



# Evidence-Based Management

## *2011 VA/DoD Management of Pregnancy Clinical Practice Guideline Update*

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# Outline

- Review Process
- Structure of Guideline
- Change in Scope
- Highlights
- Patient and Provider Tools

# Intent of Guideline

- Reduce current practice variation and provide facilities with a structured framework to help improve patient outcomes
- Provide evidence-based recommendations to assist providers and their patients in the decision-making process concerning pregnancy
- Identify outcome measures to support the development of practice-based evidence that can ultimately be used to improve clinical guidelines.

# Benefits of Standardization

- Transient population
- Multiple services
- Patient satisfaction
- Provider satisfaction
- Patient safety
- Outcomes assessment
- Unified community voice

# CPG in Pregnancy - History

- History of VA/DoD Guidelines
  - 2001 Start
  - 2003 Uncomplicated Pregnancy
  - Goal oriented care
  - Limited Scope
  - Exit the guideline
- 2010 Pregnancy Guideline

# These Recommendations . . .

- may be modified according to local conditions and updated scientific evidence.
- should serve as a backbone to the supplemental care provided by advanced care providers.
- are designed to be adapted by individual facilities, considering needs and resources.
- serve as a guide to optimize quality of care and clinical outcomes for their patients.
- should not prevent providers from using own clinical expertise in the care of individual patient.
- should never replace sound clinical judgment.

# Goals of the Guideline

- Outline antenatal visits for specific gestational ages
- Each visit having specific goals and objectives
- Help ensure both pregnant women and providers are aware of expectations
- A standardized care plan
- Provide scientific evidence-base for practice interventions and evaluations

# Understanding the Process

- Committee Established
- Evidence Reviews
- Meetings
  - TDY
  - Weekly teleconferences
- Editorial Reviews
- Service Reviews
- TMA Review
- Consultants Review
- Editorial Changes
- Guideline Published

# Creating a Tool Kit

- Committee Established
- Meetings
  - Denver, Colorado
  - San Antonio, Texas
  - Weekly teleconferences
- Tool development
- Community Education

# Assessing the Evidence

# Quality of Evidence

- I At least one properly done RCT
- II-1 Well-designed controlled trial without randomization
- II-2 Well-designed cohort or case-control analytic study, preferable from more than one source
- II-3 Multiple time series evidence with/without intervention, dramatic results of uncontrolled experiment
- III Opinion of respected authorities, descriptive studies, case reports, and expert committees

# Net Effect of the Intervention

- Substantial More than a small relative impact on a frequent condition with a substantial burden of suffering; ***or A large impact on an infrequent condition with a significant impact on the individual patient level.***
- Moderate A small relative impact on a frequent condition with a substantial burden of suffering; ***or A moderate impact on an infrequent condition with a significant impact on the individual patient level.***
- Small A negligible relative impact on a frequent condition with a substantial burden of suffering; ***or A small impact on an infrequent condition with a significant impact on the individual patient level.***
- Zero or Negative Negative impact on patients; ***or No relative impact on either a frequent condition with a substantial burden of suffering; or an infrequent condition with a significant impact on the individual patient level.***

# Overall Quality

- **Good** High-grade evidence (I or II-1) directly linked to health outcome
- **Fair** High-grade evidence (I or II-1) indirectly linked to health outcome or Moderate-grade evidence (II-2 or II-3) directly linked to health outcome
- **Poor** Level III evidence or no linkage to evidence to health outcome

# Final Grade

- A A strong recommendation that the clinicians provide the intervention to eligible patients. *Good evidence was found that the intervention improves important health outcomes and concludes that benefits substantially outweigh harm.*
- B A recommendation that clinicians provide (the service) to eligible patients. *At least fair evidence was found that the intervention improves health outcomes and concludes that benefits outweigh harm.*
- C No recommendation for or against the routine provision of the intervention is made. *At least fair evidence was found that the intervention can improve outcomes but concludes that the balance of benefits and harms is too close to justify a general recommendation.*

# Final Grade

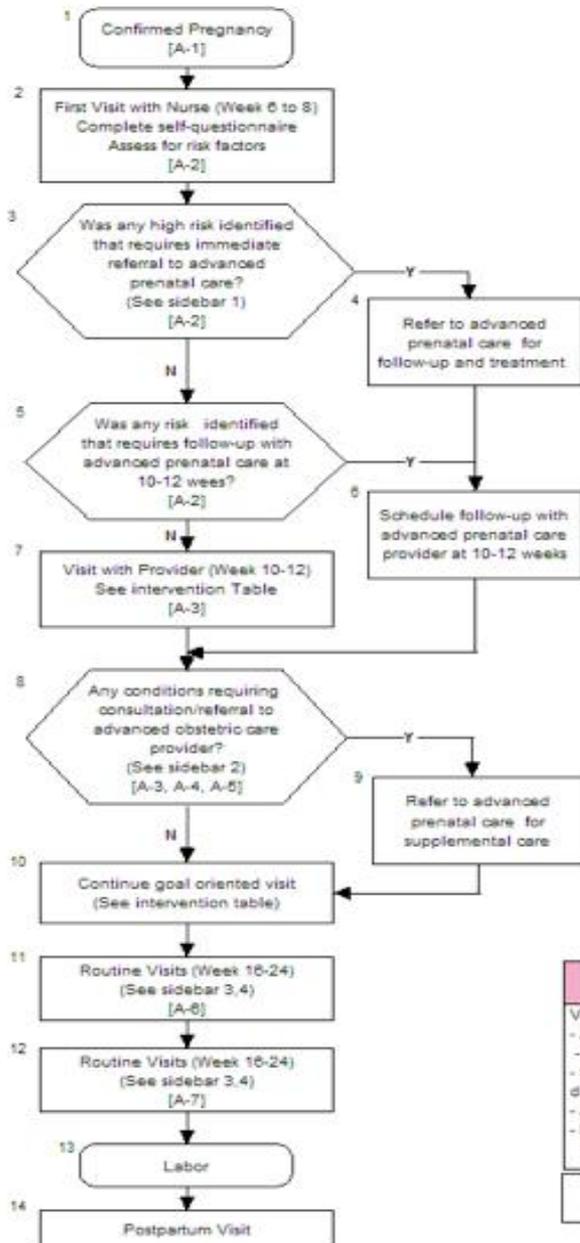
- D Recommendation is made against routinely providing the intervention to asymptomatic patients. *At least fair evidence was found that the intervention is ineffective or that harms outweigh benefits.*
- I The conclusion is that the evidence is insufficient to recommend for or against routinely providing the intervention. *Evidence that the intervention is effective is lacking , or poor quality, or conflicting, and the balance of benefits and harms cannot be determined.*

# Change in Scope

- ~~Uncomplicated~~ Pregnancy Guideline
  - Allows individual or group care (e.g. Centering Pregnancy)
  - Provides guidance for levels of care
  - Addresses some common complications

# Level of Care Settings

- Routine Prenatal Care Providers
  - Family Medicine
  - CNM WHNP
  - OB/GYN
- Advanced Prenatal Care Providers
  - OB/GYN
  - MFM



Sidebar 1: Indication for immediate Referral
Recurrent pregnancy loss
Preterm birth
Ectopic pregnancy
Vaginal bleeding
Significant abdominal pain/cramping
Severe pelvic infections
Cardiovascular diseases -
Cardiac abnormality
Diabetes mellitus (DM) – Type 1 or 2
Renal disorder
Transplant
Moderate-sever MDD
Suicidal
HIV

Sidebar 2: Indication for advanced obstetric care following 10-12 weeks	
<ul style="list-style-type: none"> <li>Prior macrosomia or GDM</li> <li>Recurrent pregnancy loss</li> <li>Ectopic pregnancy</li> <li>Severe pelvic infections</li> <li>Pelvic surgery for infertility or infection</li> <li>Second trimester pregnancy loss</li> <li>Cervical surgery (LEEP, cone biopsy)</li> <li>Uterine abnormality</li> <li>Vaginal bleeding</li> <li>Significant abdominal pain/cramping</li> <li>Drug use/alcohol use/smoking</li> <li>Current Cancer</li> <li>Transplant on medication</li> <li>Cardiac abnormality</li> </ul>	<ul style="list-style-type: none"> <li>Current Infection:               <ul style="list-style-type: none"> <li>- Positive gonorrhea</li> <li>- Positive Chlamydia</li> <li>- Hepatitis B</li> <li>- Genital herpes</li> <li>- HIV</li> </ul> </li> <li>Pre-existing conditions:               <ul style="list-style-type: none"> <li>- Abnormal pap-smear</li> <li>- Mild asthma</li> <li>- Controlled hypothyroidism</li> <li>- Previous gastric bypass</li> <li>- Depression</li> <li>- At risk for diabetes</li> </ul> </li> <li>OB/GYN conditions               <ul style="list-style-type: none"> <li>- At risk for preterm birth</li> <li>- Prior caesarean section</li> </ul> </li> </ul>

Sidebar 3: Intervention at ALL visits
<ul style="list-style-type: none"> <li>Screening for hypertensive disorders</li> <li>Breast feeding education</li> <li>Exercise during pregnancy</li> <li>Influenza vaccine (season-related)</li> </ul>
<b>For specific Intervention</b> See Summary Table

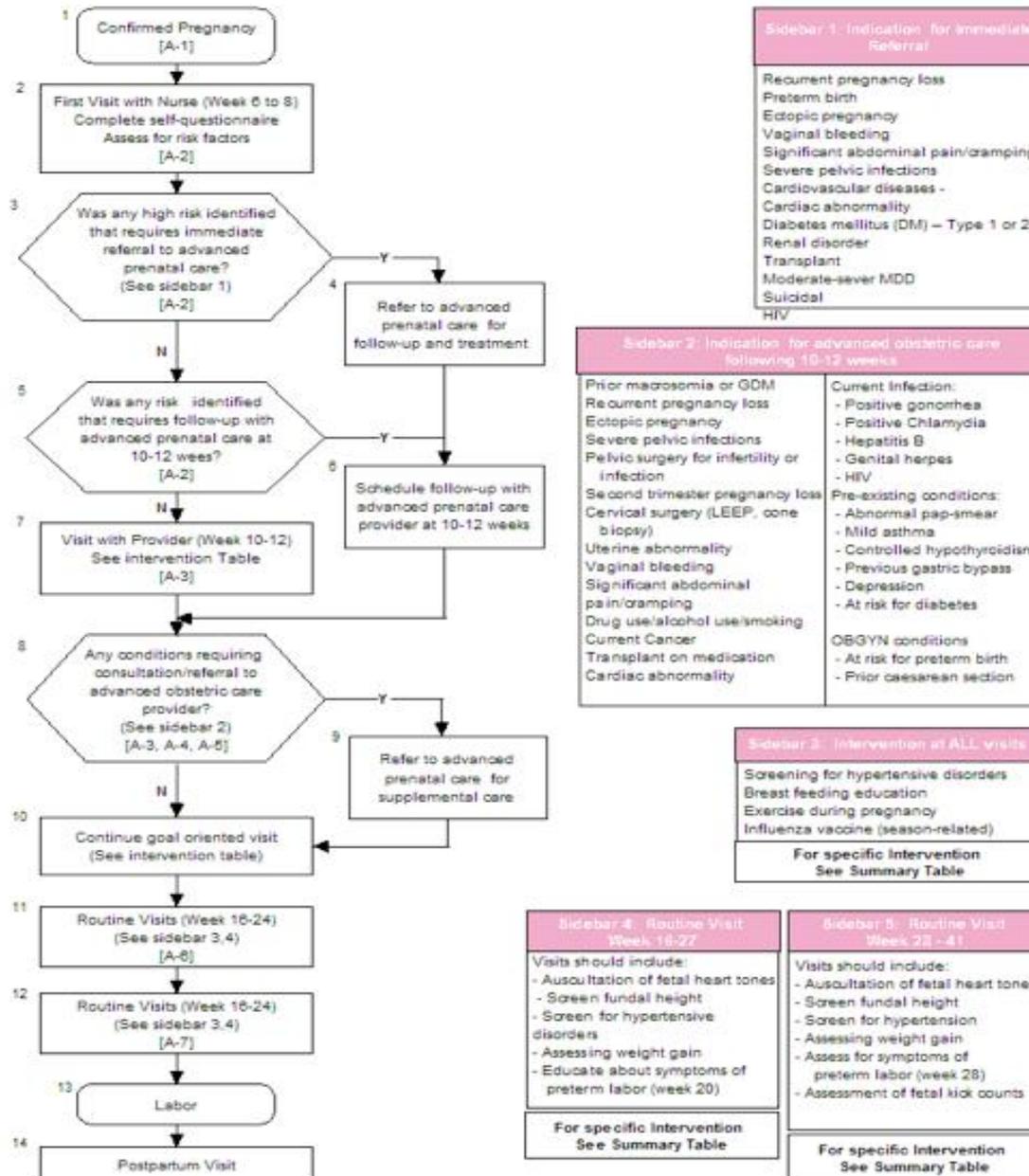
Sidebar 4: Routine Visit Week 16-27
Visits should include: <ul style="list-style-type: none"> <li>- Auscultation of fetal heart tones</li> <li>- Screen fundal height</li> <li>- Screen for hypertensive disorders</li> <li>- Assessing weight gain</li> <li>- Educate about symptoms of preterm labor (week 20)</li> </ul>
<b>For specific Intervention</b> See Summary Table

