



# VA/DoD CLINICAL PRACTICE GUIDELINE FOR MANAGEMENT OF PREGNANCY

Department of Veterans Affairs  
Department of Defense

## Pocket Card

### QUALIFYING STATEMENTS

The Department of Veterans Affairs and the Department of Defense guidelines are based upon the best information available at the time of publication. They are designed to provide information and assist decision making. They are not intended to define a standard of care and should not be construed as one. Neither should they be interpreted as prescribing an exclusive course of management.

This Clinical Practice Guideline is based on a systematic review of both clinical and epidemiological evidence. Developed by a panel of multidisciplinary experts, it provides a clear explanation of the logical relationships between various care options and health outcomes while rating both the quality of the evidence and the strength of the recommendation.

Variations in practice will inevitably and appropriately occur when clinicians 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 particular clinical situation.

These guidelines are not intended to represent Department of Veterans Affairs or TRICARE policy. Further, inclusion of recommendations for specific testing and/or therapeutic interventions within these guidelines does not guarantee coverage of civilian sector care. Additional information on current TRICARE benefits may be found at [www.tricare.mil](http://www.tricare.mil) or by contacting your regional TRICARE Managed Care Support Contractor.

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## I. Summary of Recommendations

Recommendations were made using a systematic approach considering multiple domains: the confidence in the quality of the evidence, balance of desirable and undesirable outcomes, patient or provider values and preferences, and other implications, as appropriate (e.g., resource use, equity, acceptability).

### A. Care Throughout Pregnancy

#### *We recommend:*

- Mild to moderate exercise sessions three or more times per week for those without known contraindications
- Folic acid (at least 400 micrograms daily) starting one month before conception and continued throughout pregnancy and breastfeeding
- Screening for use of tobacco, alcohol, illicit drugs, and unauthorized use of prescription medication with additional evaluation and treatment based on results (see VA/DoD Clinical Practice Guidelines for the Management of Substance Use Disorders<sup>1</sup> and the Management of Tobacco Use<sup>2</sup>)
- Screening for depression using a standardized tool (e.g., Edinburgh Postnatal Depression Scale, 9-item Patient Health Questionnaire) periodically during pregnancy and postpartum
- Breastfeeding education, assessment, and support at the first visit and throughout pregnancy and the postpartum period using open-ended questions such as “What do you know about breastfeeding?”

#### *We suggest:*

- Offering a group model of prenatal care as an alternative to individual provider appointments
- For women with uncomplicated pregnancies, continuation of a standard work schedule throughout pregnancy

### B. One-time Interventions

#### *We recommend:*

- Offering prenatal screening for aneuploidy and most common clinically significant genetic disorders
  - When aneuploidy screening is desired, consider cell-free fetal DNA screening; however, test selection should be individualized and take into account the patient’s age, baseline aneuploidy risk, and test performance for a given condition

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<sup>1</sup> See the VA/DoD Clinical Practice Guideline for the Management of Substance Use Disorders. Available at: <https://www.healthquality.va.gov/guidelines/mh/sud/>

<sup>2</sup> See the Clinical Practice Guideline for the Management of Tobacco Use. Available at: <https://www.healthquality.va.gov/CPGArchives.asp>

- First-trimester ultrasound to establish or confirm gestational age and estimated birth date, identify multiple pregnancies, and confirm the presence of cardiac activity
  - For women who present after the first trimester, we suggest performing a dating and anatomical ultrasound at the earliest opportunity, preferably prior to 22 weeks
- Offering scheduled delivery to women who reach 41 and 0/7 days undelivered; start antepartum fetal testing at 41 weeks and 0/7 days if not scheduled for delivery
- For pregnant women who have a past or current history of gestational diabetes mellitus, hypertension, or preeclampsia, documenting reproductive history and making women aware of increased lifetime risks of cardiovascular disease and/or diabetes

***We suggest:***

- Making prenatal diagnostic testing for aneuploidy available to all pregnant women
- Two-step process (one-hour oral glucose challenge test followed by three-hour oral glucose tolerance test) to screen for gestational diabetes mellitus at 24-28 weeks gestation

