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NORTHERN NEW ENGLAND
PERINATAL QUALITY IMPROVEMENT NETWORK

DRAFT: Patient Education: Birth choices after previous cesarean delivery

VBAC means Vaginal Birth After Cesarean Section

This document was created by obstetric doctors, midwives, and nurses from hospitals across Northern New England. It is based upon thorough and thoughtful review of medical studies on vaginal birth after cesarean section (VBAC). Our goal is to give you a fair review of the risks and benefits of attempting vaginal delivery after a cesarean delivery (trial of labor after cesarean birth, or TOLAC). We believe vaginal birth after a cesarean section is a good choice for many women.

Your Hospital wants to give you the best care possible. Taking part in choices about your delivery is an important part of this care. Because you had a cesarean birth before, you come to this delivery experience with further choices to make. We will give you information so that you can make choices that are best for you and your family. The goal is a healthy mother and baby, whether the birth is vaginal or cesarean.

What is the chance that trying a VBAC will result in a vaginal birth?

- Overall, 60-80% (6 to 8 out of 10) of women who attempt VBAC are able to have a vaginal birth.
- There is no perfect way to say who will deliver vaginally, but there are tools that your doctor or midwife can use to help predict your individual chance of success
- A number of factors increase the chance of success, including:
    - Cesarean birth for a reason that is not likely to happen again (i.e. breech presentation)
    - Having a vaginal birth in the past
    - Labor that occurs naturally
    - The length of the pregnancy is less than 40 weeks
    - A cervix that is at least 2 cm dilated and very thin when admitted to the hospital
- Other factors decrease the chance of successful VBAC, including:
    - Maternal obesity or excessive weight gain during pregnancy
    - Carrying a baby with birth weight greater than 8lb 13oz
    - Previous cesarean delivery for a baby weighing greater than 8lb 13oz
    - Pregnancy lasting beyond 40 weeks

Can all women with previous cesarean birth attempt VBAC?

Some women should not try VBAC. If the cesarean scar is in the upper part of the uterus where contractions occur (a vertical, or "classical" uterine incision), the risk of the uterus tearing (also called uterine rupture) is much higher. The type of scar you have on your skin may not be the same type of scar you have in your uterus. Your doctor or midwife will review the records of your previous birth to determine the location of your uterine scar. If you have had three or more cesarean births and no vaginal births, the risk of the uterus tearing during labor may increase and VBAC may not be recommended. Finally, if you have a condition where vaginal birth is not possible (like placenta previa), then VBAC is not recommended.

What are the benefits of VBAC compared to a planned repeat cesarean birth?

- Faster time to heal after birth
- Shorter hospital stay
- Less risk of infection after delivery
- No chance of problems caused by surgery (wound infection, injury to bowel or urinary tract, excessive blood loss)
- Less risk that the baby will have breathing problems
- Quicker return to normal activities.
- Greater chance of having a vaginal birth in later pregnancies
- Less risk of problems with how the placenta attaches in future pregnancies.

What are the risks of VBAC compared to a planned repeat cesarean birth?

- A tear or opening in the uterus (uterine rupture) occurs in 5 to 10 women out of every 1,000 low risk women who try VBAC (0.5% to 1.0%). Because you have a scar on your uterus from your prior cesarean birth, you will always be at risk for having a tear in your uterus. The tears usually occur during labor.
- Risks to the mother if there is a tear in the uterus include:
    - Blood loss that may require a blood transfusion
    - Damage to the uterus that may require a hysterectomy (removal of the uterus)
    - Damage to the bladder
    - Infection
    - Blood clots
    - Death, which is very rare.
- The risk of your baby dying or being seriously injured during VBAC is the same as during a first labor. There is a higher risk of the baby dying or being injured with VBAC compared to a planned repeat cesarean birth. The overall risk with VBAC is about 11 out of 10,000 (0.1%) and with a planned repeat cesarean birth 6 out of 10,000 (0.06%).
- The normal risks of having a vaginal birth are also present for VBAC.
- The risk of your uterus tearing during labor is increased with any of the following:
    - Labor that is induced (does not start on its own)
    - More than 1 cesarean section
    - Less than 18 months since your last cesarean delivery
    - Need for medicine during labor to increase contractions
- The highest risk of complications is in women who attempt a VBAC but do not have a vaginal birth. Unfortunately, it is impossible to predict which women will and won't be successful. The table at the end of this document illustrates the risks to mother and fetus for all women attempting VBAC (successful and unsuccessful) versus having a planned second cesarean delivery at term.

What are the benefits of a planned repeat cesarean birth compared to VBAC?

- The ability to plan your delivery (usually during the week before your due date)
- Decreased risk of a tear in the wall of the uterus
- The ability to have a tubal sterilization procedure at the same time
- The ability to avoid labor and the risks of vaginal delivery (including the need to still have a cesarean section if complications arise during labor)

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What are the risks of a planned repeat cesarean birth compared to VBAC?

- The risk that the uterus will tear before a planned cesarean birth is very low but not zero. The tears

usually occur during labor. The risks to the baby and you are the same as if the uterus tore during a VBAC.
- Excessive blood loss requiring transfusion
- Each cesarean birth increases the risks to the next pregnancy
- Infection
- Scarring inside the abdomen
- Injury to organs inside the body such as the bladder, intestines, or ureters (tubes than connect the kidneys to the bladder)
- Problems with anesthesia
- Blood clots in the veins of the legs ("DVT") or lungs (pulmonary embolism, or "PE")
- Risk in later pregnancies of problems with the placenta that may require hysterectomy at the time of repeat cesarean birth
- Death, which is very rare

How can I reduce risks to my baby and me?
- Regular prenatal care is very important in reducing all risks in pregnancy.
- Having labor occur naturally, rather than using medications to start labor, decreases the risk of a tear in the uterus. Your doctor or midwife will talk to you about this, taking into account your own situation.
- Spacing of at least 18 months between the date of your last cesarean birth and the due date of your current pregnancy decreases the risk of uterine rupture during this pregnancy.
- Coming to the hospital early in labor and using continuous heart monitoring during labor can help identify and manage uterine tears.

