

M Health Fairview

SAFE VAGINAL BIRTH

Women's and Children's Service Line

Safe Vaginal Birth: Positioning for Labor Progress

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Learning Outcomes

At the conclusion of this session all participants will be able to:

- Describe the Safe Vaginal Birth initiative and the nurse's role in decreasing NTSV cesarean births.
- Implement algorithms, multidisciplinary huddles and standardized documentation in the EHR that supports safe vaginal birth.
- Demonstrate positioning and the use of birthing tools for laboring patients that facilitates labor progress and vaginal birth.

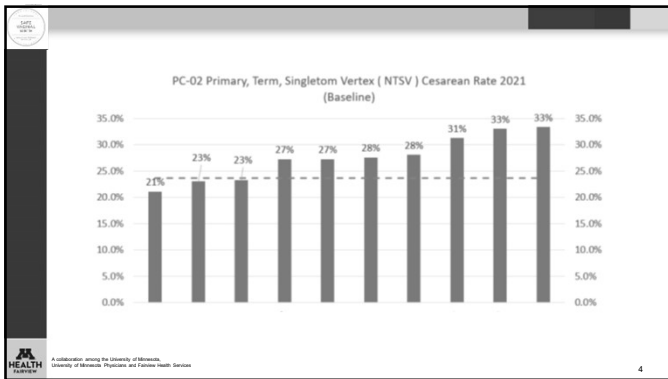
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Promotion of Safe Vaginal Birth Care Map Goals:

- On April 2, 2023
- **Aim** - Safely increase the proportion of vaginal births for Nulliparous patients without increasing unexpected complications in adult patients or newborns.
- **Goal** - Reduce the cesarean rate amongst nulliparous patients with 37-week term, singleton vertex (NTSV) presentations 27.22% to 23.6%
- Secondary measurements include:
 - No increase in unexpected complications for patients & their newborn
 - Decreased length of stay (vaginal delivery is shorter stay)
 - Improvement in patient preparation by utilizing a birth plan and receiving early labor at home instruction
 - Team culture strengthened through team huddles
- **Project Scope** - Nine Hospitals and over 60 clinics providing perinatal care

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Promotion of Safe Vaginal Birth Steering Team Members

Performance Dimension: Safety & Quality	Strategy Deployment Team(s): Optimal Care
A3 Owner: Laura France, Becky Gams	Steering Team Members: Dr. Rauk, Ann Forster Page, Adele Clobes, Tony Pelzel, Suzin Cho, Melissa Hasler, Mary J Johnson, Nancy Misurek, John T Smith, Rebecca Jensen, Rhianna Britton, Nanette Vogel, Jeanne Moore, Jane Sublette
A3 Coach: Jeanne Moore	

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- ### Opportunities – Pre Implementation
- Early labor admission
 - Intermittent Auscultation use
 - Category 2 fetal heart rate documentation
 - Documentation of team communication for Category 2 fetal heart rate tracings
 - Positioning for labor progress
 - Second stage labor management

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Promotion of Safe Vaginal Birth: Phases of Care

<p>Prenatal</p> <ul style="list-style-type: none"> • Outpatient mechanical cervical ripening • 3 NEW Pt Ed documents <ul style="list-style-type: none"> • My Labor & Birth • Any Day Now • What to expect in hospital 	<p>Admission/Triage</p> <ol style="list-style-type: none"> 1. Reduce rate of latent labor admissions (<5 cm dilation) <ul style="list-style-type: none"> • Discharging patients in early labor 2. Utilize intermittent auscultation for all eligible patients 3. Arrival and triage discharge notes standardization
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Promotion of Safe Vaginal Birth: Phases of Care

<p>1st Stage of Labor</p> <ol style="list-style-type: none"> 1. Freedom of movement <ul style="list-style-type: none"> • Upright positioning & position changes 2. Minimize early amniotomy prior to 6 cm 3. Increase Intermittent Auscultation 4. Cat. 2 Algorithm use 5. Birthing tools use <ul style="list-style-type: none"> • Labor Partogram use (the new labor curve) • 5 Ps (position, passageway, passenger, psyche, power) 	<p>2nd Stage of Labor</p> <ol style="list-style-type: none"> 1. Second stage huddle <ul style="list-style-type: none"> • Hourly documentation of station 2. Ongoing upright positioning & position changes 3. Ongoing Intermittent Auscultation 4. Ongoing Cat. 2 Algorithm use 5. Ongoing Birthing tools use <ul style="list-style-type: none"> • Labor Partogram use (the new labor curve) • 5 Ps (position, passageway, passenger, psyche, power) • Smartphrase Huddles (Cat 2 / Dystocia / 2nd Stage)
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Early Labor Admission – Why do we care?

