



Vaginal Birth After One Previous Low-Segment Caesarean Section

This guideline has been reviewed and approved by the AOM Board of Directors on June 16, 2004.

INTRODUCTION

During the late 1980's to mid 1990's vaginal birth after caesarean (VBAC) rates increased in North America, in response to women's desire for vaginal birth, numerous studies, and recommendations which indicated, that in the absence of contraindications, VBAC is a safe and effective choice for women. However, by the late 1990's, caesarean section rates once again began to rise. Renewed concerns about safety, appropriate place of birth and medico-legal pressures have shaped recent discussions and practices regarding VBAC.

Although there is an abundance of literature on the subject of VBAC and elective repeat caesarean section (ERCS) the research available is deficient in many respects. As stated by the Agency for Health Care and Research Quality:

The deficiencies in the literature about the relative benefits and harms of TOL (trial of labour) versus ERCS are striking. Patients, clinicians, insurers, and policymakers do not have the data they need to make truly informed decisions about appropriate delivery choices following one of the most common surgical procedures performed on women. Given the rising prevalence of this condition, and potential for devastating consequences for thousands of women and children each year, obtaining accurate data should be a high research priority.¹

Despite these limitations, midwives must be able to interpret adequately the available evidence so that they may aid women in making informed decisions about their maternity care. The purpose of this guideline is to present the current evidence in order to assist midwives with informed choice discussions and to guide clinical decision-making.

CONTRAINDICATIONS TO VBAC

The contraindications to a woman planning a VBAC are generally accepted to be:

- Previous classical or inverted T uterine scar;
- Previous hysterotomy or myomectomy entering the uterine cavity;
- Previous uterine rupture;
- Presence of a contraindication to labour such as placenta previa, transverse lie; and
- A woman declining VBAC and requesting a caesarean section.^{2,3,4}

BENEFITS OF VAGINAL BIRTH AFTER CAESAREAN SECTION

A Guide to Effective Care in Pregnancy and Childbirth states:

The rate of maternal death associated with caesarean section (approximately 40 per 100,000 births) is four times that associated with all types of vaginal delivery (10 per 100,000 births). The maternal death rate associated with elective repeat caesarean section (18 per 100,000 births), although lower than that associated with caesarean sections overall, is still almost twice the rate associated with all vaginal deliveries and nearly four times the mortality rate associated with normal vaginal delivery (5 per 100,000 births).⁵

VBAC results in a significant decrease in maternal morbidity compared to ERCS.^{6,7} Benefits of VBAC include:

- Less requirement for blood transfusion (OR 0.57, 95% CI 0.42- 0.76);⁶
- Fewer hysterectomies (OR 0.39, 95% CI 0.27 – 0.57);⁶

- Less febrile morbidity (OR 0.70, 95% CI 0.64 – 0.77);⁶ and
- Shorter hospital stays.^{6,7}

(For a brief explanation regarding odds ratio and confidence intervals, please refer to the Appendix: A Brief Explanation of Odds Ratio and Confidence Intervals.)

It should be noted that in the subgroup of women who have a repeat caesarean section after labouring there is a higher morbidity rate than in those having an ERCS (OR 1.7, 95% CI 1.5 – 2.0).⁷ Although there has been little research conducted on this subject, other benefits of a planned VBAC may include the woman's feeling of a sense of control in the decision making process,⁸ and increased maternal satisfaction.⁵ In addition, VBAC women have less postpartum discomfort, and describe a feeling of wellness sooner than women recovering from caesarean section.⁹

RISK OF VAGINAL BIRTH AFTER CAESAREAN

A significant risk of having had a previous caesarean section is uterine rupture. There is a greater risk of uterine rupture with labour after a previous caesarean section than with ERCS (OR 2.10, 95% CI 1.45 – 3.05).⁶ Incidence rates from 0.1% to 1.5% with a previous low-segment caesarean section are quoted in the literature.² A recent meta-analysis determined a 0.4% rate of symptomatic uterine rupture in women attempting VBAC compared to a 0.2% rate in the group planning an ERCS.⁶ The specific outcomes associated with uterine rupture when not quickly diagnosed and acted upon are: risk of neurological injury or death of the baby (reported to be as high as 50%); and significant risk of morbidity to the woman including haemorrhage, bladder damage, and need for hysterectomy.^{10,11} Rupture of the uterus can be a catastrophic event for both mother and baby and requires emergency medical and surgical intervention.