**C. Referral**

***We recommend:***

- Considering use of fetal fibronectin testing as a part of the evaluation strategy in women between 24 and 34 6/7 weeks gestation with signs and symptoms of preterm labor, particularly in facilities where the result might affect management of delivery

***We suggest:***

- Evaluation and counseling by a qualified obstetric provider for pregnant women with an unexplained elevation of maternal serum alpha-fetoprotein

***We recommend against:***

- Routine screening for preterm delivery using the fetal fibronectin test in asymptomatic women

**D. Subpopulations**

***We recommend:***

- For women at risk of preeclampsia, low dose (e.g., 100-150 mg daily) aspirin therapy initiated at or before 16 weeks gestation
- For women at high risk for recurrent preterm delivery and who meet the generally accepted inclusion criteria, antenatal progesterone therapy in consultation with an advanced prenatal care provider

***We suggest:***

- For women greater than 44 years of age, offering planned delivery at 38 weeks gestation to reduce the risk of stillbirth

- For women who have undergone bariatric surgery, evaluation for nutritional deficiencies and need for nutritional supplementation
- For women with a history of gastric bypass surgery, evaluation by a surgeon with bariatric expertise

***There is inconclusive evidence to recommend for or against:***

- For women who have undergone bariatric surgery, routine supplementation of vitamins A, D, E, or K

## II. Algorithm

### A. Algorithm Key

| Symbol   | Meaning  |
|----------|--|
| <b>P</b> | Action to be carried out by provider   |
| <b>R</b> | Referral needs to be made to an advanced prenatal care provider (e.g., obstetrician or maternal-fetal medicine)                  |
| <b>L</b> | Lab needs to be ordered  |
| Dotted   | Timing is not ideal, but it is still helpful for the pregnant woman to receive this action at this time (rather than not at all) |
| V1       | First visit  |
| PP       | Postpartum visit   |

### Actions at Every Visit

At every visit, assess:

- Blood pressure
- Body mass index (BMI)
- Weight gain
- Medication reconciliation
- Need for consultation with advanced prenatal care provider (e.g., obstetrician or maternal-fetal medicine) for women at high risk for preterm delivery (Recommendation 18)

Note:

Please see the section below on [Routine Pregnancy Care](#) and the section in the full CPG on Standard of Pregnancy Care. The recommendation numbering refers to each recommendation as it is listed in the full CPG. Please see the full CPG for the complete list of recommendations and accompanying discussions.

### C. Interventions by Weeks Gestation

| Intervention  | Weeks Gestation |   |    |                  |    |    |                 |    |    |    | PP       |
|---|-----------------|---|----|------------------|----|----|-----------------|----|----|----|----------|
|   | First Trimester |   |    | Second Trimester |    |    | Third Trimester |    |    |    |          |
|   | V1              | 8 | 12 | 16               | 20 | 24 | 28              | 32 | 36 | 40 |          |
| <ul style="list-style-type: none"> <li>■ Screen for intimate partner violence<sup>a</sup></li> <li>■ Screen for depression using standardized tool (e.g., EPDS, PHQ-9)<sup>a</sup> (Recommendation 6)</li> </ul>  | <b>P</b>        |   |    |                  |    |    | <b>P</b>        |    |    |    | <b>P</b> |
| <ul style="list-style-type: none"> <li>■ Screen for tobacco, alcohol, illicit drugs, and non-prescribed use of medication; if positive, recommend cessation and offer assistance<sup>a</sup> (Recommendation 5)</li> <li>■ Provide prenatal education (e.g., dental health, breastfeeding [Recommendation 7], exercise [Recommendation 2], weight gain, work schedules [Recommendation 3], dietary supplementation [Recommendation 4])<sup>b</sup></li> <li>■ Recommend influenza vaccination (seasonal) for mother and family<sup>b</sup></li> </ul> | <b>P</b>        |   |    |                  |    |    |                 |    |    |    |          |
| <ul style="list-style-type: none"> <li>■ Screen for infectious diseases (GC/CT, HIV, syphilis, rubella, hepatitis B, varicella [if unsure], asymptomatic bacteriuria, TB, history of HSV); treat or manage as indicated<sup>a</sup></li> <li>■ Screen for Rh status and anemia/hemoglobinopathies</li> </ul>  | <b>L</b>        |   |    |                  |    |    |                 |    |    |    |          |
| <ul style="list-style-type: none"> <li>■ Evaluate for nutritional deficiencies in women who have undergone bariatric surgery with intervention as needed (Recommendation 20)</li> <li>■ Consult with RDN for women who have undergone bariatric surgery and who are on a restrictive diet</li> <li>■ Refer to bariatric surgeon women who have recently undergone gastric bypass surgery (Recommendation 22)</li> </ul>   | <b>R</b>        |   |    |                  |    |    |                 |    |    |    |          |
| <ul style="list-style-type: none"> <li>■ Perform dating ultrasound<sup>c</sup> (Recommendation 11)</li> </ul>   | <b>P</b>        |   |    |                  |    |    |                 |    |    |    |          |

