

Prenatal Care: The First Visit

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Learning Objectives

- Explain the importance of prenatal care
- Learn to obtain a comprehensive intake for the first prenatal care visit
- Determine an appropriate estimated due date (EDD)
- Identify health problems that may affect current pregnancy and require additional evaluation and management
- Interpret common lab abnormalities and become familiar with their management
- Practice important counseling and education topics
- Learn resources to help care for pregnant patients
- Review aspirin guidelines for prevention of pre-eclampsia

What is prenatal care?

- Routine medical care in pregnancy.
- Provided by a midwife, OBGYN, family physician, or MFM provider.
- 51% of family physicians intend to provide prenatal care after residency.

What is prenatal care?

- Q4wk visits- onset of prenatal care to ~28 weeks
- Q2wk visits- 28-35wks
- Weekly visits- 36wks to delivery
- More frequent if high risk or when close follow up indicated

And why is it important?

- Reduce the risk of pregnancy complications
- Close surveillance if high risk conditions exist
- If no prenatal care
 - higher rate of low birth weight
 - higher neonatal mortality

The FIRST Visit

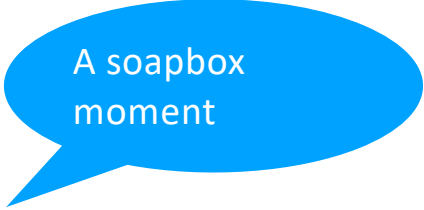
What should be your very FIRST question?

The FIRST Visit

Is this pregnancy planned/desired?

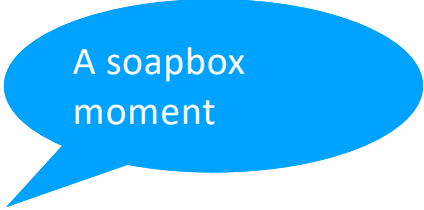
The FIRST Visit

- First visit is a full H&P
- This visit starts a problem list for remainder of pregnancy
- If key data is not obtained in first visit, it may never be captured or it may be identified too late.
- Early identification is important



A soapbox
moment


What is better than prenatal
care?



A soapbox
moment

What is better than prenatal
care?

Preconception care

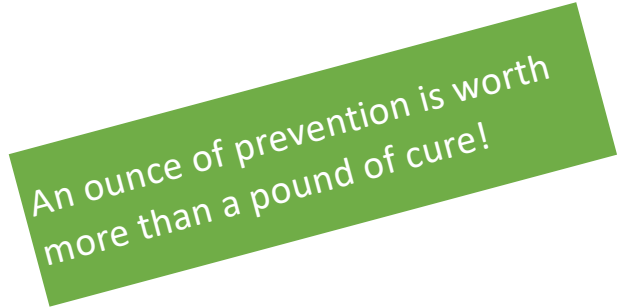


A soapbox
moment

In an ideal world, every patient would have a visit with you for preconception counseling!

But since we don't live in an perfect world...

Regard every woman of childbearing age not on an effective form of birth control as at risk for pregnancy. Your medication and intervention choices should always be made with this in mind.



An ounce of prevention is worth
more than a pound of cure!

Why is EDD important?

- All management decisions are dependent on gestational age.
- Being off by even one week, increases potential harm.

Establishing EDD

- What makes an LMP accurate?

CROWD PARTICIPATION!

Establishing EDD

- What makes an LMP accurate?
 - Recorded at the time of LMP
 - Has regular menses
 - Normal amount of flow and duration
 - No hormonal contraception for 3 months prior

Establishing EDD

- Benefits of early ultrasound
 - Pregnancy location
 - Viability
 - Number of gestations
 - Evaluate uterine and adnexal anatomy
 - Confirm gestational age
- It is critical if there is abdominal pain, bleeding, history of prior ectopic pregnancy.

Establishing EDD

- Women's Health View > Prenatal tab > EDD Maintenance > Modify EDD
- Never click final!