There are a variety of factors which have been implicated in increasing the risk of rupture. More research is needed to confirm the association of these factors with the risk of uterine rupture. These include:

- Dystocia (OR 7.2, 95% CI 2.7 – 20.0);¹²
- Oxytocin induction and augmentation (RR 4.9, 95% CI 2.4 – 9.7);^{13,14}
- Prostaglandins for use in cervical ripening (RR 15.6, 95% CI 8.1 – 30);¹³
- Short interpregnancy or interdelivery interval (less than 18-24 months),^{15,16} (OR 3.92, 95% CI 1.09 – 14.3),¹⁷ (OR 2.65, 95% CI 1.08 – 6.46);¹⁸

- Advanced maternal age (ranging in studies from either >30 to >40 years of age),⁷ (OR 3.2, 95% CI 1.2 – 8.4);^{15,19}
- Single vs. double layer closure of the previous uterine incision (OR 3.95, CI 1.35 – 11.49);²⁰
- Previous caesarean section prior to 28 weeks, where the lower segment of the uterus is not fully developed; and
- Previous caesarean section for transverse/oblique lie where the lower segment may not be properly identified and the uterus incised elsewhere.

Many of these factors can be found in the previous operative report and postpartum records.

Perinatal mortality rates associated with VBAC have been demonstrated in one retrospective population-based study to be substantially higher than that associated with ERCS (12.9 per 10,000 births versus 1.1 per 10,000),²¹ although there is a suggestion that the perinatal mortality rate for ERCS in that study is spuriously low.¹ The same study noted, however, that the risk of perinatal mortality in women having a VBAC is similar to that incurred in nulliparous women.²¹

BENEFITS AND RISKS OF ELECTIVE CAESAREAN BIRTH

The benefits of ERCS include:

- Decreased rate of uterine rupture and associated fetal and maternal morbidities compared to an attempted VBAC; and
- Decreased morbidity than with an attempted VBAC that culminates in caesarean section.⁷

The risks of ERCS are the same as risks associated with all caesarean delivery, which have been relatively well documented but poorly quantified. These include:

- Increased infectious morbidity;⁶
- Haemorrhage;⁶
- Thrombo-embolic complications such as deep vein thrombosis;²
- Placenta previa or accreta in future pregnancies;²
- Rare complications such as paralytic ileus;
- Longer hospital stay;² and
- Interruption of infant bonding in the immediate postpartum period.²

Risks to the baby include:

- A higher rate of transient tachypnea of the newborn and persistent pulmonary hypertension, and concomitant admission to the Neonatal Intensive Care Unit, septic work up and maternal-newborn separation (OR 2.3, 95% CI 1.4 – 3.8).²²
- In all caesarean birth, there is a small risk to the baby of laceration (0.5-1.5%).^{23,24}

The maternal risks of caesarean section and ERCS may have more significant long-term implications for those women who plan to have many children.

PREDICTORS OF SUCCESS

The overall likelihood of success of VBAC is high, usually quoted as being from between 60 and 80 per cent.¹⁴ The predictors for success have been well studied and include:

- Prior vaginal birth, especially if the vaginal birth occurred after the caesarean section;^{25,26,27}
- Non-recurrent indication for the previous caesarean (for example, breech presentation or placenta previa);^{28,29,30,31}
- Favourable cervix upon assessment of labour;^{27,31}
- Maternal age < 40 years;³¹ and
- High motivation for vaginal birth.⁵

There are a variety of factors which may decrease the success of planned VBAC including:

- More than one previous LSCS;^{32,33}
- Previous diagnosis of true CPD;^{34,35,36}
- Maternal obesity and diabetes;^{37,38,39}
- Macrosomia;^{40,41} and
- Postdates pregnancy.⁴²

MIDWIFERY CARE FOR WOMEN PLANNING A VBAC

The College of Midwives of Ontario document *Indications for Mandatory Discussion, Consultation and Transfer of Care (IMDCTC)*⁴³ requires that a midwife involved in the primary care of a woman with one previous low segment caesarean section have a discussion with another midwife involved in her care. In developing the plan for care for a woman planning a VBAC, midwives should request and review a copy of

the operative record from the caesarean section. Inability to obtain the previous record should be documented in the woman's chart. The informed choice discussion regarding the risks and benefits of VBAC and ERCS should also be documented.

