BELIEVE MIDWIFERY SERVICES

TITLE: BREECH BIRTH  EFFECTIVE DATE: December, 2011

POLICY STATEMENT:
Whether term vaginal breech birth is safe is no longer a question. The PREMODA study has clearly shown that with careful selection and management by average maternity units, breech birth can be safe. Using the Term Breech Trial alone as a basis for a consent discussion and not providing women a trial of labor is coercive.

Client autonomy takes precedence over practitioner concerns about small levels of fetal risk. Women should be informed of the safety of a trial of labor in a setting with experienced care providers.

BLOOD BORNE PATHOGEN
EXPOSURE CATEGORY: I (Involves exposure to blood, body fluids, or tissues)

FUNCTION: Care of Clients

POINTS OF EMPHASIS:
Vaginal breech birth does carry some additional risk, but these risks must be weighed against the risks of cesarean section. Choice has been removed for American women by the medical establishment; therefore, homebirth midwives have become the primary attendant of breech births, surpassing physicians in experience and expertise. Believe Midwifery Services has encouraged additional training of its Nurse Midwives in effort to meet the needs of mothers in communities seeking a safe option for vaginal breech birth. This option is a basic human right.

Breech babies were always more problematic. They seemed to get stuck more, they seemed to get hurt more, they seemed to die more. In the 1940s, about 1 in 20 American breech babies died, or 13,000 each year. Today, we know that breech babies are more likely than vertex babies to be compromised in some way. We also know that their high death rate in the first half of the century was due to the “assisted breech” delivery technique of the day: heavy anesthesia, manual pressure on the uterus, traction on the baby’s body, and routine forceps to extract the head. This was demonstrated as a landmark 1953 review by two Columbia University obstetricians. They found, “The more manipulation is performed and the earlier this manipulation is instituted, the greater is the fetal mortality and morbidity, to say nothing of maternal injuries.”

A German obstetrician developed the Bracht maneuver, which was close to “hands off” as one could get with the mother flat on her back. They key to the Bracht maneuver was “the art of waiting” for spontaneous delivery with minimal manipulation, mainly supporting the baby’s body with a force “equivalent to the force of gravity; that is, equivalent to the weight of that portion of the baby which has already been born.” Bracht’s work represents the largest reduction in breech-related infant mortality in obstetric history, leading to more than 30 trials in Latin America and Europe, showing dramatic reductions in breech-related mortality. Not one of those studies however, was translated into English. In North America, breech birth fell out of fashion. Then a large study seemed to settle it.

The “landmark” Hannah and Hannah (2000) indicated that planned cesarean delivery reduced perinatal mortality, late neonatal death, and serious neonatal morbidity by one third. Nevertheless, the interpretation of the results has been challenged with respect to the trial’s clinical design, specifically because a minority of perinatal deaths were related to the mode of delivery, because it recruited from countries with widely varying underlying perinatal outcome, because the definitions of serious neonatal morbidity were loosely defined, and because some of the clinical practices employed were questionable. The real outcome this study proved is that vaginal breech birth is not safe in the hospital with ill-prepared physicians.

Maggie Banks (2001) article, “Breech Birth Beyond the ‘Term Breech Trial’” is quite alarming with respect to the low level of expertise by some of the medical practitioner in the study and the high level of medical intervention, including artificial rupture of membranes, augmentation, and even breech extraction of the fetus. She states, “The findings of the Term Breech Trial provides important information for women with breech presenting babies regarding the medical ‘management’ of vaginal breech delivery. It gives a well-rounded overview of the injury and death rates around the time of birth (perinatal morbidity and mortality) with such management. However, the way in
which vaginal breech delivery is conducted within the Medical Model of Care is no more conducive to a physiological process of giving birth than any other medically ‘managed’ birth. Medical management of birth results in high levels of birth injury for women and their babies, irrespective of presentation. It ensures the rate of ‘normal’ birthing in the Western world falls far short of the at least 85% which is often cited as appropriate” (2001, p1).

Enrollment in the Term Breech Trial was stopped on April 21st, 2000 with 2088 enrollments out of the proposed trial of 2800. The Data Safety Monitoring Committee reported “the results were clearly in favour of planned Caesarian section.” When data was excluded from analysis for those women who had prolonged labour, induction/augmentation of labour with oxytocin/prostaglandins, epidural anaesthesia, footling/uncertain clinician at birth, the findings were similar. The report notes reduced benefit of Caesarian section in countries that have a high perinatal mortality rate - the authors postulate “possibly because of higher levels of experience with vaginal breech delivery in those countries.”

It is important to question the relevance of the TBT’s findings to women who are motivated to achieve physiological, natural breech birth. The trial does nothing to investigate outcomes where the Midwifery Model of Care prevails. However, these short-comings do not entirely invalidate the conclusion that a vaginal birth is more risky for a baby in breech presentation than a properly timed elective cesarean section. Yet, one should not also assume cesarean section is the superior option for all breech presentations.