Sidebar 5: Routine Visit Week 28 -41
Visits should include: <ul style="list-style-type: none"> <li>- Auscultation of fetal heart tones</li> <li>- Screen fundal height</li> <li>- Screen for hypertension</li> <li>- Assessing weight gain</li> <li>- Assess for symptoms of preterm labor (week 28)</li> <li>- Assessment of fetal kick counts</li> </ul>
<b>For specific Intervention</b> See Summary Table

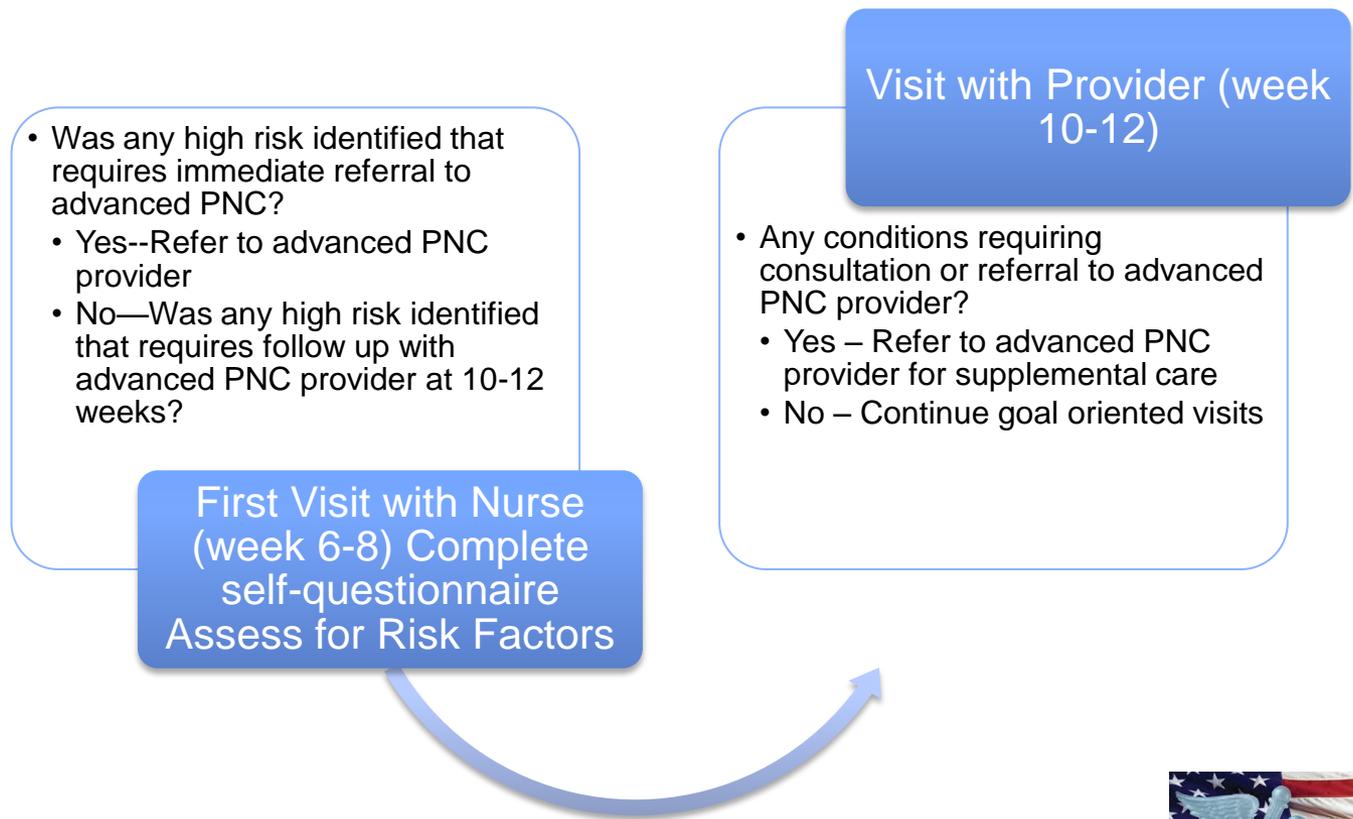


# DoDVA Clinical Practice Guideline for Management of Uncomplicated Pregnancy

3/23/2016



# Pregnancy Management Algorithm



# Ongoing Normal Pregnancy

- Any Conditions requiring consultation with or referral to advanced PNC provider?
- No—Continue goal oriented visits
- Yes—Refer or consult with advanced PNC provider

Routine Goal Oriented Visits (week 16-24)

Routine Goal Oriented Visits (weeks 25-41)

- Any Conditions requiring consultation with or referral to advanced PNC provider?
- No—Continue goal oriented visits
- Yes—Refer or consult with advanced PNC provider

# VA/DoD Clinical Practice Guideline for the Management of Pregnancy

## Table 1 ~ Initial Nurse Assessment and Consultation/Referral Guide

Risk Assessed by Nurse	Lab Tests	Advanced Prenatal Care Provider		
		Immediate Referral	Consult	Follow-Up (wks 10-12)
Uncertain dating criteria	Ultrasound		<input checked="" type="checkbox"/>	
Late presentation	Ultrasound		<input checked="" type="checkbox"/>	
<b>Past OB History:</b>				
Recurrent pregnancy loss		<input checked="" type="checkbox"/>		
Ectopic pregnancy risk (hx of ectopic, tubal surgery, tubal infertility, or PID; current IUD)	Quant HCG/ Ultrasound	<input checked="" type="checkbox"/>		
Prior macrosomia or prior gestational diabetes mellitus (GDM)	Glucola for GDM	<input checked="" type="checkbox"/>		
Preterm birth			<input checked="" type="checkbox"/>	
Second trimester pregnancy loss	Ultrasound		<input checked="" type="checkbox"/>	
Cervical surgery (LEEP, cone biopsy)			<input checked="" type="checkbox"/>	
Bariatric Surgery (less than 18 months)			<input checked="" type="checkbox"/>	
<b>Current Problems:</b>				
Vaginal bleeding		<input checked="" type="checkbox"/>		
Significant abd pain/cramping		<input checked="" type="checkbox"/>		
Prescription, over-the-counter/herbal medications			<input checked="" type="checkbox"/>	
Drug / alcohol use				<input checked="" type="checkbox"/>
Smoking				<input checked="" type="checkbox"/>
<b>Medical Conditions:</b>				
Cardiovascular diseases		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Cardiac abnormality		<input checked="" type="checkbox"/>		
Diabetes mellitus (DM) - Type 1 or 2	Hgb A1c	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Renal disorder (includes pyelonephritis)		<input checked="" type="checkbox"/>		
Hypertension		Not controlled	<input checked="" type="checkbox"/>	
Thyroid disorders	Thyroid function		<input checked="" type="checkbox"/>	
Gastrointestinal disorders on medication			<input checked="" type="checkbox"/>	
Pulmonary disease			<input checked="" type="checkbox"/>	
Family history of DM in first relative	Glucola for GDM			
Neurological disorder			<input checked="" type="checkbox"/>	
Autoimmune disorder/Lupus			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Major mental illness			<input checked="" type="checkbox"/>	
Blood disorders			<input checked="" type="checkbox"/>	
Hepatitis	Hep panel		<input checked="" type="checkbox"/>	
Sexually transmitted disease (STD)	<input checked="" type="checkbox"/>			
Tuberculosis			<input checked="" type="checkbox"/>	
Human immunodeficiency virus (HIV)	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Rash or viral illness			<input checked="" type="checkbox"/>	
Radiation/toxic chemical exposure since becoming pregnant			<input checked="" type="checkbox"/>	
Thromboembolic Disease		<input checked="" type="checkbox"/>		

Risk Assessed by Nurse	Lab Tests	Advanced Prenatal Care Provider		
		Immediate Referral	Consult	Follow-Up (wks 10-12)
Cancer			<input checked="" type="checkbox"/>	
Transplant		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Hx genetic disease or family of genetic disease		<input checked="" type="checkbox"/>		
Dental complaint		To Dentistry		
Screen for Major Depressive Disorder (MDD)		To Mental Health if suicidal or moderate or severe MDD		
Occupational hazards		To Prev Med/ Pub Hlth		
Homeless		To Social Work		
Domestic Violence		To Social Work if unsafe		
Hx of infertility	Transvaginal Ultrasound		<input checked="" type="checkbox"/>	
Hx of mental illness on medications			<input checked="" type="checkbox"/>	
Diet restriction		To Nutritionist	<input checked="" type="checkbox"/>	
Eating disorder			<input checked="" type="checkbox"/>	
Body mass index (BMI) >29 kg/m <sup>2</sup>		Glucola for GDM	<input checked="" type="checkbox"/>	
BMI <20 kg/m <sup>2</sup>			<input checked="" type="checkbox"/>	
Age (<16 or >35)			<input checked="" type="checkbox"/>	
<b>Routine Lab Tests:</b>				
HEV	<input checked="" type="checkbox"/>			
Complete Blood Count (CBC)	<input checked="" type="checkbox"/>			
ABO Rh blood typing	<input checked="" type="checkbox"/>			
Antibody screen	<input checked="" type="checkbox"/>			
Rapid plasma reagent (RPR)	<input checked="" type="checkbox"/>			
Hepatitis B surface antigen	<input checked="" type="checkbox"/>			
Rubella test	<input checked="" type="checkbox"/>			
Urinalysis and culture	<input checked="" type="checkbox"/>			
<b>Additional Information:</b>				
Religion				
Language barrier				
Current/recent deployed self/family member				
Born outside of US				
Lives with cats				
Wears seat belts				
Planned pregnancy				
Highest level of education				



VA/DoD Pregnancy Clinical Practice Guideline - 2019  
 Web Site: VA: <https://www.health.equality.va.gov>  
 DoD: <https://www.GMO.army.mil>



# Indications for Consult / Referral

## Immediate Referral

- Recurrent Pregnancy loss
- Preterm birth
- Ectopic pregnancy hx/risk
- Vaginal Bleeding
- Significant abdominal
- Severe pelvic infection
- Cardiovascular Disease
- Cardiac abnormality
- Diabetes Mellitus
- Renal disorder
- Transplant
- Moderate-severe MDD



## 10-12 Week Referral

- Prior Macrosomia or GDM
- Hx Second trimester loss
- Cervical Surgery
- Uterin abnormality
- Current Cancer
- Positive Infection
- Medical conditions
  - Asthma
  - Controlled thyroid
  - Gastric bypass
  - Prior PT Birth
  - Prior Cesarean
- Pelvic surgery for infertility or infection

# VA/DoD Clinical Practice Guideline for the Management of Pregnancy

## Table 2 ~ Provider Consultation/Referral Guide

Risk Assessed by Routine Prenatal Care Provider	Referral/Consult with	Consider Referral/Consult with
	Advanced Prenatal Care Provider	
<b>General Conditions:</b>		
Genetic condition potentially affecting fetus	<input checked="" type="checkbox"/>	
Body Mass Index (BMI < 16.5 or >30)		<input checked="" type="checkbox"/>
Age < 16 or > 34		<input checked="" type="checkbox"/>
Genetic condition affecting patient or spouse		<input checked="" type="checkbox"/>
<b>Obstetric Conditions: (current or historical)</b>		
Recurrent pregnancy loss	<input checked="" type="checkbox"/>	
Ectopic pregnancy	<input checked="" type="checkbox"/>	
Significant abdominal pain/cramping	<input checked="" type="checkbox"/>	
Vaginal bleeding	<input checked="" type="checkbox"/>	
Second-trimester pregnancy loss	<input checked="" type="checkbox"/>	
Preterm labor (current) or birth (history)	<input checked="" type="checkbox"/>	
Cervical surgery (LEEP, cone biopsy)	<input checked="" type="checkbox"/>	
Uterine abnormality	<input checked="" type="checkbox"/>	
Short (<2.5 cm) cervix (< 36 weeks)	<input checked="" type="checkbox"/>	
Pregnancy induced hypertensive disorders	<input checked="" type="checkbox"/>	
Gestational diabetes mellitus (GDM)	<input checked="" type="checkbox"/>	
Malpresentation (> 36 weeks)	<input checked="" type="checkbox"/>	
Placenta Previa (symptomatic or beyond 28 weeks)	<input checked="" type="checkbox"/>	
Abnormal amniotic fluid: oligo/poly hydramnios	<input checked="" type="checkbox"/>	
Preterm ruptured membranes	<input checked="" type="checkbox"/>	
Fetal growth abnormality (<10, >90 %tile)	<input checked="" type="checkbox"/>	
Known or suspected fetal anomaly	<input checked="" type="checkbox"/>	
Multiple gestation	<input checked="" type="checkbox"/>	
Isimmunization	<input checked="" type="checkbox"/>	
Abnormal prenatal screening result (aneuploidy risk)	<input checked="" type="checkbox"/>	
Abnormal prenatal screening result (ONTD risk)	<input checked="" type="checkbox"/>	
Intrauterine fetal demise	<input checked="" type="checkbox"/>	
Teratogenic exposure including drugs or radiation		<input checked="" type="checkbox"/>
Placental abruption		<input checked="" type="checkbox"/>
Prior cesarean section		<input checked="" type="checkbox"/>
Intrapartum complications		<input checked="" type="checkbox"/>

