	0.13
Neonatal mortality	0.06	0.11
NICU admission	1.5–17.6	0.8–26.2
Respiratory morbidity	2.5	5.4
Transient tachypnea	4.2	3.6

https://www.ncbi.nlm.nih.gov/books/NBK44562/#ch3.s1

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Background

Characteristics of less successful TOLAC patients:

- More than 1 prior C-section
- Incision other than low-transverse
- Any condition in which SVD is contraindicated
- Increasing maternal age
- Increasing BMI
- High neonatal birth weight
- Advanced gestational age at delivery (>40 wks)
- Induction of labor
- Interdelivery interval <19 months
- Presence of preeclampsia at the time of delivery

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Background

- Validated peer-reviewed VBAC calculators may assist with shared decision making
- No prediction model has been shown to result in improved patient outcomes
- Evidence suggests that women with at least 60-70% likelihood of achieving VBAC who attempt TOLAC experience the same or less maternal morbidity compared to women who undergo elective repeat C-section (Cahill et al & Grobman et al)

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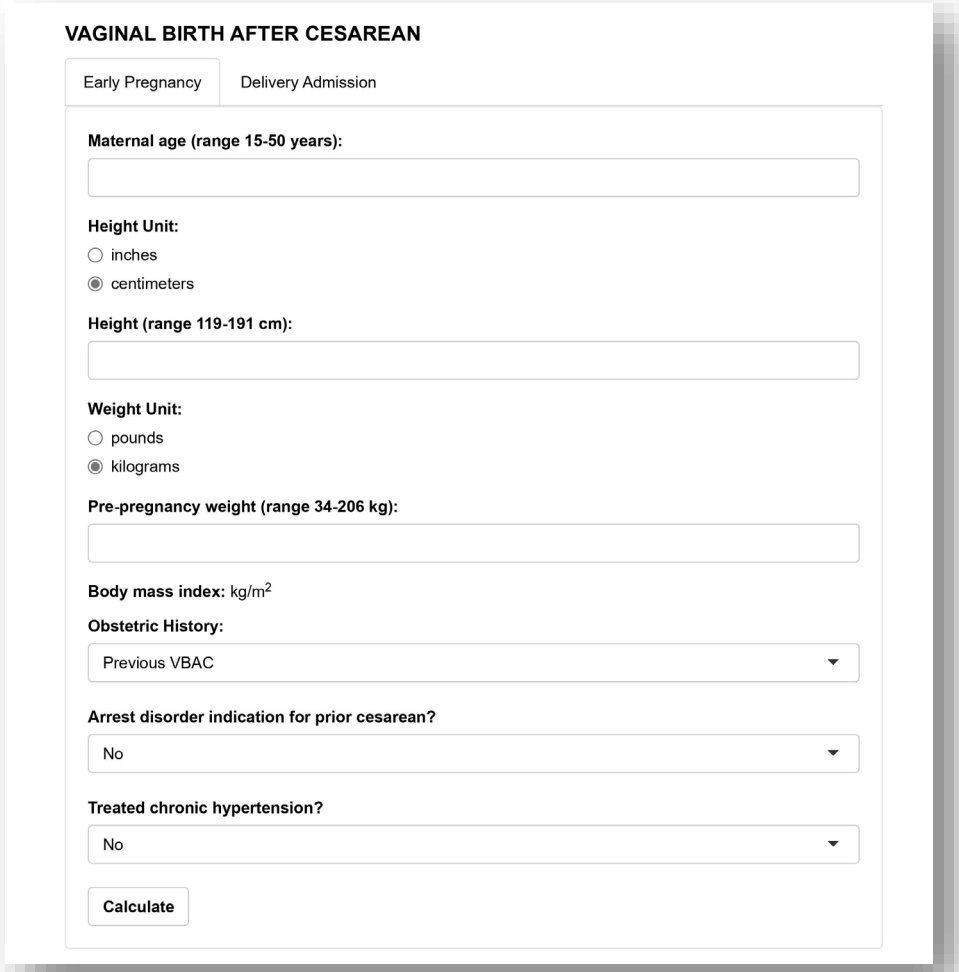

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Design

Population: Obstetric patients of 2 practices at a 510-bed university-affiliated community hospital in north Florida

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Design

Population: obstetric patients of 2 practices at a 510-bed university-affiliated community hospital in north Florida

Inclusion criteria:

- History of at least 1 prior C-section

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Design

Exclusion criteria:

- More than 2 prior C-Sections
- Prior uterine incision other than low transverse, or unknown incision
- Contraindication to vaginal delivery (placental abnormality, malpresentation)
- History of arrest of descent
- Multifetal gestation
- Fetal macrosomia
- Worsening preeclampsia, HELLP, AFLP, or other worsening maternal disease remote from delivery
- Cervix closed on admission
- History of shoulder dystocia
- History of 4th degree laceration