Opinion from legal experts indicates that consent forms may be useful for helping women achieve clarity about their decisions, as well as providing some protective documentation in the event of medico-legal action. Consent forms are not to be considered as an alternative or replacement for informed choice discussions.

Based on the woman's health history, operative note, and current pregnancy events, the midwife may also be required to arrange an in-person consultation with a physician (usually an obstetrician). Reasons for consultation include a history of caesarean section other than one documented lower segment caesarean section (IMDCTC).⁴³ This would include a history of caesarean section in which the location and type of uterine incision is unknown. Midwives may consider consultation for other matters related to the previous caesarean section such as:

- Previous history of Bandl's or constriction ring;
- Previous significant infection of the uterine scar;
- Previous extension of the uterine incision; and
- The woman's request for consultation.

The results of any consultation, including the physician's recommendations, should be reviewed with the woman and inform a plan for care.

MANAGEMENT DURING LABOUR

During the antenatal period, community standards regarding VBAC, hospital and practice group protocols, and relevant obstetrical clinical guidelines should be included as part of the informed choice discussion with a woman planning a VBAC. Components of the discussion would include fetal monitoring practices, pain management options, use of intravenous access and choice of birth place.

In managing the labour of a woman with a previous caesarean section, as with all clients, the midwife utilizes her assessment skills, the principle of the appropriate use of technology, and one-to-one support to minimize risks and provide optimal care.

SIGNS OF UTERINE RUPTURE

When uterine rupture occurs, it can do so with little or no warning.⁴⁴ Abnormal fetal heart rate patterns, such as fetal bradycardia, prolonged, late or variable decelerations (isolated or repetitive) have been recognized as the most frequent indicator associated with uterine rupture.¹ Classical signs of uterine rupture include maternal hypotension, maternal tachycardia, haematuria and excessive vaginal bleeding. Other possible signs may be maternal restlessness or loss of fetal station.^{11,45} Pain over the previous uterine incision has been found to be an unreliable sign, since abdominal pain is hard to evaluate during active labour. However, a woman may experience abnormal pain, a sudden change in pain, or an abnormal level of concern. Although these last signs may be difficult to objectively evaluate, the midwife should be alert to the woman's verbal and non-verbal cues.

FETAL HEART MONITORING

There is, as yet, incomplete evidence regarding the ability of continuous electronic fetal monitoring (CEFM) to predict uterine rupture in labouring women with a previous caesarean section.¹ The American College of Nurse-Midwives (ACNM) recommends either using the intermittent auscultation protocol for high risk pregnancies, as defined by the American College of Obstetricians and Gynecologists (ACOG)[†] or using continuous electronic fetal monitoring (CEFM).² The Association of Ontario Midwives also supports the ACNM recommendation. Midwives should note that the intermittent auscultation protocol endorsed in the ACNM clinical bulletin differs from that outlined by the Society of Obstetricians and Gynecologists of Canada (SOGC),⁴⁷ which does not differentiate between low and high risk protocols. If labour is prolonged, if any fetal heart rate abnormalities are heard, or if there are any other signs or symptoms associated with rupture, the AOM recommends the use of continuous monitoring.

