Perinatal care: Low risk, term

Preconception Care

Less than 50% of pregnancies are planned. Unplanned pregnancies may be unintended or unwanted.

Risk Assessment, Counseling and Interventions:

- H&P (routine care including pap test if indicated per guidelines), past obstetric history; optimize chronic medical and psychiatric diseases. Screen for DM if BMI > 30, or other risks.
- Infectious disease counseling, testing and immunization
  - STI: safe sex practices; STI history; yearly chlamydia screening all sexually active women ≤ 25, screening older women with new or multiple partners; targeted gonorrhea screening women ≤ 25 with increased risk; HIV and syphilis screening for high risk
  - Hepatitis A, hepatitis B, Rubella (MMR)*^, Varicella*^, Tdap, influenza**^, HPV^, pneumococcus, meningococcus - update immunizations as recommended by CDC; *wait 4 weeks to conceive **wait 4 weeks if received live vaccine, ^Live vaccines and HPV not recommended during pregnancy
- Teratogens and genetics (medication and supplementation use, history of congenital defects, maternal and paternal history of genetic disorders (offer appropriate screening and counseling) environmental exposure)
- Behavioral history and counseling (drug, alcohol, tobacco use, weight, nutrition and exercise)
- Social (domestic violence, barriers to care, and support structure).
- Folic acid 400 - 800 µg qd at least 1 month before conception to reduce risk of neural tube defects
- Family planning / contraception. Menstrual calendar for dating.

Antepartum Care: General

Goal is identify medical conditions, pregnancy complications and fetal abnormalities to reduce maternal and fetal morbidity and mortality.

Use of standardized prenatal record, such as ACOG, by all providers helps effectively manage pregnancy.

Typical frequency of prenatal visits in nulliparous, uncomplicated pregnancy is q 4 weeks for first 28 weeks of gestation, q 2 weeks until 36 weeks, then weekly until delivery. Frequency should be individualized based on risks.

Prenatal visits provide examinations, screening, education, immunization and chemoprophylaxis as indicated.

At each visit:

- **Screening:** Weight, blood pressure, fetal heart tones, (10-12 weeks) fundal height ; patient should be queried about fetal movement (starting at 28 week visit), contractions, fluid leakage and vaginal bleeding.
- Routine US dipstick no longer recommended - unreliable
- **Education:** Preterm labor education - support risk factor modification (stress, depression, domestic violence, tobacco, drug and alcohol use, STI's, nutritional deficiency, low BMI); depression and domestic violence screening should be performed at least every trimester; prenatal and lifestyle education (fetal growth, nutrition, weight gain, breast feeding, N/V, physiology of pregnancy, exercise, routine health maintenance, dental care, flu vaccination recommended, car safety, toxoplasmosis, safe food handling, hot tub/sauna, medication, avoidance of mercury exposure from certain fish); need for emergent care (PROM, vaginal bleeding, decreased fetal movement).

Antepartum Care: First Visit

First Visit (6 - 8 weeks) (Q MO until 28 weeks)

Screening

- **Risk assessment and H&P** - if not completed preconception
- **Genetic screening** - offer
  - Offer cystic fibrosis screening to all patients (if not done)
  - Offer Tay-Sachs, Canavan, familial dysautonomia screening to all pregnant Jewish, Cajun or French Canadian patients if they or their partners not tested
  - Offer CBC and hemoglobin electrophoresis to African Americans and CBC with indices to others to screen for hemaglobinopathies.
  - Other based on history
- **Estimated Date of Delivery**
  - First day of LMP: may be influenced by recall, irregularity, prior hormonal contraceptives
  - Accuracy of EDD crucial. 1st trimester US most accurate.
- **Lab testing**
  - Screen: HIV, hepatitis B, rubella, syphilis, chlamydia (gonorrhea if at risk). High risk women should be screened for TB. Offer Hepatitis B vaccination if HBsAg negative and at high risk.
  - Blood type, D (Rh), antibody screen, CBC, UA and urine culture (consider lead if risk)
- **Education:** Review expected course of pregnancy, anticipated schedule of visits, recommended testing, provider coverage, costs, discuss fetal aneuploidy testing and VBAC (if appropriate)
- **Recommendations:** Continue folic acid throughout first trimester. Calcium supplement recommended for women with poor dietary intake -(total daily requirement 1200 - 1500 mg/d.) Iron supplement, if deficient. Avoid excessive Vitamin A (> 700 µg).

Antepartum Care: Weeks 10 - 26

Recommendations

10-12 weeks

- **Screening:** Consideration for 1st trimester US if uncertain dates, antecedent medical complications or complications in previous pregnancy); Combined test for aneuploidy (11-13 week (US for nuchal translucency, hCG and PAPP-A followed by lab 15 - 22 weeks- if results show high risk- chorionic villus sampling. High risk women: cell-free DNA at 10 - 22 weeks with AFP at 15 - 22 weeks
- **Education:** Review labs

16-18 weeks

- **Screening:** OB US (optional: benefit of universal screening with US unproven) (Optimal timing recommended 18-20 weeks: satisfactory information for dating; good visualization for fetal malformations); cervical assessment by digital exam and/or transvaginal ultrasound. If cervix short (<25 mm), serially monitor. Aneuploidy (15 - 20 weeks if combined test indeterminate or not done then triple or quadruple screen (estriol, hCG, AFP, (inhibin-A)); if results show high risk - amniocentesis)
- **Education:** Quickening
- **Recommendations:** Prophylactic progesterone to prevent preterm delivery should be considered in high risk women with history of prior preterm labor or PROM; cerclage in women with previous preterm birth and short cervix