Risk Assessed by Routine Prenatal Care Provider	Referral/Consult with	Consider Referral/Consult with
	Advanced Prenatal Care Provider	
<b>Gynecological, Medical, Surgical Conditions:</b>		
Current need for surgery	<input checked="" type="checkbox"/>	
Bariatric surgery (< 18, > 36 months ago)	<input checked="" type="checkbox"/>	
Diabetes mellitus (DM) – Type 1 or 2	<input checked="" type="checkbox"/>	
Hematologic disorders (except mild anemia)	<input checked="" type="checkbox"/>	
Gastrointestinal disorders on medication	<input checked="" type="checkbox"/>	
Chronic hypertension	<input checked="" type="checkbox"/>	
Cardiovascular disease	<input checked="" type="checkbox"/>	
Pulmonary disease including asthma	<input checked="" type="checkbox"/>	
Cancer (current or recent)	<input checked="" type="checkbox"/>	
Neurological disorders including epilepsy	<input checked="" type="checkbox"/>	
Renal, urinary tract disorder	<input checked="" type="checkbox"/>	
Autoimmune disorder including Lupus	<input checked="" type="checkbox"/>	
Antiphospholipid syndrome	<input checked="" type="checkbox"/>	
Thromboembolic disease	<input checked="" type="checkbox"/>	
Transplant	<input checked="" type="checkbox"/>	
Abnormal pap smear		<input checked="" type="checkbox"/>
Breast abnormality		<input checked="" type="checkbox"/>
Pelvic surgery for infertility or infection		<input checked="" type="checkbox"/>
Illicit drug, alcohol, or tobacco use		<input checked="" type="checkbox"/>
Thyroid disorders		<input checked="" type="checkbox"/>
<b>Infectious Diseases:</b>		
Severe pelvic infections	<input checked="" type="checkbox"/>	
Hepatitis	<input checked="" type="checkbox"/>	
Tuberculosis	<input checked="" type="checkbox"/>	
HIV	<input checked="" type="checkbox"/>	
TORCH infection	<input checked="" type="checkbox"/>	
Sexually transmitted infection (STI)		<input checked="" type="checkbox"/>
<b>Psychosocial Conditions:</b>		
Major depressive disorder (MDD)	To Mental Health if suicidal or moderate or severe MDD	<input checked="" type="checkbox"/>
Domestic violence	To Social Work if unsafe environment	<input checked="" type="checkbox"/>
Homeless	To Social Service	<input checked="" type="checkbox"/>

# VA/DoD Clinical Practice Guideline for the Management of Pregnancy

## Table 2 ~ Provider Consultation/Referral Guide

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Age < 16 or > 34		<input checked="" type="checkbox"/>
Genetic condition affecting patient or spouse		<input checked="" type="checkbox"/>
<b>Obstetric Conditions: (current or historical)</b>		
Recurrent pregnancy loss	<input checked="" type="checkbox"/>	
Ectopic pregnancy	<input checked="" type="checkbox"/>	
Significant abdominal pain/cramping	<input checked="" type="checkbox"/>	
Vaginal bleeding	<input checked="" type="checkbox"/>	
Second-trimester pregnancy loss	<input checked="" type="checkbox"/>	
Preterm labor (current) or birth (history)	<input checked="" type="checkbox"/>	
Cervical surgery (LEEP, cone biopsy)	<input checked="" type="checkbox"/>	
Uterine abnormality	<input checked="" type="checkbox"/>	
Short (< 2.5 cm) cervix (< 36 weeks)	<input checked="" type="checkbox"/>	
Pregnancy induced hypertensive disorders	<input checked="" type="checkbox"/>	
Gestational diabetes mellitus (GDM)	<input checked="" type="checkbox"/>	
Malpresentation (> 36 weeks)	<input checked="" type="checkbox"/>	
Placenta Previa (symptomatic or beyond 28 weeks)	<input checked="" type="checkbox"/>	
Abnormal amniotic fluid: oligo/polyhydramnios	<input checked="" type="checkbox"/>	
Preterm ruptured membranes	<input checked="" type="checkbox"/>	
Fetal growth abnormality (< 10, > 90 %tile)	<input checked="" type="checkbox"/>	
Known or suspected fetal anomaly	<input checked="" type="checkbox"/>	
Multiple gestation	<input checked="" type="checkbox"/>	
Isoimmunization	<input checked="" type="checkbox"/>	
Abnormal prenatal screening result (aneuploidy risk)	<input checked="" type="checkbox"/>	
Abnormal prenatal screening result (ONTD risk)	<input checked="" type="checkbox"/>	
Intrauterine fetal demise	<input checked="" type="checkbox"/>	
Teratogenic exposure including drugs or radiation		<input checked="" type="checkbox"/>
Placental abruption		<input checked="" type="checkbox"/>
Prior cesarean section		<input checked="" type="checkbox"/>
Intrapartum complications		<input checked="" type="checkbox"/>

Risk Assessed by Routine Prenatal Care Provider	Referral/Consult with	Consider Referral/Consult with
	Advanced Prenatal Care Provider	
<b>Gynecological, Medical, Surgical Conditions:</b>		
Current need for surgery	<input checked="" type="checkbox"/>	
Bariatric surgery (< 18, > 36 months ago)	<input checked="" type="checkbox"/>	
Diabetes mellitus (DM) – Type 1 or 2	<input checked="" type="checkbox"/>	
Hematologic disorders (except mild anemia)	<input checked="" type="checkbox"/>	
Gastrointestinal disorders on medication	<input checked="" type="checkbox"/>	
Chronic hypertension	<input checked="" type="checkbox"/>	
Cardiovascular disease	<input checked="" type="checkbox"/>	
Pulmonary disease including asthma	<input checked="" type="checkbox"/>	
Cancer (current or recent)	<input checked="" type="checkbox"/>	
Neurological disorders including epilepsy	<input checked="" type="checkbox"/>	
Renal, urinary tract disorder	<input checked="" type="checkbox"/>	
Autoimmune disorder including Lupus	<input checked="" type="checkbox"/>	
Antiphospholipid syndrome	<input checked="" type="checkbox"/>	
Thromboembolic disease	<input checked="" type="checkbox"/>	
Transplant	<input checked="" type="checkbox"/>	
Abnormal pap smear		<input checked="" type="checkbox"/>
Breast abnormality		<input checked="" type="checkbox"/>
Pelvic surgery for infertility or infection		<input checked="" type="checkbox"/>
Illicit drug, alcohol, or tobacco use		<input checked="" type="checkbox"/>
Thyroid disorders		<input checked="" type="checkbox"/>
<b>Infectious Diseases:</b>		
Severe pelvic infections	<input checked="" type="checkbox"/>	
Hepatitis	<input checked="" type="checkbox"/>	
Tuberculosis	<input checked="" type="checkbox"/>	
HEV	<input checked="" type="checkbox"/>	
TORCH infection	<input checked="" type="checkbox"/>	
Sexually transmitted infection (STI)		<input checked="" type="checkbox"/>
<b>Psychosocial Conditions:</b>		
Major depressive disorder (MDD)	To Mental Health if suicidal or moderate or severe MDD	<input checked="" type="checkbox"/>
Domestic violence	To Social Work if unsafe environment	<input checked="" type="checkbox"/>
Homeless	To Social Services	<input checked="" type="checkbox"/>

# Guideline Structure

- Annotations
- Visit Outline (A 1-7)
- Interventions
  - All visits (1-4)
  - Nurse visit (5-21)
  - First Provider Visit (22-36)
  - Specific EGA (37-51)
  - Not recommended (52-65)
- Appendix A-I

# Highlights of Changes

- Risk for Preterm Birth
- Depression Screening
- Establishing the gestational age
- Obesity, previous bypass
- Prenatal screening options/counseling
- HPV
- Shaken Baby
- Postpartum Visit

# Establishing the Gestational Age

- Importance of establishing an accurate gestational age early
  - Timing all other interventions
  - Anomaly/aneuploidy screening
  - IUGR
  - Post due date inductions



# Prioritized Dating

- IVF
- Known conception
- First trimester ultrasound
- Reliable LMP
- 12-21 week US
- 22-28 week US

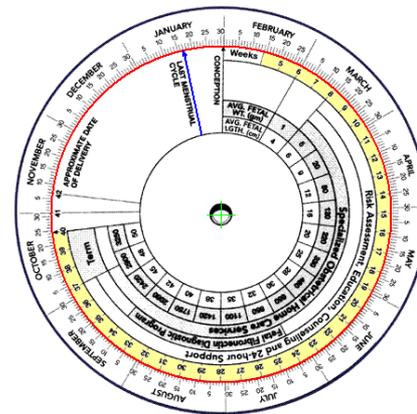
# Evidence Supporting First Trimester Ultrasound over LMP

- Post dates inductions
- Aneuploidy screening
- Poor Reliability of LMP



# Dating Methods

- Menstrual
- Clinical
- Ultrasound



# Is a “Sure” LMP Reliable???

- Accuracy dependent upon recall
- 50% unplanned
- Assumes 28 day cycle
  - Cycle lengths vary between within individuals.  
95% confidence limits 27+/- 9 days.
- Most common date of LMP is 15th.
- 10-45% cannot provide “accurate” information
- 18% discordant from US with “certain” menstrual dates.

Geirsson et al *Br J Obstet Gynaecol.* Jan 1991;98(1):108-9.

Waller et al, *Paediatr Perinat Epidemiol.* 2000;14:263-267.

Wilcox et al, *BMJ.* Sep 4 1993;307(6904):588-91.

# Ultrasound Dating 6-12 Weeks

- 95% CL +/- 6 days
- Abdominal vs vaginal 1.6 days less
- Reduced rates of post dates inductions
  - 70% Mongelli et al, *Am J Obstet Gynecol.* Jan 1996;174(1 Pt 1):278-81.
  - 10.3% to 2.7% Taipale et al, *Obstet Gynecol.* 2001;97:189-194.
  - RCT Bennet et al. *Am J Obstet Gynecol.* 2004;190:1077-1081.  
Caughey et al. *Am J Obstet Gynecol.* 2008;198:70-76.
  - 8% rule Hadlock et al, *Radiology.* 1992 Feb;182(2):501-5.
  - Aneuploidy screening, fewer false +

Data from FASTER trial

# ACOG Bulletin 101, 2009

“First-trimester crown rump measurement is the most accurate means for ultrasound dating of pregnancy . . . . In general, ultrasound-established dates should take preference over menstrual dates when the discrepancy is greater than 7 days in the first trimester and greater than 10 days in the second trimester . . . . Ultrasonography may be considered to confirm menstrual dates if there is a gestational age agreement within 1 week by crown rump measurement obtained in the first trimester . . . . Guidelines for assignment of gestational age when a discrepancy exists between menstrual and ultrasound-established dates vary in different ultrasound units.”

# Cautions with First Trimester Ultrasound

- IUGR can manifest in 1 T
- Aneuploidy can result in  $S < D$  in 1 T

Bukowski et al, BMJ. 2007 April 21; 334(7598): 836.

