Improving Prenatal Education in a Health Center: A Pilot Study

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BACKGROUND

Common Health Education Practices for Obstetrical Care:
Timing and variety of topics are left up to the discretion of the individual provider. Lack of consistency between providers, even in a single practice.

Pros of Current Practice: Health education is highly individualized to each patient.

Cons of Current Practice: Some important subject matter may be neglected, which could ultimately improve patients outcomes and satisfaction.

Previously reported studies found evidence that improved patient education:

- Increases rates of breastfeeding.
- Increases duration of breastfeeding.
- Increases seatbelt use during pregnancy.
- Decreases preterm, low birth weight, infants.
- Can decrease the need for as many prenatal visits without negatively affecting pregnancy outcomes.

OBJECTIVES

1. To evaluate if prenatal patient satisfaction and knowledge about pregnancy improves if a structured prenatal education plan is implemented throughout a family medicine health center.
2. To evaluate if a structured prenatal education plan for expectant mothers will improve clinical outcomes.

PROJECT TIME LINE

Year One - Jan 2011 through Dec 2011:

- Enrollment of about 50 prenatal patients during their first trimester (Group A) who receive care at Hahnemann Family Health Center (HFHC). Women will be followed through the prenatal and postpartum period.
- Prenatal care will remain the same as it was prior to the start of the study at the health center.
- Three surveys per patient will be filled out at appropriate times in their pregnancy and clinical out comes will be tracked.

Year Two - Jan 2012 through Dec 2012:

- New prenatal health education will be implemented.
- About 50 more HFHC prenatal patients (Group B) will be enrolled in the study during their first trimester and receive the new prenatal health education throughout pregnancy.
- Three surveys per patient will be filled out at appropriate times in their pregnancy and clinical out comes will be tracked.
- Group A's and Group B's surveys and clinical outcomes will be compared.

METHODS

Creation of a Prenatal Education Plan:

1. **Review of Current Prenatal Education Materials from Around the Country**

2. **Patient Focus Groups**
   Current prenatal patients at HFHC were asked about their level of satisfaction with their prenatal care. Advice for improvement was also elicited.

3. **Creation of prenatal health education packet draft. Edited by three health center physicians.**

4. **Patient Feedback**
   Current third trimester prenatal patients, and women who previously attended the focus group, were invited to review the health education packet and submit feedback.

5. **Physician Focus Groups**
   HFHC attending and resident physicians, nurses, and nurse practitioners, were asked to attend one of two designated staff/faculty meetings at HFHC and submit comments and feedback about the packet.

Creation of Study Surveys:

Three surveys, specific for the first trimester, third trimester and post-natal period, were created. Partially based upon previously validated tools.

Surveys are intended to measure patient satisfaction with prenatal care and to understand their knowledge on prenatal health education topics.

Indicators of satisfaction include the patient's perception of her:

- level of stress secondary to pregnancy.
- confidence in making decisions about her pregnancy without the help of her provider.
- worry about pregnancy and various pregnancy related issues.

Clinical Outcomes:

Chart reviews will be performed on each enrolled patient after delivery of baby. Tracked outcomes will include:

- Number of phone call for prenatal issues between appointments
- Number of trips to the emergency room for prenatal related issues
- Smoking status during pregnancy
- Preterm labor
- Breastfeeding intent and actual rate at discharge
- Pregnancy complications

RESULTS

PATIENT FOCUS GROUPS

WOMEN APPRECIATED:

- Consistently seeing their doctor (and not another physician or nurse)
- Having two physicians (resident and attending)
- Personal touches such as the physician calling the patient him/herself: "Dr. X was on top of everything."
- Friendly support staff
- Low wait times
- Women felt supported on their pain management decisions (epidural vs. no epidural)
- Memorial Birthing Classes: "I totally recommend it…it was great. I loved the camaraderie".

SUGGESTIONS FOR IMPROVEMENT:

- List of resources (books & websites, availability at library)
- Consistently handing out the prenatal folder. Many women did not receive the current prenatal folder. One who did said it was incomplete
- Info on what will be talked about at the next visit. Women often had questions but were not sure if it was too early to ask: "Maybe it will be brought up next time."
- "We didn't discuss labor until 35 weeks. I wanted to talk about it during the entire process."
- Discussion of birth plans and what will happen when they arrive at the hospital
- A resource for between visits that can be referred to before calling: "You don't want to be THAT annoying patient (that calls all the time)."