Critics of the Hannah and Hannah (2000) study were vindicated in 2004, when Hannah published follow-up results to the study. It turned out that at 2 years following birth, there were no neurological differences between the babies born by cesarean and those born vaginally. In other words, the initial diagnosis of “serious neonatal morbidity” had not predicted damage. The only statistically significant outcome was “medical problems not otherwise specified,” which was higher among the cesarean-born babies. The follow-up study concluded that “planned cesarean delivery is not associated with a reduction in risk of death or neuro-developmental delay in children at 2 years of age.”

A woman at term with a breech presentation has a 97-98% chance of having a normal 2 year-old regardless of which method of delivery she chooses.

More recent studies have supported the overall safety of breech birth when in judicious hands, such as a recent study of 641 breech births, 298 of which were vaginal with no deaths or serious injuries at the time of delivery (Alarab et al, 2004). Another study of 481 planned vaginal breech births found the same (Giuliani et al, 2002). In 2006, in response to the TBT, Goffinet et al. published the PREMODA study: a multicentre descriptive study four times larger than the TBT. Prospective data were collected from 8105 women in 174 centres in France and Belgium, using the same short-term combined outcome of perinatal mortality or serious neonatal morbidity as the TBT. Without any increase in perinatal morbidity or mortality, these 1800 women (23 percent) avoided the immediate risks and longer recovery associated with primary Caesarean section as well as the increased downstream risks of abnormal placentation, stillbirth, and uterine rupture in subsequent pregnancies.

The combined stillbirth and neonatal mortality rate in the PREMODA study was 3.9 per thousand births. In all, 6 of the 22 fetal deaths, and 17 of the 18 neonatal or postneonatal deaths before discharge were associated with a lethal congenital anomaly. Two of these deaths occurred in the delivery room, one associated with severe pontocerebellar atrophy and the other with severe ichthyosis. The only neonatal death not associated with a lethal congenital anomaly was sudden and unexplained, at home on day 15, and no cause was found. Fetal or neonatal death or serious neonatal morbidity without lethal congenital anomalies was reported for 129 infants, or 1.59% of the entire sample and for 40 infants in the planned vaginal delivery group. This prospective group showed a global risk of 1.59% for fetal or neonatal mortality or serious neonatal morbidity among the overall population of singleton term breech infants (1.60%) (PREMODA, 2006).

Still, the ACOG opinion concludes that cesareans “will be the preferred mode of delivery” because of “diminishing expertise” in vaginal breech birth.

The SOGC states that, “Planned vaginal delivery is reasonable in selected women with a term singleton breech fetus” (2009, p 557). Their preference for birth is within a modern obstetrical setting, but these options are not
available within our community or any surrounding community. The SOGC recognizes this lack of option as a motivator for mothers to seek vaginal birth attendants out-of-hospital and therefore, supports the training of homebirth midwives in effort to improve maternal/child health outcomes.

**EQUIPMENT:**

1. NRP equipment – oxygen, bag and mask, intubation equipment, emergency medications.
2. Birth instruments
3. Lidocaine for episiotomy

**PROCEDURE:**

**Labor Selection Criteria**

There is very little data on the recommended physical exam prior to vaginal breech birth.

1. Nurse-midwives identifying the persistent breech or unstable lie should counsel the family in obtaining an ultrasound, which might assist in determining the cause for suboptimal presentation and/or vaginal breech birth candidacy.
   a. Specific points to request when ordering, include: type of breech presentation, fetal growth and estimated weight, attitude of fetal head, and cord presentation requiring vaginal ultrasound.
   b. If ultrasound is not available, caesarean section is recommended.
   c. The PREMODA study concluded that half of all women with breech presenting babies at term were not good candidates for vaginal birth, specific to imaging results.

2. Contraindications to labor include:
   a. Cord presentation,
   b. Fetal growth restriction or macrosomia,
   c. Any presentation other than a frank or complete breech with a flexed or neutral head attitude,
      i. A footling breech, defined as having at least one extended fetal hip, is a contraindication to labor, and a cesarean section should be performed unless delivery is imminent. A fetus with feet presenting but flexed hips and knees is a complete breech, therefore eligible for a TOL.
      ii. Footling breech is associated with cord prolapse 10 percent of the time, which means a 10 percent chance of a catastrophic outcome (not acceptable)
   d. Clinically inadequate maternal pelvis, or
      i. Pelvic should be charted as having a wide suprapubic arch, ischial spines greater than 10 centimeters in distance, and a large AP diameter (unable to reach sacrum)
   e. Fetal anomaly incompatible with vaginal delivery.