## OBTAINING A QUALITY CROWN RUMP LENGTH MEASUREMENT

1. Machine inserted patient identification on images
2. Archived electronically or scanned into Electronic Medical Record
3. Embryo/fetus in sagittal view occupying 2/3 of the screen
4. Calipers placed from cephalic edge to rump
5. Minimum of 3 CRL measurements for each fetus using average of best 3
6. In multiple gestation, base gestational age on largest embryo/fetus
7. Document presence or absence of fetal yolk sac
8. Document presence or absence of fetal cardiac activity

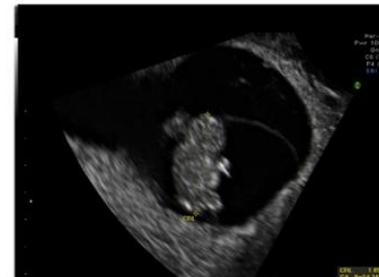
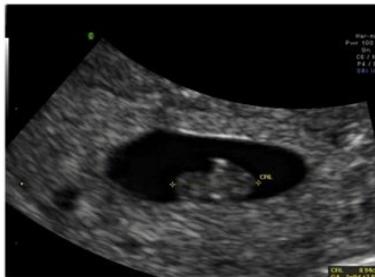


### Optimal Image

Patient Information on image  
Appropriate Zoom  
Well Placed Calipers  
Fetus in Saggital plane

### Suboptimal Images

Lacking Patient Information or handwritten information  
Inadequate Zoom  
Poorly Placed Calipers  
AP rather than saggital view



Jane Doe 20/1234

Note : Typically crown rump measurements are included in a first trimester ultrasound. First trimester criteria outlined by AIUM, ACR and ACOG also include visualization of adnexa and pregnancy location.

# Aneuploidy Screening

- ACOG 2007
  - Varied screening options
  - Expanded diagnostic testing
  - Counseling
  - Screening Options



# ACOG Jan 2007

“Ideally, all women should be offered aneuploidy screening before 20 weeks of gestation, regardless of maternal age. It is not practical to have patients choose from among the large array of screening strategies that might be used.”

# ACOG Jan 2007

“Regardless of which screening tests you decide to offer your patients, information about the detection and false-positive rates, advantages, disadvantages, and limitations, as well as the risks and benefits of diagnostic procedures, should be available to patients so that they can make informed decisions.”

# Institutional Considerations

“ . . .each institution needs to establish testing strategies they will make available to their beneficiaries. These strategies should take into account the principles and recommendations from above. Accordingly, each institution should have available one or more tests/testing strategies from each of the groups below. . . . is not feasible for every institution to offer the spectrum of potential testing strategies . . . provide one or more screening strategies giving a first- trimester result and one or more strategies giving a second-trimester result . . . also provide or arrange . . . ultrasound . . . CVS, amniocentesis . . . counseling.”

# Basic Constellation of Screening and Diagnostic Strategies

- No screening
- 1st Trimester Screening Result
- 2nd Trimester Screening Result
- Ultrasound Screening
- Amniocentesis
- CVS

# Institutional Considerations

**Table E- 4. Institutional Considerations**

	Options	Name / Type of Test	Advantages	Disadvantages
1 <sup>st</sup> Trimester Result	1T US + 1T Serum	First Trimester Combined	1T < 15 weeks	1T < 15 weeks and 2T > 15 weeks
	1T US + 1T and 2T Serum	Contingency		
2 <sup>nd</sup> Trimester Result	1T US + 1T and 2T Serum	Integrated Screen	2T > 15 weeks	
	1T Serum + 2T Serum	Serum Integrated Screen	2T > 15 weeks	
	2T Serum	Quad Screen	2T > 15 weeks	
<i>Key: 1T – First Trimester; 2T – Second Trimester</i>				

# Institutional Options

First T Result	Options	Name/Type of Test	Advantages	Disadvantages
	1T US + 1T Serum	First T Combined	!T < 15 weeks	1T <15 weeks and 2T > 15 weeks
	1T US + 1T and 2T Serum	Contingency	Categorization of risk in 1T	Full Results not until >15 weeks

Second T Result	Options	Name/Type of Test	Advantages	Disadvantages
	1T US + 1T and 2 T Serum	Integrated Screen		2T > 15 weeks
	1T US and 2T Serum	Serum integrated Screen		2T > 15 weeks
	2T Serum	Quad Screen		2T > 15 weeks

# ToolKit

- Purple Book
- Passport
- Exam Room Cards
- Counseling Video
- AHLTA
- eMOMs

# On Line Access

- <https://www.qmo.amedd.army.mil/>



Clinical Practice Guidelines  
HEDIS  
Patient Safety  
The Joint Commission  
Medical Management  
OM / POP Health  
Risk Management  
Credentialing  
Policies  
Corporate Quality  
Resources  
Miscellaneous Tools  
FAQs  
Contact Us  
QMO Home

Welcome Quick Links

Welcome to the Office of Quality Management web site.

We are continually assembling information which can be

accessed from the menu bar

on the left and the tabs on top of each information panel.

We have large quantities of information

to publish, and desire to make this your source

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Access To Care	Privacy & Security Notice	External Link Disclaimer	Web Accessibility
This site is brought to you by the Quality Management Office, MEDCOM Headquarters. We are continually assembling information which can be accessed from the menu bar. We have large quantities of information to publish, and desire to make this site your source for the latest information from our office. Contact Web Master			



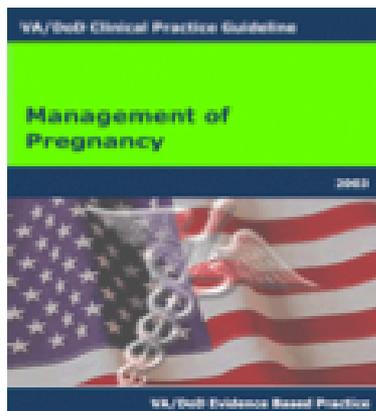


## VA/DoD Clinical Practice Guidelines

### Management of Pregnancy

The guideline describes the critical decision points in the Management of Pregnancy and provides clear and comprehensive evidence based recommendations incorporating current information and practices for practitioners throughout the DoD and VA Health Care systems. The guideline is intended to improve patient outcomes and local management of patients who are pregnant.

This guideline is formatted as a single algorithm with annotations.



[Pregnancy Full Guideline](#) (2,070 KB, PDF)

[Pregnancy Summary](#) (1,060 KB, PDF)

Variations in practice will inevitably and appropriately occur when providers take into account the needs of individual patients, available resources, and limitations unique to an institution or type of practice. Every healthcare professional making use of these guidelines is responsible for evaluating the appropriateness of applying them in the setting of any clinical situation.

Questions on this website? Contact the [CPS Web Team](#).

# **Management of Pregnancy**

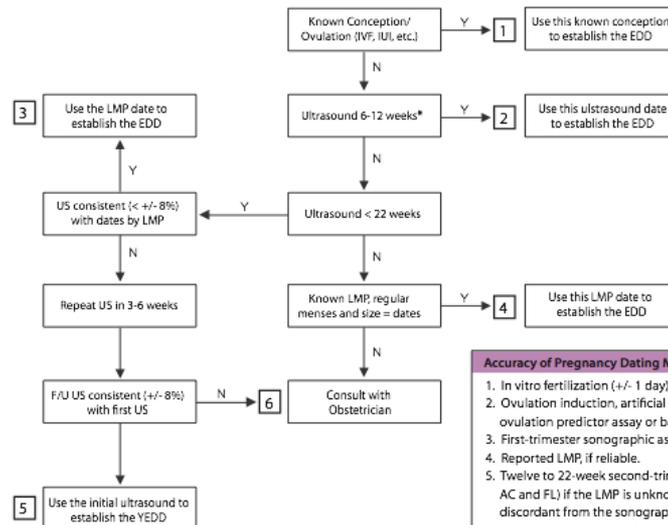
**2009**



# Provider Tools

- Exam Room Cards
- AHLTA Templates
- Passport
- eMOMs

## VA/DoD Clinical Practice Guideline for the Management of Pregnancy Algorithm for Establishing the Due Date



- Accuracy of Pregnancy Dating Methods (Prioritized List)**
1. In vitro fertilization (+/- 1 day).
  2. Ovulation induction, artificial insemination, a single intercourse record, ovulation predictor assay or basal body temperature measurement (+/- 3 days).
  3. First-trimester sonographic assessment (6-11 weeks) (+/- 8%).
  4. Reported LMP, if reliable.
  5. Twelve to 22-week second-trimester sonographic examination (CRL or BPD, HC, AC and FL) if the LMP is unknown or uncertain or if the LMP is more than 8 percent discordant from the sonographic examination.
  6. Twenty-three to 28-week second-trimester sonographic examination (BPD, HC, AC, FL) confirmed by a second examination 3-6 weeks later demonstrating normal interval growth (+/- 8%).
  7. Third-trimester sonographic evaluation (+/- 8%).

**NOTES:**

- \*Note-Images of measurements used for dating should be based on a CRL and archived electronically or in the written record for review if necessary.
- \*A first trimester ultrasound is not required to establish the due date but should be liberally used if there is a discrepancy in the initial assessment of uterine size or uncertainty regarding the LMP.
- This algorithm recognizes the data supporting reduced rates of post dates inductions, abnormal serum screening results when first trimester ultrasound is in favor of even a sure and regular LMP.
- 8% rule: Days of Pregnancy by Criteria 1 - Days of Pregnancy by Criteria 2 / Days of Pregnancy by Criteria 1 = % discordant.
- Use caution in changing EDD for transfer in patients with firmly established dates by a sure, regular LMP, confirmed (+/- 5 days) by 48-week US.



# Patient Tools

- Purple Book
- Passport
- Spring Garden

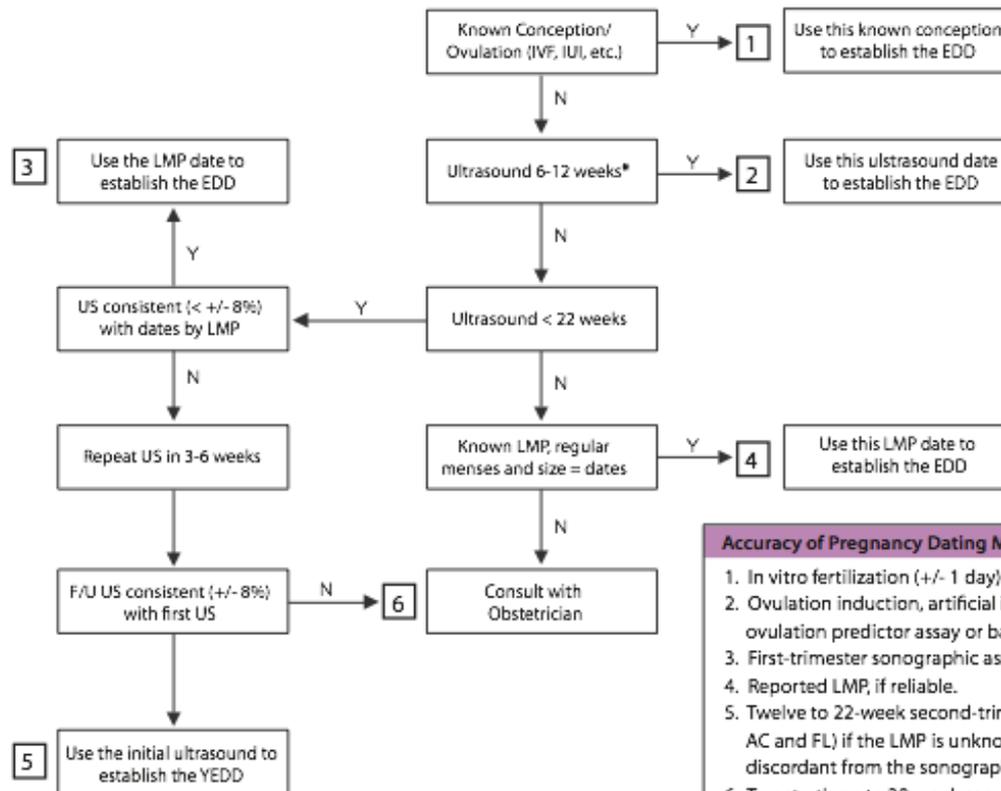


**VA/DoD Clinical Practice Guideline for the Management of Pregnancy  
Accuracy of Pregnancy Dating Information/Modalities (Prioritized List)**

1.	In vitro fertilization (+/- 1 day).
2.	Ovulation induction, artificial insemination, a single intercourse record, ovulation predictor assay or basal body temperature measurement (+/- 3 days).
3.	First-trimester sonographic assessment (6-11 weeks) (+/- 8%).
4.	Reported LMP, if reliable.
5.	Twelve to 22-week second-trimester sonographic examination (CRL or BPD, HC, AC and FL) if the LMP is unknown or uncertain or if the LMP is more than 8 percent discordant from the sonographic examination.
6.	Twenty-three to 28-week second-trimester sonographic examination (BPD, HC, AC, FL) confirmed by a second examination 3-6 weeks later demonstrating normal interval growth (+/- 8%).
7.	Third-trimester sonographic evaluation (+/- 8%).