- Patients admitted with cervical dilation greater than or equal to 4 cm were less likely to have epidural anesthesia, oxytocin augmentation, or a cesarean birth than those admitted with cervical dilation less than 4 cm (Kaufman et al. 2016)

Year	≥4 cm (%)	<4 cm (%)
2012	~15	~7
2013	~12	~7
2014	~15	~7

Fig. 3: Cesarean delivery rate, in percentage, by year of delivery and cervical dilation on admission. Kaufman. Cervical Dilation on Admission and Outcome. Obstet Gynecol 2016

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Early Labor Discharge Criteria

- Greater than 37 weeks
- Singleton
- Vertex
- Category 1 FHR
- Less than 5 cm
- Intact membranes or ruptured less than 24 hours with clear amniotic fluid
- Normotensive
- Afebrile (<100.4)
- GBS negative
- Normal fetal growth
- No serious patient health conditions
- No previous uterine scar
- Absence of vaginal bleeding
- Coping well with pain

Changes will include updated definition for active labor (6 cm), potential discharge of patient with ruptured membranes, mechanical ripening, definition of ripened cervix as a Bishop score ≥ 6 regardless of parity

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Intermittent Auscultation Promotion

- Pre-checked mode of monitoring on intrapartum order set
- Indications for continuous fetal monitoring when ordered
- Raising awareness of benefits and techniques for IA
- Improved hand-held doppler availability
 - Reinforced that IA is completed utilizing doppler only
- Fetal monitoring policy updated to promote IA as preferred monitoring mode

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Labor Partogram

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Zhang (2010)
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Category 2 Management

- Improve utilization of Category 2 algorithm
- Implement standardized Category 2 note
 - Nurses
 - Providers
- Promote use of Category 2 huddles

Provider (M) CNM / MD / DO - was notified at (M) regarding a persistent Category II fetal heart rate tracing for (M) minutes. Category II Algorithm

Fetal heart rate and uterine activity reviewed with provider.

EFM interpretation suggests (EFM Concern / Absence of Concern -)

Interventions to improve fetal oxygenation for a Category II tracing include -

After discussion with provider
 Provider coming to bedside / Plan reassessment / Plan team huddle -

Plan per provider / orders received (Optional) -

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Second Stage of Labor

Second Stage Labor: Interdisciplinary Care and Management
 (After 1st Stage - Cervical Dilatation and Descent)

Interdisciplinary team assessment initiated at admission and/or within 30 minutes

Identify if at risk
 • Fetal readiness: presence and effectiveness of pushing effort
 • Maternal pushing: presence, technique, and duration
 • Fetal position: presence and effectiveness of pushing effort
 • Maternal pushing: presence, technique, and duration
 • Fetal position: presence and effectiveness of pushing effort
 • Maternal pushing: presence, technique, and duration

Maternal Assessment
 • Cervical dilation and descent
 • Maternal pushing effort
 • Maternal pushing technique
 • Maternal pushing duration
 • Maternal pushing effectiveness
 • Maternal pushing comfort
 • Maternal pushing fatigue
 • Maternal pushing pain
 • Maternal pushing anxiety

Fetal Assessment
 • Fetal heart rate
 • Fetal position
 • Fetal descent
 • Fetal engagement
 • Fetal head position
 • Fetal head position relative to the pelvic inlet
 • Fetal head position relative to the pelvic outlet
 • Fetal head position relative to the pelvic floor

Interventions
 • Manual rotation
 • Vacuum extraction
 • Cesarean section
 • Episiotomy
 • Perineal massage
 • Supportive care
 • Emotional support
 • Pain management
 • Maternal pushing technique
 • Maternal pushing duration
 • Maternal pushing effectiveness
 • Maternal pushing comfort
 • Maternal pushing fatigue
 • Maternal pushing pain
 • Maternal pushing anxiety

Documentation
 • Maternal pushing effort
 • Maternal pushing technique
 • Maternal pushing duration
 • Maternal pushing effectiveness
 • Maternal pushing comfort
 • Maternal pushing fatigue
 • Maternal pushing pain
 • Maternal pushing anxiety

Communication
 • Maternal pushing effort
 • Maternal pushing technique
 • Maternal pushing duration
 • Maternal pushing effectiveness
 • Maternal pushing comfort
 • Maternal pushing fatigue
 • Maternal pushing pain
 • Maternal pushing anxiety

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One year later...

