



Clinical Guidelines for Obstetrical Services

AT CRICO-INSURED INSTITUTIONS

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The entire *Clinical Guidelines for Obstetrical Services*, along with related information and links, is available at www.rmhf.harvard.edu/guidesob



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Contents

	<i>page</i>		<i>page</i>
<i>Introduction</i>	I	21 Management of Breech Presentation	21
THE GUIDELINES		22 Management of Twins	23
1 Documentation for Patient Safety	2	23 Prolonged Pregnancy	24
2 Informed Consent	3	24 Macrosomia	25
3 Clinical Coverage and Patient Handoffs	4	25 Management of Shoulder Dystocia	26
4 Consultation	5	26 Patients with Previous Cesarean Delivery	27
5 Resolution of Clinical Discord	5	27 Cesarean Delivery on Maternal Request	28
6 Preconception Care	6	28 Communication Prior to Obstetrical Surgery	28
7 Pregnancy Dating/Estimated Date of Delivery	7	29 Anesthesia in Obstetrics	29
8 Antenatal Care	8	30 Placental Pathology Evaluation	31
9 Mid-trimester Termination	10	31 Postpartum Care	32
10 Antenatal Tests of Fetal Well-being	11	32 Circumcision	33
11 Ordering of Tocolytic Agents	11	33 Reporting of Adverse Outcomes	34
12 Use of Antenatal Corticosteroids for Fetal Maturation	11	34 Institutional Responsibilities	35
13 Prevention of Neonatal Sepsis Due to Group B Streptococci	12	APPENDICES	
14 Availability of Clinician and Case Load in Labor and Delivery	13	A Sample Documentation Form for Shoulder Dystocia ...	37
15 Scheduled and Elective Delivery	13	B Sample Documentation Form for Operative Vaginal Delivery	38
16 Assessment and Monitoring in Labor and Delivery	14	C About Your Care During Labor and Birth	40
17 Induction of Labor	17	D Breech Version or External Cephalic Version	44
18 Augmentation of Labor	18	E Delivery Following a Previous Cesarean Delivery	46
19 Operative Vaginal Delivery	19	F The Delivery of Twins	49
20 Prevention of Retained Sponges and Needles Following Vaginal Delivery	20	G Primary Cesarean Delivery on Maternal Request	51

Introduction

The *Clinical Guidelines for the Obstetrical Services of the CRICO-insured Institutions* are intended to provide guidance for clinicians and to support the safest maternal and fetal outcomes for patients receiving care by CRICO-insured clinicians.¹ The recommendations for practice included in this document were arrived at through careful consideration of the available evidence and should be considered as thoughtful, expert advice. These *Guidelines* offer a framework for provision of obstetrical care, rather than an inflexible set of mandates. Clinicians involved in obstetrical care must use their professional knowledge and judgment when applying the recommendations to the management of individual patients. These *Guidelines* are subject to revision at regular intervals as changes in clinical practice evolve.

PRINCIPLES

Safe care requires a collaborative process among obstetrical clinicians who respect the right of the patient to make informed decisions for herself and her fetus.

RESOURCES

The *Guidelines* are a codification of:

- existing best practices,
- recommendations of the American College of Obstetricians and Gynecologists (ACOG),
- *Guidelines for Perinatal Care* (American Academy of Pediatrics and ACOG), and
- *Practice Guidelines for Obstetrical Anesthesia*.

The 2014 revisions to the *Clinical Guidelines for the Obstetrical Services* were guided by a multi-disciplinary group of clinicians, including obstetricians, nurse leaders, nurse midwives, and anesthesiologists from several CRICO-insured institutions. The clinical leaders of the obstetrical departments of the CRICO-insured institutions have approved the current version of these guidelines. Questions regarding this document should be directed to the Patient Safety Operations Manager at CRICO, Cambridge, Massachusetts.

1. As of March 2014, the following institutions insured through CRICO provide obstetrical service: Beth Israel Deaconess Medical Center, Brigham and Women's Hospital, Cambridge Health Alliance, Harvard Vanguard Medical Associates, Martha's Vineyard Hospital, Massachusetts General Hospital, Mount Auburn Hospital, Newton-Wellesley Hospital, North Shore Medical Center, and Nantucket Cottage Hospital.

GUIDELINE 1

Documentation for Patient Safety

GENERAL PRINCIPLES OF DOCUMENTATION

The medical record is a sequential record of patient care, a storage place for diagnostic test results, a communication tool for clinicians, and a legal document.

1. Include date and time, if relevant, of each encounter (telephone, electronic, and face-to-face).
2. Include the diagnostic rationale in the assessment portion of the note.
3. Clearly state the plan of care.
4. Consent discussions are appropriate to include in the body of a note as well as in a signed form.
5. Proofread and correct dictated notes prior to signing.
6. Only medical information is appropriate in the medical record; references to legal action or incident reports are not intended for the medical record.
7. Do not obliterate errors, remove pages, or otherwise alter a medical record.
8. Patient requests for changes in the medical record should be managed by institutionally approved procedures.

ANTEPARTUM, INTRAPARTUM, AND POSTPARTUM MEDICAL RECORDS

Each encounter should be documented in the medical record. The note should include, as appropriate: history, physical, vital signs, test results, assessment, plan, and instructions.

Documentation of electronic fetal monitoring (EFM) pattern terminology, pattern recognition, and interpretation should be consistent with current recommendations supported by the National Institute of Child Health and Human Development and American College of Obstetricians and Gynecologists.^{1,2}

An antenatal record shall be completed on every obstetrical patient and a copy maintained in the medical record. Department of Public Health-licensed facilities are required

by the Commonwealth of Massachusetts to have a copy of this antenatal record made available in the hospital after 24 weeks of pregnancy.³ If any significant changes occur after 24 weeks, the obstetrical provider must send an update to Labor and Delivery. Periodic updates after 36 weeks are advised.

For normal vaginal delivery, completion of the institution's standard form is required. A short written note shall be entered in the medical record. In the case of all operative deliveries (i.e., non-spontaneous vaginal and cesarean), and those complicated by shoulder dystocia, a dictated operative note or its electronic equivalent should be completed. This note shall include the indications and rationale for any procedure or maneuvers selected.

A copy of any EFM strips and recorded ultrasound images is to be maintained as part of the patient's permanent medical record.

PRESERVATION OF EFM RECORDS

Department of Public Health-licensed facilities are required by Massachusetts law⁴ to keep a record of EFM tracings for at least five years (CRICO recommends 30 years). The tracings should include the patient's name and hospital number; date and time at the beginning of the tracing; and—if delivery concludes the monitoring—date and time of delivery. EFM tracings need not be stored with the medical record, but should be readily retrievable.

INSTITUTIONAL RESPONSIBILITY

The institution has a responsibility (shared with the medical staff) mandated by the Joint Commission to provide adequate resources for record processing, to support quality improvement activities, and to adhere to record keeping standards including compliance with federal regulations (e.g., HIPAA) and its mandate for a designated institutional compliance officer.

GUIDELINE 2

Informed Consent

1. Macones GA, et al. The 2008 National Institute of Child Health and Human Development Workshop report on electronic fetal monitoring update on definitions, interpretation, and research guidelines. *Obstet Gynecol.* 2008;112:661–66.
2. Intrapartum fetal heart rate monitoring: nomenclature, interpretation, and general management principles. *ACOG Practice Bulletin No. 106.* American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2009;114:192–202.
3. Commonwealth of Massachusetts: Hospital Licensure Regulations. 105 CMR §130 Hospital Licensure, Mass.Gov Available at: <http://www.mass.gov/eohhs/docs/dph/regs/105cmr130.pdf> - section 130.627.
4. Commonwealth of Massachusetts: Hospital Licensure Regulations. 105 CMR §130 Hospital Licensure, Mass.Gov Available at: <http://www.mass.gov/eohhs/docs/dph/regs/105cmr130.pdf> - section 130.370.

Informed consent is a process employing oral and written communication to convey to the patient the risks, benefits, and alternatives of medical treatments. The consent form should be considered the documentation of the discussion(s), and both the discussion with the patient and the completed consent forms are necessary to ensure and verify that the patient is informed about her and her baby's care. Consent forms should be presented to patients in a language they can understand. If this is not feasible, a competent translator should be available to translate the consent form orally into the patient's primary language.

Prenatally, the clinician will initiate the informed consent process for labor and delivery care, guided by the general written obstetrical consent form. Consistent use of an institutionally approved informed consent form is expected.

Discussions involving specific obstetrical interventions, such as external version or vaginal delivery for second twin (non-vertex), use of tocolytic or uterotonic drugs, or forceps delivery, should be initiated with the patient as early as feasible.

Informed consent during the course of antenatal care and labor management (when appropriate) should be documented in the medical record.

The person who is actually performing a procedure is responsible for reviewing and confirming the informed consent with the patient and for documenting that conversation in the medical record.

Specific and separate written consent is required for:

- circumcision
- cesarean delivery on maternal request¹
- external version¹
- trial of labor after cesarean delivery¹
- delivery of twins¹

Guideline 2 continued

If an obstetrical patient refuses to sign the consent form, then more dialogue between the clinician and the patient about the patient's preferences vis-a-vis medical judgment during labor and delivery is indicated. Issues of trust should be addressed. The obstetrical team and hospital administrators should develop a coordinated plan to address those issues and manage the patient's labor and delivery. This discussion should be documented in the patient's medical record. Documentation should include the dialogue about the pregnancy and plans for labor and delivery that have occurred and note the proposed obstetrical procedures, activities, risks, and benefits, including unexpected risks and complications. The patient's oral consent for continuing obstetrical care and refusal to sign a consent form should also be documented. The institution's printed obstetrical consent form can serve as a reference for the detailed note.

1. Sample consent forms can be found in the Appendix to these Guidelines.

GUIDELINE 3

Clinician Coverage and Patient Handoffs

For clinicians working as a group, coverage should be formally agreed to with adequate communication within the group to ensure good follow up. Each patient should be informed early in her pregnancy about group coverage arrangements.

For non-group practice, coverage arrangements for a clinician who is unavailable must be carefully made with a qualified clinician who has adequate time and has agreed to provide coverage. A formal handoff should occur at the time the coverage is initiated.

When a patient is in the hospital and the clinician arranges for coverage, the handoff should ensure the following:

- the patient is notified and knows who will be covering;
- other members of the health care team are notified of the coverage arrangements;
- the clinician assuming the coverage is qualified and has the necessary clinical privileges;
- the covering clinician is notified in a timely manner and agrees to cover; and
- the clinician's office staff is informed of coverage arrangements, and know how and where to reach the clinician who has agreed to assume coverage.

PATIENT HANDOFF

The process for the transfer of patient information and knowledge from one clinician to another clinician (i.e., handoff) should include:

- interactive communications, including the opportunity to ask questions, clarify and confirm the information being transmitted;
- limited interruptions;
- a process for verification; and
- an opportunity to review relevant historical data.

1. Communication strategies for patient handoffs. ACOG Committee Opinion No. 517. American College of Obstetricians and Gynecologists. *Obstet Gynecol* 2012;119:408–11.

GUIDELINE 4

Consultation¹

All clinicians are encouraged to seek additional medical advice whenever they have concern about a diagnosis or course of treatment. Consultation is essential when the experience, expertise, or comfort level of the attending clinician is exceeded. Once the limits of a clinician's privileges are exceeded, care must be transferred.

Consultations may be formal or informal.

A formal consultation occurs when an opinion about a specific circumstance is requested. The consulting clinician is responsible for documenting the request.

- If the consultation is in person, the consultant shall personally evaluate the patient including a physical examination, where appropriate, and a written note will be placed in the hospital record.
- If a telephone consultation is obtained, both parties should be clear that this is a formal consultation and that a summary of the discussion and the consultant's name will be entered into the medical record.
- If the final management plan differs from the consultant's recommendation, then the responsible clinician should document his or her rationale for choosing a different course of action.

An informal consultation occurs when the discussion between clinicians lacks details specific to one patient. An informal consultant is not named in the record. When these consultations occur, both parties should be clear as to the nature of the discussion.

1. CRICO has defined a consultation as follows: Consultation occurs between two professionals who are both licensed or credentialed to provide patient care. One (the "consultee") requests an opinion from the other (the "consultant"). The consultee considers the recommendations of the consultant and decides whether or not to follow them, based on his or her more extensive knowledge of the patient.

GUIDELINE 5

Resolution of Clinical Discord

Each institution shall have a formal process to resolve disagreements between professional staff about medical management, conduct of labor, or interpretation of tests of fetal status. The process should consider these points:

1. Priority should be given to maintaining safe, quality patient care.
2. In cases of discord, the involved parties shall first discuss the discord and attempt to resolve it. The "two challenge rule,"¹ and other methods of conflict resolution may be considered to facilitate structured communication and avert medical errors.^{2,3}
3. If the involved parties cannot resolve the discord, they should seek assistance, initiating the chain of command⁴ through medical, resident/fellow supervisory physician, midwifery, and/or nursing hierarchy, as indicated.⁵⁻⁷ A list of medical staff, supervisory physician, midwifery, and nursing hierarchy should be available in the clinical areas.
4. All discussions pertaining to differences in clinical opinion should occur among professional staff only, and out of earshot of the patient and family.
5. Differences in clinical observations and opinions should be documented in an objective, non-argumentative fashion in the medical record.
6. Unexpected medical incidents relating to the discord should be reported to the institutional risk manager.
7. The occurrence of the discord should be reported to the Chief of Obstetrics, the Director of Nurse Midwifery, and/or the Obstetrical Nursing Director, as indicated.

Guideline 5 continued

1. Assertively voicing your concern(s) at least twice to ensure your concerns have been heard by your colleague.
2. MacReady N. Two-challenge rule averts errors improves patient safety. *OR Manager*. 1999;15(1):12.
3. Marshall P, Robson R. Preventing and managing conflict: vital pieces in the patient safety puzzle. *Healthcare Quarterly*. 2005;8:39–44.
4. The chain of command is a series of steps ascending the administrative and clinical lines of authority established to ensure effective conflict resolution in patient care situations.
5. Patient safety in obstetrics and gynecology. ACOG Committee Opinion No. 447. American College of Obstetricians and Gynecologists. *Obstet Gynecol*. 2009;114:1424–27.
6. American Nurses Association, (2001). Code of Ethics for Nurses with Interpretive Statements, Washington, D.C. American Nurses Publishing.
7. American College of Nurse Midwives. Code of Ethics. 2005. Reaffirmed 2008. Available at: http://www.midwife.org/ACNM/files/ACNMLibraryData/UPLOADFILENAME/000000000048/code%20of_ethics_2008.pdf

GUIDELINE 6

Preconception Care

When feasible, the clinician should discuss pregnancy and preconception issues with a woman who is anticipating pregnancy. The patient should be encouraged to consider a preconception visit. Such a visit may include:

- lifestyle issues including tobacco, alcohol, drugs of abuse, diet, exercise, caffeine, weight, oral care;
- assessment for domestic violence and psychosocial issues;
- safety of prescribed medications and alternative choices;
- safety of non-prescribed medications, including herbal remedies;
- dietary supplements, including recommendation for folic acid supplementation; and
- review of major medical problems or risk factors, such as hypertension, diabetes, advanced maternal age, obesity, eating disorders.