.Visits during 20-26 weeks

- **Screening:** Gestational DM (24 - 28 weeks) 50 g oral load with lab at 1 hr. If BG 1 hour elevated (140 mg/dl) then 3 hr GTT with 100 g oral load.
- **Education:** Prenatal education classes, family support or issues, gestational DM, delivery course, RhoGAM

Antepartum Care: Weeks 28 - 36

28 weeks (Q 2 week until 36 weeks)

Screening: Repeat D antibody testing (Rh) all unsensitized D-negative women; check HgB or Hct; urine protein if risk gestational HTN or kidney disease; rescreen high risk for STI (28 - 36 weeks);

Education: preregistration, awareness of fetal movement, work

- **Recommendations:** D immunoglobulin (RhoGAM) if antibody negative (also give with any procedure / injury associated with potential blood transfer); CDC: Tdap each pregnancy (27 - 36 weeks)

Visits during 30 - 34 weeks

- **Screening:** Routine
- **Education:** Travel, contraception, sexuality, pediatric care, labor and delivery issues, VBAC, warning signs pregnancy induced hypertension, preterm labor

36 weeks (Q 1 week)

- **Screening:** Cervix exam as indicated; confirm fetal position; group B strep (35 - 37 weeks) culture with lower vaginal and rectal swab
- **Education:** Postpartum care; management of late pregnancy symptoms; when to call provider; discuss post-partum depression
- **Recommendation:** Consider external cephalic version if breech

Visits during 37 - 41 weeks

- Screening: Cervix exam as indicated
- Education: Post-partum vaccinations; infant CPR; labor and delivery update; breast feeding; post-term management

Intrapartum Care

Late preterm:	34 0/7 - 36 6/7
Early term:	37 0/7 - 38 6/7
Full term*:	39 0/7 - 40 6/7
Late term:	41 0/7 - 41 6/7
Postterm:	≥ 42 0/7

*Lowest frequency of adverse neonatal outcomes

Intrapartum

- **Group B strep:** Antibiotics indicated if: previous infant with invasive GBS, GBS bacturia during pregnancy, positive GBS screening during pregnancy, unknown GBS status at onset of labor and delivery < 37 weeks, amniotic membrane rupture > 18 hr, temp > 38 C, intrapartum NAAT + GBS
- **Preterm labor:** hospitalize < 34 weeks; betamethasone, tocolytic drugs x 48 hours (maximize betamethasone effect); antibiotics for GBS and positive urine culture as indicated; magnesium sulfate 24 - 32 weeks. Use antenatal steroids if increased risk of preterm delivery within 7 days
- **Late preterm or early-term deliveries:**
  - Indications: Preeclampsia, eclampsia, oligohydramnios, prior classical c-section or myomectomy, placenta previa or accreta, multiple gestations, fetal growth restrictions, pregestational DM with vascular disease, poorly controlled DM or GDM, placental abruption, chorioamnionitis, PROM, cholestasis of pregnancy, alloimmunization of pregnancy with fetal effects, fetal congenital malformations
  - Not indications: suspected macrosomia, well controlled GDM, documented pulmonary maturity with no other indication
  - Fetal lung maturity may be evaluated if impacts risk assessment

Intrapartum Care: Cont.

Trial of labor after c-section (TOLAC) - VBAC: full discussion risks vs. benefits (uterine rupture, potential need for emergent c-section, risk of c-section, etc.)

Induction of Labor

- Indicated when the risks of continuing pregnancy for the mother or fetus are greater than the risks of early delivery. Indications: postterm pregnancy, PROM, preeclampsia, eclampsia, HELLP syndrome, fetal demise, DM, fetal growth restriction, twins, chorioamnionitis, abruptio placenta, etc.
- Not indicated: maternal anxiety, suspected macrosomia. Expert consensus that elective induction should not be performed before 39 weeks (well-dated).
- Contraindications: prior classical or other high-risk c-section /uterine incision, prior uterine rupture, active genital herpes, placenta previa or vasa previa, umbilical cord prolapse, transverse fetal lie, invasive cervical CA, category III fetal heart rate tracing.
- Women with favorable cervixes (high Bishop score) are not at increased risk of c-section.

Maternal request c-section

Full discussion and education. Not recommended if planning several pregnancies as placental previa and accreta more common, increased risk uterine rupture with VBAC, scheduled ≥ 39 weeks (well-dated)

Planned c-section

Examples: prior c-section, fetal malpresentation, placenta previa, multiple gestations, etc.

Unplanned c-section

Decision for c-section occurs from a complication of labor (failure to progress, nonreassuring fetal status, cord prolapse)

Postterm and Postpartum

Postterm

Increased risk with prior postterm pregnancy. Associated with increased fetal, neonatal, and maternal risks.

Induction commonly recommended in well-dated postterm pregnancies between 41 0/7 and 42 0/7 weeks. Fetal monitoring biophysical profile or modified biophysical profile twice weekly starting at 41 0/7 has been recommended.

Immediate post-partum

- **Recommendations:** D immunoglobulin (RhoGAM) if antibody negative and neonate positive; MMR if received series but non-immune (full series if not received);Tdap if not provided; varicella series if not immune (second dose during postpartum visit)

3 - 4 weeks post-partum

- **Screening:** Pap (if indicated per guidelines); rescreen high risk women for STI; rescreen for domestic violence and depression; screen women with GDM for DM

Education: Counseling patient with GDM about risk of developing DM and need for periodic screening; contraception, post-partum depression, breast feeding-support