Location	Q3 Rate Jul-Sept	Q4 Rate Oct-Dec	2024 Jan-Feb	Change in Rate Q4 to Jan/Feb
Hospital 1	30.4%	28.1%	36.51%	8.41%
Hospital 2	25.8%	25.5%	31.94%	6.44%
Hospital 3	37.3%	25%	34.48%	9.48%
Hospital 4	47.9%	35%	37.5%	2.5%
Hospital 5	30.7%	37%	22.22% ☆	14.8% ☆
Hospital 6	29.4%	21.9% ☆	25.81%	3.91%
Hospital 7	29.1%	27.7%	23.53% ☆	4.17%
Hospital 8	26.7%	21.7% ☆	33.33% ☆	11.63%
Hospital 9	42.2%	46.2%	16.67%	29.53% ☆
System	29.1%	27.67%	28.59% ☆	.92%


Goal - Primary Cesareans (PC-02) Target=23.6%

2023 rate decreased in quarter 2 and 3 for a System Rate at the end of Q4 = 27.67% to end the year

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	“5 Ps”	
How do you as a nurse promote physiological birth?		

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The 5 Ps Include	
Let's take a look at how impacting the 5Ps can positive influence labor progress	
Psyche	_____
Power	_____
Passageway	_____
Passenger	_____
Position	_____

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<p>Psyche</p> <ul style="list-style-type: none"> • Birth preparation • Patient education <ul style="list-style-type: none"> • In the prenatal period and continuing throughout all phases of care • Empowering our patients to complete early labor at home 	
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The 5 Ps

Psyche

Power

Passageway

Passenger

Position

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Power of Labor

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The 5 Ps

Psyche

Power

Passageway

Passenger

Position

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Passageway

Bones- Gynecoid, Android, Anthropoid and Platypelloid pelvises

Joints- Pubic symphysis, sacroiliac joints, sacrococcygeal joint

Soft Tissues- Pelvic floor, psoas muscle, piriformis muscle, broad ligament, round ligament, sacroiliac ligament, sacrotuberous ligament, uterosacral ligament, pubocervical ligaments, cardinal ligaments, fascia

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Passageway

	SHAPE	INLET	MIDPELVIS	OUTLET
Gynecoid				
Android				
Anthropoid				
Platypelloid				

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The 5 Ps

Psyche

Power

Passageway

Passenger

Position

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Passenger

Bony plates

Fontanelles

Sutures

Where is the fetal occiput?

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PASSENGER

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Fetal Station

- Inlet (top of pelvis)
 - Goal - head puts pressure on cervix
 - Rotation to LOA or ROA position is easiest as baby is not engaged
- Mid-Pelvis (middle of pelvis near ischial spines)
 - Goal - baby passes through ischial spines
 - Positions focus on increasing this narrow space
- Outlet (bottom of pelvis)
 - Goal - open the bottom of the pelvis
 - Manipulate the top of the pelvis to cause the bottom to open

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The 5 Ps

Psyche

Power

Passageway

Passenger

Position

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Why don't patients walk around?

What is the practice at your site?



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Mobility is treated as an intervention. Let's flip the script and treat lying in bed as the intervention.



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Physiologic Positions for each level of the Pelvis

Inlet: -2, -3, -4

Mid-pelvis: -1, 0, +1

Outlet: +2, +3, +4



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Physiologic Positions

Inlet (-2, -3, -4)