Review of previous pregnancy problems should include:

- family history with specific attention to conditions that may place the woman at risk (e.g., parental thromboembolic disease) or increase the risk of genetic disease of the fetus, and
- risk of genetic diseases with offer for genetic testing if appropriate (e.g., Tay Sachs, Canavan's, Cystic Fibrosis, Hemoglobin electrophoresis, PKU).

Review environmental exposures such as:

- lead, pesticides, workplace hazards;
- infectious exposures, including toxoplasmosis, HIV, STIs with offer of HIV, STD testing; and
- evaluation of vaccine status and offer vaccines if indicated (e.g. Tdap, rubella, varicella, influenza).

GUIDELINE 7

Pregnancy Dating/Estimated Date of Delivery

Accurate assessment of gestational age is of paramount importance for management of pregnancy, interpretation of test results, and timing of interventions. Pregnancy dating should be determined by a combination of the historical, clinical, and laboratory criteria listed below:

- known normal last menstrual period, corrected for cycle length;
- known date of assisted reproductive technologic intervention;
- date(s) of HCG testing (urine or blood);
- uterine size on initial physical exam;
- date of detection of FHT with Doppler;
- first trimester ultrasound measurement of crown-rump length; and
- second trimester ultrasound measurement of multiple fetal biometrics.

Ultrasound dating should take precedence over clinical dating if:

- the last menstrual period is uncertain or abnormal,
- there is a ≥ 7 day discrepancy between historical/clinical parameters and first trimester ultrasound measurements, or
- there is a ≥ 10 day discrepancy between historical/clinical parameters and second trimester ultrasound measurements (up to 20 weeks gestation).¹

Gestational age based on third trimester ultrasound should be interpreted with caution, due to the decreased accuracy of ultrasound for dating late in pregnancy.

When necessary for clinical decision making, fetal pulmonary maturity may be presumed if early reliable dating confirms that the patient is no more than seven days before her estimated date of delivery (EDD).

Alternatively, fetal lung maturity may be assessed by testing the amniotic fluid. However, a mature FLM does not in and of itself guarantee a good neonatal outcome and should not be used as a reason for early delivery without a clinical indication for delivery.

The primary obstetrical provider is responsible for establishing the EDD and documenting this information in the patient's prenatal record. The sooner the EDD is established and documented in the patient's prenatal record, the better.

1. Ultrasonography in pregnancy. ACOG Practice Bulletin No. 101. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2009;113: 451–61.

GUIDELINE 8

Antenatal Care

INITIAL VISIT

The initial visit to the obstetrical provider should be scheduled in the first trimester (whenever possible). The visit should include a detailed evaluation of the patient and her history to assess and plan for the pregnancy. At a minimum, the initial assessment should encompass:

1. A detailed history, including:
 - past and current illnesses;
 - surgeries;
 - allergies;
 - family history including genetic history, and ethnicity;
 - prior pregnancies;
 - a menstrual history, with specific attention for accurate dating of the pregnancy;
 - medications and supplements currently being taken;
 - psychosocial history, including mental health, depression; alcohol, tobacco and drug use; type of work; relationship status; domestic violence concerns; and
 - environmental and occupational exposure history.
2. Counseling about:
 - normal course of pregnancy;
 - frequency of visits, office hours;
 - when and how to contact the clinician;
 - balanced nutrition, recommended weight gain, vitamin supplementation, and foods and beverages to avoid;
 - exercise;
 - sexual activity;
 - environmental hazards;
 - health maintenance (e.g., dental health, appropriate use of seat belts);
 - HIV and recommendations for testing;
 - suggested readings;
 - recommended vaccinations: influenza, Tdap, hepatitis A & B if at risk; and
 - substance abuse or abuse screening, including tobacco, alcohol, and drugs, with interventions offered, as appropriate.
3. Genetic counseling should include:
 - offering testing for cystic fibrosis with specific information about carrier frequency and sensitivity of the test;
 - offering testing as appropriate for ethnicity including:
 - Tay Sachs testing, such as for patients of Ashkenazi Jewish , French-Canadian, or Cajun descent;
 - Canavan's disease and familial dysautonomia screening, such as for patients of Ashkenazi Jewish descent;
 - hemoglobin electrophoresis for those at risk for hemoglobin disorders, such as for patients of Asian, African, Caribbean, or Mediterranean descent;
 - others as appropriate to history, family history or ethnicity; and
 - offering counseling on methods available to screen or test for fetal aneuploidy.
4. A detailed physical examination that includes blood pressure, height, weight and breast, heart, lung, abdominal, and pelvic examinations.
5. Recommended laboratory testing, including:
 - complete blood count (CBC) with indices,
 - blood group and Rh type determination,
 - antibody screen,
 - rubella immunity status (unless previously documented or adequate vaccination documented),
 - hepatitis B surface antigen,

- hepatitis C antibody (if appropriate),
 - HIV testing (unless declined by patient),
 - syphilis screen,
 - varicella immunity status (if not known),
 - urine culture,
 - genetic screening (as selected by patient),
 - cervical cytology (if appropriate), and
 - gonorrhea and chlamydia screening if indicated.
6. Identified medical problems and risk factors should be addressed and a problem list created.
7. Folic acid or prenatal vitamin containing adequate folic acid should be advised.

SUBSEQUENT VISITS

At every routine prenatal visit, an interval history should be obtained. Assessment should be made of the patient's weight, blood pressure, and uterine size. Urine testing for protein and glucose should be obtained if indicated. Fetal assessment should include heart sounds and movement as appropriate for gestational age. Fetal presentation should be assessed in the late third trimester.

Testing in the second and third trimesters:

- fetal survey ultrasound may be performed at 17–20 weeks;
- TB testing should be performed in the early second trimester if indicated;
- CBC and glucose screening, if appropriate, at 24–28 weeks;
- serial antibody testing should be performed in Rh negative patients as indicated;
- STD testing should be repeated at 32–36 weeks for patients at risk; and
- Group B Streptococcus screening should be done, if appropriate, at 35–38 weeks (*see Guideline 13*).

Counseling in the second and third trimester may include:

- offering a fetal survey ultrasound;
- reviewing instructions on when/how to call the clinician;
- reviewing and discussing informed consent for labor and delivery;
- reviewing and discussing the health care proxy;
- reviewing warning signs of preterm labor;
- reviewing expected fetal movements;
- preparation for childbirth including availability of childbirth classes, analgesic options, and expectations during labor and birth;
- discussing and encouraging breastfeeding;
- selecting a pediatrician;
- newborn issues, including circumcision, infant care classes, infant CPR classes, car seats; and
- postpartum recovery including postpartum appointments, maternity leave, depression, and contraception.

Additional interventions:

- during flu season, influenza vaccine should be recommended to pregnant patients;
- Tdap vaccine should be offered in the third trimester;
- other vaccinations may be considered in pregnancy as indicated (e.g., hepatitis B vaccination for women at risk); and
- Rh immunoglobulin should be provided for Rh negative woman at approximately 28–30 weeks gestation, or as indicated (bleeding, trauma, or amniocentesis, external version); and postpartum as indicated.

GUIDELINE 9

Mid-trimester Termination

Patients for whom a mid-trimester termination (up to 23rd weeks gestation) is planned should have a plan of care and a discussion of the methods. Medical-Surgical consents and Massachusetts Department of Public Health consents appropriate for the procedure should be obtained and documented. If appropriate, consent for disposition of fetal remains should be obtained.

Eligibility for second trimester termination should be determined by the best estimate of gestational age. The calculation of gestational age should be consistently applied and transparently obtained by all available dating criteria. Ultrasound verification of gestational age and determination of biparietal diameter is preferred, ideally within one week of the procedure.

PRIOR TO SECOND TRIMESTER TERMINATION

- obtain medical and obstetrical history;
- confirm the gestational age;
- conduct a physical exam; and
- counsel the patient regarding potential risks, agents and methods for the chosen procedure, and the possible risks of the chosen procedure.

The plan of care may include, but not be limited to:

- the patient wishes for an intact fetus;
- the patient wishes not to have a labor and delivery;
- availability of a care provider experienced in the procedures for second trimester termination;
- medical or obstetrical co-morbidities;
- discussion of the appropriate location for the proposed procedure;
- anesthesia consultation as indicated; and
- consultation with Social Work, Chaplaincy, or both as desired.

INSTITUTIONAL GUIDELINES

Each facility shall develop guidelines for mid-trimester termination to include, at a minimum, details regarding:

- procedures,
- medications,
- monitoring the patient,
- description of training and competency of personnel,
- availability of a physician who can manage complications,
- use of cervical ripening agents,
- potential role of intra-operative ultrasound,
- potential role of feticidal agents, and
- strategy/plan in the event of a live birth.

METHODS OF SECOND TRIMESTER TERMINATION

Methods of second trimester termination include dilation and evacuation, and induction of labor. Hysterectomy and hysterotomy are not considered primary methods for terminating a second trimester pregnancy.

DOCUMENTATION

Documentation should include, but not be limited to:

- discussion of procedures or methods, and their risks and benefits;
- consents for medical-surgical procedures, and the Massachusetts Department of Public Health consents and disposition of fetal remains, if applicable;
- administration of medications: time, date, dose;
- administration of medications or the use of hygroscopic dilators (e.g., laminaria, dilapan), including date, time, and number placed, as needed for cervical preparation;
- patient's clinical response;
- delivery or removal of fetal tissue and completeness; and
- complications and need for additional procedures.^{1,2}

1. Second-trimester abortion. ACOG Practice Bulletin No. 135. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2013;121:1394–1406.

2. Abortion Policy. College Statement of Policy. As issued by the College Executive Board. American College of Obstetricians and Gynecologists. Reaffirmed 2011.

GUIDELINE 10

Antenatal Tests of Fetal Well-being

Tests of fetal well-being may be indicated for patients who are at increased risk of adverse fetal outcome.

Tests available include fetal kick counts, non-stress tests, contraction stimulation tests, biophysical profiles, and Doppler studies.

Timing of initiation of testing should be based on:

- underlying medical issues and their severity,
- maternal age,
- gestational age,
- obstetrical history, and
- plurality.

Antenatal testing should only be initiated at a gestational age and fetal weight at which, when necessary, delivery for an abnormal test result would be reasonable. The frequency and duration of testing should be determined by the obstetrical provider; testing should usually be continued until the pregnancy is delivered, unless the clinical scenario improves.

When regular antenatal testing is considered at very early gestational ages (24–28 weeks), an MFM and NICU consultation should be considered.

If regular antenatal fetal surveillance is indicated, then non-stress tests and/or biophysical profiles are recommended.

GUIDELINE 11

Ordering of Tocolytic Agents

The clinician shall examine the patient before prescribing initial therapy with tocolytic agents in the second or third trimester.

The patient should be informed of the risks and benefits of these medications, and provide oral or written informed consent. Documentation should include presumptive diagnosis, possible causes, and that informed consent has been obtained.

GUIDELINE 12

Use of Antenatal Corticosteroids for Fetal Maturation

All women between 24 and 34 weeks gestation who are at risk for delivery within seven days, should receive corticosteroids. This includes women with rupture of membranes, unless individual circumstances affect this decision.

Treatment options include:

- two doses of betamethasone 12 mg IM 24 hours apart, or
- four doses of dexamethasone 6 mg IM 12 hours apart.

The 2000 NIH Consensus panel did not find significant evidence to support using one drug preferentially over the other.

A second course of antenatal corticosteroids may be considered if clinically appropriate.¹ Further repeat courses should be reserved for women enrolled in clinical trials.

1. Management of preterm labor. ACOG Practice Bulletin No. 127. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2012;119:1308–17.

GUIDELINE 13

Prevention of Neonatal Sepsis Due to Group B Streptococci

The CDC has recommended that all obstetrical clinicians adhere to a screening culture-based obstetrical protocol for prevention of neonatal sepsis due to Group B Strep.¹ This protocol requires that GBS-specific cultures be universally performed during the antepartum period and that intrapartum antibiotics be administered to women based on culture data. If culture results are not available, intrapartum antibiotics should be administered according to defined risk factors.

Adherence to this culture-based protocol requires the following:

1. Antepartum GBS-specific cultures according to the methodology specified by the CDC are performed between 35 and 37 weeks gestation. Women with positive screening cultures during a previous pregnancy should be recultured during subsequent pregnancies and managed on the basis of the current culture. Women who have had GBS cultures performed prior to 35 weeks (whether positive or negative) should have a repeat screening culture performed between 35 and 37 weeks gestation if it is anticipated that delivery may occur more than five weeks after the prior culture.
2. Intrapartum antibiotics are administered according to results of these cultures.
3. If results of cultures are not available, intrapartum antibiotics should be administered to all women with any of the following risk factors:
 - preterm labor (<37 weeks gestation)
 - rupture of membranes ≥ 18 hours, or
 - intrapartum temperature $\geq 100.4^\circ$ F orally (100° F axillary).
4. Intrapartum antibiotics should be administered to women with either of the following (regardless of culture results):
 - previous GBS infected neonate, or
 - GBS bacteriuria (of any magnitude of colony count) at any time during the current pregnancy.
5. If a woman at term with a positive GBS culture ruptures her membranes without signs of labor, no more than 12 hours should pass prior to consideration of steps to effect delivery and antibiotic administration.
6. Women with negative cultures within five weeks of delivery do not require intrapartum antibiotic prophylaxis for GBS even if obstetrical risk factors develop. Intrapartum temperature $\geq 100.4^\circ$ F orally (100° F axillary) should prompt consideration for use of intrapartum antibiotics regardless of concerns regarding GBS prophylaxis.
7. Women undergoing a planned cesarean delivery prior to the onset of labor and membrane rupture do not require intrapartum antibiotic prophylaxis for GBS.
8. Penicillin is the first line antibiotic recommended for this purpose; ampicillin is also acceptable. For penicillin-allergic individuals, acceptable antibiotics include:
 - Cefazolin: (preferred alternative except for patients at high risk for anaphylaxis);²
 - Clindamycin and erythromycin: (for patients at high risk for anaphylaxis, and whose susceptibility is known);³ and
 - Vancomycin: (for patients at high risk for anaphylaxis, and whose susceptibility is unknown).

1. Verani JR, L McGee, and SJ Schrag. Division of Bacterial Diseases. National Center for Immunization and Respiratory Diseases, Centers for Disease Control and Prevention. Prevention of perinatal Group B streptococcal disease: revised guidelines from CDC (2010): 1–36.

2. Women who are at high risk for anaphylaxis include those with a history of immediate hypersensitivity reaction to penicillin and those with concomitant conditions that may make anaphylaxis more difficult to treat, including active asthma and current treatment with beta-adrenergic blocking agents.

3. Susceptibility testing to clindamycin and erythromycin should be performed on all positive GBS cultures obtained from women at high risk for anaphylaxis.

GUIDELINE 14

Availability of Clinician and Case Load in Labor and Delivery

IN LABOR

Once active labor has begun, the responsible clinician should be immediately available to return to Labor and Delivery if needed.

Immediately available assistance by a qualified clinician from the obstetrical service is mandatory when a clinician's case load exceeds three low-risk patients in active labor; or when the combined acuity of all patients on a clinician's labor and delivery case load exceeds that of three low-risk patients in active labor.