3. Vaginal breech delivery can be offered when the estimated fetal weight is between 2500 g and 4000 g. Big babies however, do significantly better than smaller babies.

**Labor Management**

4. Clinical pelvic examination should be performed to rule out pathological pelvic contraction. Radiologic pelvimetry is not necessary for a safe trial of labor, good progress in labor is the best indicator of adequate fetal-pelvic proportions.
5. Fetal monitoring should be exceptionally diligent during both first and second stage of labor, as the risk of cord compression is greater than that with cephalic presentation.
6. A cervical exam at the onset of labor would confirm presentation, assess for presence of cord and establish a baseline for labor.
7. When membranes rupture, immediate vaginal examination is recommended to rule out prolapsed cord.
8. In the absence of adequate progress in active labor, cesarean section is advised.
   a. Don’t offer patience with plateaus in the labor curve. Don’t extrapolate data and/or experience from cephalic presenting labor patterns.
   b. It would seem prudent to expect cervical dilation from 5 to 10 centimeters to take a maximum of 7 hours.
9. The midwife should be mindful that when the fetus presents breech, the cervix can still be palpated beyond ten centimeters, but instead, she should depend on her skills of measuring the ten centimeter cervix digitally and appreciating it as parallel to the fetus rather than disappearing behind the fetal crown.
10. Induction of labor is NOT recommended for breech presentation.
11. A passive second stage without active pushing may last up to 90 minutes, allowing the breech to descend well into the pelvis. Once active pushing commences, if delivery is not imminent after 60 minutes, Caesarean section is recommended.
12. Two health care professionals skilled in neonatal resuscitation should be present at the time of delivery.
   a. Breech infants often have lower Apgar scores at birth.
13. Rarely, a client in labor at home may present with a previously undetected breech. The Nurse Midwife and family need to communicate openly and determine the best management plan under the circumstances. The Nurse-midwife must maintain a current knowledge base of delivering a breech baby because chances are the midwife will be confronted with a breech unexpectedly, or attend the birth of a family who has made an informed decision for a vaginal delivery, and/or in the event a second twin presents in a non-vertex presentation.
14. Believe Midwifery Services, LLC highly recommends the CNM obtaining cord gases on each breech birth and transporting on ice to the nearest lab and/or hospital.
15. Close collaboration with a consulting physician is optimal, as well as having skilled birth assistants.
16. Pipers forceps have been a common instrument utilized for management of the fetal head when presenting breech; however, the head flexion desired by use of the Pipers forceps can be achieved through suprapubic pressure by a midwife assistant.

Delivery Technique
17. The health care provider for a planned vaginal breech delivery needs to possess the requisite skills and experience as deemed appropriate by Believe Midwifery Services, LLC.
18. The SOGC recommends that the local facility, with operating room staff, be present within a 30 minute availability.
19. The midwife is encouraged to facilitate the mechanisms of labor of a breech presentation, follow the principle of nonintervention as long as progress is visible, and does manual extraction manipulation as indicated.
   a. The midwife should be reminded that the color of the baby can be disheartening, but she is to be patient and keep her hands off. Don’t cause a reflex prematurely that would get the fetus into trouble.
   b. Thick meconium can be somewhat expected in a vaginal breech birth as the fetal abdomen and buttocks are squeezed during the birth process.
20. Effective maternal pushing efforts are essential to safe delivery and should be encouraged.
21. After the breech crowns, fetal expulsion is invariably accompanied by cord compression and fetal bradycardia. The normally grown fetus enters this phase well oxygenated without acidemia. It may tolerate a number of minutes of delay with extrinsic cord compression, resulting in a respiratory acidosis, easily reversed once ventilation is established.
   a. A growth-restricted fetus, however, has a high likelihood of metabolic acidemia in labour due to pre-existing compromise in placental function, which reduces its tolerance to cord compression during expulsion. Therefore, fetal growth restriction is a contraindication to labour.
22. Significant cord compression beyond several minutes will eventually lead to severe acidosis even in a normal fetus, and prevention and treatment of expulsive delay are critical components of delivery technique. Mechanisms that maximize power from above may be associated with lower risk of trapped after-coming fetal parts than maneuvers that involve fetal traction. Maternal cooperation is essential. Methods of increasing power from above once the buttocks have crowned include:
   a. Maximizing maternal pushing efforts,
   b. Upright posture, and
   c. Suprapubic pressure (Bracht manoeuvre).
   d. None have been well studied independently.
23. Approximately one in ten babies need assistance with the delivery of the legs. Pressure can be exerted in the popliteal space of the knee, then flexion of the knee, and then the lower leg can be swept medially and out of the vagina. This is termed the Pinard maneuver (or more easily, “getting off the horse” maneuver”).
24. Approximately half of all vaginal breech births require assistance with the delivery of the fetal arms. Most commonly the arms can be swept across the baby’s face and downwards across the chest (the Vanna White maneuver).
25. Nuchal arms may be reduced by rotating the baby (Lovset manuever) if not spontaneous delivered after the lower 1/3 of the scapulas are visualized.
   a. The scapula may not be visualized with a nuchal arm.
   b. Chest cleavage is reassuring and indicative of the fetal arms in front of the chest. If absent however, this is indicative of a nuchal arm.
26. Only the bony fetal pelvis and legs should be grasped to avoid damage to the fetal adrenal glands, which are disproportionately large.
27. The fetus should be rotated if necessary, so that the fetus’ face is towards the mother’s back in effort to prevent the chin from hooking on the maternal symphysis pubis.