| Intervention   | Weeks Gestation |   |    |                  |    |    |                 |    |    |    | PP |   |
|--|-----------------|---|----|------------------|----|----|-----------------|----|----|----|----|---|
|  | First Trimester |   |    | Second Trimester |    |    | Third Trimester |    |    |    |    |   |
|  | V1              | 8 | 12 | 16               | 20 | 24 | 28              | 32 | 36 | 40 |    |   |
| ■ Offer group model of prenatal care (Recommendation 1)  |                 | P |    |                  |    |    |                 |    |    |    |    |   |
| ■ Offer prenatal screening for aneuploidy and common genetic disorders (Recommendation 8 and Recommendation 9)   |                 | P |    |                  |    |    |                 |    |    |    |    |   |
| ■ Offer prenatal diagnostic testing for aneuploidy (accepted alternative to screening)   |                 |   | L  |                  |    |    |                 |    |    |    |    |   |
| ■ Initiate low dose aspirin therapy for women at risk of preeclampsia (Recommendation 17)  |                 |   |    | P                |    |    |                 |    |    |    |    |   |
| ■ Offer evaluation of MSAFP for pregnant women who did not have serum aneuploidy screening or who had non-invasive prenatal screening (Recommendation 14)  |                 |   |    |                  | L  |    |                 |    |    |    |    |   |
| ■ Offer antenatal progesterone therapy in consultation with an advanced prenatal care provider (e.g., obstetrician or maternal-fetal medicine) for women at high risk for recurrent preterm delivery (Recommendation 18)                             |                 |   |    |                  |    |    | P               |    |    |    |    |   |
| ■ Complete fetal anatomy ultrasound  |                 |   |    |                  | P  |    |                 |    |    |    |    |   |
| ■ Measure fundal height  |                 |   |    |                  |    |    |                 | P  |    |    |    |   |
| ■ Screen for GDM with one-hour GCT (for women with dumping syndrome, use fasting and two-hour post-prandial glucose value) <sup>a</sup> (Recommendation 10)  |                 |   |    |                  |    | L  |                 |    |    |    |    |   |
| ■ Perform fetal fibronectin test for women with signs/symptoms of preterm labor (Recommendation 16)  |                 |   |    |                  |    |    |                 | P  |    |    |    |   |
| ■ Assess and educate regarding fetal movement/kick counts and preterm labor symptoms   |                 |   |    |                  |    |    |                 | P  |    |    |    |   |
| ■ Recommend Tdap vaccination for mother and family   |                 |   |    |                  |    |    |                 | P  |    |    |    |   |
| ■ Administer Rh immune globulin to Rh negative pregnant women  |                 |   |    |                  |    |    | P               |    |    |    |    |   |
| ■ Discuss family planning/contraception  |                 |   |    |                  |    |    |                 | P  |    |    |    | P |
| ■ Screen for GBS   |                 |   |    |                  |    |    |                 |    | P  |    |    |   |
| ■ Initiate HSV prophylaxis if indicated  |                 |   |    |                  |    |    |                 |    | P  |    |    |   |
| ■ Assess fetal presentation  |                 |   |    |                  |    |    |                 |    |    | P  |    |   |
| ■ Assess and educate regarding fetal movement/kick counts and labor symptoms   |                 |   |    |                  |    |    |                 |    |    |    | P  |   |
| ■ Offer scheduled delivery at 38 weeks for women greater than 44 years old (Recommendation 19)   |                 |   |    |                  |    |    |                 |    |    |    | P  |   |
| ■ Offer scheduled delivery or initiate antepartum fetal testing (Recommendation 12)  |                 |   |    |                  |    |    |                 |    |    |    |    | P |
| ■ Administer Rh immune globulin to Rh negative mothers with Rh positive babies   |                 |   |    |                  |    |    |                 |    |    |    |    | P |
| ■ Postpartum visit: Educate about lifetime risk of CVD and DM for women with GDM, HTN, and/or preeclampsia (Recommendation 13); review current vaccination status in accordance with CDC guidance; screen for type 2 diabetes if the patient had GDM |                 |   |    |                  |    |    |                 |    |    |    |    | P |