The patients and the nurses caring for them should be notified about any change in status of the responsible clinician. If a clinician becomes unavailable for reasons that would not permit timely return to labor and delivery (such as surgery or involvement in a complex medical case) then that clinician must provide the nursing staff with the name of an alternate clinician who has agreed to assume responsibility and be immediately available for that clinician's laboring patients.

At all times when there is an actively laboring patient on the labor floor, a physician credentialed to perform emergency operative delivery must be readily available.

ALTERNATIVE COVERAGE

When a clinician cannot be contacted or, if after being appropriately notified, a clinician does not see a patient in a timely fashion, and/or if a clinician has made no arrangements for alternative coverage, the nursing staff shall report this occurrence through appropriate institutional procedures. Each institution shall devise a system by which alternative clinician coverage is provided in such situations; and the system of clinician coverage should be clearly communicated and readily available to all members of the labor and delivery staff.

GUIDELINE 15

Scheduled and Elective Delivery

Elective Delivery refers to delivery of a normal pregnancy without a recognized maternal or fetal indication.

Scheduled Delivery refers to a purposely timed delivery for either induction of labor or for cesarean birth.

Delivery occurring more than seven days prior to the EDD is associated with an increased risk of adverse neonatal outcomes and, in the case of elective induction, may be associated with an increased risk of cesarean delivery in nulliparous women.

Elective delivery of singleton gestations should not be planned to occur before seven days prior to the EDD, i.e., prior to 39 weeks gestation.

When scheduled for maternal or fetal indications, referred to as a "scheduled indicated delivery," the timing of delivery is determined by the medical situation.¹

Confirmation of term gestation is dependent on satisfying at least one of the following gestational age criteria:²

- known date of assisted reproductive technologic intervention,
- an ultrasound measurement of the fetus obtained at <20 weeks gestation supports gestational age of 39 weeks or greater,
- fetal heart tones have been documented as present for 30 weeks by Doppler ultrasonography, and
- it has been 36 weeks since a positive serum or urine human chorionic gonadotropin pregnancy test result.

A test indicating fetal lung maturity does not itself meet the criteria for elective delivery.

1. Medically indicated late-preterm and early-term deliveries. ACOG Committee Opinion No. 560. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2013;121:908–10.

2. Induction of labor. ACOG Practice Bulletin 107. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2009;114:386–97.

GUIDELINE 16

Assessment and Monitoring in Labor and Delivery

PATIENT EDUCATION

During prenatal care, the clinician and patient will discuss common events and procedures in labor, including methods of assessing fetal well-being.

ADMISSION TO LABOR AND DELIVERY

The responsible clinician or designee shall evaluate the patient, enter a note, and provide orders within two hours of his or her patient arriving at the Labor and Delivery unit.

If the patient is not in active labor, and is low risk, i.e.:

- 37–41 weeks gestation,
- appropriate weight for gestational age,
- has a Category I electronic fetal monitoring strip on admission, or a reassuring auscultation and a note written by the clinician if she (patient) refuses electronic fetal monitoring,
- absence of moderate or thick meconium,
- vertex presentation, and
- absence of any medical or obstetrical complications,

Then, initial assessment can be delayed until:

- a risk factor is identified,
- the patient enters active labor, or
- the patient requests pain medication.

INITIAL EVALUATION BY CLINICIAN IN LABOR AND DELIVERY

The clinician's initial evaluation and documentation in Labor and Delivery shall include, at a minimum:

- reviewing and summarizing the antenatal course;
- physical exam (including an estimated fetal weight);
- evaluation of status of labor, including a description of uterine activity, cervical dilation and effacement, and fetal station and presentation, unless vaginal exam deferred;

- evaluation of fetal status, including interpretation of auscultation or electronic fetal monitoring strips, if generated; and
- the plan for delivery.

Fetal status must be assessed on every patient who is evaluated or admitted in a triage unit. This should be performed without delay for any fetus of 24 or more weeks. A recording of fetal heart rate (FHR) and uterine contractions is advised until categorization of the FHR tracing is determined. If a Category I pattern cannot be obtained in a reasonable time frame, continued evaluation should proceed.

FIRST STAGE OF LABOR AFTER INITIAL EVALUATION

For a patient without complications, continuous FHR monitoring is not required if the initial FHR tracing exhibits a Category I tracing.

“Categorization of the FHR tracing evaluates the fetus at that point in time; tracing patterns can and will change. An FHR tracing may move back and forth between categories depending on the clinical situation and management strategies employed.”¹

Fetal heart rate (and variability—if electronically monitored) should be evaluated and recorded at least every 15–30 minutes, depending on the risk status of the patient, during the active phase of labor.^{2,3} The FHR should be evaluated as soon as is feasible after spontaneous rupture, or immediately after artificial rupture of the membranes.

Continuous fetal heart rate monitoring should be done for patients with any of these indicators:

- history of an abnormal antepartum FHR or rhythm,
- breech presentation,
- history of prior cesarean delivery,
- multiple gestation,
- nonreassuring fetal assessment,
- significant maternal illness,

- use of oxytocin,
- abnormality of active or second stage labor,
- thick meconium, or
- heavy vaginal bleeding.

Electronic fetal monitoring is also preferred when auscultation is not feasible. Once continuous electronic fetal monitoring is chosen and initiated, a technically satisfactory and continuous tracing should be achieved. If this cannot be accomplished, the reasons must be documented and an alternative plan for fetal assessment must be developed.

In the event of a Category III FHR tracing, the attending clinician or his or her designee shall promptly evaluate the fetal status and initiate efforts to resolve the abnormal FHR pattern. If corrective measures are not successful, preparations for delivery will be initiated.²

An amnioinfusion may be considered when persistent variable decelerations are seen on the FHR tracing.²

EVALUATION DURING FIRST STAGE

The patient shall be evaluated during labor at appropriate intervals. Each evaluation should include:

- assessment of maternal status, including level of pain during labor;
- description of uterine activity;
- assessment of fetal status;
- description of findings on vaginal exam, if performed, including cervical dilation and effacement, fetal station, change in status of membranes, and progress since last exam;
- summary of maternal and fetal status; and
- plan, including plans for or performance of clinical interventions and pain management.

Each evaluation should be recorded in the medical record.

SECOND STAGE LABOR

The monitoring clinician should document in the medical record at the time of identification of second stage, after two hours of second stage, and hourly thereafter. This documentation, which should be dated and timed, should include, at a minimum:

- maternal status;
- fetal status;
- fetal station and, if known, position;
- presence of caput and molding; and
- the plan for delivery.

Fetal heart rate should be evaluated and recorded at least every 5–15 minutes, depending on the risk status of the patient.^{2,3}

In the event of a Category III FHR tracing, the attending clinician or his or her designee shall promptly evaluate the fetal status and promptly initiate efforts to resolve the abnormal FHR pattern. He or she may consider obtaining another opinion about the fetal status.

No later than the end of the second hour of the second stage of labor, and every hour thereafter, the attending physician or midwife should personally evaluate the patient and document in the medical record the minimum as noted above. Additionally, the providers involved (which may include the attending physician, resident, nurse midwife, RN, and/or charge nurse) shall discuss the patient's progress and plan of care at each hourly interval.

By the end of the third hour of the second stage of labor, the attending obstetrician should personally evaluate and examine the patient, immediately document details of this evaluation, and be involved in continued planning.

*Guideline 16 continued***DELIVERY**

If a patient is moved to another room for delivery, fetal monitoring should be established in that room unless delivery is reasonably expected to occur imminently. For patients about to undergo cesarean delivery, monitoring should continue as is feasible until abdominal preparation for surgery is begun.

When the clinician is concerned about the fetal status at delivery, a double-clamped segment of the umbilical cord should be set aside for possible arterial blood gas assessment. If the neonatal 5-minute Apgar score is 4 or less, umbilical artery blood should be sent for analysis whenever possible. Blood can be drawn from the clamped segment of cord at any time within an hour of delivery.

AFTER DELIVERY

Following delivery, the clinician must record all the events in the medical record, using forms, notation, and/or dictation as appropriate to the case. The clinician should be readily available to return to the unit until the immediate (30 minute) postpartum period is complete and the patient is stable.

INSTITUTIONAL RESPONSIBILITY

Each institution shall provide and maintain appropriate fetal monitoring apparatus to meet the needs of its patients. Accommodations for preserving all electronic fetal monitoring tracings (*see Guideline 1*) is also the responsibility of the institution, with special consideration and allocation of resources to assure permanent and secure preservation of fetal monitor tracings (antenatal and intrapartum) for all babies born with five minute Apgar scores of 4 or less. If copies of electronic fetal monitor strips are kept, then preservation and storage of paper fetal monitor strips is not necessary.

Each hospital shall have at least daily multidisciplinary meetings held on the Labor and Delivery unit, at which time all patients' relevant clinical issues shall be discussed and appropriate clinical and administrative plans agreed upon by the team caring for the patients.

CLINICIAN EDUCATION

Ongoing continuing education should be provided by each institution for all obstetrical personnel. Subjects to be reviewed may include FHR monitoring, emergency measures for the treatment of shoulder dystocia and eclampsia, and forceps or vacuum application. Each institution shall develop a program to evaluate and document staff competence.

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1. Macones GA, et al. The 2008 National Institute of Child Health and Human Development Workshop Report on Electronic Fetal Monitoring Update on Definitions, Interpretation, and Research Guidelines. *Obstet Gynecol.* 2008;112:661–66.
 2. Intrapartum fetal heart rate monitoring: nomenclature, interpretation, and general management principles. ACOG Practice Bulletin No. 106. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2009;114:192–202.
 3. American College of Nurse-Midwives. Intermittent auscultation for intrapartum fetal heart rate surveillance. *Clinical Bulletin no. 11. J Midwifery Womens Health* 2010;55:397–403.

GUIDELINE 17

Induction of Labor^{1,2}

Indications for the induction of labor should take into account maternal and fetal conditions, gestational age, cervical status, and other factors. Criteria for confirmation of fetal lung maturity should be met in these circumstances (*see Guideline 15*). Labor may be induced for non-medical reasons after 39 weeks gestation.

The risks and benefits of induction should be discussed and documented in the patient's medical record. In general, the contraindications to induction are the same as those for spontaneous labor and vaginal delivery. For women with a previous cesarean delivery, see Guideline 26.

PRIOR TO THE INDUCTION OF LABOR

1. Assess the pelvis; and fetal size, position, and presentation. The clinical rationale for the induction should always be documented in the patient's medical record.^{3,4}
2. Confirm gestational age. (*See Guideline 7.*)
3. Counsel the patient regarding potential risks to the mother or fetus, agents and methods of cervical ripening, and labor stimulation.
4. Evaluate fetal status with a non-stress test.
5. Select the method of induction based on the indications and assessment.
6. Documentation in the patient's medical record should include the following:
 - the risks and benefits of induction that have been discussed with the patient and the patient's stated understanding;
 - the reason for indicated or elective induction, and the clinical rationale;
 - the patient's gestational age and fetal status;
 - the method of induction planned; and
 - the method of cervical ripening when the cervix is unfavorable.

METHODS OF INDUCTION

1. Amniotomy
2. Oxytocin (e.g., Pitocin): Each obstetrical unit shall develop guidelines for the administration of oxytocin which, at a minimum, should include:
 - preparation and administration via a controlled infusion device,
 - monitoring of the mother and fetus,
 - management of uterine tachysystole,
 - description of training and competency of personnel administering oxytocin, and
 - readily available physician who has privileges to perform cesarean deliveries.

Adequate documentation of clinical reasoning is required and intrauterine pressure catheter (IUPC) may be considered when oxytocin infusion rates rise above 20 mu/min.

3. Synthetic Prostaglandin E₁ or E₂ (e.g., Misoprostol/Cytotec; or Dinoprostone/Cervidil, Prepidil or Prostin E₂): Each obstetrical unit shall develop guidelines for the administration of prostaglandin, which, at a minimum, should include:
 - indications and contraindications;
 - procedure, including dosage, frequency of administration, maximum number of doses, and the duration of fetal monitoring; and
 - options for treatment of uterine tachysystole.
4. Mechanical methods of cervical ripening: if the status of the cervix is unfavorable, mechanical cervical dilators may be used. Each obstetrical unit shall develop guidelines for the use of mechanical or osmotic dilators, such as: hygroscopic dilators, osmotic dilators (e.g., laminaria), and Foley catheter bulb.

INSTITUTIONAL RESPONSIBILITY

Guideline 17 continued

Each obstetrical institution is responsible for establishing standard policies and procedures for scheduling elective induction of labor, gestational age, and the indication and method for induction of labor, including the preparation and use of oxytocin and use of cervical ripening agents.

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1. Induction of labor. ACOG Practice Bulletin 107. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2009;114:386–97.
 2. ACOG/ACP Guidelines for Perinatal Care, Seventh Edition. Washington DC, October 2012.
 3. Reducing Inappropriate Induction of Labor: Case Study of Intermountain Health Care. The Commonwealth Fund. November 19, 2004. Available at: <http://www.commonwealthfund.org/Innovations/Case-Studies/2004/%20Nov/Reducing-Inappropriate-Induction-of-Labor--Case-Study-of-Intermountain-Health-Care.aspx>
 4. Management of Elective Labor Induction, 2012 Update. Intermountain Health Care. Available at: <https://kr.ihc.com/ext/Dcmnt?ncid=51061830>

GUIDELINE 18

Augmentation of Labor¹

Labor may be augmented with the use of oxytocin, amniotomy, or both.

PRIOR TO THE AUGMENTATION OF LABOR

The following criteria should apply:

- patient was evaluated and the pelvic exam documented;
- an indication for augmentation of labor, e.g., arrest or protraction of labor, prolonged latent phase of labor, hypotonic uterine contraction pattern;
- no contraindications to augmentation of labor;
- the fetal presentation is cephalic; and
- no evidence of fetal acidemia or hypoxemia, such as the presence of a Category III FHR tracing.

Explain to the patient the planned procedures and/or medications, including risks, benefits, and alternatives, and document the patient's agreement in the medical record.

AFTER THE INITIATION OF OXYTOCIN

(See Guideline 17.)

The patient should be monitored for effect, including:

- contractions either electronically or by palpation, with a goal of avoiding uterine tachysystole (hyperstimulation);
- fetal status (continuous electronic fetal monitoring is mandated, brief interruptions are acceptable);
- the progress of the patient's labor;
- monitoring the dose of oxytocin (adequate documentation of clinical reasoning is required and IUPC may be considered when oxytocin infusion rates rise above 20 mu/min); and
- when external monitoring is problematic, consider applying the IUPC for monitoring uterine contractions.

All of these monitoring activities should be recorded in the medical record.

INSTITUTIONAL RESPONSIBILITY

Each obstetrical unit shall develop guidelines for the use of oxytocin (*see Guideline 17*). The institution is responsible for ensuring that enough controlled infusion devices for administration of oxytocin are maintained and available to meet the needs of the patient population.

1. Dystocia and augmentation of labor. ACOG Practice Bulletin No. 49. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2003;102:1445–54.