# VA/DoD Clinical Practice Guideline for the Management of Pregnancy

## Algorithm for Establishing the Due Date



### Accuracy of Pregnancy Dating Methods (Prioritized List)

1. In vitro fertilization (+/- 1 day).
2. Ovulation induction, artificial insemination, a single intercourse record, ovulation predictor assay or basal body temperature measurement (+/- 3 days).
3. First-trimester sonographic assessment (6-11 weeks) (+/- 8%).
4. Reported LMP, if reliable.
5. Twelve to 22-week second-trimester sonographic examination (CRL or BPD, HC, AC and FL) if the LMP is unknown or uncertain or if the LMP is more than 8 percent discordant from the sonographic examination.
6. Twenty-three to 28-week second-trimester sonographic examination (BPD, HC, AC, FL) confirmed by a second examination 3-6 weeks later demonstrating normal interval growth (+/- 8%).
7. Third-trimester sonographic evaluation (+/- 8%).

#### NOTES:

- \*Note-Images of measurements used for dating should be based on a CRL and archived electronically or in the written record for review if necessary.
- \*A first trimester ultrasound is not required to establish the due date but should be liberally used if there is a discrepancy in the initial assessment of uterine size or uncertainty regarding the LMP.
- This algorithm recognizes the data supporting reduced rates of post dates inductions, abnormal serum screening results when first trimester ultrasound is used in favor of even a sure and regular LMP.
- 8% rule: Days of Pregnancy by Criteria 1 - Days of Pregnancy by Criteria 2 / Days of Pregnancy by Criteria 1 = % discordant.
- Use caution in changing EDD for transfer in patients with firmly established dates by a sure, regular LMP, confirmed (+/- 5 days) by 6-12 week US.

# VA/DoD Clinical Practice Guideline for the Management of Pregnancy

## Table 1 ~ Initial Nurse Assessment and Consultation/Referral Guide

Risk Assessed by Nurse	Lab Tests	Advanced Prenatal Care Provider		
		Immediate Referral	Consult	Follow-Up (wks 10-12)
Uncertain dating criteria	Ultrasound		<input checked="" type="checkbox"/>	
Late presentation	Ultrasound		<input checked="" type="checkbox"/>	
<b>Past OB History:</b>				
Recurrent pregnancy loss		<input checked="" type="checkbox"/>		
Ectopic pregnancy risk (hx of ectopic, tubal surgery, tubal infertility, or PID; current IUD)	Quant HCG/ Ultrasound	<input checked="" type="checkbox"/>		
Prior macrosomia or prior gestational diabetes mellitus (GDM)	Glucose for GDM	<input checked="" type="checkbox"/>		
Preterm birth			<input checked="" type="checkbox"/>	
Second trimester pregnancy loss	Ultrasound		<input checked="" type="checkbox"/>	
Cervical surgery (LEEP, cone biopsy)			<input checked="" type="checkbox"/>	
Bariatric Surgery (less than 18 months)			<input checked="" type="checkbox"/>	
<b>Current Problems:</b>				
Vaginal bleeding		<input checked="" type="checkbox"/>		
Significant abd pain/cramping		<input checked="" type="checkbox"/>		
Prescription, over-the-counter/herbal medications			<input checked="" type="checkbox"/>	
Drug / alcohol use				<input checked="" type="checkbox"/>
Smoking				<input checked="" type="checkbox"/>
<b>Medical Conditions:</b>				
Cardiovascular diseases		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Cardiac abnormality		<input checked="" type="checkbox"/>		
Diabetes mellitus (DM) - Type 1 or 2	Hgb A1c	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Renal disorder (includes pyelonephritis)		<input checked="" type="checkbox"/>		
Hypertension		Not controlled	<input checked="" type="checkbox"/>	
Thyroid disorders	Thyroid function		<input checked="" type="checkbox"/>	
Gastrointestinal disorders on medication			<input checked="" type="checkbox"/>	
Pulmonary disease			<input checked="" type="checkbox"/>	
Family history of DM in first relative	Glucose for GDM			
Neurological disorder			<input checked="" type="checkbox"/>	
Autoimmune disorder/Lupus			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Major mental illness			<input checked="" type="checkbox"/>	
Blood disorders			<input checked="" type="checkbox"/>	
Hepatitis	Hep panel		<input checked="" type="checkbox"/>	
Sexually transmitted disease (STD)	<input checked="" type="checkbox"/>			
Tuberculosis			<input checked="" type="checkbox"/>	
Human immunodeficiency virus (HIV)	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
Rash or viral illness			<input checked="" type="checkbox"/>	
Radiation/toxic chemical exposure since becoming pregnant			<input checked="" type="checkbox"/>	
Thromboembolic Disease		<input checked="" type="checkbox"/>		

Risk Assessed by Nurse	Lab Tests	Advanced Prenatal Care Provider		
		Immediate Referral	Consult	Follow-Up (wks 10-12)
Cancer			<input checked="" type="checkbox"/>	
Transplant		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Hx genetic disease or family of genetic disease		<input checked="" type="checkbox"/>		
Dental complaint		To Dentistry		
Screen for Major Depressive Disorder (MDD)		To Mental Health if suicidal or moderate or severe MDD		
Occupational hazards		To Prev Med/ Pub Hlth		
Homeless		To Social Work		
Domestic Violence		To Social Work if unsafe		
Hx of infertility	Transvaginal Ultrasound		<input checked="" type="checkbox"/>	
Hx of mental illness on medications			<input checked="" type="checkbox"/>	
Diet restriction		To Nutritionist	<input checked="" type="checkbox"/>	
Eating disorder			<input checked="" type="checkbox"/>	
Body mass index (BMI) >29 kg/m <sup>2</sup>		Glucose for GDM	<input checked="" type="checkbox"/>	
BMI <20 kg/m <sup>2</sup>			<input checked="" type="checkbox"/>	
Age (<16 or >35)			<input checked="" type="checkbox"/>	
<b>Routine Lab Tests:</b>				
HIV	<input checked="" type="checkbox"/>			
Complete Blood Count (CBC)	<input checked="" type="checkbox"/>			
ABO Rh blood typing	<input checked="" type="checkbox"/>			
Antibody screen	<input checked="" type="checkbox"/>			
Rapid plasma reagent (RPR)	<input checked="" type="checkbox"/>			
Hepatitis B surface antigen	<input checked="" type="checkbox"/>			
Rubella test	<input checked="" type="checkbox"/>			
Urinalysis and culture	<input checked="" type="checkbox"/>			
<b>Additional Information:</b>				
Religion				
Language barrier				
Current/recent deployed self/family member				
Born outside of US				
Lives with cats				
Wears seat belts				
Planned pregnancy				
Highest level of education				



VA/DoD Pregnancy Clinical Practice Guideline - 2019  
 Web Site: VA: <https://www.healthquality.va.gov>  
 DoD: <https://www.dmdc.army.mil>



# VA/DoD Clinical Practice Guideline for the Management of Pregnancy

## Antepartum Care Matrix

Visits	6-8 Weeks	10-12 Weeks	16-20 Weeks	24 Weeks	28 Weeks	32 Weeks	36 Weeks	38-41 Weeks
<b>Goals</b>	Exchange information and identify risk factors that may impact the pregnancy.	Determine current health status, and gestational age work towards a healthy pregnancy.	Work towards a comfortable and safe pregnancy.	Prevent pre-term labor for a safe and healthy baby.	Monitor baby and maternal progress and learn to count fetal movements.	Prepare for baby's arrival.	Begin preparations for hospital experience.	Prepare for the birth and baby's arrival at home.
<b>Assess</b>	Prenatal history and screen for tobacco, alcohol and illicit drugs, depression, domestic abuse and risk factors, whether cats in home.	H&P exam to include breast and pelvic. Dental status with referral if indicated. Risk factor for PTL/ Depression. Tobacco Use.	Fetal growth, maternal well-being F/U on CF testing if done. Counseling and referral if needed. Risk factor for PTL. Tobacco Use.	Fetal growth, maternal well-being. Tobacco Use.	Fetal growth, maternal well-being. Signs and symptoms of PTL or domestic abuse or depression. Tobacco Use.	Fetal growth, maternal well-being. Signs and symptoms of PTL. Tobacco Use.	Fetal growth, maternal well-being. Fetal position. Signs & symptoms of labor. Tobacco Use.	Fetal growth, maternal well-being. Fetal position. Tobacco Use.
<b>Labs/ Procedures</b>	CBC, US, C&S, RPR, ABO & Rh Hemoglobinopathies, (if indicated) Rubella, Varicella, Hepatitis B. Consent/screen for CF Carrier and HIV. Immunizations as needed.	Pap Smear, GC and Chlamydia. Consent/ schedule and counseling for CF (if desired) Consent/ schedule for aneuploidy screening (11-21 weeks) if desired.	Ultrasound, Quad Screen if desired.	Schedule Diabetes screen, Antibody Screen, Hct and other labs as indicated.	Diabetes screen. If RH negative: Rh antibody screen and D-Immunoglobulin if needed. Other lab work if needed.		GBS	Cervical check, may offer sweeping. Starting at wk 41: Term mgmt. (Amniotic fluid index weekly; Non-stress testing twice weekly.)
<b>Monitor</b>	BP, BMI and weight.	BP, fundal height, fetal heart tone, weight gain and exercise.	BP, fundal height, fetal heart tone, weight gain and exercise.	BP, fundal height, fetal heart tone, weight gain and exercise	BP, fundal height, fetal heart tone, weight gain and exercise.	BP, fundal height, fetal heart tone, weight gain and exercise.	BP, fundal height, fetal heart tone, fetal presentation, weight gain and exercise, fetal kick count.	BP, fundal height, fetal heart tone, fetal presentation, weight gain and exercise, fetal kick count.
<b>Psycho/ Social</b>	Social Services/domestic abuse, "Is your home SAFE for you? Identify deployment status of partner.	Emotional Status. Identify deployment status of partner.	Discuss birth control planning. Identify deployment status of partner.	Identify deployment status of partner.	Domestic abuse, "Is your home SAFE for you?" Child care options. Identify deployment status of partner.	Family planning. Identify deployment status of partner.	Apprehension as delivery approaches. Identify deployment status of partner.	Parenting issues. Identify deployment status of partner.
<b>Patient Education</b>	CF and other prenatal screening, breastfeeding, nutrition, substance abuse and cessation, exercise, discomforts, safe meds. Use of Pregnancy and Childbirth book. Centering group if available.	Breastfeeding, nutrition, exercise. Danger signs to report.	Breastfeeding, nutrition, exercise. Danger signs to report. True vs. false labor.	Breastfeeding, nutrition, exercise. Pre-term labor (PTL) signs and symptoms. Counseling for PTL and TOL if applicable.	Breastfeeding, nutrition, exercise. Fetal kick count, PTL signs and symptoms. Iron supplementation if indicated.	Birth control, breastfeeding, nutrition, exercise, childbirth classes, birth plan, fetal kick count. PTL signs and symptoms.	Labor and Delivery, fetal kick count. Breastfeeding, pre-admission process.	Fetal kick count, post date pregnancy plan, labor and Delivery, breastfeeding.

Note: Women with specific risk factors or who develop high risk conditions may require additional surveillance.



VA/DoD Pregnancy Clinical Practice Guideline - 2019  
 Web Site: VA: <https://www.healthquality.va.gov>  
 DoD: <https://www.12MDCaremeds.army.mil>



## Table of Contents

### The Birth of a Mother

#### Visit Summary Pages

This section provides a quick overview of goals and expectations for each visit.

#### Keeping Your and Your Baby Safe

#### Visit Information

This section provides detailed information about each visit. Each visit section includes what to expect at this point in your pregnancy, what to expect at your visit, and general pregnancy education. We suggest you be cautious about information and advice you may receive from family members, friends, the internet or from other outside sources. While most of these sources are well-meaning and may provide important support, bad advice and inaccurate information is common. Please make sure to discuss your specific concerns with your health care provider.

Week 6 - 8 . . . . .	#
Week 10 - 12 . . . . .	#
Week 16 - 20 . . . . .	#
Week 24 . . . . .	#
Week 28 . . . . .	#
Week 32 . . . . .	#
Week 36 . . . . .	#
Week 38 - 41 . . . . .	#
After Delivery . . . . .	#

#### Resource Section:

##### • Pregnancy Information

- Active Duty Information . . . . .	#
- Veterans Health Administration Information . . . . .	#
- Father's Information . . . . .	#
- Anatomy (front & side views)	
- Common Discomforts and Annoyances of Pregnancy	
- Exercise	
- Travel During Pregnancy	
- Having Twins, Triplets or More	
- Fetal Movement Count Charts	
- Immunizations	
- Nutrition in Pregnancy	
- Weight Gain Chart	
- Dental Care	
- Tobacco and Alcohol Use in Pregnancy	
- Sexually Transmitted and Other Infections in Pregnancy	
- Genetic Screening	
- Specific Genetic Testing	
- EPDS - 28 Week	
- Testing and Monitoring During Pregnancy	
- True versus False Labor	
- Preterm Labor	
- Labor and Delivery Procedures	
- Labor and Delivery Basics	



- Cesarean Delivery
- Birth Plan
- Baby Supplies
- Family Planning
- Breastfeeding
- Bottle Feeding
- Safety Tips for Baby

- **Common Terms**

- **Types of Providers**

- **EPDS-Postpartum**

**Suggested Additional Readings (available in your clinic):**

- Prenatal Fitness and Exercise

**WEB SITE INFORMATION:** Links to non-federal organizations in this book are provided solely as a service to our users. Links do not constitute an endorsement of any organization by the Department of Defense and Veterans Health Administration and none should be inferred. The Department of Defense and Veterans Health Administration is not responsible for the content of the individual organizations web pages found via these links.