Routine CEFM for VBAC is recommended by the Society of Obstetricians and Gynecologists of Canada,⁴⁷ the American College of Obstetricians and Gynecologists⁴ and the National Institute of Clinical Excellence,⁴⁸ and is standard in many communities for VBAC women. However, the benefit of CEFM in the prevention of poor long-term outcomes in normal pregnancies and births is dubious.⁴⁹ CEFM is also associated with a higher rate of

caesarean section, which may be an important consideration for women attempting a VBAC.⁵⁰

PROGRESS OF LABOUR

Research assessing risk for uterine rupture indicate that dystocia may be an important factor.^{12,51,52} Therefore, during a VBAC labour, it is particularly important for midwives to diagnose the onset of active labour accurately (defined as the presence of regular, painful contractions leading to more rapid cervical dilatation after 3 to 4 cm dilatation in a primiparous woman or 4 to 5 cm dilatation in a multiparous woman)⁵³ and to be vigilant for prolonged labour. If progress in active labour is deemed to be abnormally slow, prompt consultation in accordance with College of Midwives of Ontario guidelines⁴³ should be initiated. A standard labour graph or partogram may be very helpful in identifying dystocia and is recommended for use in all labours. If dystocia is identified, continuous monitoring, intravenous access and appropriate laboratory investigations (such as group and reserve) may be initiated while awaiting consultation.

CHOICE OF PAIN RELIEF

In the past, women planning a VBAC were often discouraged from using pain relief, especially epidural anaesthesia, in labour for fear that it might mask signs of uterine rupture. However, there is no evidence to demonstrate that women having a VBAC should be restricted in their choice of analgesia or anaesthesia for pain relief. As with all medical forms of pain relief, the risks and benefits of epidural analgesia should be discussed with the client in assisting her to make an informed decision. One potential benefit of an epidural is that preparation for surgery, if required, may be expedited. However, this benefit should be balanced with the associated risks which include lower plasma levels of oxytocin post epidural insertion⁵⁴ and the increased use of oxytocin augmentation with epidural.^{55,56}

Because of the potential for decreased uterine activity with epidural anaesthesia, it may be more difficult to ascertain the cause of dystocia in a woman with a previous caesarean section.

INDUCTION OF LABOUR

There are a variety of methods used for cervical ripening and medical induction, including artificial rupture of membranes, cervical foley catheter, oxytocin and prostaglandins. Only artificial rupture of membranes is within the midwifery scope of care without consultation.

[†] The American College of Obstetricians and Gynecologists differentiates between a "high-risk" and "low-risk" protocol for intermittent auscultation. The high-risk protocol is defined as listening every 15 minutes in the active phase of the first stage of labour and every 5 minutes in the second stage.⁴⁶ ACOG, however, does not support the use of intermittent auscultation for VBAC labours.

There appears to be an increased risk of uterine rupture with the use of oxytocin, especially for induction, and prostaglandins.^{13,14} A midwife should have this information available for women planning a VBAC, but because induction or augmentation by means other than artificial rupture of membranes require a consultation with a physician, the consultant's recommendations will also constitute a part of the woman's decision.

Recent evidence regarding the potential risks of induction in a VBAC labour has led to a recommendation that it is preferable to await the onset of spontaneous labour after 40 weeks gestation.^{42,57}

Midwives should be aware that there is little evidence regarding the safety and effectiveness of commonly used herbs, castor oil and homeopathics for induction and/or augmentation of labour.² This lack of evidence should be discussed with clients before considering their use.

CHOICE OF BIRTH PLACE

The CMO guidelines clearly indicate that midwives offer choice of birth place to their clients. This does not preclude midwives from providing recommendations and rationales regarding choice of birth place.⁵⁸

In the discussion regarding choice of birth place, the risks and benefits, as well as other considerations, should be explored, including:

- The recognition that anxiety can inhibit the progress of labour and an acknowledgement that one of the benefits of supporting women to give birth in the location of their choice is a reduction of the anxiety that can stem from previous birth experiences and place of birth;
- The identification of the components of each option for birth place that might increase maternal anxiety, with a plan for mediating those components and advocating for a woman's choices within her chosen birth place;
- Recognition that hospital policies perceived by a woman as restrictive may lead her to choose giving birth at home;
- Home birth reduces the risk of iatrogenic consequences;⁵⁹
- Out-of-hospital settings increase the time required to access emergency care, and that this time span can be additionally affected by distance from hospital, response times of emergency services, weather conditions and the capacity of the receiving hospital to handle emergency caesarean section, if necessary;

- An understanding of the differences between levels of hospitals and their abilities to provide immediate emergency consultation and/or operative birth, as well as specialized neonatal care; and
- The major limitation in providing evidence to women wishing VBAC regarding choice of place of birth is that virtually all of the research about VBAC has utilized data from physician attended hospital births, largely in tertiary centres.