GUIDELINE 19

Operative Vaginal Delivery^{1,2}

The vacuum extractor or forceps should only be used if all of the following are met:

1. The delivering clinician has clinical privileges to use a vacuum extractor or forceps.
2. Capability to perform an emergency cesarean delivery is available if unexpected difficulties are encountered.
3. Informed consent has been obtained and the patient agrees to the procedure.
4. The fetal head (exclusive of any caput) has reached at least +2 cm (scale: -5 to +5) and clinical pelvimetry indicates that delivery without fetal or maternal trauma can reasonably be expected.
5. The cervix is completely dilated and the membranes ruptured.
6. The delivering clinician has assessed the station, position, and attitude of the fetal head as appropriate to permit an accurate cephalic application of the forceps blades, or vacuum cup.
7. Adequate analgesia is provided.
8. Urinary bladder is empty.

For use of the vacuum extractor:

1. Gestational age must be 34 weeks or greater.
2. Careful pelvic examination to rule out any maternal tissue trapped between the vacuum cup and fetal head.
3. Vacuum extraction and commitment to vaginal delivery should be reevaluated in the event of:
 - failure of descent of the vertex with the first traction effort,
 - delivery that is not imminent after four traction efforts, or
 - vacuum cup detachment that occurs three times.

If the vacuum extractor or forceps fails to accomplish delivery despite proper application and technique, then a subsequent trial with the alternate instrument is appropriate only in carefully selected cases. If possible, a second opinion from another physician is recommended if a trial with the alternate

Guideline 19 continued

instrument is planned. The consultant shall document his or her obstetrical evaluation and recommendation in the patient's medical record (*see Guideline 4*).

The incidence of intracranial hemorrhage is highest among infants delivered by cesarean following a trial of vacuum or forceps, or a combination of vacuum and forceps. Therefore, a trial of operative vaginal delivery should be attempted only when the likelihood of success is high.

The clinician shall dictate a detailed operative note which should include:

- the station and position of the fetal head,
- the fetal status at the time of application of vacuum extractor or forceps,
- indications, and
- clinical rationale and substantive risks discussed with the patient.

For vacuum extractions, the note must also include:

- the instrument used and pressure settings,
- number of attempts, and
- duration of the procedure.

In addition to a dictated detailed operative note, the delivering clinician should document the operative procedure in the patient's medical record immediately following the delivery.

1. ACOG/ACP *Guidelines for Perinatal Care*, Seventh Edition. Washington DC, October 2012.

2. Operative vaginal delivery. ACOG Practice Bulletin 17. American College of Obstetricians and Gynecologists. June 2000. Reaffirmed 2012.

GUIDELINE 20

Prevention of Retained Sponges and Needles Following Vaginal Delivery

Retained foreign objects after surgeries or procedures are considered serious reportable events, one of the 28 events identified in the Commonwealth of Massachusetts' uniform non-payment policy.¹ Retained foreign objects following vaginal delivery and obstetrical surgery procedures are events that can be prevented by implementing the following steps:

- Two qualified personnel, including the primary care nurse, will perform sponge and needle counts before and after each delivery. The counts should be documented in the medical record. If a pre-delivery sponge count is not possible, as with a precipitous delivery, then sponges shall not be utilized until after the delivery, when a count can be systematically performed prior to their use.
- All sponges used in deliveries should be radio-opaque.
- If there is a discrepancy in the sponge count at the completion of the delivery, then manual search of the vagina should be performed and findings documented by the delivering obstetrical provider. If the discrepancy persists, then the further search of the delivery area should be performed and findings documented in the medical record. A diagnostic X-ray of the patient may be considered to ensure missing sponges are not retained in the vagina.
- If there is a discrepancy in the needle count and careful inspection of the vagina and search of the delivery area do not locate the needle, then diagnostic X-ray is expected to ensure that the missing needle is not retained in the patient.

- The nurse should record the final status of the sponge and needle counts on the Labor and Delivery patient flow record and the obstetrical provider should similarly document in the delivery note.
- Purposeful placement and retention of vaginal sponges or packing in the vagina, as in the setting of post partum hemorrhage, necessitates a reliable method of tracking and communicating such with members of the obstetrical care team.

1. HealthyMass Serious Reportable Events Task Force, POLICY GUIDELINES. Available at: <http://www.mass.gov/eohhs/docs/eohhs/healthymass/sre-guidelines.pdf> Accessed June 20, 2013.

GUIDELINE 21

Management of Breech Presentations^{1,2}

EXTERNAL CEPHALIC VERSION

I. Patient Selection

External cephalic version should be discussed with all women who are carrying a breech presenting singleton fetus as early as the clinician feels is suitable. The discussion and its conclusion should be documented in the prenatal record.

Factors that may preclude version:

- fetal compromise
- non-reactive non-stress test
- intrauterine growth restriction
- oligohydramnios
- placenta previa
- abruption
- premature rupture of the membranes
- multiple gestation
- significant uterine anomaly
- hyperextended fetal head
- contraindications to a vaginal delivery
- observed nuchal cord
- fetal anomalies

2. Education/Consent

A discussion with the patient should precede the performance of the procedure and include:

- pregnancy management after a successful or unsuccessful version,
- success rate of attempted version,
- risks and benefits of the procedure, and
- when to call following the procedure.

See Appendix D for a sample consent form for this procedure. This, or a reasonable facsimile, should be reviewed with and signed by the patient prior to the procedure.

Guideline 21 continued

3. Prior to the Procedure

- arrange a location in close proximity to the delivery unit;
- confirm that an immediate pre-procedure non-stress test is reactive;
- perform an immediate pre-procedure sonogram to confirm presentation and that there is normal amniotic fluid volume;
- perform a formal fetal anatomy survey (if one has not been performed previously) to evaluate the possibility of significant congenital anomalies;
- consider a tocolytic agent (tocolytics are relatively contraindicated in patients with heart disease, diabetes, or disorders of the thyroid—*See Guideline 11*); and
- consider regional anesthesia if the procedure is to be performed in the operating room.

4. During the Procedure

Monitor the fetal heart rate, at minimum, every 30 seconds during the procedure.

5. Following the Procedure

- observe the patient for at least one hour;
- continuously monitor the fetal heart rate and pattern via electronic fetal monitor apparatus for a minimum of one hour;
- confirm a Category I fetal heart rate tracing post-procedure, prior to discharge;
- administer Rhogam if indicated;
- instruct the patient about follow-up plans, and advise whom to call in the event of any issues;
- give the patient a written discharge instruction sheet.

6. Documentation of the Procedure

The details on the procedure should be recorded in the patient's medical record, including:

- gestational age;
- Rh blood type
- results of pre-procedure testing;
- medication administered;
- details on the version attempt, whether it was successful or unsuccessful;
- post-procedure testing; and
- future plans.

DELIVERY OPTIONS: BREECH SINGLETON

Cesarean delivery is the most usual method for delivery of a breech singleton living fetus without any significant congenital anomalies. Assessment of the fetal presentation should be performed immediately prior to a scheduled cesarean.

Planned vaginal delivery of a term singleton breech may be reasonable under hospital-specific protocol for both eligibility and management of labor.^{1,2} If the patient opts for a vaginal breech delivery, a detailed written informed consent shall be obtained and placed in the medical record. Women should be informed that the risk of perinatal or neonatal mortality or short-term serious morbidity may be higher than for cesarean delivery.

In this circumstance:

- the obstetrician must be skilled in vaginal breech delivery or have adequate back-up consultants available;
- the adequacy of the pelvis must be assessed; the estimated fetal weight, type of breech, and fetal attitude shall be determined;

- oxytocin shall not be used for induction or augmentation;
- labor dysfunction of any type warrants delivery by cesarean; and
- breech delivery should be permitted to occur spontaneously, or by assisted breech delivery maneuvers as indicated.

1. Mode of term singleton breech delivery. ACOG Committee Opinion No. 340. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2006;108:235–37.

2. External cephalic version. ACOG Practice Bulletin No. 13. American College of Obstetricians and Gynecologists; February 2000. Reaffirmed 2012.

GUIDELINE 22

Management of Twins

The clinician and the patient should have a discussion about the delivery options during the antenatal period and that discussion should be documented in the medical record. An example of a specific written consent is available in *Appendix F*.

TIMING OF DELIVERY

Dichorionic twin pregnancies should usually be delivered after the end of the 37th week, and not later than their due date. Monochorionic diamniotic twins should be delivered no later than 37 weeks gestation. Prior assessment of fetal lung maturity is not required for such cases.¹

INTRAPARTUM CONSIDERATIONS

1. The obstetrical care provider should evaluate and document fetal presentations.
2. Continuously monitor (via EFM) both fetuses throughout active labor and delivery.
3. Intravenous access should be established.
4. Pain relief remains the patient's choice.
5. Sufficient personnel should be available to care for the mother and each baby.
6. An ultrasound should be available throughout the delivery to confirm presentation and, if necessary, to document the fetal heart rate.
7. Cesarean delivery is indicated for twin pregnancies with a non-vertex presenting twin unless vaginal delivery is imminent.

AFTER VAGINAL DELIVERY OF THE FIRST TWIN

1. When monitoring indicates a Category I or II intrapartum fetal heart rate, there is no urgency to deliver the second twin (delivery interval does not appear to affect perinatal outcome).
2. If the second twin is not in a vertex presentation, an obstetrician skilled in vaginal breech delivery should be available.

Guideline 22 continued

- Total breech extraction, assisted breech delivery, cesarean delivery, and attempted external cephalic version are all acceptable approaches to the delivery of a breech second twin. Vaginal breech delivery is not recommended in the presence of significant discordance (i.e., second twin larger than first). Previous ultrasound (within 2–4 weeks of labor) can be valuable in determining discordance.

1. Multiple gestation: complicated twin, triplet, and high-order multifetal pregnancy. ACOG Practice Bulletin No. 56. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2004;104:869–83.

GUIDELINE 23

Prolonged Pregnancy

Many descriptive labels are applied to pregnancies that go beyond the expected date of delivery (EDD). CRICO Guidelines supports ACOG's classifications.¹

Late term: 41⁰/₇ weeks of gestation through 41⁶/₇ weeks of gestation.

Post-term: 42⁰/₇ weeks of gestation and beyond.

Post-term pregnancies are at risk for adverse outcomes that include an increased incidence of perinatal and neonatal morbidity and mortality, uteroplacental insufficiency, meconium aspiration, and intrauterine infection. Late term pregnancies may also be at risk for an increased incidence of perinatal and neonatal morbidity. Accurate assessment of gestational age is of paramount importance for management of pregnancy, interpretation of test results and timing of interventions. (*See Guideline 7.*)

RISKS OF INDUCTION VS. EXPECTANT MANAGEMENT

Clinicians should be familiar with the acceptable alternative methods of management of late term and post-term pregnancies. Whichever method is chosen, the prenatal record must indicate that a discussion regarding management of pregnancy exceeding 41 weeks gestation occurred between the obstetrical provider and the patient.

The risks of induction include: failed induction, possibly leading to a cesarean delivery, and complications related to the use of oxytocin or prostaglandin administration, such as uterine tachysytote (hyperstimulation) and fetal intolerance of contractions.² The risks of continued expectant management include but are not limited to: intrauterine fetal demise, meconium aspiration syndrome, dysmaturity syndrome, and aspiration of meconium particulate matter.

MANAGEMENT OF LATE-TERM PREGNANCY

CRICO recommends the following approach to managing pregnancies that go beyond the completion of the 41st gestational week.

If the cervix is:

1. favorable for oxytocin induction (patient is nullipara or multipara), then induction is preferred; fetal surveillance is an acceptable alternative;
2. not favorable for oxytocin induction and the patient is a multipara, then induction or fetal surveillance are acceptable alternatives; or
3. not favorable for oxytocin induction and the patient is a nullipara, then induction or fetal surveillance are acceptable alternatives.

If fetal surveillance is chosen, then twice-weekly fetal testing should begin by 7–9 days after the EDD.

MANAGEMENT OF POST-TERM PREGNANCY

Steps should be initiated to deliver the patient by induction or cesarean delivery as soon as is feasible.

1. Definition of term pregnancy. ACOG Committee Opinion No. 579. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2013;122:1139–40.

2. Induction of labor. ACOG Practice Bulletin 107. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2009;114:386–97.

GUIDELINE 24

Macrosomia¹

For the purposes of these *Guidelines*, fetal macrosomia implies growth beyond 4,500 grams (approximately 1–2 percent of live born infants achieve this birth weight). Risks for morbidity for mother and baby increase sharply beyond this weight compared to the general population. Clinical palpation and sonography are similar in their ability to estimate the presence of macrosomia.

PRENATAL COUNSELING

When macrosomia is clinically suspected, patients should be informed of the potential risks and such discussion should be documented in the prenatal record.

Maternal risks include:

- increased likelihood of cesarean delivery,
- vaginal lacerations, and
- postpartum hemorrhage.

Fetal risks include:

- shoulder dystocia,
- fractured clavicle, and
- damage to the nerves of the brachial plexus producing symptoms ranging from temporary upper extremity weakness to permanent paralysis, which is extremely rare (most infants delivered vaginally with birth weight >4,000 grams and a brachial nerve injury do not have a permanent paralysis).

INTRAPARTUM COUNSELING

The responsible intrapartum clinician should confirm that the patient understands the risks and document this in the intrapartum record.

DELIVERY OPTIONS

If the estimated fetal weight is 5,000 grams or greater (4,500 grams or greater for infants of diabetic mothers), then prophylactic cesarean delivery may be considered.

Induction of labor for macrosomia is not recommended because it does not improve maternal or fetal outcomes and failed induction may result in unnecessary cesarean delivery.

*Guideline 24 continued***POSTPARTUM DOCUMENTATION**

In the event of shoulder dystocia, a dictated operative note or its electronic equivalent should be completed. This note shall include the indications and rationale for any procedure or maneuvers selected. (*See Guidelines 1 and 25, and the Sample Form for Documenting Shoulder Dystocia.*)

The clinician's hospital risk management unit should be notified of all cases of infant upper extremity weakness or paralysis.

INSTITUTIONAL RESPONSIBILITY

Each obstetrical institution is responsible for developing a plan for routine safety drills to prepare staff in the event of shoulder dystocia and other obstetrical emergencies.²

1. Fetal macrosomia. ACOG Practice Bulletin 22. American College of Obstetricians and Gynecologists. November 2000. Reaffirmed 2013.

2. Joint Commission: http://www.jointcommission.org/assets/1/18/SEA_30.pdf

GUIDELINE 25

Management of Shoulder Dystocia

Diagnosis of shoulder dystocia is made when the practice of gentle downward guidance of the fetal head fails to accomplish delivery of the anterior shoulder requiring the need for additional obstetrical maneuvers for the delivery of the fetal shoulders.^{1,2}

A plan for the use of maneuvers to alleviate the shoulder dystocia and obtaining assistance by additional members of the obstetrical team should be in place since shoulder dystocia is most often an unpredictable and unpreventable obstetrical emergency.

DOCUMENTATION

If a shoulder dystocia occurs, this event and the details used to resolve it must be entered into the medical record as an operative report and dictated (or the electronic equivalent completed) immediately after the delivery.

This information should include:

- time of delivery of the fetal head and the time of complete expulsion of the body,
- maneuvers used,
- Apgars of the newborn,
- maternal complications,
- infant complications, and
- names of staff in attendance at the delivery.