**General Pregnancy and Childbirth**

- <http://www.nlm.nih.gov/medlineplus>
- <http://www.healthfinder.gov>
- <http://familydoctor.org>
- <http://marchofdimess.com>
- <http://www.childbirth.org>
- <http://www.text4baby.org> (text messages about baby)
- [http://www.midwife.org/consumer\\_information](http://www.midwife.org/consumer_information)
- <http://www.plannedparenthood.org>
- <http://www.mypyramid.gov/mypyramidmoms>
- <http://www.dodparenting.org> (Parent Review)

**Baby/Child Care**

- <http://www.aap.org>
- <http://www.dodparenting.org> (Parent Review)

**Breastfeeding**

- <http://www.la lecheleague.org>
- <http://www.ilea.org>
- <http://www.4women.gov>
- <http://www.womanshealth.gov/breastfeeding/learning>

**General**

- <http://www.militaryonesource.com>



# 24 Week Visit Prenatal Information Sheet



Goal: Prevent preterm labor for a safe  
and healthy baby

24 Week Visit

## Prenatal Information Sheet: 24 Week Visit

Goal: Prevent preterm labor for a safe and healthy baby

### Your baby's growth

- Your baby is now about 8.4 inches long and weighs about 1.2 pounds.
- Your baby is resting and growing inside your uterus, inside of an amniotic sac filled with fluid. This sac provides the perfect environment for your baby. Movement is easy and the sac serves as a cushion for the fetus against injury. The fluid in the sac also regulates the temperature. The fluid level should now begin to increase steadily.



Your baby's growth

### Your body's changes

- Your uterus is now an inch or two above the belly button and is about the size of a small soccer ball.
- You may feel an occasional tightening of your abdomen (Braxton-Hicks), which is normal.
- You may develop varicose veins, increasing heartburn, and skin changes due to the fluctuation in hormones.
- If you have any of the signs of preterm labor, such as cramping or contractions that do not go away within an hour of rest, call your provider immediately.



Your body's changes

### Your family's changes

- Talk to your family about ways to help each other adjust to the many changes you are all facing. Encourage their involvement by inviting them to your clinic visits. Jointly plan for the future and share the many emotions, fears, and joys you are all going through. The more your family is involved now, the easier they will bond with the new baby and participate in his/her care.
- If the father of the baby is not available, find someone you trust and who is willing to be your support person.



Your family's changes

Who is that person? \_\_\_\_\_

### Your thoughts and feelings

- You may still feel somewhat emotional at times. This will likely continue through your pregnancy as you and your partner prepare for changes now and after baby arrives. As much as you are excited about planning for your baby's birth, you may be worried about how you will adjust to motherhood, labor and delivery, expenses, work and the changes that are coming.
- Discuss your feelings with someone you trust, and your healthcare provider, especially if you have been very sad or depressed.



Thoughts & Feelings



#### Signs to report immediately

#### Signs to report immediately

- When in doubt, call the clinic, your healthcare provider or Labor and Delivery!
- Bright red vaginal bleeding
- Gush of fluid from the vagina
- Four or more painful cramping contractions within an hour (after resting and emptying bladder)
- Severe nausea and vomiting
  - Inability to keep fluids down
  - Persistent small amount of dark urine
- Persistent headache (unrelieved by taking Tylenol®)
- Loss of vision
- Sudden weight gain
- Rapid swelling of hands and face
- Constant right upper belly pain
- Fever at or over 100.4° F or 38° C



#### Today's visit

#### Today's visit

- We will measure your uterine growth, blood pressure, weight, listen to your baby's heart rate, and discuss any concerns/questions you may have.
- Schedule lab tests.
- Sign up for breastfeeding and other prenatal classes.
- Check to see if you are having any preterm contractions.
- Learn the signs of preterm labor and what to do if it occurs.
- If you had a cesarean delivery for a prior birth, discuss your birth options for this pregnancy. See Cesarean Delivery in Resource Section for further information.



Your weight:

\_\_\_\_\_

Your total weight change:

\_\_\_\_\_

#### Your weight

- Your weight gain will average close to one pound per week.
- Many common discomforts of pregnancy (constipation, nausea, heartburn) can be reduced through a change in diet.
- Record your weight on the Weight Chart in the Resource Section.

Notes:	Discussion:	Key points:
Reference: Prenatal Fitness and Exercise	<p><b>Your exercise routine</b></p> <ul style="list-style-type: none"> <li>• We recommend you drink a full glass of water for every 30 minutes of exercise you do.</li> <li>• The American College of OB/GYN advises women to avoid bouncing, jumping, jarring or high-impact motions.</li> <li>• Always check with your healthcare provider before beginning a new exercise.</li> </ul>	 <p>Your exercise</p>
	<p><b>Breastfeeding - a great start</b></p> <ul style="list-style-type: none"> <li>• Some advantages of breastfeeding to you include: <ul style="list-style-type: none"> <li>– Burns about the same number of calories as one hour of exercise and allows you to use some of the extra fat you have stored during your pregnancy.</li> <li>– Helps your uterus get back to its normal size faster.</li> <li>– Saves time, money and extra trips to the store for formula and supplies.</li> <li>– There are no special foods you have to eat; however, you should eat a well-balanced diet, and limit alcohol and caffeine.</li> </ul> </li> <li>• For further information see Breastfeeding in Resource Section.</li> </ul>	 <p>Consider breast-feeding</p>
Fetal heart rate:  _____	<p><b>Fetal heart rate</b></p> <ul style="list-style-type: none"> <li>• Baby's heartbeat is getting much easier to hear.</li> </ul>	 <p>Fetal heart rate</p>
Fundal height:  _____	<p><b>Fundal height</b></p> <ul style="list-style-type: none"> <li>• Fundal height is about 24 cm or 2 inches above the belly button.</li> </ul>	 <p>Fundal height</p>
My BP:  _____	<p><b>Your blood pressure</b></p> <ul style="list-style-type: none"> <li>• Blood pressure is measured at every prenatal visit. High blood pressure can cause serious complications for baby and mother if left unchecked.</li> </ul>	 <p>Your blood pressure</p>



#### Preterm labor guidelines

### Preterm labor

- Your baby needs to continue to grow inside you for the full term of your pregnancy. Labor earlier than three weeks before your due date can lead to a premature (preemie) baby with many associated risks.
- As always, when in doubt call your healthcare provider or Labor and Delivery.
- **Report any of the following symptoms to your health care provider:**
  - Low, dull backache
  - Four or more uterine contractions per hour. Uterine contractions may feel like:
    - Menstrual cramps
    - Sensation of “baby rolling up in a ball”
    - Abdominal cramping (may also have diarrhea)
    - Increased uterine activity compared to previous patterns
  - Increased pelvic pressure (may be with thigh cramps)
  - Sensation that “something feels different” (e.g., agitation, flu-like syndrome, and sensation that baby has “dropped”)
- **If you experience any of the above symptoms you should:**
  - Stop what you are doing and empty your bladder.
  - Drink 3-4 glasses of water.
  - Lie down on your side for one hour and place your hands on your abdomen and feel for tightening/hardening and relaxing of your uterus.
  - Count how many contractions you have in an hour.
  - If you have more than four contractions for more than one hour call either the clinic or Labor & Delivery immediately.
- **You should report immediately:**
  - Change in vaginal discharge such as change in color of mucus, leaking of clear fluid, spotting or bleeding, or a vaginal discharge with a fish-like odor (may be more notable after intercourse).

### Gestational Diabetes (GD) testing

- Gestational diabetes is high sugar levels in your blood during your pregnancy. It usually goes away after delivery. If your results are high, this does not mean you have diabetes, it just means further testing is needed.
- You will have a blood test for gestational diabetes. This blood test will tell how your body is responding to your sugar levels.
- To prepare for the test at your next visit, eat your usual dinner the night before the test and your normal breakfast the day of the test.
- At the lab, you will be given a very sweet drink (glucola) that has a specific amount of sugar in it.
- During the hour between drinking the glucola and having your blood drawn, do not eat or drink anything, including gum and candy, because it may affect the test results. You may drink plain water during this time while you are waiting.



Gestational  
Diabetes  
(GD) testing

### Summary of visit

Due date: \_\_\_\_\_ Date of next visit: \_\_\_\_\_

Date for lab work/other medical tests: \_\_\_\_\_

Date for any other scheduled appointments: \_\_\_\_\_

\_\_\_\_\_



Summary  
of visit

### Your next visit

At your 28 week visit we will:

- Measure your uterine growth, blood pressure, weight, listen to your baby's heart rate, and discuss any concerns/questions you may have.
- Provide instructions on counting fetal movement.
- Provide RhoGAM® (D-immunoglobulin) if your blood is Rh negative (D-) and you are not sensitized.
- Have blood work for gestational diabetes and other labs if needed. You will have to wait one hour between drinking the glucola and having your blood drawn.
- Sign up for breastfeeding and other available classes.



Your next visit

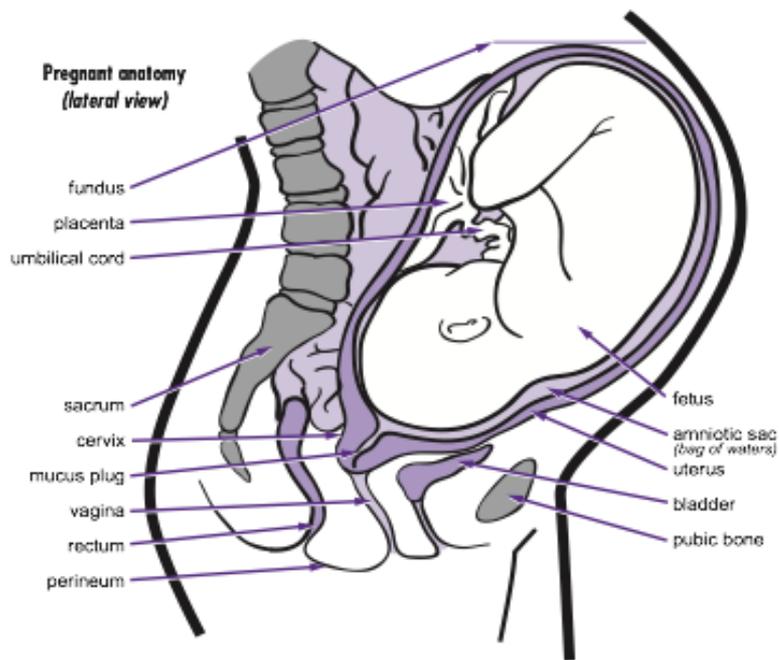
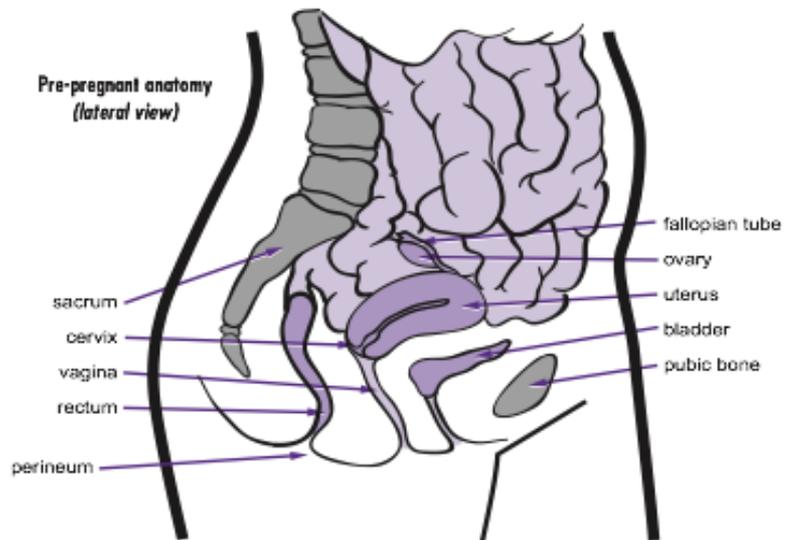
ALWAYS  
BRING YOUR  
PURPLE BOOK  
AND  
PREGNANCY  
PASSPORT  
TO EVERY VISIT