EDD Maintenance

Confirmation	Status	EDD	EGA on Method Date	Method	Date of Method	Description
✓ Confirmed	Authoritative	01/18/2022 MST	9 6/7 weeks	Last Menstrual Per...	04/13/2021 MDT	

Modify EDD Maintenance

Method: Last Menstrual Period (dropdown menu open showing: Assisted Reproductive Technology, Date of Conception, Last Menstrual Period, Reported EGA/EDD, Ultrasound, Unknown)

Date of Method: 04/13/2021

Description:

- Normal Amount/Duration
- Abnormal Amount/Duration
- Date Approximate
- Date Definite
- Date Unknown
- Other

Comments:

Final Initial

6 weeks 6 days

Show Additional Details

Delete OK Cancel

Guidelines for redating based on ultrasound

Ultrasound gestational age	Discrepancy between ultrasound dating and LMP dating that supports redating
<8 6/7 wk	More than 5 days
9 0/7 wk to 13 6/7 wk	More than 7 days
14 wk to 15 6/7 wk	More than 7 days
16 wk to 21 6/7 wk	More than 10 days
22 wk to 27 6/7 wk	More than 14 days
28 wk and beyond	More than 21 days

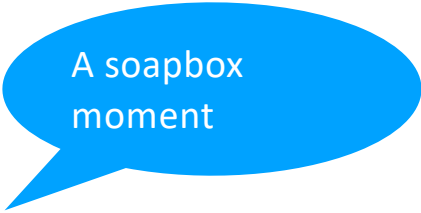
Establishing EDD

- Always use the earliest ultrasound with an embryo.
- Get records for ultrasounds done elsewhere
- Avoid using ultrasounds from pregnancy crisis centers
- Ultrasounds after 20 weeks have more room for error because of IUGR, macrosomia, parental size

Medical History

- Many medical conditions affect pregnancy and need to be addressed at the first visit.
- Medication changes may be needed.
- Closer surveillance in pregnancy may be warranted.
- Additional tests may need to be ordered.
- Poor obstetric outcomes may be a result of these conditions.

Medical History



A soapbox
moment

- Our patients have a varying educational backgrounds, health literacy levels, language preferences, and socioeconomic statuses.
- Obtain history in a way that works for your patients.
 - Sometimes you need to run through organ systems, or provide examples for patients.
 - Always use an interpreter.
 - Take your time.

Medical History

What are common chronic medical conditions that affect pregnant women?

And what is their prevalence?



Common Medical Conditions Affecting Pregnancy

- Hypothyroidism- 2.5% of pregnancies
- Pre-existing Diabetes (Type 1 and 2)- 0.9-1.8% of pregnancies
- Chronic Hypertension- 3-5% of pregnancies



Hypothyroidism

Management

- Increase levothyroxine dose by 30%. This can be accomplished by adding two extra doses a week.
- TSH Goal:
 - <2.5 in first trimester
 - <3 in 2nd/3rd trimester
- If not at goal, increase every 4 weeks until at goal.
- Counsel against taking prenatal vitamin and levothyroxine simultaneously.

Additional studies needed

- Check TSH every 4-6 weeks if not at goal. Or every trimester if at goal.
- If patient has a history of Graves, may need additional workup and antibody testing.
- Consider serial growth ultrasounds if not well controlled

Impacts on pregnancy if untreated or under-treated

- Spontaneous abortions
- IUGR
- Pre-eclampsia
- Impaired neurologic development
- Placental abruption
- Preterm delivery
- Increased perinatal morbidity and mortality

Pre-existing Diabetes

Management

- Stop teratogenic meds like ACE-I and statin
- Prescribe glucometer and supplies ASAP.
 - Check fasting glucose. Goal <95
 - Check 2 hour postprandial. Goal <120
- Achieving good control is time sensitive.
- Referral to Diabetes educator
- Exercise
- Start aspirin at 12 weeks
- Message your fellows!

Additional studies needed

- Baseline PIH labs (Cr, LFT, uric acid, LDH, platelets, random urine protein and creatinine (if abnormal or borderline obtain 24 hour urine protein collection))
- EKG, foot and eye exams
- Fetal cardiogram (20-24wks)
- Serial growth ultrasound
- Antenatal testing
- Adequate dating is especially important, as induction often needed.
- Genetic testing should be strongly encouraged.