The clinician's hospital risk management unit should be notified of all cases of infant complications.

INSTITUTIONAL RESPONSIBILITY

Each obstetrical institution is responsible for developing a plan for obstetrical safety drills to prepare staff in the event of high acuity, low frequency emergent events such as shoulder dystocia.

1. Shoulder dystocia. ACOG Practice Bulletin No. 40. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2002;100:1045–50.

2. Barbieri R. The natural history of obstetric brachial plexus injury. *OBG Management.* 2013;25(2):8–14.

GUIDELINE 26

Patients with Previous Cesarean Delivery^{1,2}

EVALUATION

Make an effort during the pregnancy to document the type of prior incision made in the uterus, and the indication(s) for the prior cesarean delivery. The maternal pelvis should be clinically evaluated.

Contraindications to a trial of labor after cesarean:

- prior cesarean delivery involving the upper contractile portion of the uterus (classical uterine incision),
- prior T incisions on the uterus,
- prior uterine surgery involving the upper contractile portion of the uterus with significant disruption of the uterine wall or entering of the uterine cavity,
- prior uterine rupture or dehiscence,
- more than two consecutive cesarean deliveries and no prior or interval vaginal deliveries,
- a too small or “contracted” pelvis, and
- other contraindication to vaginal delivery.

If the previous operative note cannot be located, an unknown scar is not a contraindication to trial of labor.

COUNSELING

Discuss with eligible patients the risks and benefits of a trial of labor after cesarean versus a scheduled repeat cesarean delivery. This discussion should occur after all past obstetrical history is obtained and should, ideally, occur early in the pregnancy. Issues that may be important in this decision include:

- success rates of a trial of labor;
- perinatal morbidity and mortality;
- maternal morbidity, including infection, operative injury, hysterectomy, transfusion;
- uterine rupture;
- recovery and hospital stay; and
- risk of additional cesarean deliveries.

A consent form should be used as documentation of this discussion in the medical record (*see Appendix E*).

SCHEDULED REPEAT CESAREAN DELIVERY

Patients for whom labor is contraindicated, such as those with previous classical uterine incision or myomectomy in the upper contractile portion of the uterus, should be delivered by a scheduled repeat cesarean delivery. Timing of delivery will be determined by clinical circumstances.

Patients with lower uterine segment incisions, who decline a trial of labor, can be scheduled for a repeat cesarean delivery by or after seven days prior to the EDD. Alternately, the patient and the clinician may choose to await the onset of labor.

TRIAL OF LABOR AFTER CESAREAN DELIVERY

1. A physician who has credentials to perform an emergent cesarean delivery should be immediately available throughout active labor.
2. Anesthesia and nursing/operating room personnel should be available for emergent performance of a cesarean delivery.
3. Continuous electronic fetal monitoring should be instituted no later than the institution of the use of epidural or oxytocin. According to ACOG, most authorities recommend continuous electronic monitoring during labor.
4. Intravenous access should be obtained in all patients with a prior cesarean delivery.
5. Oxytocin may be used for augmentation of labor in the absence of disproportion.
6. Oxytocin may be used for cervical ripening or induction after a discussion with the patient of the increased risk of uterine rupture associated with its use.
7. Prostaglandins (including Misoprostol) should not be used for cervical ripening or the induction of labor after a prior cesarean delivery or major uterine surgery.

After a successful vaginal delivery, exploration of the prior uterine scar is not necessary in the absence of symptoms of uterine rupture, such as bleeding.

1. Vaginal birth after previous cesarean delivery. ACOG Practice Bulletin No. 115. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2010;116:450–63.

2. Induction of labor. ACOG Practice Bulletin 107. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2009;114:3

GUIDELINE 27

Cesarean Delivery on Maternal Request

Cesarean delivery on maternal request is defined as a primary cesarean performed at patient request without medical indication. Each physician may decide to support the patient request or not on a case-by-case basis. Primary cesarean delivery on maternal request without medical indication should not be scheduled before seven days prior to the EDD (*see Guideline 15*). If a physician agrees to perform a primary cesarean delivery upon patient request, then detailed written informed consent should be obtained. A sample consent form for this procedure is available (*see Appendix G*).

GUIDELINE 28

Communication Prior to Obstetrical Surgery

Each institution will develop guidelines for communication prior to obstetrical surgery.¹⁻³ Guidelines should include specific items to be communicated by the surgical team, which may include the obstetrician, surgical assistant, scrub nurse or scrub tech, circulating nurse, and the anesthesiologist. Communication should be ongoing and may include a preoperative briefing of the surgical team in addition to the formal time-out (surgical pause).

BRIEFING

The purpose of a briefing is to gather the care team together prior to moving to the operating room in order to introduce members of the team, confirm that the correct documentation is present (e.g., history and physical, consents) and to assure the team has a shared mental model regarding the planned procedure.

TIME OUT

The purpose of a time-out is to confirm correct patient and procedure immediately prior to initiation of the procedure/surgery. A standardized, scripted, interactive time-out should be performed before each obstetrical procedure, including but not limited to: cesarean delivery, external cephalic version, peripartum hysterectomy, and dilation and evacuation. The time-out should be documented in the patient's record. Content and timing of the time-out should be addressed in the institutional guidelines.

Items that should be considered for inclusion for communication during the briefing and the time-out.

- confirmation of patient identity from two sources;
- confirmation of planned procedure(s);
- confirmation of patient allergies;
- confirmation of completed consent;
- confirmation of antibiotic request or administration: prophylactic, otherwise, or none needed;

GUIDELINE 29

Anesthesia in Obstetrics

- factors that may significantly affect the length of time for the surgical procedure (such as, but not limited to, placenta previa, multiple previous surgeries, known previous adhesions, fibroid uterus);
- anticipated need for pediatric providers for the birth;
- anticipated need for blood products;
- anticipated need for special or additional equipment;
- other planned procedures, such as tubal ligation; and
- other existing pathology that should be evaluated at the time of the procedure (such as a previously noted ovarian cyst).

In an emergency, when any delay is inadvisable, the staff should cover as many of these items as possible while preparing or in the initial phases of the case.

In general, surgical marking is seldom required in obstetrical procedures. If unilaterality in approach and planned procedure exists, institutional guidelines should be established in order to standardize surgical marking.

1. Obstetrical surgery includes, but may not be limited to, cesarean delivery, cerclage placement, postpartum tubal ligation, and dilation and evacuation (D&E).

2. Patient safety in the surgical environment. ACOG Committee Opinion No. 464. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2010;116:786–90.

3. Joint Commission Universal Protocol. Effective July 1, 2004. Available at: http://www.jointcommission.org/facts_about_the_universal_protocol/

This guideline has been adapted from the *Practice Guidelines for Obstetrical Anesthesia* and the *Guidelines for Regional Anesthesia in Obstetrics* as approved by the American Society of Anesthesiologists.¹⁻⁵ It applies to obstetrical patients receiving major neuraxial anesthesia (spinal, epidural, combined spinal-epidural); general anesthesia; or monitored anesthesia care (MAC) for labor analgesia or operative procedures.

1. Regional anesthesia should be initiated and maintained only in locations in which appropriate resuscitation equipment and drugs are immediately available to manage procedure-related problems. Resuscitation equipment should include, but is not limited to:
 - sources of oxygen and suction;
 - equipment to maintain an airway and perform endotracheal intubation;
 - a means to provide positive pressure ventilation;
 - drugs and equipment for cardiopulmonary resuscitation;
 - a protocol for the management of failed endotracheal intubation;
 - adjunctive devices for the management of failed intubation such as LMA, Combi-tube, or video-laryngoscope or fiberoptic intubation devices;^{6,7} and
 - lipid rescue therapy.^{8,9}
2. Surgical airway management must be available.
3. Anesthesia should be initiated and maintained by, or under the medical supervision of, a physician with appropriate privileges. Other anesthesia care providers should be credentialed to manage obstetrical anesthesia under the medical direction of a physician as appropriate.
4. Prior to the initiation of anesthesia for labor or operative obstetrical procedures:
 - The patient must be examined by an appropriate obstetrical care provider.

Guideline 29 continued

- An anesthesia care provider must perform a focused pre-anesthesia evaluation which should include, but is not limited to, maternal health history, anesthesia-related history, an airway exam, and baseline vital signs. Examination of other organ systems should be performed as indicated. Laboratory testing should be performed when appropriate indications exist.
 - A physician credentialed to perform an operative vaginal or cesarean delivery must be available.
 - An intravenous infusion should be established and maintained throughout the duration of the regional anesthetic. Whenever possible, this should be a large bore cannula (≥ 18 gauge).
 - A pre-procedure verification/time-out should be performed.
5. During routine regional anesthesia for labor, maternal vital signs and the fetal heart rate should be monitored and documented. Additional monitoring of the parturient or fetus should be employed when indicated.
 6. Patients who receive extensive regional block, MAC, or general anesthesia must be monitored, according to the standards for basic anesthesia, by a qualified anesthesia personnel present in the room who is monitoring the patient's oxygenation, ventilation, circulation, and temperature.
 7. The primary responsibility of the primary anesthesiologist is to provide care to the mother. Qualified personnel, other than the anesthesiologist attending the mother, should be immediately available to assume responsibility for resuscitation of the newborn.
 8. A physician with appropriate privileges to administer obstetrical anesthesia shall be available in the medical facility from the initiation of an anesthetic until the patient's post-anesthesia condition is satisfactory and stable. Should this physician become unavailable for reasons that would not permit timely return to the patient (such as surgery), he or she must provide the nursing staff with the name of an alternate clinician who:
 - agrees to assume responsibility for the care of the patient,
 - is readily available, and
 - is capable of intervening in emergency circumstances.
 9. All patients recovering from routine regional anesthesia for labor should receive appropriate post-anesthesia care. Following extensive regional blockade, MAC, or general anesthesia, the standards for post-anesthesia care should be applied:⁴
 - A post-anesthesia care unit (PACU) should be available to receive patients. The design, equipment, and staffing should meet requirements of the facility's accrediting and licensing agencies.
 - Obstetric units must develop a policy for the management of patients in the PACU. This policy should describe who is responsible for the care of patients in the PACU, how they will be monitored, and the process for discharge. Specifically, it must address whether patients will be discharged by a nurse according to protocols, or signed out by an independent licensed practitioner. The protocol for discharge by nurses must be delineated.
 - When a site other than the PACU is used, equivalent post-anesthesia care should be provided.
 10. Whenever possible, pregnant patients with co-morbid conditions that may pose an increased anesthesia risk should be evaluated by an anesthesia care provider prior to labor so that a multi-disciplinary care plan can be created. Such patient conditions include, but are not limited to:
 - morbid obesity,
 - significant cardiac or intracranial lesions,
 - a personal or family history of major adverse reaction to anesthesia (such as malignant hyperthermia),
 - coagulopathy,
 - history of difficult intubation, and
 - significant back surgery (e.g. lumbar scoliosis repair) that might preclude the use of regional anesthesia.

GUIDELINE 30

Placental Pathology Evaluation

The decision to submit the placenta to the hospital's Department of Pathology for gross and microscopic examination should be based upon a reasonable likelihood that such an examination will:

- facilitate the diagnosis of maternal-fetal conditions associated with adverse outcomes; and
- provide information salient to or allow prognosis for future pregnancies and their outcomes.

The American College of Obstetricians and Gynecologists (ACOG) offers no formal guidelines recommending placental examination based on specific clinical conditions with the exception of stillbirth.¹ ACOG regards placental examination as “an essential component” of stillbirth evaluation. Some clinicians have advised that all placentas be submitted to pathology for examination;^{2,3} however, there is a lack of consensus for routine examination.

CONDITIONS FOR PLACENTAL EXAMINATION

Individual judgment is warranted concerning the appropriateness of submitting the placenta, with as much umbilical cord as is feasible, for pathologic evaluation. Consider submitting the tissue if one is in doubt. CRICO supports placental examination under the following maternal or fetal clinical conditions:

1. Maternal Conditions

- diabetes
- hypertension
- maternal substance abuse
- prematurity (less than completion of 37th gestational week)
- post-maturity (greater than the completion of the 42nd gestational week)

2. Peripartum Conditions

- temperature greater than 100.4° F (intrapartum)
- suspected or proven infection

1. Obstetrical Anesthesia Committee. *Guidelines for Neuraxial Anesthesia in Obstetrics*. American Society of Anesthesiologists. (Approved by House of Delegates on October 12, 1988 and last amended on October 20, 2010).
2. Obstetrical Anesthesia Committee. *Practice Guidelines for Obstetric Anesthesia*. Anesthesiology. 2007; 106:843–63.
3. Obstetrical Anesthesia Committee. *Standards for Basic Anesthetic Monitoring*. American Society of Anesthesiologists. (Approved by House of Delegates on October 21, 1986 and last amended on October 20, 2010 with an effective date of July 1, 2011).
4. Obstetrical Anesthesia Committee. *Standards for Post Anesthesia Care*. American Society of Anesthesiologists. (Approved by the ASA House of Delegates on October 27, 2004, and last amended on October 21, 2009).
5. Obstetrical Anesthesia Committee. *Optimal Goals for Anesthesia Care in Obstetrics*. American Society of Anesthesiologists. Approved by the ASA House of Delegates on October 17, 2007 and last amended on October 20, 2010
6. Maassen R, et al. A comparison of three videolaryngoscopes: the Macintosh laryngoscope blade reduces, but does not replace, routine stylet use for intubation in morbidly obese patients. *Anesth Analg* 2009;109:1560–5.
7. Stroupoulis K, et al. Videolaryngoscopy in the management of the difficult airway: a comparison with the Macintosh blade. *Eur J Anaesthesiol* 2009;26:218–22.
8. Rowlingson JC. Lipid rescue: a step forward in patient safety? Likely so! *Anesth Analg* 2008;106:1333–6
9. Weinberg GL. Lipid infusion therapy: translation to clinical practice.

Guideline 30 continued

- bleeding, of magnitude beyond “show” (for example: suspected abruption placenta, placenta previa, vasa previa, etc.)
 - oligohydramnios or polyhydramnios
3. Fetal/Neonatal Conditions
 - still birth (antenatal, or intrapartum) or neonatal death in the delivery or operating room
 - multiple births
 - all major or minor congenital anomalies
 - fetal growth restriction
 - hydrops fetalis or an edematous placenta
 - meconium (thin or thick), noted on admission or occurring in labor
 4. Immediate Neonatal Course
 - Apgar scores of 4 or less at 5 minutes
 - suspected neonatal infection
 5. Gross Placental Anomalies

1. Management of stillbirth. ACOG Practice Bulletin No. 102. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2009; 113:748–61.

2. Salafia CM, Vintzileos AM. Why all placentas should be examined by a pathologist in 1990. *Am J Obstet Gynecol.* 1990;163:1282–93.

3. Langston C, et al. guideline for examination of the placenta: developed by the Placental Pathology Practice Guideline Development Task Force of the College of American Pathologists. *Arch Pathol Lab Med.* 1997 May;121(5):449–76.

GUIDELINE 31

Postpartum Care

IN-HOSPITAL CARE

Patients should be seen each day of their hospitalization by an obstetrical provider. This person assesses for medical complications and psychosocial issues, addresses any questions or concerns, and arranges for discharge.