# Prenatal Information Resources

Resources





Discomfort	When	What you can do to help	Notify provider if:
Contractions (Braxton Hicks)	After 20th week	<ul style="list-style-type: none"> <li>Know this is part of your uterus getting "ready" for labor.</li> <li>Empty bladder and drink 2 - 3 glasses of water.</li> <li>Lie down on your side with hands on belly.</li> <li>Keep track of how often these occur.</li> </ul>	<ul style="list-style-type: none"> <li>Regular contractions that do not go away</li> <li>Painful contractions</li> <li>No improvement in symptoms</li> <li>History of preterm labor</li> </ul>
Dizziness	As your uterus enlarges	<ul style="list-style-type: none"> <li>Move slowly when getting up from lying down or sitting.</li> <li>Eat small, frequent meals and healthy snacks with protein to avoid low blood sugar.</li> <li>Drink lots of fluids especially if exercising or in hot weather.</li> <li>If dizzy, lie down on your side.</li> </ul>	<ul style="list-style-type: none"> <li>Persistent dizziness</li> <li>Feeling faint</li> <li>You have diabetes</li> <li>Shortness of breath/ chest pain</li> <li>Vaginal bleeding or abdominal pain</li> </ul>
Enlarging belly and breasts	Second half of pregnancy	<ul style="list-style-type: none"> <li>Sleep on your side with a pillow between your legs.</li> <li>Wear loose, comfortable clothes.</li> <li>Wear support bra even to bed.</li> <li>Use maternity support belt.</li> </ul>	
Fatigue or tiredness	Early in pregnancy and again in the last month	<ul style="list-style-type: none"> <li>Take extra naps during the day if possible.</li> <li>Avoid fluids before bedtime.</li> <li>Continue mild exercise but not to the point of exhaustion.</li> <li>Try to get at least 8 hours sleep at the same time each night.</li> </ul>	
Flatulence (gas)	Anytime, especially after 20 weeks	<ul style="list-style-type: none"> <li>Eat foods high in fiber daily.</li> <li>Drink at least 8 glasses of water daily.</li> <li>Avoid gas-forming foods such as beans, cabbage and sodas.</li> <li>If approved by your provider, exercise daily.</li> <li>Walk after meals.</li> </ul>	
Food cravings	First half of pregnancy	<ul style="list-style-type: none"> <li>OK to indulge if food choice is not harmful.</li> </ul>	<ul style="list-style-type: none"> <li>Craving excessive ice</li> <li>Craving non-food items (dirt/paint)</li> </ul>

## Food Guide Pyramid: A Guide to Healthier Eating

When you are pregnant, you have special nutritional needs. Follow the MyPyramid Plan below to help you and your baby stay healthy. The plan shows different amounts of food for different trimesters, to meet your changing nutritional needs.

Food Group	1st Trimester	2nd & 3rd Trimester	What counts as 1 cup or 1 ounce?	Remember to...
<b>Eat the amount indicated below from each group daily *</b>				
Fruits	2 cups	2 cups	1 cup fruit or juice 1/2 cup dried fruit	<b>Focus on fruits</b> Eat a variety of fruits
Vegetables	2 1/2 cups	3 cups	1 cup raw or cooked vegetables or juice 2 cups raw leafy vegetables	<b>Vary your veggies</b> Eat more dark-green and orange vegetables and cooked dry beans
Grains	6 ounces	8 ounces	1 slice bread 1 ounce ready-to-eat cereal 1/2 cup cooked pasta, rice or cereal	<b>Make half your grains whole</b> Choose whole instead of refined grains
Meats & Beans	5 1/2 ounces	6 1/2 ounces	1 ounce lean meat, poultry or fish 1/4 cup cooked dry beans 1/2 ounce nuts or 1 egg 1 tablespoon peanut butter	<b>Go lean with protein</b> Choose low-fat or lean meats and poultry
Milk	3 cups	3 cups	1 cup milk 8 ounces yogurt 1 1/2 ounces cheese 2 ounces processed cheese	<b>Get your calcium-rich foods</b> Go low-fat or fat-free when choosing milk, yogurt and cheese

\* These amounts are for an average pregnant woman. You may need more or less than the average. Check with your doctor to make sure you are gaining weight as you should.

## Genetic Screening

As a new mother-to-be you might be wondering, “How do I know my baby is OK?” It seems as soon as a pregnancy is confirmed we begin to wonder and hope that the baby is developing and growing normally. Many of the routine processes and testing that are done during pregnancy are outlined in the visit sections of this book. Your test results can be recorded in this book as well as in your Pregnancy Passport. While healthcare providers can detect many problems and help correct them, pregnancy is an amazingly complicated process and things do not always go well. There are some problems that begin at conception that are not correctable. Approximately three to five percent of babies born to women in the United States have birth defects.

Birth defects can be caused by many factors including genetic problems. While most birth defects are minor, with little or no significance, others can cause major short and long-term problems. Most of the tests that we do in pregnancy help your providers to help you and the baby do well. There are other tests that primarily provide information to you. These tests have the potential of giving you helpful information but do not necessarily help providers take better care of you or improve the chances of a good outcome for the baby. Such information could either help give you some peace of mind that things are going well or help you prepare for problems if they are not. In some cases, women use this information to help decide whether or not to continue a pregnancy. While we all hope this information would provide peace of mind, this information also has the potential to make you worry, usually unnecessarily. As it turns out, there are several such optional tests that you may or may not find helpful depending upon what you would do with the information from the test results.

The following information will help you understand some of the optional tests and help you make a decision about the tests that may be useful for you.

### Background

Genetic information is contained in chromosomes. As human beings, we have 23 pairs of chromosomes. Normally, we get 23 chromosomes from our father and 23 chromosomes from our mother for a total of 46. One pair of the chromosomes (sex chromosomes X and Y) is responsible for our gender and the other chromosomes (numbered 1-22) are responsible for a multitude of different structures and functions in our bodies. At the time of egg or sperm formation, or conception, mistakes can occur that result in too many or too few chromosomes. Having more or less than the normal 46 chromosomes is called aneuploidy. Aneuploidy causes major problems because each chromosome contains thousands of genes. Because so many genes are involved, aneuploidy usually causes a miscarriage. Half of all human pregnancies end in miscarriage because of aneuploidy. Most of these pregnancy losses occur before women even recognize they are pregnant. It is rare for pregnancies with aneuploidy to go on and result in a live born baby. However, when certain chromosomes are involved in aneuploidy, such as number 13, 18 or 21, survival is possible, although the majority of these pregnancies also end in miscarriage.

Diagnostic (yes or no) tests are invasive and include amniocentesis and chorionic villus sampling (CVS). The CVS can be performed as early as 11 weeks but is not available at most DoD or VA facilities. It can usually be obtained through referral. Amniocentesis is available at most VA and DoD facilities that provide obstetric services.

**Table 1.**  
Risk of having a live-born child with Down Syndrome or other chromosome abnormality.

Maternal Age	Risk of Down Syndrome	Total Risk for All Chromosomal Abnormalities
20	1/1667	1/526
21	1/1667	1/526
22	1/1429	1/500
23	1/1429	1/500
24	1/1250	1/476
25	1/1250	1/476
26	1/1176	1/476
27	1/1111	1/455
28	1/1053	1/435
29	1/1000	1/417
30	1/952	1/385
31	1/909	1/384
32	1/769	1/322
33	1/625	1/317
34	1/500	1/260
35	1/385	1/207
36	1/294	1/164
37	1/227	1/130
38	1/175	1/103
39	1/137	1/82
40	1/106	1/65
41	1/82	1/51
42	1/64	1/40
43	1/50	1/32
44	1/36	1/25
45	1/30	1/20
46	1/23	1/15
47	1/16	1/12
48	1/14	1/10
49	1/11	1/7

References:  
JAMA. 1983 Apr 15; 249 [15]: 2034-8.  
Obstet Gynecol. 1981 Sep; 58 (3): 282-5.

**Table 2. Down Syndrome Detection Rates**

TEST	Detection rate at 5% False Positive
First Trimester Screens	83 - 88%
Quad Screen	81 - 85%
Screening Ultrasound	50 - 70%
Genetic Ultrasound	70 - 90%

**Table 3. Diagnostic Testing**

TEST	Timing (weeks)	Risk of Loss	Comment
CVS	11 - 14	1/10 to 1/1000	Referral usually required
Amnio	>14	1/1500	Available at most DoD facilities

**Labor**

The series of uterine contractions that dilate (open) and efface (thin out) the cervix for birth.

**Libido**

Sexual desire.

**Maternal Serum Analyte Screen**

Group of blood tests, also known as a Quad Screen, that check for substances linked with certain birth defects such as Down Syndrome (Trisomy 21), neural tube defects, Edwards Syndrome (Trisomy 18) and other related birth defects. The test is done during the 15th to 21st week of your pregnancy. If you get an abnormal test result, your pregnancy will be further evaluated. This test has many false positives.

**Maturation**

Achievement of full development or growth.

**Meconium**

Baby's first bowel movement, usually passed after birth. When it is passed before birth, it stains the amniotic fluid and may be a sign of fetal stress or fetal maturity. When this occurs, it is referred to as meconium staining.

**Mucous Plug**

A collection of cervical mucus that seals the opening of the cervix. It keeps bacteria from entering into the cervix, providing a protective barrier for the baby. As the cervix opens, the mucous plug may fall out. It may be noticed as a thick glob of stringy mucous, usually thicker than what is seen with normal vaginal secretions. Some women will lose their mucous plug or part of their mucous plug weeks before they go into labor. Losing the mucous plug does not always mean labor will begin shortly. Women with a history of preterm labor, or who have blood tinged mucus before 36 weeks should call their provider right away. After 36 weeks, loss of the mucous plug is of no concern.

**Neonatology**

Branch of medicine that specializes in the care of ill or premature newborns.

**Neural Tube Defects (NTDs)**

Birth defects that result from improper development of the brain, spinal cord, or their coverings. This can be tested for between 15 and 21 weeks in your pregnancy with a Maternal Serum Analyte Screen blood test.

**Non-Reassuring Fetal Heart Rate**

Fetal heart rate pattern changes that raise concern that baby may not be getting enough oxygen.

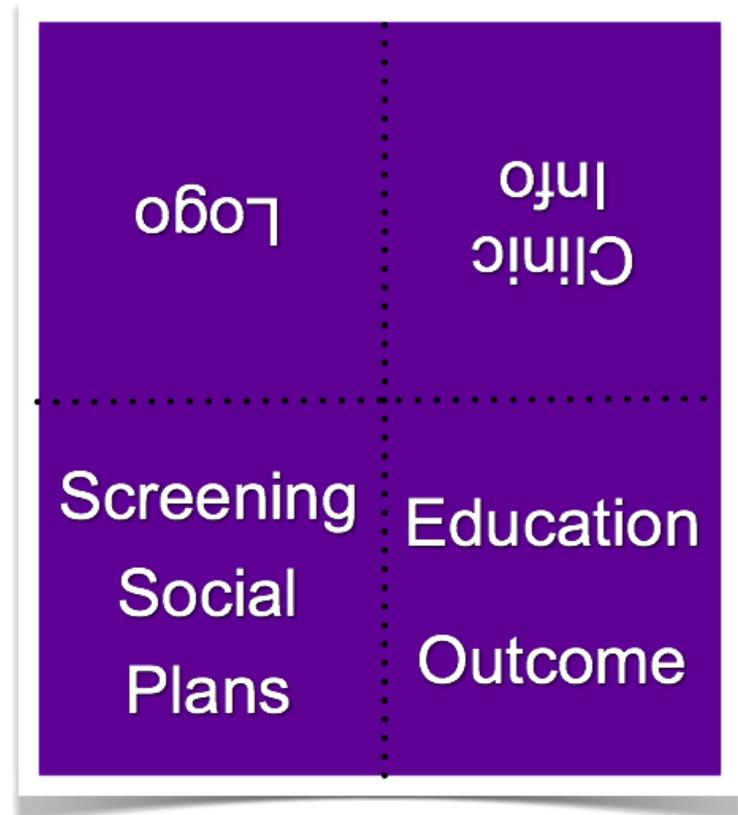
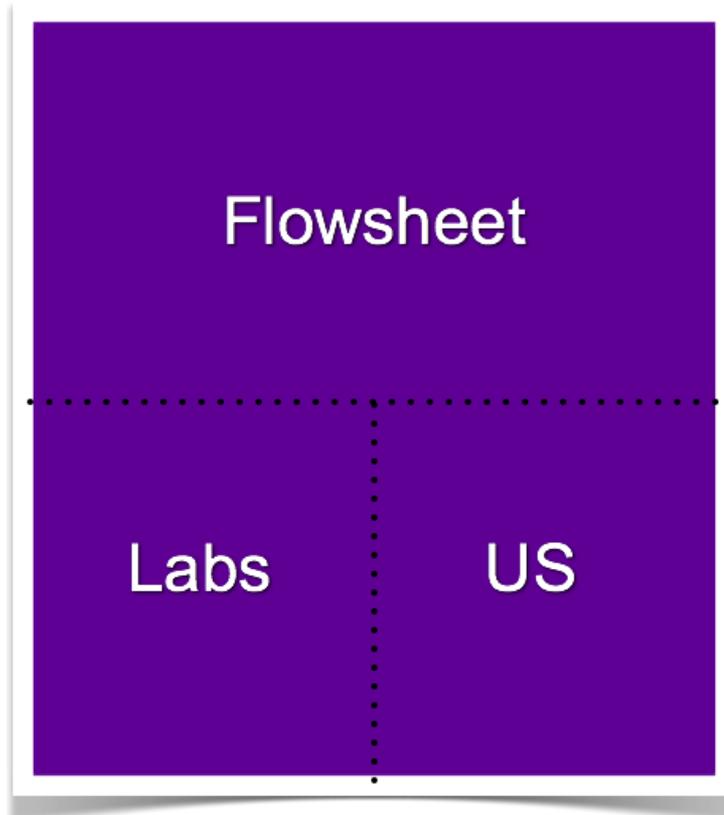
**Pap Test**

Cells are taken from the cervix and vagina by gentle scraping and examined to check for abnormalities that may lead to cervical cancer.