Impacts on pregnancy if untreated or under-treated

- Macrosomia and IUGR
- Pre-eclampsia
- Birth trauma (shoulder dystocia and resulting upper extremity fractures)
- Hypoglycemia in neonate
- Congenital defects like CHD, spina bifida (13-20x more common in Diabetics), sacral agenesis (200x more common)
- IUFD
- Preterm labor
- Maternal infections

Chronic Hypertension

Management

- Stop teratogenic meds like ACE-I
- Preferred agents are nifedipine, labetalol, methyldopa
- Start meds if BP not at goal (systolic <150, diastolic <100)
 - BP often lower than usual in first and second trimesters.
- Start aspirin at 12 weeks
- Message your fellows!

Additional studies needed

- Baseline PIH labs (Cr, LFT, uric acid, LDH, platelets, random urine protein and creatinine (if abnormal or borderline obtain 24 hour urine protein collection)
- Serial growth ultrasound
- Antenatal testing
- Induction may be indicated

Impacts on pregnancy if untreated or under-treated

- Preeclampsia (25% increased risk)
- Placental abruption
- IUGR
- Preterm delivery
- C-section

OB History

- Gravida (Gs)- total number of pregnancies
- Para (Ps)- TPAL (term deliveries, preterm deliveries, spontaneous and induced abortions, living children)
 - If abortions, did pass spontaneously, with medication or procedure (D&C).
 - Multiple D&Cs > increased risk of placental abnormalities.

OB History

- Gestational age at time of delivery
 - Some patients don't know this, and may need prompting For example, when was your due date and when did you give birth.
 - If preterm delivery suspected, ask follow up questions:
 - How much did you baby weigh?
 - How long did you baby stay in hospital/NICU?
 - Did your doctors identify a cause of preterm delivery?

History of preterm delivery

Management

- May consider weekly 17-hydroxyprogesterone injections is indicated if history of birth between 16-20 wks and 36 6/7 wks.
 - Start between 16-24wks
 - Continue until 36 6/7wks
 - Must be committed
 - Prefer IM as opposed to new subcutaneous autoinjectors.

Additional studies needed

- Check cervical length via transvaginal ultrasound at 16, 18, 20, 22, and 24wks
- If shortened cervix (<25mm), urgently call fellow to discuss MFM consult, vaginal progesterone, possible cerclage placement.
- Steroids

Impacts on pregnancy if untreated

- Respiratory distress
- Hypoglycemia
- NEC
- IVH
- Feeding difficulties
- Prolonged hospitalization

OB History

- Mode of delivery- vaginal, vacuum, forceps, c-section
 - If operative, ask about indication
 - Ask if any complications from c-section
 - Ask if they were told never to have vaginal delivery
 - If not at UNM, GET RECORDS ASAP.

OB History

- Pregnancy complications- many are at risk of recurrence
- Gestational diabetes
- Pre-eclampsia
- Cholestasis

OB History

- Delivery complications- may change management of delivery
- PPH and need for transfusion
- 3rd or 4th degree lacerations
- Shoulder dystocia

OB History

- Newborn weight
- Newborn complications
- Breastfeeding history
- Women's Health View > Pregnancy Overview > Click on Gs and Ps hyperlink

Past Surgical History | Past Medical | Social History | **Pregnancy**

4 1 0 0 1

Baby A

+ Add Baby

*Delivery/Outcome Date/Time [Date Picker] [Time Picker]

*Gestation at Birth
 Weeks Days Unknown or Approximate

*Pregnancy Outcome / Result [Dropdown] Length of Labor [] hrs [] mins

Child's Sex [Dropdown] Infant's Weight [] lbs [] oz/ [] gms Anesthesia Type [Dropdown] Delivery Hospital [Dropdown] Preterm Labor [Dropdown]

Mother Complications [Dropdown] Fetal Complications [Dropdown] *Neonate Outcome [Dropdown] Neonate Complications [Dropdown] Newborn's Name [Text]

Father of Baby - Name [Text] Mark as Sensitive

Comments [Text Area]

Delivery / Outcome Date must be in the past OK OK & New Can

Gyn History

- STD
 - If high risk STDs, screen more than once in pregnancy, especially in third trimester.
- History of genital herpes
 - Need prophylaxis beginning at 36wks
- Menses history
- Known uterine malformations
- Prior birth control methods

Surgical History

- Pelvic or abdominal surgeries may require closer attention to delivery planning, even if cesarean delivery is not expected.
- Surgical history may give you clues about other medical history.