Each institution shall have a process or program to instruct each patient regarding normal postpartum events. These instructions should include care of the breasts, perineum, bladder, the incision (if appropriate) and signs of complications. Instruction about infant care, infant feeding (including the benefits of breastfeeding), and subsequent maternal and newborn medical examinations should also be included. Verbal instructions should be supplemented with written instructions and reinforced by providers. The need for and timing of follow up should be clearly communicated to the patient.

Plans for management or referral of ongoing problems should be instituted when appropriate, including evaluation of problems identified during the pregnancy. Vaccine status should be assessed and vaccination for Tdap, influenza, rubella and varicella should be initiated if indicated. Contraception should be discussed and a plan established with the patient.

AFTER DISCHARGE

Consideration should be given to an early follow-up postpartum visit for women with medical complications or those women at risk for postpartum depression, such as:

- past episodes of depression,
- family history of mood disorder, or
- unusually stressful life events.¹

All women, including those with an earlier visit (as above), should be advised to have a visit four to eight weeks postpartum. That visit should include a complete review of the pregnancy and events that occurred during labor, delivery, and the immediate postpartum period for the outpatient medical record if not already completed. The patient should be asked

about her recent history and current symptoms. All postpartum women should be assessed for and counseled about postpartum depression and domestic violence and should be informed about support services offered through the institution or community.² Use of one of the validated screening tools for postpartum depression may be helpful. An appropriate physical exam should be performed including, at a minimum, vital signs and examination of the breasts, abdomen, pelvis, perineum, and extremities.

1. Wisner KL, et al. Postpartum depression. *N Eng J Med.* 2002;347(3):194–99.

2. Screening for depression during and after pregnancy. ACOG Committee Opinion No. 453. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2010;115:394–95.

GUIDELINE 32

Circumcision

Circumcision is the surgical removal of the foreskin of the penis. In the neonatal period, this is an elective procedure performed at the request of the parent(s).

Each institution will develop guidelines for circumcision, including:

- contraindications (e.g., abnormal genital structure, prematurity);
- requirements for ascertaining normal physical examination of the infant prior to procedure;
- preparation for procedure, including obtaining consent (using a form specifically for circumcision);
- time-out (surgical pause) is required prior to the procedure to confirm the patient and the presence of completed consent;
- pain relief: injection anesthetic, such as dorsal penile nerve block or subcutaneous ring block, is expected unless the parent declines; should the parent decline injection then use of a topical anesthetic agent may be considered; swaddling, oral sucrose and acetaminophen administration may be considered for comfort of the newborn during the procedure but are not sufficient as a sole method of analgesia;¹
- documentation; and
- qualifications of performing clinicians.

Pediatricians, obstetrical providers, and nurses should all be involved in the development/approval of guidelines.

Each institution will track short-term complications of the procedure, including the type of complication, the method of circumcision, and the performing clinician.

1. Circumcision. ACOG Committee Opinion No. 260. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2001;98:707–08.

GUIDELINE 33

Reporting of Adverse Outcomes

Routine screening for adverse outcomes shall be conducted at each institution for the purpose of capturing untoward outcomes, determining trends, developing corrective action, and providing timely information. The following patient outcomes should be reported to the institution's risk management and quality assurance personnel as soon as possible.

INFANT CONDITION OR COMPLICATION

- Apgar score of 3 or less at five minutes
- Brachial plexus palsy
- Congenital deformity or birth injury leading to incapacity or disability¹
- Cord pH less than 7.0
- Fracture of any long bone (excluding clavicle)
- Fractured skull
- Infant abduction
- Intracranial bleed unrelated to prematurity
- Meconium aspiration
- Neonatal seizures within the first 48 hours
- Respiratory distress syndrome after elective induction or elective repeat cesarean delivery
- Stillbirth or neonatal death in fetuses >24 weeks or >500 grams
- Surgical injury, including laceration of infant
- Term infant (>36 weeks) >2,500 grams admitted for >24 hours to Level II or Level III nursery
- Unconsented circumcision

MATERNAL COMPLICATIONS

- Death
- Eclampsia
- Failure to perform planned procedure
- Hysterectomy
- Maternal readmission within two weeks of discharge
- Need for return to delivery room or operating room for unplanned procedure
- Retained sponge, instrument, or needle
- Surgery done on the wrong person or the wrong organ
- Surgical or delivery injuries, including burns and nerve injuries
- Symptomatic uterine rupture
- Unconsented procedure
- Unplanned transfer to intensive care

INSTITUTIONAL RESPONSIBILITY

Events identified as being Serious Reportable Events (SREs) must be reported by the institution to the Commonwealth of Massachusetts Executive Office of Health and Human Services Department of Public Health.¹

Each obstetrical institution is responsible for developing policies and procedures for disclosure to patients of adverse events and outcomes involving their care.²

1. Massachusetts Department of Public Health website for reportable incidents. Available at: <http://www.mass.gov/dph>

2. If an adverse event occurs. CRICO. Available at: <https://www.rm.harvard.edu/Clinician-Resources/Article/2009/What-to-do-After-an-Adverse-Event>

GUIDELINE 34

Institutional Responsibilities

When obstetrical services are provided in a CRICO-insured institution, the following support services, staff training and arrangements are the responsibility of the institution:

FOR EMERGENCY SUPPORT

1. Blood products should be available at all times.
2. Personnel capable of performing an emergent surgical airway must always be immediately available.
3. Obstetrical (maternal) resuscitation guidelines should be readily available by each institution and include:
 - a designated response team for maternal emergencies in Labor and Delivery that includes members familiar with the physiologic changes of pregnancy and the procedures for notification of the response team; and
 - a designated response team for obstetrical patients who experience emergencies anywhere in the hospital other than Labor and Delivery.
4. Consultants from other services should be readily available as needed.

FOR INFANT IDENTIFICATION AND PROTECTION

1. Each institution should affirm the identity of the newborn prior to any procedure, testing, and prior to being released to the mother and/or her designee(s) while in the hospital.
2. Each institution should establish clear protocols to prevent infant abduction.

FOR GENERAL SUPPORT

These responsibilities are imbedded in specific guidelines, and repeated here for clarity. CRICO-insured institutions are responsible for:

1. Adequate resources for record processing and adhering to record keeping standards including compliance with federal regulations (e.g., HIPAA) and its mandate for a designated institutional compliance officer (*Guideline 1*).
2. Accommodations for preserving all electronic fetal monitoring tracings (*Guideline 1*).

3. Support for quality improvement activities (*Guideline 1*).
4. A formal process to resolve disagreements between professional staff about medical management, conduct of labor, or interpretation of tests of fetal status (*Guideline 5*).
5. A standard policy and procedure for establishing gestational age (*Guideline 7*).
6. A system by which alternative clinician coverage (as needed) is clearly communicated and readily available to all members of the labor and delivery staff (*Guideline 14*).
7. Provide and maintain appropriate fetal monitoring apparatus to meet the needs of its patients (*Guideline 16*).
8. At least daily multidisciplinary meetings held on the Labor and Delivery unit to discuss all patients' relevant clinical issues and have appropriate clinical and administrative plans agreed upon by the team caring for the patients (*Guideline 16*).
9. A standard policy and procedure for scheduling elective induction of labor (*Guideline 16*).
10. A standard policy and procedure for establishing the indication and method for induction of labor, including the preparation and use of oxytocin and use of cervical ripening agents (*Guideline 17*).
11. Guidelines for the use of oxytocin (*Guideline 18*).
12. Ensuring that enough controlled infusion devices for administration of oxytocin are maintained and available to meet the needs of the patient population (*Guideline 18*).
13. Ensuring that a physician with appropriate privileges to administer obstetrical anesthesia (or a designee) will be available in the medical facility from the initiation of an anesthetic until the patient's post-anesthesia condition is satisfactory and stable (*Guideline 29*).
14. A policy for the management of patients in the PACU that describes who is responsible for the care of patients in the PACU, how they will be monitored, and the process for discharge (*Guideline 29*).

Guideline 34 continued

15. A process or program to instruct each patient regarding normal postpartum events. These instructions should include care of the breasts, perineum, bladder, the incision (if appropriate), and signs of complications (*Guideline 31*).
16. A process or program to instruct each patient regarding infant care, infant feeding (including the benefits of breastfeeding), and subsequent maternal and newborn medical examinations (*Guideline 31*).
17. Identifying and reporting Serious Reportable Events (SREs) to the Commonwealth of Massachusetts Executive Office of Health and Human Services Department of Public Health (*Guideline 33*).
18. Developing policies and procedures for disclosure to patients of adverse events and outcomes involving their care (*Guideline 33*).

FOR STAFF COMMUNICATION, EDUCATION, AND TRAINING

1. A program to evaluate and document staff competence.
2. Continuing education for all obstetrical personnel including: FHR monitoring, emergency measures for the treatment of shoulder dystocia and eclampsia, and forceps or vacuum application.
3. Developing a plan for obstetrical safety drills to prepare staff in the event of high acuity, low frequency emergent events such as shoulder dystocia.

APPENDIX A

Sample Documentation of Delivery with Shoulder Dystocia

Patient identifiers here or upper right hand corner, depending on institution.

Shoulder Dystocia Duration: minutes from delivery of head to expulsion of baby: _____

Maneuvers Performed (check all that apply)

- | | |
|--|--|
| <input type="checkbox"/> McRobert's | <input type="checkbox"/> Fetal rotation (Wood's Maneuver, Rubin's) |
| <input type="checkbox"/> Suprapubic pressure | <input type="checkbox"/> Gaskin's (hands and knees) |
| <input type="checkbox"/> Episiotomy | <input type="checkbox"/> Zavanelli |
| <input type="checkbox"/> Deliver posterior arm | <input type="checkbox"/> Other (describe): _____ |

Fetal vertex position: OA LOA ROA | OT LOT ROT | OP LOP ROP

Shoulder anterior at time of diagnosis of shoulder dystocia: Left Right

Pain relief (check all that apply): None Local Epidural Spinal CSE General Other: _____

Anesthesiology Team alerted: NO YES

Pediatric Team alerted: NO YES

Maternal Status

Maternal complication: NO YES

If YES, describe: _____

Maternal blood transfusion: NO YES | If YES, # units transfused: _____

Newborn Status

MALE FEMALE

Birth weight: _____ lbs _____ oz, or _____ grams

Apgar: 1 min _____ | 5 min _____

If 5 min is less than 7, document Apgar score at: 10 min _____ | 15 min _____ | 20 min _____

If 5 min Apgar is 0, 1, 2, or 3, arterial blood cord pH: _____

Newborn complication known or suspected: NO YES

If YES, describe: _____

Shoulder dystocia delivery note and dictation/electronic equivalent entered into chart: NO YES

Clinician Name (print)

Clinician Signature

Date

Time

APPENDIX B

Sample Documentation of Operative Vaginal Delivery

Patient identifiers here or upper right hand corner, depending on institution

Indication(s) for OVD (check all that apply)

- Fetal intolerance of labor
 Arrest of descent
 Maternal exhaustion
 Prolonged 2nd stage
 Elective
 Other (specify): _____

Patient Counseling (check all that apply)

Discussed with patient: Risks: NO YES | Benefits: NO YES | Alternatives: NO YES

Patient consent obtained prior to procedure: NO YES

If NO, state why: _____

Maternal-Fetal Assessment Prior to Operative Delivery

Maternal bladder empty: NO YES

Fetal vertex position: OA LOA ROA | OT LOT ROT | OP LOP ROP

Fetal station immediately prior to application of instrument: +2/+5 +3/+5 +4/+5 +5/+5

Fetal heart rate: Category 1 Category 2 Category 3

Estimated fetal weight: _____ grams

Anesthesia (check all that apply): None Local Epidural Spinal Pudendal Other: _____

Anesthesiology Team alerted: NO YES

Pediatric Team alerted: NO YES

Details of Procedure

Forceps instrument applied

Forceps (name): _____ | # of pulls: _____

Rotation of fetal head: None 0-45° 45-90° > 90°

Total time instrument applied (minutes): _____

Vacuum instrument applied

Vacuum cup: Hard cup Soft cup Other: _____

Pressure setting: _____ | # of pulls: _____ | # of pop offs: _____

Total duration of instrument application (minutes): _____

Was instrument-assisted delivery successful: NO YES

If NO, please describe: please describe: _____

Was instrument-assisted delivery accompanied by shoulder dystocia? NO YES | If YES, *also complete shoulder dystocia form.*

Maternal StatusEpisiotomy: NO YES | If YES: Median Mediolateral, right Mediolateral, leftLacerations: NO YES | If YES: 1st degree 2nd degree 3rd degree 4th degreeOther maternal complications: NO YES

If YES, describe: _____

Estimated maternal blood loss: _____

Placenta: Spontaneous Manual extractionBlood transfusion: NO YES | If YES, # units of blood transfused: _____**Newborn Status** MALE FEMALE

Birth weight: _____ lbs _____ oz, or _____ gms

Apgar: 1 min _____ | 5 min _____

If 5 min is less than 7, document Apgar score at: 10 min _____ | 15 min _____ | 20 min _____

If 5 min Apgar is 0, 1, 2, or 3, arterial blood cord pH: _____

Newborn injury: NO YESIf YES, check all that apply: Scalp laceration Scalp hematoma Other (describe): _____Operative vaginal delivery note and dictation/electronic equivalent entered into chart: NO YES_____
Clinician Name (print)_____
Clinician Signature_____
Date_____
Time

APPENDIX C

About Your Care During Labor and Birth

Having a baby is natural. Most mothers and babies go through it without serious problems. Even so, some situations may arise near the end of your pregnancy, or during labor. These can affect the care you or your baby may need.

Many of those situations are described below. Some common practices you might experience at the hospital are also described. Ask your doctor, midwife, or any nurse if you have questions.

LABOR

1. A nurse will work with your doctor or midwife to take care of you. In some hospitals, doctors who are in training (residents) may also help care for you.
2. Other trainees may be involved in caring for you. Students are always supervised by your doctor, midwife, or a nurse.
3. You may have a blood test during labor.
4. A nurse may put a monitor on your belly to check your baby's heartbeat. If it is normal, the monitor may be removed. The baby's heartbeat will be checked again during your labor.
5. If your baby's heartbeat needs to be checked more closely, you might wear a monitor for longer. Sometimes the baby's heartbeat patterns cause concern, even when the baby is fine. These patterns can be hard to understand. Your chance of a cesarean or vaginal delivery with vacuum or forceps increases when your baby's pattern raises a concern. Checking your baby's heartbeat does not prevent cerebral palsy or birth defects.
6. Your doctor or midwife might place an electrode on your baby's head before he or she is born. Very rarely, this can cause infection of the baby's scalp.
7. Very rarely, a blood sample from the baby's scalp is needed during labor. It is like having your finger pricked. Very rarely, the sample area will bleed or get infected.
8. Sometimes it is possible to change the baby's heartbeat pattern. Your doctor or midwife can place a tube inside your womb and add fluid around the baby. This added fluid may take pressure off the umbilical cord during your labor.
9. You may have an intravenous line (IV) in your arm during labor. This is used to give you extra fluids, pain relief drugs, or antibiotics.
10. Pain you feel during labor can be relieved many ways. You might choose walking, a bath or shower, breathing, massage, or a combination. Your doctor or midwife can offer you other, safe choices:
 - Medication:** You get pain relief medication by needle (a "shot") or through an IV line. You may get sleepy. Allergic reactions are rare.
 - Epidural:** A doctor places a thin tube in your back. This takes about 20 minutes. You can then get drugs through the tube that will relieve most of your labor pain.
11. If your labor slows down, your doctor or midwife might give you oxytocin through an IV to make your contractions stronger and closer together.
12. Your doctor or midwife may try to help you start (induce) labor. Some reasons for this are listed.
 - Your baby is overdue by more than a week or two.
 - Your baby has not grown well.
 - Infection
 - High blood pressure
 - Diabetes
 - Your water breaks.

