Modifiable Risk Factors

Pregnancies at high risk for iatrogenic preterm delivery if uncontrolled medical comorbidities

Identify medical comorbidities with high risk for iatrogenic preterm delivery*

Identified pre-conception

Identified at first prenatal visit

Medical Comorbidities with High Risk for Iatrogenic PTD

- Chronic Hypertension
- Gestational Hypertension
- Preeclampsia
- Obesity
- Pregestational Diabetes
- Gestational Diabetes
- APAS
- Growth Restriction
- Accreta
- Previa
- Abruptio

Address Barriers:

- Provider (MFM/OB) knowledge re: medical comorbidities and modifiable risk factors
- Counseling: Referral to MFM and other medical subspecialists when indicated.

- Recommend preconception consultation at annual GYN visits for women with comorbidities
- Subspecialist referrals to MFM/Ob for preconception consultation
- Prediction of risks for iatrogenic PTB
- Provider education

Address Barriers:

- Early initiation of care
- Subspecialist referrals for disease co-management/optimization
- Prediction of risks for iatrogenic PTB
- Provider education
Chronic Hypertension

**Address Barriers:**
- Recommend preconception consultation at annual GYN visits for women with comorbidities
- Subspecialist referrals to MFM/OB for preconception consultation
- Prediction of risks for iatrogenic PTB
- Provider education
- Patient access to preconception consultation.

**Address Barriers:**
- Early initiation of care
- Subspecialist referrals for disease co-management/optimization
- Prediction of risks for iatrogenic PTB
- Provider education

**Identified pre-conception**
- Referral to MFM/OB for preconception consultation
- Baseline labs
- Control hypertension
- Discontinue medications that could be teratogenic

**Identified at first prenatal visit**
- Early referral to MFM/OB for consultation
- Baseline labs
- Discontinue teratogenic agents
- Control hypertension treat with anti-hypertensive agents if BP >160/110 and maintain between 120-160/80-105
- Consideration of low-dose aspirin for women at high risk for superimposed preeclampsia
- Consideration for antenatal surveillance; screen for growth restriction, BPPs/NSTs after 32 weeks of gestation
- Monitoring for preeclampsia
- Referral to tertiary care center if early superimposed preeclampsia identified

**Address Barriers:**
- Availability of subspecialist referrals (MFM)
- Provider education
- Availability of appropriate surveillance

For a more detailed evidence-based approach to management, please refer to:
Obesity

**Address Barriers:**
- Recommend preconception consultation at annual GYN visits for women with comorbidities
- Subspecialist referrals to MFM/OB for preconception consultation
- Prediction of risks for iatrogenic PTB
- Provider education
- Patient access to preconception consultation.

**Identified pre-conception**
- BMI calculation and Review of implications on pregnancy
- Diabetes screening
- Screen for associated comorbidities (hypertension, lipid abnormalities, thyroid dysfunction, sleep apnea cardiac disease, etc.)
- Lifestyle modifications – motivation for weight loss, nutrition and exercise counseling

**Identified at first prenatal visit**
- 1st trimester glucose screening and repeat at 25-28 weeks if negative in first trimester
- Baseline labs: CMP, P:Cr ratio
- Consideration of EKG or echocardiogram
- Lifestyle modifications—motivation for healthy diet, appropriate weight gain (or even weight loss) in pregnancy, exercise
- Plan for antenatal surveillance; screen for appropriate growth, consideration od BPPs/NSTs after 36 weeks of gestation

**Address Barriers:**
- Early initiation of care
- Subspecialist referrals for disease co-management/optimization
- Prediction of risks for iatrogenic PTB
- Provider education

**Address Barriers:**
- Availability of subspecialist referrals (MFM)
- Provider education
- Availability of appropriate surveillance

For a more detailed evidence-based approach to management, please refer to:
http://www.acog.org/Resources-And-Publications/Practice-Bulletins/Committee-on-Practice-Bulletins-Obstetrics/Obesity-in-Pregnancy
Pregestational Diabetes

**Address Barriers:**
- Recommend preconception consultation at annual GYN visits for women with comorbidities
- Subspecialist referrals to MFM/OB for preconception consultation
- Prediction of risks for iatrogenic PTB
- Provider education
- Patient access to preconception consultation.