Family History

- Congenital birth defects
- Congenital syndromes
- Developmental delay
- Deafness.
- Pregnancy complications like recurrent pregnancy loss, stillbirth, etc.
- DVT/PE
- Other medical conditions like Diabetes and Hypertension

Family History

- Women's Health View > Prenatal tab > Genetic Screening > +

*Performed on: 07/04/2021 11:30 MDT By: Gurule, Francheska

Genetic Screen

Patient and Father of the Pregnancy Risk Factors

Is the patient 35 years or older at the Estimated Due Date? Yes No

Is the father of the pregnancy 45 years or older? Yes No

Has the patient or the father of the pregnancy has a baby that died shortly after birth or in the first year of life? Yes No

Has the patient or the father of the pregnancy had a stillborn child or 3 or more first trimester miscarriages? Yes No

Are the patient and the father of this pregnancy related to each other in any way? Yes No

Has the patient taken any medications known to be teratogenic, and/or medication?

Does the patient have diabetes prior to pregnancy that was uncontrolled?

Have there been any exposures to recreational drugs, alcohol, or X-Rays since

Comments

Segoe UI 9

Ethnic / Racial Background

	Self	Baby's father	Other relative	Comment
African American, African or Black				
Asian, Southeast Asian				
Cajun				
Caucasian				
French Canadian				
Greek				
Hispanic, Spanish, or Caribbean				
Italian				
Jewish ancestry (Ashkenazi or Sephardic)				
Mediterranean				
Native American				
Other				

Genetic Disorders

	Self	Baby's father	Other relative	Comment
Birth Defect or Genetic Disorder				
Deafness/Early Onset Hearing Loss				
Developmental or Intellectual Delay/Autism/ Fragile X				
Chromosome Disorder				
Bleeding Disorder				
Metabolic Disease (e.g. PKU)				
Neurofibromatosis				
Tay Sachs Disease				
Familial /Genetic Anemia				
Other inherited conditions or chromosomal abnormality not listed				
Cancer less than 50 yrs. old				
Heart Attack less than 40 yrs. old				
Known genetic cancer disorder				

Social History

- Does she live in a home? Who does she live with?
- Education level
- Pets
- FOB/Support person
- Intimate partner violence
- Custody of other children
- Alcohol, tobacco, drug use
 - There is a high nondisclosure rate for all of these.
 - Specifically ask about marijuana.

Medications

- Many medications are teratogenic (Lisinopril, NSAIDs, lithium, valproic acid, etc)
- Some medications need dose adjustments (Antiepileptics, Levothyroxine)
- Allergies-
 - if penicillin allergy, document type of allergy as this affects GBS testing and treatment.
- Sources
 - Infant Risk Center
 - Reprotox
 - LactMed
 - mothertobaby.org for good patient handouts

Medications

Soapbox Moment

Your patient tells you, “I was on prozac, but I stopped it as soon as I got pregnant because my friend said it causes birth defects.”

What do you say?

Other

- Last dental visit
- Travel
- Miscarriage precautions
- OB triage
- Environmental hazards

Prenatal Labs

Blood type, Rh status

Antibody screen

CBC

Hemoglobin A1C

Hepatitis B surface
antigen

Hepatitis C antibody*

HIV

Prenatal Labs

- **Blood type, Rh status-**
 - If Rh negative > rhogam at 28 wks.
 - Ensure antibody screen is negative for anti-D antibodies.
- **Antibody screen-**
 - Some antibodies are associated with hemolytic disease of the newborn
 - Sometimes too weak to titer
 - Obtain FOB antigen testing if paternity is certain
- **CBC/Hematocrit-**
 - if anemic, treat empirically with iron or consider iron studies.
 - If no iron deficiency, do electrophoresis. There are genetic implications for hemoglobinopathies.