If your cervix is soft and stretchy, you may be given oxytocin through an IV. If your cervix is not ripe, you may get a prostaglandin medication to soften the cervix before using oxytocin.
13. Sometimes, your labor may be induced for non-medical reasons before your due date. Generally, this cannot be done before 39 weeks gestation because babies who deliver before then can have trouble breathing room air. Your baby must be able to breathe room air upon birth before your labor can be induced for non-medical reasons.
14. The risks of inducing labor include creating contractions that are too strong or frequent. This can stress the baby. This risk is usually manageable and the contractions can be decreased. An unsuccessful induction of labor can increase the risk of cesarean birth, especially if this is your first baby.

VAGINAL BIRTH

1. Labor contractions slowly open your cervix. When your cervix is completely open, contractions, along with your help, push the baby through the birth canal (vagina). Usually, the baby's head comes out first, then the shoulders.
2. About 10–15 percent of mothers need some help getting the baby through the birth canal. A doctor or midwife may apply a special vacuum cup or forceps (tongs) to your baby's head. The doctor or midwife will then pull while you push the baby out.
3. In approximately one percent of births, the shoulders do not come out easily. This is called shoulder dystocia. If this happens, your doctor or midwife will try to free the baby's shoulders. Shoulder dystocia may cause a broken bone or nerve damage to the baby's arm. Most often, these problems heal quickly. Shoulder dystocia may cause tears around your vaginal opening, and bleeding after birth.
4. Many women get small tears around their vaginal opening. Sometimes a doctor or midwife will cut some vaginal tissue to make the opening bigger. This is called an episiotomy.
5. Most women with tears or an episiotomy will need stitches. Your stitches will dissolve over a few weeks during healing. The area may be swollen and sore for a few days. Rarely, infection may occur. Infrequently, a tear or cut may extend to the rectum. Most often this heals with no problem.
6. Normally, the placenta will come out soon after birth. If not, then the doctor or midwife must reach into the womb and remove the placenta. You may need anesthesia.
7. All women lose some blood during childbirth. Some reasons you might lose a lot are listed.
 - The placenta doesn't pass on its own,
 - You are having more than one baby, such as twins or triplets.
 - Your labor lasts a very long time.
8. Oxytocin can help reduce bleeding after birth. If your bleeding is very heavy, you may be given other medications to help contract your uterus. Very few women need a blood transfusion after vaginal birth.

CESAREAN DELIVERY

1. About one third of mothers give birth by cesarean. Some are planned. Some are not.
2. During cesarean birth, a doctor delivers the baby through an incision (cut) in your belly.
3. The most common reasons you might need a cesarean follow.
 - Your cervix doesn't open completely.
 - Your baby doesn't move down the birth canal.
 - Your baby needs to be delivered quickly because of a problem for mother or baby.
 - Your baby is not in a position that allows for a vaginal delivery.
 - You delivered by cesarean before.
4. Anesthesia is always used for a cesarean. Most cesareans are performed using regional anesthesia (spinal, epidural or combined spinal-epidural) so that the mother is awake during the delivery. Some are performed using general anesthesia and the mother is not awake during the delivery.
5. You will lose more blood during a cesarean birth than during a vaginal birth. About 12 out of 1,000 mothers who have cesareans need a blood transfusion.
6. Infection is more common after a cesarean. Your doctors may give you drugs to help prevent infection.
7. A thin tube (catheter) will drain your bladder during a cesarean. It may remain in place for 12–24 hours afterwards.
8. In less than one percent of cesareans, the mother's bowel or urinary system is injured. Most of the time these problems are fixed during the surgery.
9. In less than one percent of cesareans, the baby might be injured. Such injuries are usually minor.

AFTER BIRTH

1. Infection of the uterus (womb)
 - After a vaginal birth = 2–3 percent
 - After a cesarean birth = 20–30 percent.
 - Drugs (antibiotics) can lower the risk, but don't guarantee you won't get an infection.

About Your Care During Labor and Birth continued

2. You may have cramps as your womb returns to its normal size. Cramping gets stronger with each birth. You may notice it more when breastfeeding.
3. After a vaginal birth, you will probably have discomfort around your vaginal opening. After a cesarean birth, you will have pain from the incision. Ask your doctor or midwife for pain relief.
4. Vaginal bleeding is normal after birth. It will lessen over 1 to 2 weeks. About one percent of women will need treatment for heavy bleeding. Sometimes, heavy bleeding can happen weeks after birth.
5. Most women feel tired and may feel sad after birth. For about 10 percent of new mothers, these feelings of sadness linger or get worse. This may be postpartum depression. If this happens, ask your doctor or midwife for help.
6. When you can leave the hospital will depend on your health, your baby's health, and the help you have at home.

NEWBORN

1. At one minute, and again at 5 minutes after birth, your baby will be given Apgar scores. The scores are based on heart rate, breathing, skin and muscle tone, and vigor. Apgar scores help your pediatrician and the hospital staff care for your baby.
2. About 3 to 4 percent of babies are born with birth defects. Many (for example, extra fingers or toes) do not hurt the baby. Some, such as some heart abnormalities, can be serious.
3. Approximately 7 to 10 percent of babies are born prematurely, that is before the 38th week of pregnancy. Premature babies may require treatment in a special nursery or an intensive care unit. Some babies born after 37 weeks also may need special care.
4. About 12 to 16 percent of babies pass meconium (the first bowel movement) into the amniotic fluid before delivery. If this occurs, your baby's mouth and airway will be cleared as soon as possible after birth.
5. After birth, your baby will be given eye ointment to prevent eye infections. Your baby will also get a Vitamin K shot to prevent bleeding. A few drops of blood from his or her heel are taken to screen your baby for some diseases. The results are sent to your pediatrician. Your baby's hearing will be checked while in the hospital. You will be asked if you want your baby protected against hepatitis B before going home.
6. Three to four of every 1,000 newborns have serious infections of their blood, lungs, and—in more rare cases—the brain and spine. You may be given drugs to protect your baby if:
 - You carry Group B Strep
 - You develop a fever during labor
 - Your membranes (bag of waters) are ruptured for a long time.
7. If your baby is at risk, your pediatrician may order testing for infection. Your baby may also receive drugs to prevent infection.

INFREQUENT OR RARE EVENTS

The following problems occur infrequently or rarely during pregnancy:

1. A baby is born too early to survive, or with serious medical problems. A baby may die inside the womb after 20 weeks gestation (stillbirth or fetal death); or a baby may die shortly after or within one month of birth.
2. The mother develops blood clots in her legs after giving birth. This is more likely to occur after a cesarean than after a vaginal birth.
3. The doctor must remove the mother's uterus (hysterectomy) to stop heavy, uncontrollable bleeding. The woman cannot become pregnant again.
4. The mother has a problem after a blood transfusion such as an allergic reaction, fever, or infection. The chance of contracting hepatitis (from a transfusion) is 1 in 100,000; the chance of contracting HIV is less than 1 in 1,000,000.
5. The mother dies during childbirth (less than 1 in 10,000). Causes might include extremely severe bleeding, high blood pressure, blood clots in the lungs, and other medical conditions.

SUMMARY

Most babies are born healthy. Most mothers go through labor and birth without serious problems. But pregnancy and childbirth do have some risks. Many of the possible problems are frightening, but most are uncommon. The most serious events are very rare.

Your health care team will do its best to identify any problems early and offer you treatment. Your team looks forward to caring for you and delivering a healthy baby.

Authorization for Obstetrical Care

- I have read *About Your Care During Labor and Birth*.
- I understand what has been discussed with me, including this form. I have been given the chance to ask questions and have received satisfactory answers.
- No guarantees or promises have been made to me about expected results of this pregnancy.
- I am aware that other risks and complications may occur. I also understand that during the remainder of my pregnancy, or during labor, unforeseen conditions may be revealed that require additional procedures.
- I know that anesthesiologists, pediatricians, resident doctors, and other clinical students/staff may help my doctor or midwife.
- I retain the right to refuse any specific treatment.
- All of my questions have been answered.

I consent to obstetrical care during my birthing experience. I understand that some of the procedures described above may occur. I retain the right to refuse any specific treatment. Ongoing discussion(s) about my current status and the recommended steps will be a part of my care.

Patient Name (print)

DOB or Patient ID#

Patient Signature

Date

Time

Clinician Name (print)

Clinician Signature

Date

Time

- I accept blood transfusions in the case of a life-threatening medical emergency.
- I refuse blood transfusion under any circumstances and have signed a separate form specifically for the refusal of blood products.

Patient Signature

Date

Time

APPENDIX D

Breech Version or External Cephalic Version

If your baby is in the breech (buttocks down) position late in your pregnancy, the following explains a procedure your doctor or midwife may try to turn the baby to a head down position.

About 4 out of 100 babies are in the breech position after 37 weeks. This increases some risks for the baby. Breech babies have a slightly higher than average chance of birth injury. The mother has a high chance of cesarean delivery. For these reasons, you and your doctor or midwife may try to turn your baby.

This procedure is carried out in the hospital. An ultrasound is used to see the baby's position. This helps the doctor or midwife decide how to push on your belly. Your baby's heartbeat is checked during the procedure. A drug may be given to help your uterine muscles relax (it may make your heart beat faster). Then, the doctor or midwife will push on the baby through your abdominal wall in an attempt to turn it.

After the procedure, your baby's heartbeat is checked again. If you are Rh negative, then Rh immune globulin is usually given at this time.

About half the time, the baby can be turned into the head down position. Usually, once turned, the baby will stay head down. Sometimes, the baby turns back to breech.

If successful, turning your baby head down reduces the chance of a cesarean. But it is associated with a number of risks.

- During the turning, your baby's heart rate may fall. This is not uncommon. The heart rate usually returns to normal quickly.
- The procedure may start your labor or cause your water to break. For this reason, the attempt to turn the baby is usually done within a few weeks of the due date. By then, the baby should be mature.
- In less than 1 out of 100 cases, the baby can be entangled in the umbilical cord during the turning.
- In less than 1 out of 200 of cases, the placenta may separate from the wall of the uterus. If this happens, the blood flow to the baby is reduced. That can be dangerous for the baby.
- If a problem does occur, an emergency cesarean delivery may be needed. Rarely, a problem will happen hours or days after the version.
- In very rare instances, the baby can die.

Authorization for Breech Version or External Cephalic Version

- I have read *Breech Version and External Cephalic Version*.
- I understand what has been discussed with me, including this form. I have been given the chance to ask questions and have received satisfactory answers.
- No guarantees or promises have been made to me about expected results of this pregnancy.
- I know that anesthesiologists, pediatricians, resident doctors, and other clinical students/staff may help my doctor or midwife.
- I retain the right to refuse any specific treatment.
- All of my questions have been answered.

I consent to breech version (external cephalic version). Ongoing discussion(s) about my current status and the recommended steps will be a part of my care.

Patient Name (print)

DOB or Patient ID#

Patient Signature

Date

Time

Clinician Name (print)

Clinician Signature

Date

Time

APPENDIX E

Delivery Following a Previous Cesarean Delivery

If you have had one baby by cesarean delivery, you may have some questions about what happens in the next pregnancy. First, you must discuss the situation with your doctor or midwife. You will have to plan for another cesarean, or to try for a “trial of labor” and a vaginal delivery. If you want to try for a vaginal delivery, the following explains the risks and benefits.

IS A TRIAL OF LABOR RIGHT FOR YOU?

1. During your previous cesarean(s), a cut was made in your belly and uterus (womb). If the cut was in the lower part of your uterus—and sideways—then it is usually strong. The risk of the scar tearing during labor is low.
2. If you had a low, sideways cut, then you can safely attempt labor and a vaginal delivery. If you have had more than one cesarean, you can consider vaginal delivery, but the risk of rupture of the scar during labor goes up with each previous cesarean.
3. If your cesarean cut was in the lower part of your uterus—but up and down—then the risk of your scar tearing is higher than if it was sideways.
4. If your cesarean cut was in the upper part of your uterus and up and down (a classical cesarean delivery), then a vaginal birth is not recommended.
5. Your doctor or midwife will need to know the type of cut you had in your previous cesarean(s). If your records are not available, the two of you will have to talk and decide if a trial of labor is right for you without having the information about your previous cesarean(s).

WHAT ELSE IS NEEDED FOR A TRIAL OF LABOR?

- Your pelvis should be judged adequate.
- You should have no other uterine scars.
- An obstetrician and other medical team members must be immediately available if you need an emergency cesarean.

HOW SUCCESSFUL IS A TRIAL OF LABOR?

1. From 60 to 80 percent of women who try labor give birth vaginally. Even after two cesareans, the success rate is relatively high.
2. Women with bigger babies have a lower success rate. So do women whose previous cesarean was done because her labor slowed or stopped.

WHAT ARE THE BENEFITS AND RISKS OF A VAGINAL BIRTH?

1. The mother usually has a faster recovery time, shorter hospital stay, and less discomfort. You have less chance of blood transfusion and postpartum infection. You avoid the risks of surgery (cesarean). Vaginal birth also lowers your baby’s risk of breathing difficulty in the first few hours of life.
2. If your trial of labor is not successful, you will need an “unplanned” cesarean. An unplanned cesarean has more risk for you and your baby than a planned cesarean. This includes a higher chance of infection, blood transfusion, and a uterine tear.
3. After a previous cesarean, a uterine rupture (tear) can occur during a future pregnancy or labor. If you have a low, sideways cut, the risk is less than one percent. If your uterus does tear, you will need an emergency cesarean. Your baby may be injured or die from a uterine rupture. Occasionally, the uterus cannot be repaired and a hysterectomy (removal of the uterus) may be needed. Rarely, other organs such as the bladder or bowel may be injured from a uterine rupture or emergency cesarean.
4. The risk for rupture of the scar also goes up if your labor is induced, especially if your cervix is not ready for labor.
5. The safety of a vaginal birth (after cesarean) with twins, breech babies, or after more than one previous cesarean, is less well studied.

WHAT ARE THE BENEFITS AND RISKS OF A SCHEDULED REPEAT CESAREAN DELIVERY?