<sup>a</sup> Follow-up for positive screen or based on patient need

<sup>b</sup> Provide education at the initial visit and throughout the pregnancy as needed

<sup>c</sup> This is optimally performed in the first trimester; in the absence of a first trimester ultrasound, dating can be established by ultrasound alone up to 22 6/7 weeks

Abbreviations: CDC: Centers for Disease Control and Prevention; CVD: cardiovascular disease; DM: diabetes mellitus; EPDS: Edinburgh Postnatal Depression Scale; GBS: group B streptococcus; GC/CT: Neisseria gonorrhoeae/Chlamydia trachomatis; GCT: glucose challenge test; GDM: gestational diabetes mellitus; HIV: human immunodeficiency virus; HPV: human papillomavirus; HSV: herpes simplex virus; HTN: hypertension; MSAFP: maternal serum alpha-fetoprotein; PHQ-9: Patient Health Questionnaire-9; RDN: Registered Dietician Nutritionist; Rh: rhesus; TB: tuberculosis; Tdap: tetanus-diphtheria-acellular pertussis

### III. Routine Pregnancy Care

The CPG does not address every aspect of routine care. The below information can be used to help guide clinicians during the routine aspects of management of pregnancy. An initial prenatal risk assessment checklist, which can be used to help guide the initial prenatal care appointment and next steps, is included in [Table 1](#). Consideration of antepartum referrals to advanced prenatal care providers can be informed by [Table 2](#).

**Table 1. Initial Prenatal Risk Assessment Checklist**

|                          | Risk Factors   | Nurse Assessment via Questionnaire | Suggested Action  |
|--------------------------|--|------------------------------------|---|
| Dating                   | Uncertain dating criteria  | √                                  | Dating ultrasound   |
|                          | Late presentation  | √                                  | Dating ultrasound   |
| Current Issues           | Vaginal bleeding   | √                                  | Immediate evaluation  |
|                          | Significant abdominal pain/cramping  | √                                  | Immediate evaluation  |
|                          | Dental complaint   | √                                  | Refer to dental   |
| Past Obstetrical History | Recurrent pregnancy loss   | √                                  | Refer to infertility specialist or reproductive endocrinologist   |
|                          | Risk of ectopic pregnancy (prior ectopic pregnancy, prior tubal surgery, current intrauterine device, history of tubal infertility or pelvic inflammatory disease) | √                                  | Refer for evaluation and ultrasound (immediate referral if having bleeding or pain; scheduled referral if asymptomatic) |
|                          | Prior macrosomia or prior GDM  | √                                  | Obtain early one-hour GCT   |
|                          | Prior preterm delivery   | √                                  | Refer to obstetrician/gynecologist or maternal fetal medicine provider  |
|                          | Prior second-trimester pregnancy loss  | √                                  | Refer to maternal fetal medicine provider   |
|                          | Prior preeclampsia   | √                                  | Refer to obstetrician/gynecologist or maternal fetal medicine provider  |
|                          | Prior stillbirth   | √                                  | Refer to obstetrician/gynecologist or maternal fetal medicine provider  |
|                          | Prior isoimmunization affected pregnancy   | √                                  | Refer to maternal fetal medicine provider   |
|                          | Cervical surgery (loop electrical excision procedure, cone biopsy) or uterine anomaly  | √                                  | Refer to obstetrician/gynecologist or maternal fetal medicine provider  |
|                          | Prior uterine surgery (myomectomy, metroplasty)  | √                                  | Refer to obstetrician/gynecologist or maternal fetal medicine provider  |
|                          | Bariatric surgery less than 18 months ago  | √                                  | Refer to nutrition, obstetrician/gynecologist, or maternal fetal medicine provider                                      |
|                          | Prescription or over-the-counter medications or herbal supplements   | √                                  | Refer to maternal fetal medicine based on teratogen risk  |
|                          | Drug/alcohol use   | √                                  | Refer to maternal fetal medicine provider   |
|                          | Tobacco product use  | √                                  | Document, educate   |

