

15.3 Perinatal Care Clinical Practice Guidelines

This guideline is intended to assist the practitioner in clinical decision-making and attempt to define clinical practices that apply to most patients in most circumstances. The treating practitioner should make the ultimate decision regarding the care of a particular patient.

Preconception Care

Preconception care includes identifying those conditions that could affect a future pregnancy or fetus and that may be amenable to intervention. For example, adverse effects on the fetus caused by maternal phenylketonuria or poorly controlled diabetes mellitus, can be reduced if strict metabolic control is achieved before conception and continued throughout pregnancy.

Maternal Assessments as Basis for Counseling

Family history	Genetic history
Medical history	Current medications
Substance abuse, including alcohol, tobacco & illicit drugs	Domestic abuse & violence
Nutrition	Environmental & occupational exposures
Obstetric history	General physical examination
Family planning & pregnancy spacing	Immunity & immunization status
Assessment of socioeconomic, education, and cultural context	Risk factors for sexually transmitted diseases
Behavioral health concerns	

Immunization and Screening Offered to Women at Risk

Tdap, H1N1 Rubella, varicella, and hepatitis B vaccination for women demonstrated to be susceptible

Tests Performed for Specific Indications

Screening for sexually transmitted diseases	Mantoux skin test
Testing to assess proven etiologies of recurrent pregnancy loss	Testing for maternal disease based on medical or reproductive history
Screening for genetic disorders based on racial & ethnic background &/or based on family history	

Counseling About The Benefits Of

Preventing HIV infection	Determining time of conception (accurate menstrual history)
Folic acid 0.4 mg per day while attempting pregnancy & during the first trimester for prevention of neural tube defects.	Folic acid 4 mg daily for one month prior to conception & during the first trimester for women with a history of previous conception with a neural tube defect.
Abstaining from tobacco, alcohol & illicit drug use before & during pregnancy.	Maintaining good control of any preexisting medical conditions.
Reducing weight before pregnancy, if obese	Increasing weight before pregnancy, if underweight

Antepartum Care

Women who receive early and regular prenatal care are more likely to have healthier infants. The early diagnosis of pregnancy is important in establishing a management plan. This plan of care should take into consideration the medical, nutritional, psychosocial, and educational needs of the patient and her family, and it should be periodically reevaluated and revised in accordance with the progress of the pregnancy.

- Pregnant women should have access to unscheduled visits and emergency visits on a 24-hour basis. Timing of access varies dependent on the nature of the problem. Please note: Access to unscheduled visits and emergency visits on a 24-hour basis is based on the ACOG standard however; Plan policy for urgent care appointment access is within 48 hours.
- H1N1 vaccination is recommended and can be given without mercury. H1N1 infection can be treated with antiviral therapy with either oseltamivir or zanamivir. Seasonal influenza should also be offered during the appropriate time of year.
- Tdap is to be given to women in the 2nd or 3rd trimester during pregnancy and those women that are breastfeeding to add protection against pertussis for those women that have not received Tdap previously.
- Risk assessment during pregnancy should universally include identification of women who are victims of domestic violence. With the possible exception of preeclampsia, domestic violence is more prevalent than any major medical condition detected through routine prenatal screening.
- Increased risk for cleft palate in newborns has been associated with corticosteroids in the first 10 weeks of gestation.
- All pregnant women should receive education and counseling about preventing HIV infection as part of their regular prenatal care, as long as it is not a prerequisite for or barrier to prenatal HIV testing. -
 - Screen all pregnant women for HIV as early as possible during each pregnancy following opt-out prenatal HIV screening where legally possible.
 - Repeat HIV testing in the third trimester is recommended for women at high risk or are living in areas that are considered high risk and women that have declined HIV testing earlier in pregnancy.
 - Use conventional or rapid HIV testing for women who are candidates for third-trimester testing, women in labor with undocumented HIV status following opt-out screening.
 - For positive rapid HIV testing in labor, immediate initiation of antiretroviral prophylaxis should be recommended without waiting for results of the confirmatory test.
- The recommended dietary allowances for most vitamins and minerals increase during pregnancy. Pregnant women should take prenatal vitamins daily because the content of the average diet and the endogenous store of certain minerals are not sufficient to provide for this increased demand.