1. A repeat cesarean can be planned and the date chosen. You avoid any chance of a long labor. The risks of attempting vaginal delivery are avoided.
2. If a repeat cesarean is planned more than seven days prior to your due date, then your baby has more risk for problems.
3. The infection rate is higher in women who are delivered by cesarean than for women who have vaginal births.
4. Blood loss is usually more with a cesarean than with a vaginal delivery. Approximately 12 in 1,000 of all women who have cesareans require blood transfusion.
5. Injury to the urinary system occurs in less than 1 in 200 women. These problems are usually identified and fixed at the time of birth.
6. Injury to the bowel (the intestines, colon, or rectum) is very rare, occurring in fewer than 1 in 1,000 cesareans. If an injury to the bowel occurs, it will usually be recognized and fixed at the time of birth.
7. Occasionally, the placenta in a future pregnancy can implant over the old scar. This increases the risk of bleeding and premature delivery in that pregnancy. The chance of the placenta implanting in the wrong place increases with each cesarean.
8. Having one baby delivered by cesarean increases the chance of a cesarean for your next pregnancy. Each cesarean increases the risk of scarring and may increase the difficulty of the next cesarean surgery. There is also an increased risk for rupture of the uterus in future pregnancies if labor is tried.
9. Rarely, infertility may result from internal scar tissue.
10. Rarely, a hysterectomy (removal of the uterus) can be required.

WHO SHOULD NOT TRY LABOR AND VAGINAL DELIVERY?

Trying labor and a vaginal delivery following a previous cesarean is not recommended when the risks are greater than the benefits.

- You've had a previous cesarean delivery with an up and down cut in the upper part of your uterus (a classical cesarean delivery).
- You've had some previous uterine surgery, including some myomectomies (fibroid removal).
- You've had more than two consecutive (back to back) cesareans and no prior or interval vaginal deliveries.
- You've had a prior uterine rupture or tear.
- Your pelvis too small.
- Medical or obstetrical problems prevent vaginal delivery.

Authorization for Delivery Following a Previous Cesarean Delivery

- I have read *Delivery Following a Previous Cesarean Delivery*.
- I understand what has been discussed with me, including this form. I have been given the chance to ask questions and have received satisfactory answers.
- No guarantees or promises have been made to me about expected results of this pregnancy.
- I know that anesthesiologists, pediatricians, resident doctors, and other clinical students/staff may help my doctor or midwife.
- I retain the right to refuse any specific treatment.
- All of my questions have been answered.

I have chosen to attempt a trial of labor and vaginal delivery. Ongoing discussion(s) about my current status and the recommended steps will be a part of my care.

_____	_____	
Patient Name (print)	DOB or Patient ID#	
_____	_____	_____
Patient Signature	Date	Time
_____	_____	
Clinician Name (print)		
_____	_____	_____
Clinician Signature	Date	Time

APPENDIX F

The Delivery of Twins

If you are having twins, the following explains possible events and risks related to your labor and delivery.

TIMING OF DELIVERY

- About 40 percent of twin pregnancies begin labor early.
- Sometimes, medical problems require an early delivery.
- Almost all women with twins give birth before or by their due dates.

ROUTE OF DELIVERY

The recommended route of delivery depends in large part on how the babies are presenting.

- Both heads are down: vaginal delivery for both babies.
- The first baby is not head down: cesarean is most often recommended.
- The first baby is head down, the second baby is buttocks down or sideways, the options are:
 - cesarean delivery of both twins;
 - vaginal delivery of the first baby, attempt to turn the second baby for vaginal delivery;

- vaginal delivery of the first baby, breech vaginal delivery of the second baby;
- vaginal delivery of the first baby, cesarean delivery of the second baby (uncommon).

Each option has risks.

- Vaginal delivery poses risks for the second baby, including birth trauma (rare).
- A cesarean includes the risk of bleeding, infection, and surgical injury to the bowel or bladder.

Vaginal breech delivery of the second twin is not recommended when:

- the second baby is estimated to be much larger than the first,
- the mother's pelvis is judged to be too small to allow the baby to deliver safely, or
- the baby is very small (less than 4 pounds) or very early (less than 32 weeks).

Authorization for Twin Delivery

- I have read *The Delivery of Twins*.
- I understand what has been discussed with me, including this form. I have been given the chance to ask questions and have received satisfactory answers.
- No guarantees or promises have been made to me about expected results of this pregnancy.
- I know that anesthesiologists, pediatricians, resident doctors, and other clinical students/staff may help my doctor or midwife.
- I retain the right to refuse any specific treatment.
- All of my questions have been answered.

I understand that some of the procedures described above may occur. I retain the right to refuse any specific treatment. Ongoing discussion(s) about my current status and the recommended steps will be a part of my care.

_____	_____	
Patient Name (print)	DOB or Patient ID#	
_____	_____	_____
Patient Signature	Date	Time
_____	_____	
Clinician Name (print)		
_____	_____	_____
Clinician Signature	Date	Time

APPENDIX G

Primary Cesarean Delivery on Maternal Request

If you have never had a cesarean delivery, but have asked for one this time, then please read the following.

THE BENEFITS AND RISKS OF A SCHEDULED ELECTIVE PRIMARY CESAREAN DELIVERY

1. A cesarean delivery can be planned. The date can be chosen. You avoid a long labor. The risks of a vaginal delivery are avoided.
2. The most common problem with cesarean delivery is infection. The rate is higher for cesareans than for vaginal births.
3. For the mother, blood loss is usually greater with a cesarean than with a vaginal delivery. Approximately 12 in 1,000 of all women having a cesarean need a blood transfusion.
4. Injury to the urinary system (the bladder and drainage to and from the bladder) occurs in less than 1 in 200 women who deliver by cesarean. These problems are usually identified and repaired at the time of the cesarean.
5. Injury to the mother's bowel (intestines, colon, or rectum) is rare. It occurs in less than 1 in 1,000 cesareans. Such an injury will usually be recognized and fixed at the time of the cesarean.
6. A cesarean delivery can lead to serious problems in future pregnancies. Occasionally, the placenta in a future pregnancy can implant over the old cesarean scar. This increases the risk of bleeding and premature delivery. The chance of the placenta implanting in the wrong place increases with each additional cesarean.
7. Having had one cesarean increases the chance of having another one. Each cesarean increases the risk of scarring afterwards and may increase the difficulty of future surgeries. There is also an increased risk for rupture of the uterus during labor for women who have had a previous cesarean.
8. Rarely, the inability to get pregnant, or chronic pelvic pain, may result from scar tissue (adhesions) that may form after cesarean delivery.
9. Rarely, a hysterectomy (removal of the uterus) may be needed.

Authorization for Primary Cesarean Delivery on Maternal Request

- I have read *Elective Primary Cesarean Delivery on Maternal Request*.
- I understand that I have the option for vaginal delivery and that I do not have specific medical indications for cesarean delivery.
- I understand the risks and benefits of an elective primary cesarean delivery as explained above and as explained by my clinician. I am aware that other risks and complications may occur.
- I understand what has been discussed with me, including this form. I have been given the chance to ask questions and have received satisfactory answers.
- No guarantees or promises have been made to me about expected results of this pregnancy.
- I am aware that other risks and complications may occur. I also understand that during the remainder of my pregnancy, or during labor, unforeseen conditions may be revealed that require additional procedures.
- I know that anesthesiologists, pediatricians, resident doctors, and other clinical students/staff may help my doctor or midwife.
- I retain the right to refuse any specific treatment.
- All of my questions have been answered.

I request and consent to elective primary cesarean delivery. Ongoing discussion(s) about my current status and the recommended steps will be a part of my care.

Patient Name (print)

DOB or Patient ID#

Patient Signature

Date

Time

Clinician Name (print)

Clinician Signature

Date

Time

Index

A

abruption 21, 32
 ACOG 24, 27, 31
adverse outcome 31, 34
 allergies 8, 28
 amniotic fluid 7, 22
 amniotomy 17, 18
 ampicillin 12
 anaphylaxis 12
anesthesia 22, 27, 29, 31, 35
antenatal care 3, 8
 antenatal corticosteroids 11
 antenatal record 2
antenatal tests 11
 antibody screen 8
 Apgar 16, 26, 32, 34
 arterial blood 16
augmentation 18
 auscultation 14, 15

B

betamethasone 11
 birth injury 34, 44
 bladder 19, 32, 36
 breastfeeding 9, 32, 36
breech 14, 21, 23, 24

C

caput 15, 19
 cardiac lesions 30
 cardiopulmonary resuscitation 29
 Category I 14, 22, 23
 Category III 15, 18
 Cefazolin 12
 cervical cytology 9
 cervical dilation 14, 15
 cervical ripening 10, 17, 27, 35
 cervix 17, 19, 25
 cesarean 2, 12, 13, 16, 19, 20, 22, 23, 24, 25, 28, 30, 34
cesarean delivery on maternal request 3, 28

chlamydia 9
circumcision 3, 9, 33
 Clindamycin 12
clinical discord 5, 35
clinician caseload 13
clinician coverage 4, 13, 35
 coagulopathy 30
 congenital anomalies 22, 32
consultation 5, 10, 11, 22
corticosteroids 11
 CRICO 1, 2, 24, 31, 35

D

dating 7, 8, 10
 dehiscence 27
 dexamethasone 11
 discharge 22, 30, 32, 34, 35
documentation 2, 4, 5, 7, 10, 11, 13, 14, 17, 22, 26
 dysmaturity syndrome 24
dystocia 2, 16, 25, 26, 36

E

eclampsia 34
EDD 7, 13, 24, 25, 27, 28
 electronic fetal monitoring 2, 14, 15, 16, 17, 18, 22, 27, 35
 endotracheal intubation 29
 epidural 27, 29
 erythromycin 12
 extensive regional block 30
 external cephalic version 21, 24, 28

F

fetal assessment 9
 fetal demise 24
fetal maturity 7, 11, 13, 17, 23
fetal status 5, 11, 14, 15, 16, 17, 18, 20, 35
 fetal weight 11, 14, 22, 25
 first trimester 7, 8

Foley catheter 17
 forceps 3, 16, 19, 20, 36
 fractured clavicle 25

G

genetic screening 6, 8, 9
 glucose screening 9
 gonorrhea 9
Group B Strep 9, 12

H

handoffs 4
 hepatitis B 8, 9
 HIV 6, 8, 9
 hyperstimulation 18, 24
 hysterectomy 10, 27, 28, 34

I

incident reports 2
induction of labor 10, 13, 17, 18, 23, 24, 25, 27, 34, 35
informed consent 3, 9, 11, 19, 22, 28
institutional responsibilities 35
 intensive care (ICU) 34
 intracranial hemorrhage 20, 34
 intrapartum antibiotics 12
 intrapartum temperature 12
 intravenous access 23, 27

L

Level III nursery 34

M

macrosomia 25
 malignant hyperthermia 30
 meconium 14, 15, 24, 32, 34
 medical record 2, 3, 4, 5, 15, 16, 17, 18, 20, 22, 23, 26, 27, 28, 32
mid-trimester termination 10
 midwifery 1, 5, 15
 Misoprostol 17, 27
 multipara 25

N**neonatal sepsis 12**

neuraxial 29
 newborn 9, 26, 30, 32, 33, 35, 36
 non-stress test 11, 17, 21, 22
 non-vertex presenting twin 23
 normal vaginal delivery 2
 nuchal cord 21
 nullipara 13, 25

O

oligohydramnios 21, 32
 operative delivery 2, 13, 20, 29
 operative injury 27
 operative note 2, 20, 26, 27
operative vaginal delivery 2, 19, 20, 30
 oxytocin 15, 17, 18, 19, 23, 24, 25, 27, 35

P

PACU 30, 35
 pain 14, 15, 23, 33
 penicillin 12
 perinatal morbidity 22, 24, 27
placental pathology 31
 placenta previa 21, 29, 32
 positive pressure ventilation 29
postpartum care 32
 postpartum depression 32, 33
 postpartum hemorrhage 25
 post-term pregnancy 24, 25
 pre-anesthesia evaluation 30
preconception care 6
pregnancy dating 7
 prenatal counseling 25
 prenatal record 7, 21, 24, 25
 prenatal visit 9
 pre-procedure 22, 30
 preterm labor 9, 12
previous cesarean 14, 17, 27
 primary cesarean 28
prolonged pregnancy 24
 prostaglandin 17, 24, 27
 protraction of labor 18

R

regional anesthesia 22, 29, 30
 resuscitation 29, 30, 35
 Rh 8, 9, 22
 Rhogam 22
 risk management 5, 26, 34
 rubella 6, 8, 32
 rupture of the membranes 11, 12, 14, 21

S

scheduled elective delivery 13, 22, 27
 signs of complications 32, 36
 sonography 25
sponge count 20, 34
 spontaneous rupture 14
surgical pause 28, 33
 syphilis 9

T

telephone consultation 5
 time-out 28, 30, 33
tocolytic agents 3, 11, 22
 transfusion 27
 trauma 9, 19
 triage 14
 trial of labor 3, 27
twins 3, 23

U

ultrasound 2, 7, 9, 10, 13, 22, 23, 24, 25
 umbilical artery 16
 uterine rupture 27, 34
 uterine tachysystole 17, 18, 24

V

vacuum 16, 19, 20, 36
 Vancomycin 12
 varicella 6, 9, 32
 ventilation 29, 30
 vertex 3, 14, 19, 23

Acronyms and Definitions

Below is a list of words, phrases, and acronyms used throughout the Guidelines that may be ambiguous or unfamiliar to some providers of obstetrical service.

ACOG

American College of Obstetricians and Gynecologists

ACTIVE LABOR

The second part of first stage labor, when the cervical dilation rate is maximal.

CATEGORY I

FETAL HEART RATE (FHR)

A pattern defined as:

- baseline FHR: 110–160 beats per minute,
- baseline FHR variability: moderate,
- late or variable decelerations: absent,
- early decelerations: present or absent, and
- accelerations: present or absent.

CATEGORY II FHR

Includes all FHR tracings not categorized as Category I or Category III such as:

- baseline FHR
 - bradycardia not accompanied by absent baseline variability
 - tachycardia
- baseline FHR variability
 - minimal
 - absent with no recurrent decelerations
 - marked

- accelerations: absence of induced accelerations after fetal stimulation
- periodic or episodic decelerations
- recurrent variable decelerations accompanied by minimal or moderate baseline variability
- prolonged decelerations more than 2 minutes but less than 10 minutes
- recurrent late decelerations with moderate baseline variability
- variable decelerations with other characteristics such as slow return to baseline, overshoots, or “shoulders”

CATEGORY III FHR

Includes either:

- absent baseline FHR variability and any of the following:
 - recurrent late decelerations
 - recurrent variable decelerations
 - bradycardia
- sinusoidal pattern

CRICO

Controlled Risk Insurance Company, the provider of medical professional liability insurance for Harvard-affiliated physicians, hospitals, and their employees.

EDD

Estimated date of delivery determined by a combination of historical, clinical, and laboratory criteria.

FETAL DEMISE

In utero deaths occurring at 20 or more weeks gestation, or when the fetal weight is 350 grams or greater.

FETAL LUNG MATURITY

Fetal lungs have developed to the point that respiratory distress syndrome is not expected.

INFORMED CONSENT

A process for informing patients of the risks, benefits, and alternatives involved in the provision of specific medical care.

MIDWIFE

For these Guidelines, the term refers to a certified nurse midwife working in a collaborative relationship with an attending obstetrician.

OPERATIVE DELIVERY

Non-spontaneous vaginal and cesarean deliveries.