|                                    | Risk Factors   | Nurse Assessment via Questionnaire | Suggested Action   |
|------------------------------------|--|------------------------------------|--|
| <b>Medical Conditions/ History</b> | Neurological disorder  | √                                  | Refer to maternal fetal medicine provider, neurology   |
|                                    | CVD, cardiac anomaly   | √                                  | Refer to maternal fetal medicine provider, cardiology  |
|                                    | Hypertension   | √                                  | Refer to obstetrician/gynecologist or maternal fetal medicine provider, cardiology   |
|                                    | Pulmonary disease  | √                                  | Refer to maternal fetal medicine provider, pulmonology   |
|                                    | Renal disorder (includes pyelonephritis)                                       | √                                  | Refer to maternal fetal medicine provider, nephrology  |
|                                    | DM (Type 1 or 2)   | √                                  | Refer to maternal fetal medicine provider, endocrinology<br>Obtain HbA1c   |
|                                    | Family history of DM in first relative   | √                                  | Obtain early one-hour GCT  |
|                                    | Thyroid disorders  | √                                  | Obtain thyroid function tests  |
|                                    | Autoimmune disorders (lupus, rheumatoid arthritis, anti-phospholipid syndrome) | √                                  | Refer to maternal fetal medicine provider, rheumatology  |
|                                    | Bleeding disorder  | √                                  | Refer to maternal fetal medicine provider, hematology  |
|                                    | Clotting disorder  | √                                  | Refer to maternal fetal medicine provider, hematology  |
|                                    | Gastrointestinal disorders on medications                                      | √                                  | Refer to maternal fetal medicine provider, gastroenterology  |
|                                    | Sickle cell anemia or carrier  | √                                  | Refer to maternal fetal medicine provider, hematology, genetic counselor<br>Hemoglobin electrophoresis if not done for patient and partner |
|                                    | Cystic fibrosis carrier status   | √                                  | Refer to maternal fetal medicine provider, genetic counselor   |
|                                    | History of genetic disease or family history of genetic disease                | √                                  | Refer to maternal fetal medicine provider, genetic counselor   |
|                                    | Prior infant with congenital birth defect                                      | √                                  | Refer to maternal fetal medicine provider  |
|                                    | Hepatitis  | √                                  | Refer to maternal fetal medicine provider, gastroenterology<br>Pertinent hepatitis labs, liver function tests                              |
|                                    | Positive screen for sexually transmitted infection                             | √                                  | Refer to provider and take appropriate action depending on infection   |
|                                    | Tuberculosis or received Bacillus Calmette–Guérin vaccine                      | √                                  | Chest x-ray  |
|                                    | HIV  | √                                  | Refer to maternal fetal medicine provider, infectious disease  |
| Rash or viral illness              | √  | Serology for suspected infection   |  |