For clients choosing birth out of hospital or in a level I hospital, it is important to review clearly the small but significant risk of uterine rupture. Any delay to surgical intervention may have a serious impact on the outcome for both the woman and her baby, either short or long term. One study found that significant neonatal morbidity was experienced when greater than 18 minutes elapsed between the onset of prolonged fetal heart deceleration and delivery.¹⁰ Women should understand that level I and II hospitals providing obstetrical care in Ontario require that a physician must be present for labour and delivery within 30 minutes, but that staff are not necessarily on site at all times. At a level III hospital, there is continuous in house presence of obstetric, anaesthetic and paediatric personnel.⁶⁰ Midwives and their clients should be aware that the most recent guideline on VBAC from the SOGC specifically states that women wishing a VBAC should be discouraged from planning births out of hospital³.

POSTPARTUM CARE

Immediate Postpartum

In some situations, evidence of rupture may first be evident in the immediate postpartum period. When postpartum haemorrhage occurs in a VBAC client, uterine rupture should be considered as a possible cause.

By 6 Week Visit

If the woman has had a VBAC, the midwife may inform her that her probability of vaginal birth in future pregnancies is greater than for this birth.⁵⁷ If a planned VBAC results in repeat caesarean section, the midwife should review considerations for future pregnancies including:

- The decreased success rate of VBAC after more than one caesarean section;
- Potential risks associated with any post-surgical uterine infections; and

- Considerations for family planning in spacing pregnancies to reduce risks of uterine rupture in future pregnancies.

SUMMARY

The risks of both VBAC and ERCS are complex and difficult to quantify. Women should be well informed and offered the choice of VBAC if the previous caesarean was a low-segment caesarean section and they have no contra-indications to vaginal birth in this pregnancy.

Midwives will need to spend significant time in ensuring good informed choice regarding VBAC and management of labour, particularly when women choose care different than a local community's standard of care.

It is recommended that care in labour include regular assessment of progress, regular assessment of fetal well-being and prompt consultation for any concerns regarding slow progress in labour, abnormal fetal heart rate patterns or tracings.

Finally, given the risks associated with both vaginal birth after caesarean and with elective repeat caesarean section, it would seem that the best approach to avoiding these risks is preventing primary caesarean section. One of the goals of midwifery care should be to use evidence and best practices in an effort to reduce the incidence of primary caesarean section.

RECOMMENDATIONS

1. Provided that there are no contraindications to vaginal birth, the risks and benefits of a vaginal birth after caesarean (VBAC) versus an elective repeat caesarean section (ERCS) should be discussed with a woman with a previous caesarean section, and the discussion, including the woman's decision, should be appropriately documented in the woman's chart. (II-2B)
2. It is recommended that the previous operative report be obtained wherever possible, in order to determine the type of uterine incision used. (II-2B)
3. It is recommended that a consent form be used for women planning VBAC. (III-B)
4. It is recommended that the use of elective induction be minimized wherever possible. (II-2B)
5. In the discussion regarding choice of birth place, it is important to review thoroughly the increased morbidity and/or mortality that may be caused by

the delay to surgical intervention in the event of uterine rupture at home or in a level I hospital. (III-B)

6. During labour, midwives should monitor for signs and symptoms of uterine rupture. (III-B)
7. Fetal heart monitoring should be either a) intermittent auscultation q. 15 minutes in active labour and q. 5 minutes in second stage (III) or b) using continuous EFM. (II-2A)
8. It is recommended that CEFM be employed if labour is prolonged, any fetal heart rate abnormalities are heard or there are any other signs associated with rupture. (II-2A)
9. It is recommended that a labour graph/partogram be employed to accurately identify dystocia and facilitate appropriate consultation. (II-2A)

