Nursing Surveillance in an Obstetric Setting
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Background
- Cesarean birth (CB) is a public health issue placing both the mom and infant at increased risk for severe morbidity and mortality globally.
- Preventing the first CB is a primary strategy in reducing the overall CB rate.
- The birth outcome of cesarean or vaginal birth may be influenced by the nurse's role in the surveillance of fetal heart monitoring and interventions based upon interpretation.
- Detection and treatment of category II patterns may be an effective strategy in reducing the incidence of primary cesarean births women who nulliparous, term with single infant in vertex position (NTSV).

Purpose
- Examine nursing documentation of fetal heart rate (FHR) tracing and interventions (nursing surveillance) in response to identification of a FHR tracing consistent with category II pattern.
- Identify whether nursing surveillance and frequency of category II patterns increase the risk of cesarean birth in women are NTSV.

Methods
- Design: Cross-sectional, correlational
- Sample: Nulliparous mothers ≥37 weeks gestation, NTSV delivered at a large, nonprofit community hospital in Southern California. Exclusion criteria: Scheduled cesarean delivery, non-NTSV, high-risk pregnancy, or fetal anomalies.
- Procedures: Retrospective data collection. Three months of Hospital's Perinatal Download database (PDD) provided data related to each inclusion criterion except length of EFM which was obtained from the patient's EMR.
- Measures: Category II FHR tracings defined by characteristics of FHR, baseline variability, decelerations, presence absence of accelerations. Nursing Interventions: oxygen supplementation, maternal reposition, IV fluid bolus, Pitocin adjustment.
- Analysis: Descriptive & Multivariate

Results
- Sample Characteristics (N = 457)
  - Ethnicly diverse 5.5% Black, 1.1% NAAN, 45.5% White, 13.4% Asian/Pacific Islander, 31.7% Hispanic.
  - Mean age 28.8 ± 5.65 years
  - Mean maternal BMI 30.2 ± 5.5 kg/m2
  - Induction 30.6%
  - Cesarean birth 29.5%
  - Pitocin augmentation 40.5% (excluded pit induced)

- Q1. Is there a difference in patient characteristics between mothers who give vaginal or cesarean birth?
- Ethnically diverse 5.5% Black, 1.1% NAAN, 45.5% White, 13.4% Asian/Pacific Islander, 31.7% Hispanic.
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- Q2. Does the frequency of Category II FHR pattern predict the outcome of mode of birth (vaginal versus cesarean)?
  - Model (likelihood ratio) chi-square = 14.32, df = 2, p = .001; Nagelkerke R² = .04; Percent correctly classified = 70.2%

- Q3. Does the frequency of Category II pattern and type of nursing treatment increase the odds for cesarean birth?
  - Model (likelihood ratio) chi-square = 17.14, df = 5, p = .01; Nagelkerke R² = .05; Percent correctly classified = 70.2%

Nursing Surveillance Conceptual Framework

New Knowledge: Nursing surveillance conceptual framework may provide opportunities for examining nurse’s contribution to improving outcomes in the obstetrical setting

Future research:
- Relationship of nursing surveillance antecedents to birth outcome.
- Type of nursing intervention, proportion of category II patterns improved with nursing intervention.
- Frequency of category II characteristics among women who had induction vs. spontaneous labor.

Limitations: Sample size, single hospital setting, retrospective nature, and manual abstraction of data

References/Acknowledgments
References available on handout.
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