TOPICS THAT WERE NOT CONSISTANTLY DISCUSSED WITH WOMEN:

- Lifestyle modifications: hot baths, saunas etc.
- Ways to combat stress during pregnancy
- What will happen to the patient and the baby in the hospital
- Why a urine test is done at each visit: "I thought they were looking for drugs!"
- Dental Care
- Preterm or Early Labor
- Nutrition and foods to avoid: "Maybe (my doctor) just knows I know…this is my third pregnancy."
- Weight gain
- Breastfeeding vs. formula feeding
- Development of the baby during pregnancy
- Common symptoms during pregnancy, management of symptoms
- Stages of pregnancy
- Knowing what will happen during labor, stages of labor, how one knows she is in labor: "I only know from the movies."
- Safe medications to take during pregnancy: "I had bad headaches and thought I couldn't take anything…my grandmother said 'nothing but Tylenol.'"

RESULTS

PRELIMINARY FIRST TRIMESTER SURVEY RESULTS, n = 9

Please rate to what extent you're feeling bothered, upset, or worried at this point in your pregnancy about the following issues.

	Not at all 1	2	Somewhat 3	4	Very Much 5
Taking care of a newborn baby?	III	III	II	I	
The effect of ongoing health problems, such as high blood pressure or diabetes on your pregnancy?	IIII	I	III		I
Pain during labor and delivery?	III		I	II	III
Changes in your weight and body shape during pregnancy?	IIII		III	I	I
Whether the baby might come too early?	III		IIIII	I	
Physical symptoms of pregnancy such as vomiting, swollen feet, or backaches?	III	II	III	I	
The quality of your medical care during pregnancy?	III	II	II	I	I
Whether you might have an unhealthy baby?	III		III	I	II
What will happen during labor and delivery?	II	I	I	II	III

Please tell us if you think each of the following statements is true or false by circling either TRUE or FALSE for each statement.

Correct answers are in bold.	TRUE	FALSE
Babies of mothers who smoke tend to be smaller than babies of mothers who do not smoke.	**IIIII III**	I
Most drugs that can be bought without a prescription are safe to take during pregnancy without talking to your doctor.		**IIIII IIII**
Preterm labor is labor that starts one week before the due date.	**IIIII**	**IIII**
Epidurals and pain medications are the only ways to relieve pain during labor.	IIII	**IIIII**
Babies should always be put to sleep on their backs or sides, not their stomachs.	**IIIII I**	III
Relaxation breathing reduces stress during pregnancy.	**IIIII IIII**	
Emotional distress that lasts several weeks is no cause for concern.		**IIIII IIII**
Smoking pot during pregnancy does not influence the health of the baby.		**IIIII IIII**
A woman is in labor when contractions are consistently coming every 2-6 minutes and getting stronger every time.	IIIII IIII	
It is okay to have sex during pregnancy if there is no bleeding or fluid coming out of the vagina.	**IIIII IIII**	
Sudden increases in blood pressure may be a warning sign for preeclampsia.	**IIIII II**	

RESULTS

Please rate what you think your level of knowledge is regarding pregnancy and prenatal-related issues (e.g., what is safe to eat, what are the benefits of breast feeding, how to tell if you are in early labor):

No Knowledge 1	2	Some Knowledge 3	4	A lot of Knowledge 5
		IIII	IIIII	

To what extent are you confident or not in making decisions regarding basic pregnancy issues WITHOUT having to talk to your doctor (e.g., taking an over the counter medication, "is this headache a concern?")?

No Confidence 1	2	Some Confidence 3	4	A lot of Confidence 5
II	I	IIIII	I	

Do you feel that you have added stress in your life due to your pregnancy?

YES	NO
IIII	IIIII

To what extent do you think you are coping well with the stress of pregnancy?

Not at all 1	2	Somewhat 3	4	Very Much 5
		IIII	I	

To what extent are you bothered, worried, or upset about pregnancy-related symptoms, or questions about your pregnancy, at this point?

Not at all 1	2	Somewhat 3	4	Very Much 5
IIIII I		III		

CONCLUSIONS

1. Initial results indicate that there are gaps in prenatal education and knowledge throughout prenatal care at the health center.
2. Based on our findings, and those of previously published studies, it can be hypothesized that by closing these gaps clinical outcomes will improve. We will be better able to assess this hypothesis after year two of this study.
3. Patient satisfaction cannot be assessed at this time.
4. Early survey results indicate that first trimester women seem to subjectively and objectively have some accurate prenatal knowledge.

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