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Abdominal Tuck & Lift

Abdominal Lift and Tuck

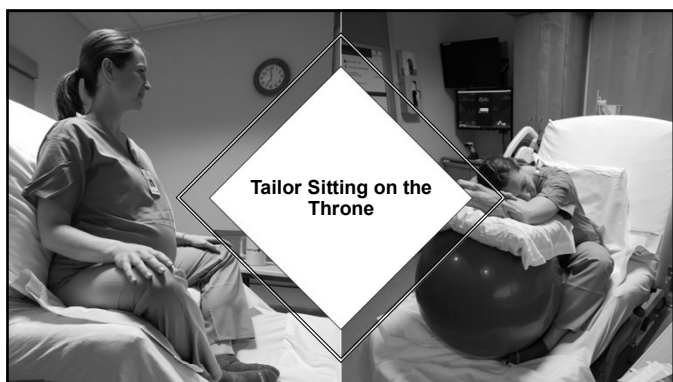


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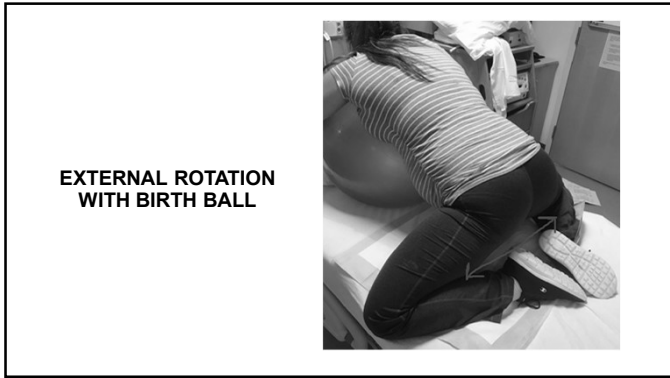
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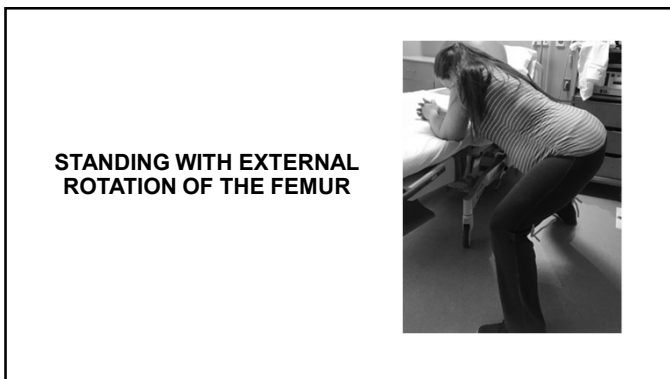
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MODIFIED LUNGE IN THE TUB

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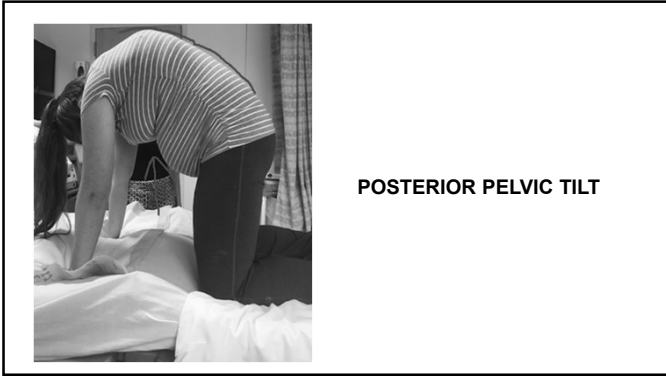
**TAILOR SITTING
IN THE TUB**

