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Apgar Scores and Oxygenation Levels: A Comparison of Vaginal and Cesarean Section Modes of Delivery
Allison Holt, student nurse; Patricia Ravert, RN, PhD, CNE

Purpose
To compare Apgar scores and oxygenation levels (two measures of birth outcomes) of well infants born by Cesarean section (c-section) to those delivered vaginally

Research Question
Does mode of birth (vaginal or c-section) have an effect on birth outcomes of well infants?

Methodology

Study Procedures
- Subjects were well infants born at a regional hospital in the Intermountain West and admitted to the well-baby nursery
- Parent, usually the mother, of the infant was approached in the hospital setting to obtain permission and informed consent
- SpO₂ levels of right upper extremity and left lower extremity were measured using a Masimo Radical Set Monitor
- Additional data collected from the patients’ charts, including gender, age, birth weight, ethnicity, mode of delivery, and Apgar scores at one and five minutes

Findings and Conclusions
No statistically significant difference was noted in the Apgar scores or oxygenation levels between vaginal or c-section births

Data analysis
- Data analyzed to determine measures of central tendency (means, SD, mode, etc.)
- Means for each of the quantitative data compared with independent t-tests based on mode of birth (vaginal delivery vs. c-section)

Limitations
- Sample did not include infants that were taken to the NICU or those who needed other special care

Recommendations
- Physicians and nurses could use this information to reassure women when a c-section delivery is necessary
- Further research sample should include all infants (well and those in the NICU or requiring special care) to compare birth outcomes of c-section and vaginal births