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Design

Interventions:

Design

Interventions:

- Didactics presentation to faculty and residents

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Design

Interventions:

- Didactics presentation to faculty and residents
  - ideal TOLAC candidates
  - TOLAC counseling

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Design

Interventions:

- Didactics presentation to faculty and residents
  - ideal TOLAC candidates
  - TOLAC counseling
- Standardized dot-phrase for TOLAC counseling in EMR

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Design

Interventions:

- Didactics presentation to faculty and residents
  - ideal TOLAC candidates
  - TOLAC counseling
- Standardized dot-phrase for TOLAC counseling in EMR

Discussion of Risks/Benefits: The benefits of VBAC compared to planned ERCD were discussed including opportunity to give vaginal birth, avoiding major abdominal surgery, faster recovery time, decreased risk of hemorrhage/thromboembolism/ surgical injury, and decreased risk of complications related to multiple c-sections (eg placenta accreta spectrum). The risks of a failed TOLAC were discussed including risk of uterine rupture (approximately 0.7%) and higher rates of hemorrhage, infection, neonatal morbidity/mortality compared to planned ERCD.

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Design

Interventions:

- Didactics presentation to faculty and residents
  - ideal TOLAC candidates
  - TOLAC counseling
- Standardized dot-phrase for TOLAC counseling in EMR
- Educational handout for patients about TOLAC

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IS TRIAL OF LABOR AFTER CESAREAN SECTION (TOLAC) RIGHT FOR YOU?

Why choose a TOLAC?

A vaginal delivery allows a mother to avoid complications associated with major surgery; has lower rates of hemorrhage, infection, and formation of blood clots; allows for quicker recovery; and decreases risks in future pregnancies. Vaginal birth also leads to better outcomes for the newborn.

Generally, when compared to a vaginal delivery, a c-section carries 3 times higher risk of complications including hemorrhage which may require transfusion or hysterectomy, anesthesia complications, shock, heart attack, kidney failure, infection, and blood clots.

Who makes a good candidate for a TOLAC?

Generally, a TOLAC leads to a successful vaginal delivery in 60-80% of mothers. A mother's chance depends on a number of factors. Some of these factors include the reason for previous c-section(s), whether a mother has had previous vaginal deliveries, mother's age, mother's weight, baby's weight, and gestational age at delivery. Ask your obstetric provider to calculate your predicted chance for a successful vaginal delivery!

Who is not a candidate for a TOLAC?

Your doctor will not offer a TOLAC if you have had more than 2 previous c-sections, if a previous c-section was performed with an up and down incision on your uterus, if you have had previous uterine rupture, if you have had extensive surgery on your uterus, or if you have any other reason for which a vaginal delivery would not be safe for you or your baby.

What are the risks of a TOLAC?

For mothers with 1-2 prior c-sections, a TOLAC carries 0.7 to 1.8% risk of uterine rupture. A uterine rupture is when the scar on the uterus from a previous c-section tears open. This requires an emergency c-section. A uterine rupture increases risks for mother and baby when compared to a scheduled repeat c-section. These risks are minimized when a TOLAC is carefully planned with your obstetrician and delivery occurs in a hospital with in-house Obstetricians, Anesthesiologists, surgical staff, and continuous fetal monitoring.

Questions? Please ask at your next visit!

GAINESVILLE OBGYN

Women's Group of North Florida

Design

Endpoints (before and after intervention):

- Percentage of patients who received documented TOLAC counseling
- Percentage of counseled patients who chose TOLAC vs repeat C-section
- Delivery outcomes

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Design

Objectives:

- Improve TOLAC counseling rate
- Increase VBAC rate / decrease repeat C-section rate

