Announcement of Capstone Presentation

Candidate: Rita J. Nutt

Date, Time, Place: April 2, 2009, 9:00 am, Room 503

Capstone Project Title: The Predictive Value of Second Trimester Blood Pressures on the Development of Preeclampsia

Capstone Project Abstract:

Background: Preeclampsia is a condition that affects between 8% and 10% of all pregnancies in the United States. It is one of the leading causes of perinatal morbidity and mortality worldwide. Early detection of preeclampsia is a goal of obstetrical care in order to increase surveillance and begin prevention and treatment strategies. Many of the routine surveillance strategies that are employed during prenatal visits are completed by nursing staff, placing nurses in a pivotal role for early detection of preeclampsia.

Purpose: The purpose of this project was to explore second trimester blood pressures as a predictor of preeclampsia.

Methods: A retrospective case control model was used to compare second trimester blood pressures of women who developed preeclampsia with those of women who remained normotensive. The main variable of interest was assessing for the normal physiologic 10 mmHg drop in diastolic pressure experienced in second trimester. It was hypothesized that a failure to experience this anticipated drop in diastolic pressure increased the likelihood of developing preeclampsia. Data were obtained from the prenatal records of 144 women who delivered a baby at a tertiary medical center during 2004. A logistic regression model was used to determine the predictive power of a variety of patient characteristics – initial diastolic pressure, BMI, excessive pregnancy weight gain based on BMI recommendations and failure to experience the 10 mmHg drop in diastolic pressure.

Findings: Two variables were significant predictors of the development of preeclampsia: excessive pregnancy weight gain based on BMI recommendations (OR=2.78; CI 1.120, 6.9.19) and failure to experience the anticipated drop of diastolic blood pressure in 2nd trimester (OR=8.798; CI 2.690, 28.776).

Conclusions: The results of this study indicate a need to re-examine normal blood pressure parameters during pregnancy – particularly during second trimester. They provide an evidence base to transform current prenatal blood pressure screening practices and documentation. In addition, study findings support the need to educate women about the potential risks of excessive weight gain and encourage healthy eating habits.

Capstone Chair (name & title): Meg Johantgen, PhD, RN

Capstone Advisory Committee Members (names & titles):
- Member: Sue Thomas, PhD, FAAN, RN
- Member: Dawn Mueller-Burke, PhD, RN

The Open Presentation is open to the university community and invitees of the candidate. Any member of the Graduate Faculty may observe the capstone presentation. Only committee members may vote.