|  | Risk Factors   | Nurse Assessment via Questionnaire | Suggested Action  |
|--|--|------------------------------------|---|
| <b>Medical Conditions/ History (cont.)</b> | Radiation/toxic chemical exposure since becoming pregnant                          | √                                  | Refer to maternal fetal medicine provider   |
|  | Cancer (current or recent)   | √                                  | Refer to maternal fetal medicine provider   |
|  | Transplant   | √                                  | Refer to maternal fetal medicine provider   |
|  | Current or prior depression  | √                                  | Refer to behavioral health if suicidal or moderate or severe MDD, unless has established care |
|  | Other mental illness (e.g., anxiety, bipolar, schizophrenia) on or off medications | √                                  | Refer to behavioral health unless has established care  |
|  | Deployment related PTSD and/or military sexual trauma                              | √                                  | Refer to behavioral health unless established care  |
|  | Occupational hazards or exposures  | √                                  | Refer to occupational health,<br>Refer to maternal fetal medicine provider if teratogen       |
|  | Homeless   | √                                  | Refer to social services  |
|  | Intimate partner violence  | √                                  | Refer to social services  |
|  | History of infertility   | √                                  | Perform transvaginal ultrasound, if not already done  |
|  | Diet restriction (e.g., previous bariatric surgery, vegan, vegetarian)             | √                                  | Refer to nutrition  |
|  | Eating disorder  | √                                  | Refer to behavioral health  |
|  | BMI <16.5 or >30 kg/m <sup>2</sup>   | √                                  | Obtain early one-hour GCT if BMI >30 kg/m <sup>2</sup><br>Refer to nutrition                  |
|  | Age (<16 or >35 years)   | √                                  | Refer to advanced prenatal provider   |
| <b>Additional Information</b>              | Currently or previously deployed or family member                                  | √                                  | Refer to social work if desired   |
|  | Previous deployment (self)   | √                                  | Document  |
|  | Lives with cats; educate about not changing litter box                             | √                                  | Educate   |
|  | Eating undercooked meat, high-mercury fish, unpasteurized foods                    | √                                  | Educate   |
|  | Seat belt usage  | √                                  | Educate   |
|  | Planned pregnancy  | √                                  | Document  |
|  | Born outside the U.S.  | √                                  | Document  |
|  | Primary language other than English  | √                                  | Document  |
|  | Religious preference   | √                                  | Document  |
|  | Highest level of education   | √                                  | Document  |
|  | Preferred method of learning   | √                                  | Document  |

|                   | Risk Factors                     | Nurse Assessment via Questionnaire | Suggested Action |
|-------------------|----------------------------------|------------------------------------|------------------|
| Routine Lab Tests | HIV                              |                                    | Lab              |
|                   | Complete blood count             |                                    | Lab              |
|                   | ABO Rh blood typing              |                                    | Lab              |
|                   | Antibody screen                  |                                    | Lab              |
|                   | Rapid plasma reagin              |                                    | Lab              |
|                   | Hepatitis B surface antigen test |                                    | Lab              |
|                   | Rubella IgG                      |                                    | Lab              |
|                   | Urinalysis and culture           |                                    | Lab              |
|                   | Varicella IgG if status unknown  |                                    | Lab              |

Abbreviations: BMI: body mass index; DM: diabetes mellitus; GCT: glucose challenge test; GDM: gestational diabetes mellitus; HbA1C: glycosylated hemoglobin A1c; HIV: human immunodeficiency virus; IgG: immunoglobulin G; kg: kilogram(s); m: meter(s); MDD: major depressive disorder; PTSD: posttraumatic stress disorder; Rh: rhesus

**Table 2. Potential Indications for Referral to an Advanced Prenatal Care Provider**

|   | Risk Assessed or Identified by Routine Prenatal Care Provider                  |
|---|--|
| Obstetric Complications                       | Short (<2.5 cm) cervix (<24 weeks)   |
|   | Malpresentation (>36 weeks)  |
|   | Placenta previa (symptomatic or beyond 28 weeks)                               |
|   | Abnormal amniotic fluid: oligo/polyhydramnios                                  |
|   | Preterm premature rupture of membranes   |
|   | Fetal growth abnormality (estimated fetal weight >5,000 g)                     |
|   | Known or suspected fetal anomaly   |
|   | Multiple gestation   |
|   | Isoimmunization  |
|   | Abnormal prenatal screening result (aneuploidy risk, open NTD, carrier screen) |
|   | Intrauterine fetal demise  |
|   | Prior cesarean section   |
| Gynecologic, Medical, and Surgical Conditions | Current need for surgery   |
|   | Hematologic disorders (except physiologic anemia)                              |
|   | Abnormal pap smear   |
|   | Prior uterine surgery (myomectomy)   |
|   | Breast abnormality   |
|   | Illicit drug or alcohol  |
|   | TORCH infection  |

\*Referral depends upon local availability of resources and comfort of individual care provider

Abbreviations: cm: centimeter(s); g: gram(s); NTD: neural tube defect; TORCH: toxoplasmosis, other (syphilis, varicella-zoster, parvovirus B19), rubella, cytomegalovirus (CMV), and herpes infections