If I choose a repeat cesarean birth, what can I expect in my recovery?
Each woman has her own special experience with cesarean delivery and recovery. Many women talk about their recovery from their second cesarean as easier than their recovery from their first cesarean. This may be due to knowing what to expect in a second cesarean and feeling less tired because you did not have labor. Still, recovering from any type of childbirth takes time.

How do women make a choice about a VBAC?
- Having a vaginal birth is very important to some women. For many women, the benefits of trying a vaginal birth outweigh the risks. Women who deliver vaginally have less postpartum discomfort, shorter hospital stays, and describe a feeling of wellness sooner than women recovering from cesarean section.
- Other women choose cesarean birth because they do not want to go through labor. They may be more concerned about the risk of the uterus tearing and the risks of vaginal delivery than the risks of cesarean birth.
- There may be added benefits and risks, some of them emotional, with either choice. We want you to discuss these with your provider and family.
- Future Child Bearing**:** If a woman is planning or would consider more pregnancies, VBAC may be the better choice as there will be fewer uterine scars and a lower chance of hemorrhage with placenta delivery in future pregnancies. If a woman is very certain in her desire to have no more children, then the VBAC benefit of less uterine scarring and allowing a better place for a placenta to attach is not present and a repeat cesarean section may be best. Tubal ligation could be performed at the time of the repeat cesarean.

If I select VBAC, what can I expect during prenatal care and at the hospital?

- You will be asked to sign a consent form showing that you understand the risks and benefits of your choice. The form will ask you to give your choice.
- Your doctor or midwife will talk with you when to call or come in for labor.
- You may meet with an anesthesiologist before your labor.
- Constant fetal heart rate and contraction monitoring during active labor (when your cervix is 4-5 cm dilated).
- You will have an IV so that fluids and medications may be given to you if needed.
- Blood samples will be taken.
- Your options for pain medication during labor are not affected by your prior cesarean section.
- A doctor able to perform a cesarean birth will be on the hospital grounds during the active phase of labor.

What is my hospital's experience with VBAC?

[Your hospital] has anesthesia staff, a doctor for the baby and operating room services available 24 hours per day. Your personal risk of a tear in the uterus and how far along you are in labor determine if all these people are present in the hospital. In cases of tear in the uterus, injury to the baby may occur. The risk of injury to the baby increases with the time it takes to deliver the baby and the damage to the placenta. We have specific plans to respond once a problem is detected. However, there is risk associated with every pregnancy. Risk can never be completely removed. We share the same goal as you: a healthy baby delivered to a healthy mom. We will make every effort to ensure this.

You also have the choice of having your birth at a hospital where anesthesia, operating room staff and doctors for the baby are always present in the hospital. This may lower the risk to the baby if there is a tear in the uterus, but not in all cases. However, delivery at another hospital may mean travel during labor and having your baby away from your local community and support system. You may want to talk to your doctor or midwife about the risks and benefits of planning to deliver at such a hospital. Changing care from one hospital to another during labor may be of little benefit and may increase the risk of harm to you and your baby.

What if I change my mind?

If during the VBAC process you have questions about continuing, we encourage you to talk with your doctor or midwife. You may change your mind about VBAC. However, if delivery is about to happen, a cesarean section may not be possible.

Am I comfortable with making the decision?

Each woman's decision is personal. Your doctor or midwife is your best source of information. She or he will guide you and your family in deciding how you have your baby. The overall goal is a healthy mother and baby, whether the delivery is by vaginal or cesarean birth.

Table 1: Maternal and Neonatal Risks from Elective Repeat Cesarean Delivery and Trial of Labor after Previous Cesarean Delivery in Term Patients:

Risk/Complication	Repeat C-section	TOLAC
Maternal		
• Infection	3.2/100	4.6/100
• Surgical injury	3-6/1,000	3-13/1,000
• Blood transfusion	4.6/1,000	6.6/1,000
• Hysterectomy	1.6/1,000	1.4/1,000

• Uterine rupture	2/1,000	71/1,000
• Death	9.6/10,000	1.0/10,000
Neonatal (fetus/baby)		
• Stillbirth before labor	2.1/1,000	1/1,000
• Stillbirth during labor	4/10,000	1-4/1,000
• Brain injury	3.2/1,000	8.9/1,000
• Fetal/Infant Death during pregnancy or in the first 28 days after birth	5/1,000	13/1,000
• Infant death in the first 28 days of life	6/1,000	11/1,000
• Admission to the neonatal intensive care unit	1.5-17.6/100	.8-26.2/100
• Need for breathing assistance at time of delivery	2.5/100	5.4/100
• Breathing problems lasting up to 48 hours after delivery	4.2/100	3.6/100

* Data from Guise JM, Eden K, Emeis C, Denman MA, Marshall N, Fu R, et al. Vaginal birth after cesarean: new insights. [Archived] Evidence Report/Technology Assessment no. 191. AHRQ Publication No. 10-E003. Rockville (MD: Agency for Healthcare Research and Quality; 2010.