28. Once arms are delivered, the mother can be encouraged to bear down so that the nape of the neck can be visualized (hairline), reassuring that the baby is well engaged in the vaginal vault.

29. Spontaneous or assisted breech delivery is acceptable. Fetal traction should be avoided, and fetal manipulation must be applied only after spontaneous delivery to the level of the umbilicus. The fetal head may delivery spontaneously, with the assistance of suprapubic pressure (Bracht manoeuvre), by using the midwife’s index and middle fingers to lift up on the fetal maxillary prominences in effort to maintain fetal head flexion (Mauriceau-Smellie-Veit maneuver), or with the assistance of Piper forceps.
   a. At the time of delivery of the after-coming head, an assistant should be present to apply suprapubic pressure to favor flexion and engagement of the fetal head (Bracht manoeuvre). This maneuver eliminates the need for Piper forceps.
   b. During the Smellie-Veit maneuver, the fetus should not be over-extended. Typically the head is expelled with the body in a perpendicular position to mother.

30. The symphysiotomy, a surgical division of the fibrocartilaginous symphysis pubis and its reinforcing ligaments by way of a scalpel blade through the mons pubis, is an obstetric strategy to allow birth of the often dreaded - but rarely occurring - head entrapment of the breech baby, occurring approximately once in every five hundred breech births when cephalo-pelvic disproportion has been excluded.
   a. The 28 percent increase in the pelvic outlet - 1 cm in the transverse diameter and 2 cm in the antero-posterior diameter of active birthing is greater than that which is normally achieved by symphysiotomy, which, primarily, increases the transverse diameters by 1 cm (Banks, 2007).

31. The nurse-midwife may administer Lidocaine in the event an episiotomy is indicated, assuming she has prescription privileges.

32. After each vaginal breech birth, the nurse-midwife is encouraged to chart diligently the informed consent process, the parent’s understanding of such education, candidacy selection, the labor pattern, assessment and progress, as well as the birth process and specific maneuvers used. The nurse-midwife should also reinforce this information to the client so she has an appropriate perspective of the diligence with which the provider must

Setting and Consent
33. Women with breech presentation diagnosed during the antepartum period should receive full informed consent regarding the techniques that have both proven effective in turning baby vertex and/or are anecdotally effective. A referral for an external version should be encouraged.

34. Persistent breech and/or unstable lie should initiate discussion concerning birth options. Families should be fully informed of the advantages and disadvantages of each option, and encouraged to seek further information and/or consultation.

35. “A woman’s choice of delivery mode should be respected,” (SOGC, 2007, p 559).

36. The consent discussion and chosen plan should be well documented and communicated to assistants.

37. Women with a contraindication to a trial of labor should be advised to have a cesarean section. “Women choosing to labor despite this recommendation have a right to do so and should not be abandoned,” (SOGC, 2007, p 559).

Competency Training
38. Staff of Believe Midwifery Services, LLC should document simulation training as part of their competency training for both the primary and assistant role for Vaginal Breech Birth.

39. Simulation training creates a physical memory and has proven advantages for various professions with limited ability to obtain real-live experience, including fighter-jet-pilots.

40. The Canadian ALARM program and the International ALARM program have continued to promote breech vaginal delivery.

RESOURCES
These are not perfect, but may assist somewhat for teaching purposes - both good and bad.

Spontaneous Breech Delivery
First birth has good Smellie-Veit, with exception of finger in fetal mouth.
Cord does not need to be pulled down as is done in second birth. This birth shows the Vanna White and Lovset maneuver.

BELIEVE MIDWIFERY SERVICES
PRACTICE GUIDELINE
BREECH BIRTH

REFERENCES


Kotaska, A. (2009). Breech birth can be safe, but is it worth the effort? JOGC, 31(6), 553-554.


Originated: February, 2008

Penny Lane MSN, CNM DATE: 7/19/2011

Holly Hopkins MSN, CNM DATE: 7/27/2011

Gretchen Knight LPN DATE: 11/9/2011

Michelle Burton DATE: 3/23/2012