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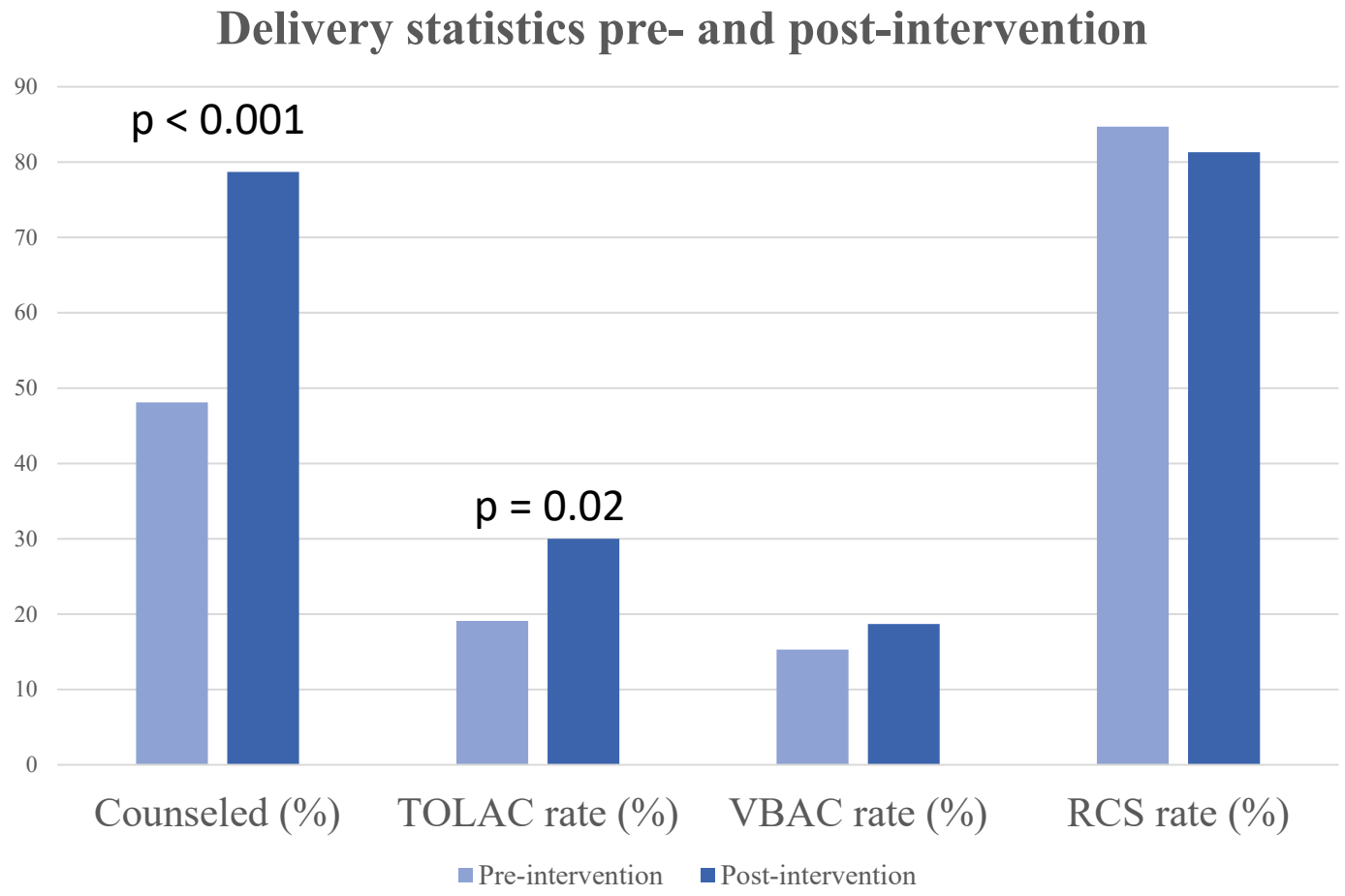
Results

Table 1

	Pre-intervention (n=183)		Post-intervention (n=150)	
	Mean (SD)	**Range**	**Mean (SD)**	**Range**
Age	28.55 (5.41)	19-42	29.87 (5.46)	18-45
BMI	33.80 (8.47)	17 – 61.8	34.23 (8.24)	17.7 – 64.4
	n	**%**	**n**	**%**
Race				
Asian	3	1.7	4	2.7
Black	66	37.1	62	41.3
Hispanic	11	6.2	9	6
White	96	54.0	70	46.7
Other	2	1.1	5	3.3
Insurance				
Private	48	25.4	57	37
Medicaid	127	73.5	87	59
Uninsured	2	1.1	6	4

Results



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Results

	Pre-intervention (n=183)		Post-intervention (n=150)		
	n	%	n	%	
Counseled	88	48	118	78.7	p < 0.001
Of those counseled, TOLAC	35	39.77	45	38.14	p= 0.8115
Of TOLAC, VBAC	28	80	28	62.2	p= 0.0852

Reason for TOLAC Failure				
Arrest	1	14.29%	3	17.64%
Failed IOL	1	14.29%	5	29.41%
NRFHT	3	42.86%	7	41.18%
Uterine Rupture	2	28.57%	1	5.88%
Not Listed			1	5.88%

Discussion

- Limitations
  - Retrospective
  - Single-center study
  - Limited timeline and size of study
  - Provider discretion in TOLAC candidacy
  - Provider discretion in calling failed TOLAC
  - Lack of subgroup analysis (HTN, Obesity)

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Conclusions

- Implementing an outpatient "TOLAC Bundle" including provider education, standardized counseling materials, and standardized EMR documentation can significantly improve counseling for TOLAC candidates.

- Additional research is needed to determine whether this improves delivery outcomes for these patients.

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Questions?

Thank you!