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Improving Delivery of Evidence-Based Prenatal Care in a Family Medicine Clinic

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BACKGROUND:

According to the Institute of Medicine, using evidence-based decision-making is one of the key principles that will enable the health care system to provide consistent, high-quality medical care to all people. This can be a challenge when providing care to pregnant women, as ethical issues regarding research in this population have resulted in a relative dearth of high quality randomized control trials providing evidence for prenatal issues. The challenge of providing evidence-based prenatal care is further compounded in a busy Family Medicine teaching practice where pregnant women represent a relatively small fraction of the patients seen on a daily basis.

PURPOSE:

The purpose of this project was to develop concise, evidence-based protocols for the management of several common prenatal problems and implement them in a Family Medicine clinic in order to improve the quality of care provided to pregnant women in this practice.

METHODS:

First, 4 common prenatal problems were identified: 1) Obesity in Pregnancy, 2) Prior Preterm Labor, 3) Gestational Diabetes, 4) Chronic Hypertension in Pregnancy. For each of these problems, a comprehensive review of the literature was performed. Priority was given to guidelines from professional organizations, meta-analyses and randomized control trials. Using the strongest evidence from all of these sources, a one-page protocol was developed for each condition. The protocols then underwent a review process by the physicians at the clinic. In areas where no strong evidence existed, medico-legal considerations and consensus-derived provider preferences were incorporated into the protocols.

Figure 1: Example of evidence-based prenatal protocol

Checklist format facilitates use in busy clinical practice

When the evidence is inconclusive, provider discretion should be used

PRIOR PRETERM LABOR GUIDELINES

Has patient had previous pregnancy in which she went into labor before 37 weeks gestation?
If no, continue with routine care
If yes, she is at greatly increased risk for preterm labor during this pregnancy and these guidelines should be considered:

1st prenatal visit:

- ___ Assess for additional risk factors for preterm delivery (smoking, periodontal disease, African descent, cocaine or heroin use, prior 2nd trimester pregnancy loss)
- ___ If patient is a smoker, counsel her about smoking cessation; if she uses illicit substances, refer as needed for treatment
- ___ Consider screening for asymptomatic BV and treating if positive

2nd Trimester:

- ___ Obtain consult from high-risk obstetrician; discuss whether and when to transfer care, or whether co-management is suitable. If decision is to transfer care, discuss and document explicit plan for transfer of patient care back to HFHC at 34 weeks if no other high-risk OB conditions are present
- ___ Administer hydroxyprogesterone 250 mg IM weekly starting by 16 weeks gestation and continuing until 36 weeks gestation
- ___ If BV screening was performed in the 1st trimester, and test result was positive, re-test for BV after treatment has finished

OPTIONAL PRACTICES (supporting data is inconclusive):

- Transvaginal ultrasound to measure cervical length
 - Can be done once around 24 weeks or serially from 20 weeks
 - Cervical length less than 25 mm is a strong predictor of preterm birth
- Prophylactic cervical cerclage
 - Evidence is strongest for women with multiple previous preterm labors or cervical length less than 15 mm on transvaginal ultrasound.

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Consensus-derived provider preferences and medico-legal issues are incorporated into protocols

RESULTS:

In each of the 4 problems of interest, there existed at least one recommendation that had strong evidence to support it. These recommendations included screening tools, counseling topics and pharmacologic interventions.

CONCLUSIONS & NEXT STEPS:

The first phase of this project has resulted in the development of concise, evidence-based protocols for care of patients with 4 common prenatal problems that can now be instituted in the Family Medicine clinic. These protocols incorporate the strongest evidence available, and on issues where no strong evidence is available, they take into consideration medico-legal issues and provider preferences derived from a consensus process. We hope that the availability of these protocols will result in more consistent, evidence-based prenatal care. The next steps will be to assess provider utilization of and satisfaction with the protocols, as well as gather outcomes data to see if the implementation of these protocols results in better patient outcomes.

References:

1. Institute of Medicine, Crossing the Quality Chasm: A New Health System for the Twenty-first Century (Washington: National Academy Press, 2001).