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**EXTERNAL ROTATION
FORWARD LEANING OVER TUB**



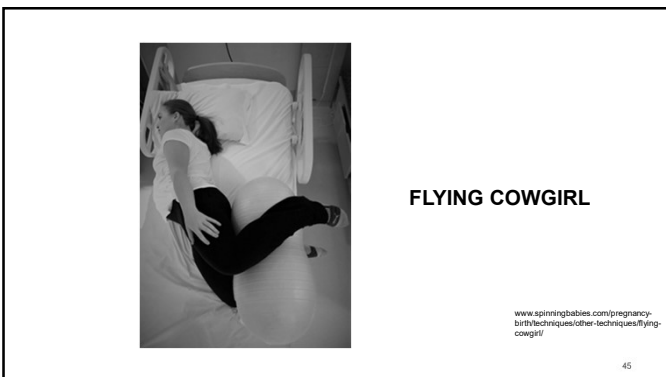
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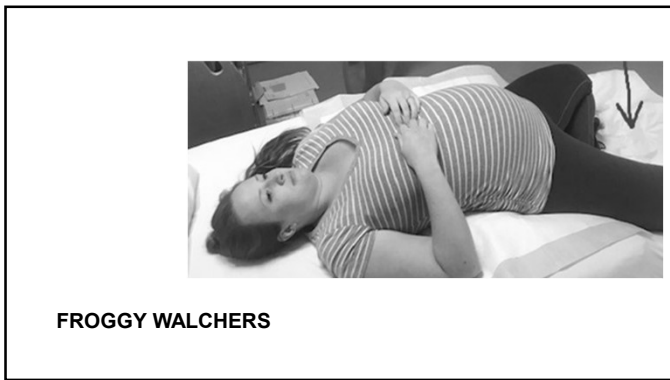
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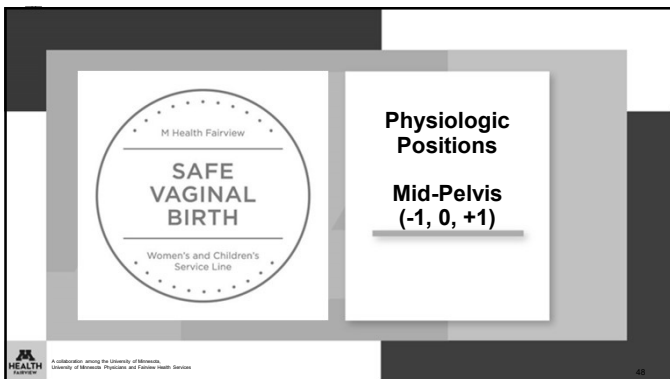
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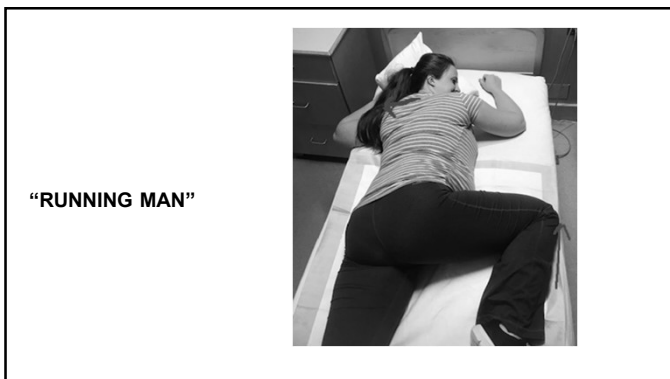
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SIDE-LYING USING STIRRUPS



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SIDE-LYING WITH INTERNAL ROTATION USING PEANUT BALL

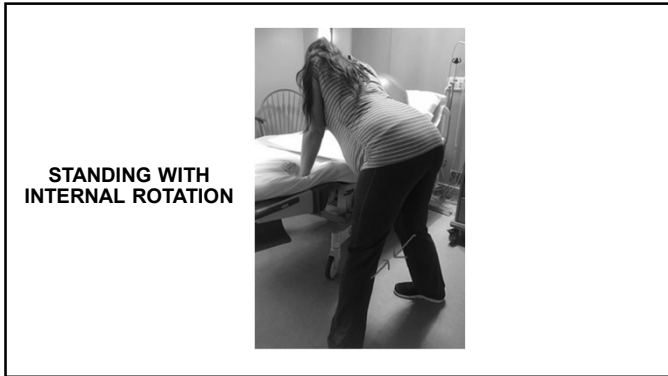


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INTERNAL ROTATION WITH PEANUT BALL



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But my Patient has an Epidural

- For patients who are in bed (epidural) and the fetus is at the inlet or mid-pelvis, there are a multitude of positions (other than right and left) to facilitate labor progress and descent
- We like to refer to this as **Bed Gymnastics!**

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Physiologic Positions


Outlet (+2, +3, +4)

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How does the patient position change the pelvic outlet?



In the squatting position the sacrum is low and moves back to widen the pelvic outlet.

In the semi-sitting position the mother's weight rests on her feet and the pelvic capacity is widened.

In the semi-reclining position the sacrum is immobile and the pelvic inlet narrows.