General Patient Education

Scope of care provided in the office	Anticipated schedule of visits & the importance of keeping appointments
Lab studies that may be performed	Physician coverage of labor & delivery
Expected course of the pregnancy	Cost to the patient of prenatal care & delivery
Signs & symptoms to be reported (eg, vaginal bleeding, rupture of membranes, or decreased fetal movement)	Practices to promote health maintenance (eg, use of safety restraints, including lap & shoulder belts)
Educational programs available	Options for intrapartum care
Encouraging breastfeeding	Planning for hospital discharge & child care
Choosing the child's physician	Sauna & hot tub exposure

Specialized Counseling

Nutrition in pregnancy	Vitamin & mineral toxicity
Tobacco use	Substance use & abuse
Exercise in pregnancy	Domestic Violence

Initial Assessments (First Prenatal Visit)

Menstrual history	Past pregnancies
Past medical history (include tobacco, alcohol, illicit drug use and relevant family history).	Genetic screening (includes patient, baby's father or anyone in either family with relevant history).
Infection history: high risk hepatitis B/immunized, exposure to TB, history of genital herpes, rash or viral illness, history of sexually transmitted disease, gonorrhea, chlamydia, human papilloma virus, syphilis, hepatitis C.	Initial physical exam.
Problem, medication list and immunization history.	Establish EDD (EDC).
Domestic violence screening with counseling when indicated.	Urine culture for asymptomatic bacteriuria.
Diabetes Screening and GTT (high risk patients-see table below)	

High-Risk Patients for Gestational Diabetes

Marked Obesity (BMI greater than 27 kg/m ²)
Diabetes in first-degree relative
History of glucose intolerance
Previous infant with macrosomia (greater than 4,500 grams)
Current glycosuria (previous impaired fasting glucose (IFG) with fasting blood glucose 110-125mg/dl)
Previous gestational diabetes mellitus

Height and Weight/Body Mass Index (BMI)

The BMI should be calculated at the first prenatal visit, and weight gain during pregnancy should be monitored at each subsequent prenatal visit.

The Institute of Medicine has devised recommendations for total weight gain and the rate of weight gain based on the pre-pregnant or initial pregnant BMI (if pre-pregnant BMI is not known). A table is shown below that has been modified from the report of the Institute of Medicine.

Pre-pregnant or Initial Pregnant BMI	BMI (kg/m ²) (WHO calculations)	Total Weight Gain Range (pounds)	Rate of Weight Gain in Second Trimesters (lbs/wk)
Underweight	<18.5	28-40	1 (range 1.0 to 1.3)
Normal Weight	18.5-24.9	25-35	1 (range 0.8 to 1.0)
Overweight	25.0-29.9	15-25	0.6 (range 0.5 to 0.7)
Obese (includes all classes)	≥30.0	11-20	0.5 (0.4 to 0.6)

Women who are pregnant with twins are given provisional guidelines. Those in the normal BMI category should aim to gain 37-54 pounds; overweight women, 31-50 pounds; and obese women, 25-42 pounds.

Frequency of Follow-up Visits

Uncomplicated pregnancy:	During each regularly scheduled visit:
Examine every 4 weeks first 28 weeks	Evaluate BP, weight, urine protein and glucose, uterine size for consistency with EDD and fetal heart rate, fetal movement, leakage of fluid, vaginal bleeding.
Examine every 2-3 weeks until 36 weeks	
Weekly thereafter	
Women with medical or obstetrical problems may require more frequent visits.	

Urine dip stick is an unreliable measurement of urine for protein. Urine protein to creatinine ratio is recommended for testing urine for protein.

Patient Education

Anesthesia plans	Nutrition and physical activity counseling
Toxoplasmosis precautions	Breast or bottle feeding
Childbirth classes	Newborn car seat
Physical/sexual activity	Postpartum birth control & importance of the post-partum visit
Smoking cessation	Alcohol & illicit drug use
Signs & symptoms of labor & pre-term labor	Environmental work hazards
Prescription and OTC drug use	

Routine Testing (First Prenatal visit or early in pregnancy)

Blood type	Chlamydia screening, re-screening performed in three to four months following treatment.
D(Rh) type	
Antibody screen	HIV counseling/testing regardless of risk factors (with patient consent)
Pap Test	Optional Testing
VDRL	Hemoglobin electrophoresis
Urine culture/screen	PPD
Hepatitis B surface antigen screening	Gonorrhea Screening
Rubella titer	Genetic testing
Domestic Violence screening with counseling when indicated.	