**Perinatologist (Maternal Fetal Medicine Specialist)**

Obstetrician with specialized training to provide care for women with complicated pregnancies.

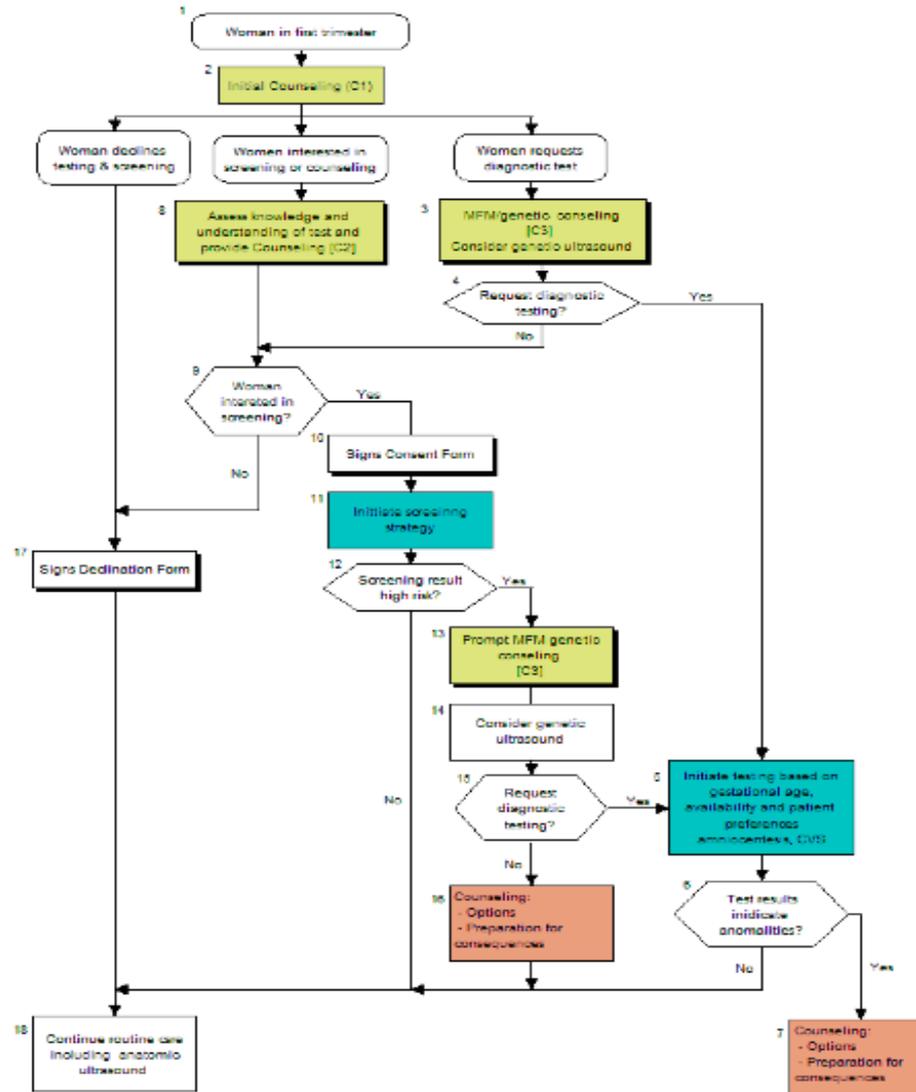
# Pregnancy Passport Layout



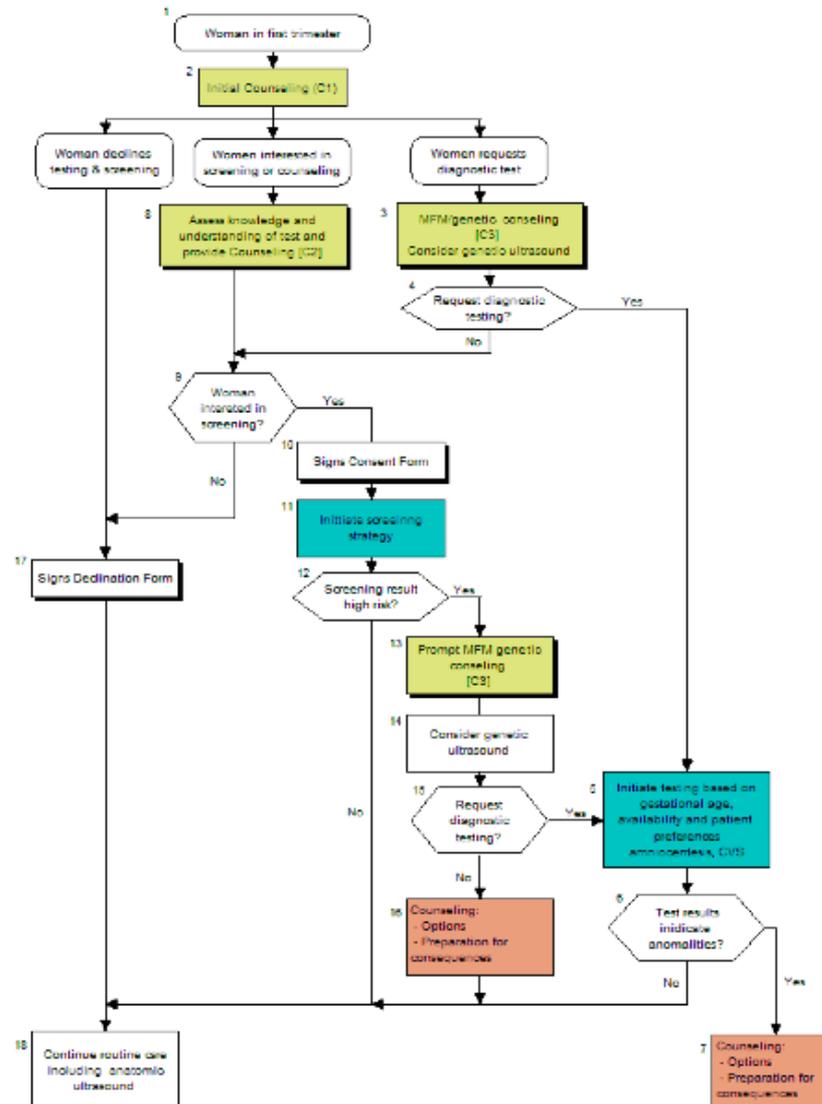
# Passport Content

<i>Optional Screening/Diagnostic Testing</i>				<i>Education</i>			<i>Education</i>	
<b>Aneuploidy/Anomaly Screening</b>				<b>Date</b>	<b>Init</b>	<b>Topic</b>	<b>Date</b>	<b>Topic</b>
Age based Risk:	DSR _____	All aneuploidy _____				Nutrition		Childbirth
Counseling	Comment _____					Exercise		Pre-Admission
						Tob/ETOH/Drugs		Trial of Labor
Selected Strategy	Declined - 2 T US - Quad - 1T - Other _____					Travel		Sterilization
Screening Result	N/A _____					Toxoplasmosis		Car Seat
Diagnostic Test	Declined - Amnio - CVS - PUBS _____					Warning Signs		
Diagnostic Result	N/A _____					Seat Belts		
<b>Cystic Fibrosis</b>	Patient: Declined - Neg - Pos _____					Sexual Activity		
	Partner: N/A - Neg - Pos _____					Fetal Movement		
<b>Other Genetic Screening</b>	N/A _____					Labor Signs		
						Pre-E Signs		
<b>Psychosocial</b>								
Depression Screen	Intake _____	28 wks _____					Complications/Comments	
Safe Home Screen	Intake _____	24 wks _____	32 wks _____					
<b>Vaccinations</b>								
Flu _____	Last Tetanus _____	RhoGam _____						
<b>Plans</b>								
L&D Requests	_____							
Breast/Bottle Feeding	_____							
Circumcision	_____							
PP Birth Control	_____							
<b>Pregnancy Outcome</b>								
Date Pregnancy End _____							Complications/Comments	
EGA Pregnancy End _____								
Delivery Findings _____								
<b>Post Partum</b>								
Colpo _____	2 hr GTT _____	Consults _____						
Comments- _____								

**APPENDIX E**  
**Prenatal Screening for Fetal Chromosomal Abnormalities**



**APPENDIX E**  
**Prenatal Screening for Fetal Chromosomal Abnormalities**



		First Trimester	First and Second Trimesters Combined			Second Trimester		Ultrasound	
	Age Only	First Trimester Screen	Sequential Screen	Integrated Screen	Serum Integrated Screen	Quad Screen	Triple Screen	Basic Ultrasound	Genetic Ultrasound
Benefits	No cost for this screening	Highest detection rate in the first trimester	Early answers and high detection rate	The highest detection rate overall	The highest detection rate without ultrasound (NT) measurements	Best second trimester test Screens for ONTD		Widely available screen for most common anomalies	Detailed genetic screening ultrasound also looks for structural, non-genetic problems
Problems	80% of babies with Down syndrome born to mothers <35	No screening for ONTD	Requires NT ultrasound measurement, not widely available	No answer given in the first trimester	No answer given in the first trimester	No answer given in the first trimester	Outdated	No answer given in the first trimester	No answer given in the first trimester. Not widely available
Timing	N/A	10 3/7 to 13 6/7	10 3/7 - 13 6/7 and 15 0/7 - 21 6/7	10 3/7 - 13 6/7 and 15 0/7 - 21 6/7	10 3/7 - 13 6/7 and 15 0/7 - 21 6/7	15 0/7 - 21 6/7	15 0/7 - 21 6/7	18-22 weeks	16-22 weeks
Down Syndrome Detection Rate	15-30%	83%	90.40%	92%	87%	81%	69%	50-60%	80-98%
Test Positive Rate	Varies with Age	5%	1.2% and 3.7%	5%	5%	5%	5%		
Odds of Being Affected with Positive Screen	Age Dependant	1 in 23	1 in 7 and 1 in 16	1 in 21	1 in 22	1 in 23	1 in 22	<1 in 100	Varies by each US
False Positive Rate		96%	86% and 94%	95%	95%	96%	95%		
Trisomy 18 Detection Rate		80%	90%	90%	90%	80%			
Open Neural Tube (ONT) Detection Rate	N/A	Not Screened	80%	80%	80%	80%	80%	95%	98%
Markers	>34 yrs	NT + PAPP-A + hCG	NT + PAPP-A + hCG + AFP + hCG + uE3 + inhibin	NT + PAPP-A, AFP + hCG + uE3 + inhibin	PAPP-A, AFP + hCG + uE3 + inhibin	AFP + hCG + uE3 + inhibin	AFP + hCG + uE3		

\*\*Data based on ACOG, 2007; SOPG, 2007; SURUSS; FASTER

Gestational Age (Weeks)													
6 to 7	8 to 9	10	11	12	13	14	15	16	17	18	19	20	21
Initial Counseling	Detailed Counseling	Post-test Counseling											
		Late Entry Counseling											
		First Trimester Ultrasound; Nuchal Translucency Measurement (A1)						Basic Ultrasound (A2)					
								Comprehensive (Genetic) Ultrasound (A3)					
		First-Trimester Analytes (B1)					Second-Trimester Analytes (B2)						
							MSAFP (B3)						
		CVS (D1)											
				Early Amniocentesis (D2)			Genetic Amniocentesis (D3)						

# Future Work

- Electronic Records
- Prompts/alarms
- Outcomes
- Parent Review
- Spring Garden
- Perinatal Advisory Panel
- Complicated Pregnancy Guidelines
- Standardized Emergency Management

# Questions????