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EVALUATION OF EVIDENCE CRITERIA AND CLASSIFICATION OF RECOMMENDATIONS

Level of Evidence*

- I Evidence obtained from at least one properly randomized clinical trial.
- II-1 Evidence from well-designed controlled trials without randomization.
- II-2 Evidence from well-designed cohort (prospective or retrospective) or case-controlled studies, preferably from more than one centre or research group.
- II-3 Evidence obtained from comparisons between times or places with or without intervention. Dramatic results in uncontrolled experiments (such as the results of treatment with penicillin in the 1940s) could also be included in this category.
- III Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees.

Classification of Recommendations[†]

- A There is good evidence to support the recommendation that the condition be specifically considered in a periodic health examination.
- B There is fair evidence to support the recommendation that the condition be specifically considered in a periodic health examination.
- C There is poor evidence regarding the inclusion or exclusion of the condition in a periodic health examination, but the recommendation may be made on other grounds.
- D There is fair evidence to support the recommendation that the condition not be considered in a public health examination.
- E There is good evidence to support the recommendation that the condition be excluded from consideration in a periodic health examination.

* The quality of evidence reported in these guidelines has been ranked according to the Evaluation of Evidence criteria outlined in the *Report of the Canadian Task Force on the Periodic Health Exam.*

† Recommendations included in these guidelines have been ranked according to the method described in the Classification of Recommendations found in the *Report of the Canadian Task Force on the Periodic Health Exam.*

Source

Woolf SH, Battista RN, Anderson GM, Logan AG, Eel W. *Canadian Task Force on the Periodic Health Exam.* Ottawa: Canada Communication Group; 1994. p. xxxvii.

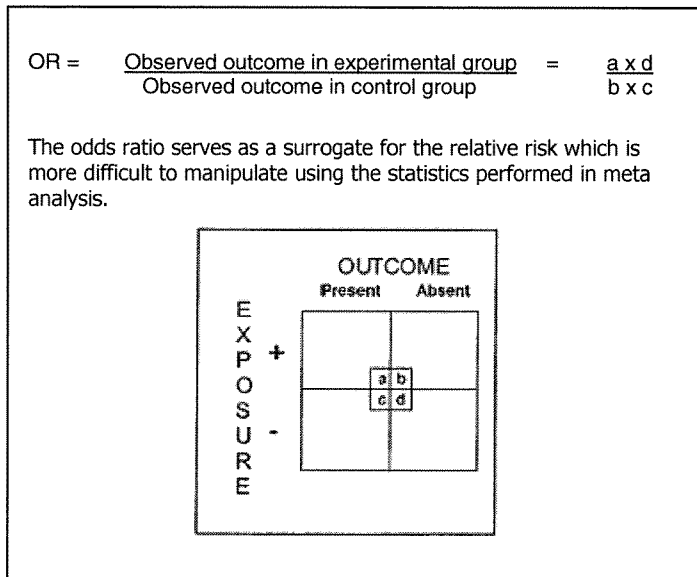
APPENDIX: A BRIEF EXPLANATION OF ODDS RATIO AND CONFIDENCE INTERVALS

Many of the study results that discuss the risks and benefits of VBAC and ERCS are accompanied by odds ratio and confidence interval data. This appendix is intended to briefly explain what both of these mean.

Odds Ratio

The odds ratio (OR) is a numeric expression of the comparison of the outcome or outcomes that are being examined in a particular study or meta-analysis. (A meta-analysis is a systematic evaluation of a collection of several studies that are similarly designed and that examine similar populations and outcomes.) The odds ratio compares the likelihood of the outcome occurring in the group that receives an intervention (the "experimental" or "exposed" group) as opposed to the group that does not receive the intervention (the "control" or "unexposed" group).

This diagram represents, in a simplified manner, how the odds ratio is calculated.



(Source: Society of Obstetricians and Gynecologists of Canada. ALARM Course Manual, 8th ed.)