8-18 Week Testing (when indicated/elected)

Ultrasound for fetal anomaly (18-20 weeks)	Karotype
Maternal Serum Screening (Downs/Spina Bifada)	Amniotic fluid (Alpha Fetal Protein)
Amniocentesis/Chorionic Villus Sampling (10-12 weeks)	Urine screening for glucose and protein
Nucal fold translucency test	Culture for asymptomatic bacteriuria (12-16 weeks)

24-28 Week Testing (when indicated/elected)

Hct/Hgb	D (Rh) Antibody screen If patient is Rh negative and has not been sensitized give Rh Immune Globulin (RhIG)
Diabetes Screen	
GTT if screen abnormal	
Domestic Violence screening with counseling when indicated	

32-36 Week Testing (when indicated/elected)

Hct/Hgb (recommended)	Gonorrhea
Ultrasound	Chlamydia
VDRL	Group B Strep (35-37 weeks) highly recommended
HIV repeat testing (36 weeks)	

Intrapartum Care

The goal of all labor and delivery units is safe birth for all mothers and their newborns. Because intrapartum complications can arise, sometimes quickly and without warning, ongoing risk assessment and surveillance of the mother and fetus are essential.

Admission

Any pregnant woman presenting to a hospital for care should, at a minimum, be assessed for the following: ⇨	Fetal heart rate Maternal vital signs Uterine contractions
The responsible obstetric caregiver should be informed promptly if any of the following findings are present: ⇨	Vaginal bleeding Acute abdominal pain Temperature of 100.4 or higher Preterm labor Preterm premature rupture of membranes Hypertension Non-reassuring fetal heart rate

Labor

Any patient suspected to be in labor or who has rupture of the membranes or vaginal bleeding should be evaluated promptly in an obstetric service area. Whenever a pregnant woman is evaluated for labor, the following factors should be assessed and recorded: ⇨	Blood pressure Pulse Temperature Frequency and duration of uterine contractions Documentation of fetal well being, group B beta strep status and treatment Clinical estimation of fetal weight & assessment of maternal pelvis Urinary protein and glucose Cervical dilatation and effacement, unless contraindicated (placenta previa) Fetal presentation and station of the presenting part Status of the membranes Date and time of the patient's arrival and notification of provider
If a woman has had prenatal care and a recent examination has confirmed the normal progress of pregnancy, her admission evaluation may be limited to: <i>For those patients who have not had any previous prenatal testing routine laboratory testing should be done at the time of admission.</i>	Interval history. Physical examination directed at presenting complaint. Previously identified risk factors should be recorded in the prenatal record.
If no new risk factors are found, attention may be focused on the following historical factors: ⇨	Time of onset and frequency of contractions. Status of the membranes. Presence or absence of bleeding. Fetal movement. History of allergies. Time, content and amount of the most recent food or fluid ingestion. Use of any medication.
Onset of true labor is established by observing progressive changes in a woman's cervix.	Two or more cervical examinations may be required. The exams should be separated by an adequate time to observe change.
Premature rupture of membranes (PROM) is considered to be present when there is leakage of amniotic fluid before the onset of labor.	Preparations for labor should begin when PROM Occurs, whether at or before term, because labor frequently ensues.

Management of Labor

Patients in active labor should avoid oral ingestion of anything except sips of clear liquids, occasional ice chips, or preparations for moistening the mouth and lips.	When significant amounts of hydration and energy substrate are needed because of a long labor, they should be given by intravenous infusion.
Progress of labor should be evaluated by periodic vaginal exams.	For women who are at no increased risk of complications, evaluation of the quality of uterine contractions and pelvic examinations should be sufficient to detect abnormalities in the progress of labor. <i>Vital signs should be recorded at regular intervals, at least every 4 hours. May be increased, particularly as active labor progresses according to signs and symptoms.</i>
Documentation of the course of labor may include, but need not be limited to:	Presence of physicians or nurses, position changes, cervical status, oxygen and drug administration, blood pressure, temperature, amniotomy or spontaneous rupture of membranes, color of amniotic fluid, and Valsalva's maneuver.