Prenatal Labs

- **Hemoglobin A1C-**
 - if pre-diabetic and fasting >93 , diagnose GDM.
 - If pre-diabetic and fasting <93 , perform early GDM testing.

- **Hepatitis B surface antigen-**
 - Positive indicates active infection.
 - This does not check for immunity. If Hep C, may consider testing for immunity and vaccinate if indicated.

Prenatal Labs

- **Rubella IgG**
 - Positive indicates immunity
 - If negative, give MMR vaccine **after** delivery
- **Syphilis- tpab**
 - If positive, will reflex to RPR and titer
 - If positive, get treatment history and old titers
 - Consult fellows
- **Pap-**
 - if due, may check in pregnancy.
 - I prefer testing between 12-36wks.

Prenatal Labs

- **Gonorrhea and chlamydia-**
 - If positive, treat.
 - Will need a test of cure
 - Test again in third trimester
- **HIV-** confirm and refer
- **Varicella IgG**
 - If positive immune.
 - If negative, vaccinate after delivery.
- **Tuberculosis testing***
- **Hepatitis C antibody (and/or viral load)**

Prenatal Labs

- **Urine Culture**
 - Screening = asymptomatic patients.
 - If positive for pathogen at 10^5 CFU, treat.
 - Reduced risk of preterm labor.
 - Reduces risk of pyelonephritis.
 - Check test of cure.
 - Obtain Q trimester urine cultures.
 - If >2 episodes, start prophylaxis (Keflex 250mg QHD or nitrofurantoin 50mg QHS)
 - Testing = symptomatic patients.
 - Only needs 10^2 CFU to warrant treatment.

Prenatal Labs

- **Other risk-specific labs**
 - TSH
 - “PIH Labs”- Pregnancy induced hypertension
 - Creatinine
 - AST
 - ALT
 - Platelets
 - Protein : Creatinine Ratio (Obtain 24 hour urine protein if over or near 0.3)
 - Uric acid
 - LDH

Who to screen for
hypothyroidism?

Who to screen for hypothyroidism?

- In general, only symptomatic individuals.
- In pregnancy, consider screening the following:
 - Personal or family history of thyroid disease
 - Diabetics
 - Head and neck radiation, prior thyroid surgery
 - BMI >40
 - Goiter on exam
 - Age >30
 - Taking amiodarone or lithium
 - Other autoimmune disease
 - Recurrent pregnancy loss
- TSH may be low in first trimester and this is normal.

A word about genetics....

Who is at increased risk for genetic anomalies?

A word about genetics....

Who do you offer genetics?

A word about genetics....

- **Offer to everyone**
- DOCUMENT your discussions
- Discuss benefits
 - Pregnancy planning
 - Delivery planning
- Discuss risks
 - False positives
 - False negatives
 - Its just a *screening* test
 - More studies may be needed

Case 1: Nausea and vomiting

- First line agents
 - Ginger- can buy capsules (300-500mg QID), tea, candies- improves nausea compared to placebo, but does not reduce vomiting
 - Pyridoxine (vitamin B6) 25mg TID (more effective when combined with unisom)- improves nausea, but does not reduce vomiting
 - Unisom/doxylamine 50mg TID (can cause drowsiness)
 - Sea bands acupressure at point P6
 - Avoid triggers, bland diet, eat more smaller meals and more slowly

Case 1: Nausea and vomiting

- Second Line agents
 - Diphenhydramine 25-50mg every 4-6 hours
 - Promethazine 12.5-25mg every 4-6 hours (oral or rectal)
 - Prochlorperazine 25mg every 12 hours
- If still no improvement, consider
 - Metoclopramide 5-10mg every 6-8 hours orally or IM
 - Ondansetron 4-8mg orally every 8 hours (in cohort study of 1/8 million births, there was increased risk of oral cleft (RR 1.24, 95% CI 1.03-1.48), but absolute risk difference is low (risk difference is 2.7 per 10,000 births).
 - Consider acid reducing agents like Ranitidine, Pantoprazole

Case 1: Nausea and vomiting

- Hyperemesis Gravidarum- severe end of the nausea and vomiting spectrum accompanied by weight loss, ketonuria, or electrolyte abnormalities.