The odds ratio is generally stated as a number, but is represented graphically as one point on a horizontal, logarithmic scale. A vertical line drawn at 1 indicates that there is no difference between the two groups. Odds ratio less than 1 are represented to the left of the vertical line, and those greater than 1 are represented to the right.

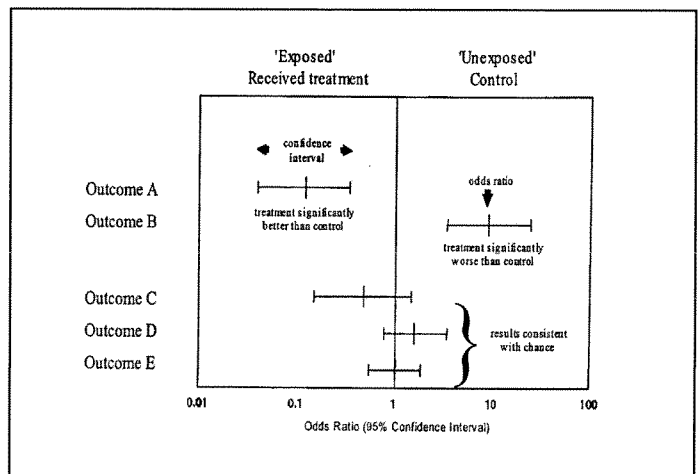
The presentation of the odds ratio data is usually done so that results less than 1 are represented as an improvement in outcome.

Another method of expressing the likelihood of an outcome, but less frequently used, is the relative risk or risk ratio (RR). Using the 2 X 2 table in the diagram above, the relative risk is calculated by the formula $[a/(a+b)]/[c/(c+d)]$. Although relative risk and odds ratio are closely related, the odds ratio is considered statistically a more stable index for the likelihood of outcome, and therefore used more frequently.

Confidence Intervals

Studies, of course, will sometimes provide results that are not considered to be statistically significant, or can be regarded as having occurred as a result of chance. Therefore, the odds ratio is usually accompanied by the 95% confidence interval. The confidence interval is a way of measuring statistical significance, and it is generally calculated as the least and greatest odds ratio within which the odds ratio result of the experiment or study would fall 95% of the time. It is displayed graphically as a horizontal line through the odds ratio point; the left end represents the lowest and the right end represents the highest odds ratio. For those used to older research that uses p values to express probability, the 95% confidence interval is equivalent to $p < 0.05$.

The measurement of the confidence interval does not rule out completely the possibility that the results of an experiment are due to chance, but they indicate how likely it is that such a result is due to chance. The graphic representation of the confidence interval, in the diagram below, demonstrates that any confidence interval that crosses the vertical line 1 (no difference) indicates that the results are not statistically significant and are consistent with chance.



(Source: Society of Obstetricians and Gynecologists of Canada. ALARM Course Manual, 8th ed.)

In studies that examine VBAC, the two groups are the group of women who have or intend to have a VBAC and the group who have an elective repeat caesarean section.

A randomized controlled trial (or RCT) is considered the "gold standard" in evaluating an intervention; in this study design, women are randomly allocated to being in the experimental or control group, and this is intended to eliminate, as much as possible, bias in the study. There have been, to date, no RCTs comparing VBAC to ERCS. Therefore, the data and studies that we currently have are derived from retrospective examinations of obstetrical databases (such as the Atlee Perinatal Database in Nova Scotia); ICD-9 codes (such as has been used in the Lydon-Rochelle study) or prospective, non-randomized data collection, usually in single centers. Although there are attempts to improve our understanding of the data and the risks, it is evident that more quality research needs to be conducted in this area.

Midwives should understand the concept that sometimes results may be statistically significant, but not necessarily clinically significant. With respect to the discussion of uterine rupture, it should be understood that, for example, although the odds ratio for uterine rupture with VBAC compared to ERCS is 2.10, this represents an overall risk of 0.4% as opposed to 0.2% (or 4/1,000 as compared to 2/1,000); in each case, the overall risk of rupture is low. These kinds of numbers may need to be explained to women in a variety of ways in order for them to understand the magnitude of risk involved, in a balanced and rational manner.

For more information:

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