Fetal Heart Rate Monitoring

Fetal heart rate monitoring to reflect fetal status during labor can be done by intermittent auscultation or continuous electronic means.	If intermittent auscultation is used, determine & record the auscultated FHR just after a contraction. If continuous fetal monitoring is used, the FHR tracing should be evaluated based on the recommended frequency for the risk factor & stage of labor.
<i>If no risk factors are present at the time of the patient's admission:</i> First Stage- at least every 30 minutes Second Stage- at least every 15 minutes	<i>If risk factors are present at admission or appear during the course of labor:</i> First Stage- at least every 15 minutes Second Stage- at least every 5 minutes

Induction and Augmentation of Labor

Labor is induced when the benefits to either the woman or the fetus outweigh those of continuing the pregnancy.	When labor is induced, a physician who has privileges to perform cesarean deliveries should be readily available.
If oxytocin is used, the infusion should be administered by a device that permits precise control of the flow rate to ensure accurate, minute-to-minute control.	Oxytocin is also used to augment labor and enhance inadequate uterine contractions in women in whom an assessment of the relationship between the maternal pelvis and fetal size is otherwise normal. Buccal, nasal or IM administration of Oxytocin should not be used to induce or augment labor.
Follow the FHR monitoring schedule for risk factors	

Analgesia and Anesthesia

<p>Management of discomfort and pain during labor and delivery is a necessary part of good obstetric practice. Maternal request is sufficient justification for providing pain relief during labor.</p>	<p>Pain relief through the general principles of education, support, relaxation, paced breathing, focusing and touch. Unless contraindicated, pharmacological analgesics to ameliorate the pain of contractions should be made available on request to women in labor.</p> <p>Parenteral opioids provide some degree of pain relief with minimal risk.</p> <p>Lumbar epidural block is the most flexible, effective and least depressing to the CNS.</p> <p>Paracervical block may result in fetal bradycardia. Because it results in profound motor and sensory blockade which impairs the maternal expulsive efforts, spinal anesthesia is typically not administered until delivery is imminent or a decision has been made to perform an operative delivery.</p>
<p>For most cesarean deliveries properly administered regional or general anesthesia is effective and has little adverse affect on the newborn.</p> <p>The following factors place a woman at increased risk from anesthesia and should be communicated to the anesthesia care provider in advance of delivery to permit formulation of a management plan: ⇨</p>	<p>Marked maternal obesity. Severe maternal facial and neck edema. Maternal extreme short stature. Difficulty opening her mouth. Small mandible, protuberant teeth or both. Arthritis of the neck. Short neck. Anatomic abnormalities of the face or mouth. Large thyroid. Asthma or other chronic pulmonary disease. Cardiac disease.</p>

Intrapartum Care

Delivery

<p>Vaginal Delivery</p>	<p>Vaginal birth is associated with less risk of operative and postoperative complications than cesarean delivery and results in shorter hospital stays.</p>
<p>Vaginal Birth after Cesarean Delivery</p>	<p>The risks & benefits of a trial of labor versus repeat cesarean delivery should be discussed with the patient. The decision to attempt vaginal delivery after cesarean delivery or to undergo a repeat cesarean delivery should be made by the informed patient & her physician. No woman should be mandated to undergo a trial of labor.</p>
<p>Cesarean Delivery</p>	<p>All hospitals offering labor and delivery services should be equipped to perform emergency cesarean delivery. Hospitals should have the capability of beginning a cesarean delivery within 30 minutes of the decision to operate.</p>
<p>Examples of indications for cesarean delivery requiring expeditious response time include:</p>	<p>Hemorrhage from placenta previa, abruptio placentae, prolapsed umbilical cord and uterine rupture.</p>

Before elective repeat cesarean delivery, the maturity of the fetus should be established. Fetal maturity may be assumed if one of the following is met:	Fetal heart tones documented for 20 weeks by non-electronic fetoscope or for 30 weeks by Doppler ultrasound. Thirty-six weeks have elapsed since positive results were obtained from a serum or urine chorionic gonadotropin pregnancy test performed by a reliable laboratory. An ultrasound measurement of the crown-rump length obtained at 6-11 weeks gestation supports a current gestational age of 39 weeks or more. Clinical history and physical ultrasound examinations performed at 12-20 weeks of gestation support a current gestational age of 39 weeks or more.
Fetal surveillance should continue until abdominal sterile preparation has begun.	
Neonatal Care Both routine assessment and care of the baby at the time of delivery and possible provision of extensive resuscitation should be provided in accordance with the American Heart Association/American Academy of Pediatrics Neonatal Resuscitation Program. At least one person who is skilled in initiating resuscitation should be present at every delivery.	Apgar score. Maintenance of body temperature. Suctioning Ventilation. External cardiac massage. Drugs and volume expansion. Acidosis Bradycardia Hypovolemia. Narcotic induced respiratory depression.