**Identified pre-conception**
- Referral to MFM/OB for preconception consultation
- Optimize glucose control (e.g. A1C <6% before conception)
- Screen for associated comorbidities (vascular disease, hypertension, obesity)
- Laboratory evaluation: CMP, Pr:Cr ratio, Hgb A1c
- Patient education
- Folic Acid preconception
- Lifestyle modifications – nutritional counseling, motivation for weight loss (if indicated), exercise counseling
- Adjust insulin regimen as appropriate to achieve glucose goals

**Identified at first prenatal visit**
- Early referral to MFM/OB for consultation, consideration for co-management with endocrine
- Baseline labs: CMP, Pr:Cr ratio, Hgb A1c
- Screen for associated comorbidities, vascular disease in particular. Ophthalmologic exam and EKG (if indicated)
- Tight glucose control; adjust insulin to achieve goals.
- Patient education
- Lifestyle modifications – nutritional counseling, diabetic education
- Plan for antenatal surveillance; msAFP screening, detailed anatomic survey, fetal echocardiogram, screen for appropriate growth restriction, BPPs/NSTs after 32 weeks of gestation

**Address Barriers:**
- Early initiation of care
- Subspecialist referrals for disease co-management/optimization
- Prediction of risks for iatrogenic PTB
- Provider education

**Address Barriers:**
- Availability of subspecialist referrals (MFM)
- Provider education
- Availability of appropriate surveillance

For a more detailed evidence-based approach to management, please refer to: [http://www.acog.org/Resources-And-Publications/Practice-Bulletins/Committee-on-Practice-Bulletins-Obstetrics/Pregestational-Diabetes-Mellitus](http://www.acog.org/Resources-And-Publications/Practice-Bulletins/Committee-on-Practice-Bulletins-Obstetrics/Pregestational-Diabetes-Mellitus)
Antiphospholipid Syndrome
High risk for indicated preterm delivery

**Address Barriers:**
- Education of providers re when to send APAS testing
- Understanding the components of APAS testing
- Proper pt identification
- Patient access to preconception consultation

**Address Barriers:**
- Early initiation of care
- Subspecialist referrals for disease co-management/optimization
- Prediction of risks for iatrogenic PTB

**Identified pre-conception**
- Proper identification of women with undiagnosed APAS (lupus, recurrent pregnancy loss, prior VTE, prior IUFD, prior early severe PEC)
- Referral to MFM/OB for preconception consultation
- Ensure diagnosis is appropriate
- Laboratory evaluation if indicated: Lupus anticoagulant, anticardiolipin antibody, beta-2 glycoprotein
- Patient education regarding importance of early presentation to prenatal care for initiation of aspirin/anticoagulation

**Address Barriers:**
- Availability of subspecialist referrals (MFM)
- Provider education
- Availability of appropriate surveillance

**Identified at first prenatal visit**
- Proper identification of women with undiagnosed APAS (lupus, recurrent pregnancy loss, prior VTE, prior IUFD, prior early severe PEC)
- Referral to MFM/OB for consultation and rheumatology for co-management
- Ensure diagnosis is appropriate
- Laboratory evaluation if indicated: Lupus anticoagulant, anticardiolipin antibody, beta-2 glycoprotein
- Baseline labs: CMP, Pr:Cr ratio, Hgb A1c
- Initiation of aspirin and heparin/Lmwh
- Patient education regarding Increased risk for obstetric complications (recurrent pregnancy loss, preeclampsia, IUFD) and medical complications (VTE)
- Plan for antenatal surveillance; screen for growth restriction, BPPs/NSTs after 32 weeks
- Delivery Goal is term
- Continue anticoagulation for 6 weeks postpartum

For a more detailed evidence-based approach to management, please refer to:
http://www.acog.org/Resources-And-Publications/Practice-Bulletins/Committee-on-Practice-Bulletins-Obstetrics/Antiphospholipid-Syndrome

*Garite et al.*
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Disclaimer

This algorithm and key driver material was written by a group of experts in the field of Preterm Birth. It was then reviewed by the Society for Maternal-Fetal Medicine's (SMFM's) Publications Committee, Executive Committee and Risk Management.

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