Weight Gain
Recommendations
For Women
Pregnant With One
Baby

If before pregnancy, you were...	You should gain...
Underweight BMI less than 18.5	28-40 pounds
Normal Weight BMI 18.5-24.9	25-35 pounds
Overweight BMI 25.0-29.9	15-25 pounds
Obese BMI greater than or equal to 30.0	11- 20 pounds

Weight Gain
Recommendations
For Women
Pregnant With
Twins

If before pregnancy, you were...	You should gain...
Underweight BMI less than 18.5	50-62 pounds*
Normal Weight BMI 18.5-24.9	37-54 pounds
Overweight BMI 25.0-29.9	31-50 pounds
Obese BMI greater than or equal to 30.0	25-42 pounds

Case 2: Obesity and Weight Gain in pregnancy

- Fish consumption in pregnancy
 - Avoid shark, swordfish, mackerel, tilefish, and tuna steaks given higher content of mercury.
 - Seafood in general is super healthy and some studies suggest eating at least 2 servings even in pregnancy. Foods low in mercury are shrimp, salmon, pollock, catfish, canned light tuna.
 - Avoid raw fish because of exposure to parasites. Sushi in the US is flash frozen, which effectively kills parasites.
 - Avoid refrigerated smoked seafood because of Listeria contamination.
- Prenatal vitamin should contain 400mcg of folic acid. Women on folate antagonists should take 4mg of folic acid daily.
- Try gummy PNV. Take at bedtime. Pre-medicate with anti-nausea medications. Do not take on empty stomach. Take folic acid alone.

Case 3: Exercise and other habits in pregnancy

- Exercise in pregnancy
 - Drink plenty of water.
 - Safe in women who have been exercising before pregnancy.
 - Avoid prolonged supine activities.
 - Avoid contact sports, or sports with high potential for falls.
 - Strenuous activity is associated with lighter babies that persist until 5 years of age.
- Caffeine in pregnancy- moderate amounts (150-300 mg/day) are safe.
- There is no demonstrated safe amount of alcohol in pregnancy. Even small levels have been associated with even mild cognitive issues. Fetal Alcohol Syndrome is now recognized as a spectrum of disease.

Who is a candidate for Aspirin? (USPSTF)

Risk Level	Risk Factors	Recommendation
High	History of preeclampsia Multifetal gestation Chronic hypertension Type 1 or 2 Diabetes Renal Disease Autoimmune disease (SLE, APLS)	Recommend low dose aspirin if the patient has 1 of these risk factors.
Moderate	Nulliparity Maternal age >35 Obesity (BMI >30) Family history of preeclampsia (mother, sister) Sociodemographic characteristic (African American race, low SES) Personal history of LBW/SGA, previous adverse pregnancy outcome, >10 year pregnancy interval	Recommend low dose aspirin if the patient has 2 of these risk factors.
Low	Previous uncomplicated full-term delivery	Do not recommend aspirin.

When do you start aspirin? 112-28 weeks,
but ideally at 16 weeks

When do you stop aspirin? There is no need or benefit in stopping aspirin. Continue through delivery.

Case 4- Aspirin for pre-eclampsia prevention

- In low-risk groups (disease prevalence of 2%), the number needed to treat is approximately 500, compared with a number needed to treat of 50 women in a high-risk group (disease prevalence of 20%).
- A meta-analysis of 31 RCTs showed a modest effect of low-dose aspirin prophylaxis on prevention of preeclampsia in groups of women with various risk profiles (RR, 0.90; 95% CI, 0.84–0.97).
- A subsequent Cochrane review, which pooled aggregate data from 59 trials, reported a 17% relative reduction in preeclampsia with low-dose aspirin use. However, this large risk reduction may reflect publication bias (a small, early positive trial is more likely to be published) or chance findings because the largest trials in the analysis showed no significant protective effect.