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Pushing Positions

Make position modifications based on baby's station



23. Kneeling, feet supported

24. Semi-sitting

25. Hands and knees

26. Side sitting

27. Sitting on a low stool

28. Squatting with feet

29. Three-point leg stance

30. Prone

31. Semi-reclining, pulling legs back

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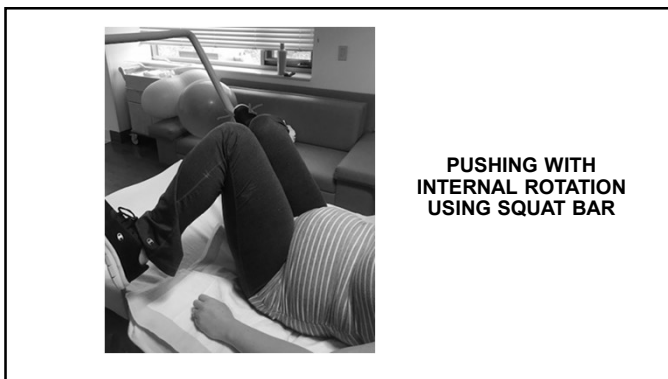
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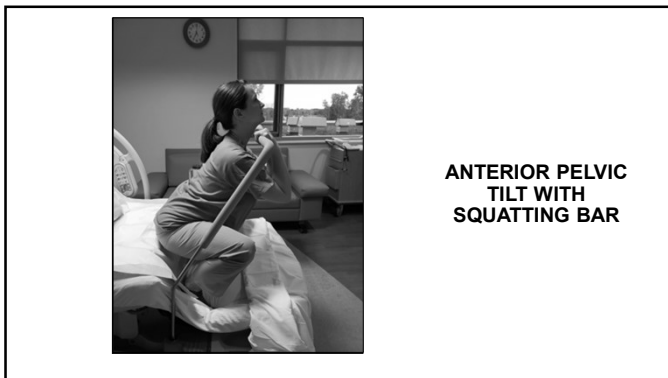
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Tools to Support Labor Positioning

- Bony Pelvis
- Soft baby
- Squat bars/Birth stools/Peanut balls
- Position "Menu" for patient education


<p>Inlet -2, -3, -4</p> <p>Mid +1, 0, +1</p> <p>Outlet +2, +3 etc.</p>	
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3 Simple Take-aways


- Position the patient based on the fetal station and position
- Knees apart = opens pelvic inlet
 - Baby enters pelvis and begins descent
- Ankles together = opens pelvic outlet
 - Allows continued rotation and descent



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Where are we now?


- Intermittent Auscultation Provided rate= 44%
- OB Triage Nurse Note Compliance rate= 28.1 %
- Position Change Count (second stage) per hour, Median=2, Mean=3.45
- Active Labor Indicated rate= 28%
- Stage 2 Huddle Nurse Note Compliance = 1.2%



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Conclusion

- The goal of this project is to reduce cesarean births and promote safe vaginal birth. While not every patient situation is going to allow for a vaginal birth, our goal is to change the culture on the unit to encourage early labor at home, promote upright positioning, intermittent auscultation and enhanced bedside presence to the laboring patient
- A commitment can be made by the multi-disciplinary team including providers, nurses and operations leaders to implement these best practices making this model of care the standard and priority to improve patient and fetal outcomes



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A Special Thank You to:

- Amber Tharp (the awesome pregnant person in our pictures) for demonstrating positions to optimize Safe Vaginal Birth.
- And Elizabeth Hursh (Woodwinds Birthplace RN) for being the support person in our pictures, for providing content for this presentation, and for educating us, her colleagues and her patients about optimal positions for birth. Your advocacy and passion for birth makes a significant difference in people's lives.



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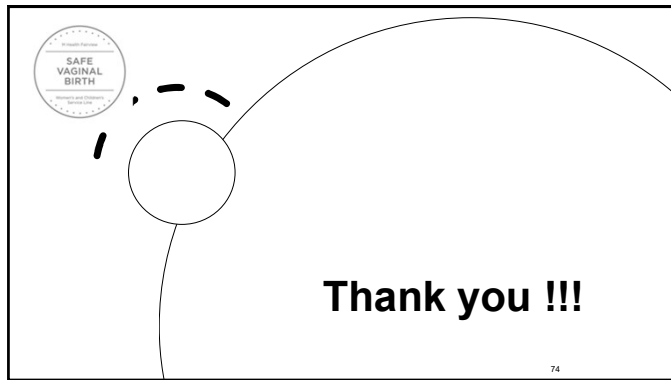
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