Assessment of the Newborn

Intrauterine Growth Status	The pediatrician should assign gestational age after all data, both pediatric and obstetric, have been assessed.
Risk Assessment	No later than two hours after birth, nursery admitting personnel should evaluate the neonate's status and assess risk.
Immediate Care	Temperature, heart and respiratory rates, skin color, adequacy of peripheral circulation, type of respiration, level of consciousness, tone and activity should be monitored and recorded at least once every 30 minutes until the neonate's condition has remained stable for 2 hours.
Eye Care	Prophylaxis against gonococcal ophthalmia neonatorum is mandatory for all neonates.
Vitamin Care	Every newborn should receive a single parenteral 0.5-1.0 mg dose of natural Vitamin K within one hour of birth.
Preventive Care	Hepatitis B immunization
Hearing Screening	Detection of hearing loss as early as possible, preferably before three months of age, facilitates early intervention and the possibility of improved functional outcome.

Intrapartum Care

Immediate Postpartum Care

Monitoring of maternal status postpartum is dictated in part by the events of the delivery process, the type of anesthesia or analgesia used & the complications identified. B/P levels & pulse should be monitored at least every 15 minutes & more frequently if complications are encountered; the temperature should be taken at least every 4 hours.

After cesarean delivery, policies for postanesthesia care should not differ from those applied to nonobstetric surgical patients receiving major anesthesia.

Post anesthesia observation	Mothers who have had regional or general anesthesia for vaginal or cesarean delivery.
Postpartum sterilization	If the delivery has been uncomplicated, and anesthesia can be continued safely, there is no contraindication to proceeding with tubal ligation.

Subsequent Postpartum Care

In the postpartum period, staff should help the mother in learning how to care for herself and her baby. This includes:

Bed rest, ambulating and diet:	The new mother should be allowed to sleep and regain strength. Regular diet, if there are no complications, as soon as she wishes.
Care of the vulva:	Proper cleansing technique. Ice bag to perineum in the first 24 hours after delivery to reduce edema, pain and swelling. Oral analgesics for episiotomy pain. Be alert for hematoma formation. Beginning 24 hours after delivery, moist heat in the form of sitz bath to reduce discomfort and promote healing.
Care of the bladder:	Void as soon as possible. Check frequently during the first 24 hours after delivery. Single catheterization may be necessary. With continued voiding difficulties, use of a single indwelling catheter is preferable to repeated catheterization.
Care of the breasts	The decision about breast-feeding determines the appropriate care of the breasts.
Temperature elevation	Postpartum patients with elevated temperature (> or = 100.4 on two occasions, six hours apart) should be evaluated.
Immunization: Immune Globulin and Rubella	An unsensitized, D-negative woman who delivers a D-positive or D ^u neonate should receive 300 ug of anti-D immune globulin postpartum, ideally within 72 hours, even when anti-D immune globulin has been administered in the antepartum period.

Maternal Considerations

Approximately 4-6 weeks after delivery, the mother should visit her provider for a postpartum review and examination. A visit within 7-14 days of delivery may be advisable after a cesarean delivery or a complicated gestation.

Review at Postpartum Visit

Obtain an interval history	Blood pressure
Perform a physical exam	Breasts
Specific inquiries about breast-feeding should be made.	Abdomen
Birth control review	Pelvic exam
Emotional evaluation	Episiotomy repair
Pap test if needed	Uterine involution
An evaluation of weight	Lochia
Review immunizations, including rubella	Encourage return for subsequent periodic examinations
Physical activity and nutrition counseling	

Neonatal Considerations

The frequency of follow-up visits should be consistent with the American Academy of Pediatrics and Passport Health Plan's EPSDT guidelines.

*Based on the Guidelines for Perinatal Care, Fifth Edition, American Academy of Pediatrics (AAP) and the American College of Obstetricians and Gynecologists (ACOG), October 2002; ICSI Routine Prenatal Care, Eleventh Edition, August 2007; and ACOG News Release, Committee Opinion #411: Routine HIV Screening, August 1, 2008.

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