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"This Nursing Honors Thesis Research Project Aims to Describe the Process of Knowledge Acquirement by New Parents Related to Airway Clearance of the Newborn"

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Project Summary – This Nursing Honors Thesis research project aims to describe the process of knowledge acquirement by new parents related to airway clearance of the newborn.

The transition from intrauterine life to extrauterine life is a monumental milestone for the newborn. In this journey from placental management to newborn lung control, gas exchange, change in blood flow and personal thermoregulation occur without difficulty in 90% of newborns. This journey can be managed by the newborn without interference from those attending the birth. The American Association of Pediatricians (AAP) opposes efforts to manage this process specifically naso-pharyngeal suctioning or airway clearance. For the term newborn, when spontaneous respirations, adequate crying and good muscle tone are exhibited, the AAP encourages simple drying of the newborn and provision of a warm environment.

Although there is no scientific evidence for the routine practice of airway clearance of the newborn at birth, this practice is frequently implemented among intrapartum nurses, midwives and obstetricians. There is scientific evidence that this routine practice causes newborn apnea, disturbances in heart rate and does not improve lung function or newborn oxygenation. The negative effects of this practice may be related to vagal nerve stimulation and interference with the newborn's journey to extrauterine life. While routine suctioning at birth may not be appropriate, there are sound indications for airway clearance procedures to be implemented during the newborn period both in the clinical setting and in the community setting. Indication for this procedure would include increased mucous production that compromises adequate respiration and in emergent airway obstruction. In these incidences, new parents need to be able to perform airway clearance effectively and safely.

This proposed methodological and descriptive study is part a research program to Improve Neonatal Outcomes by Optimizing Suctioning Processes in collaboration with Pam O'Neal PhD, RN. This proposed study will review methods available to new parents to acquire knowledge related to airway clearance of the newborn. This study will also begin scale development for a nationwide instrument used to quantify the knowledge of new parents airway clearance of the newborn.

The student researcher will have the opportunity to explore this topic within the local community, in the clinical environment and benefit from the expertise of nurse scientists by working with College of Nursing researchers and in consultation with clinical experts in California, Virginia and Texas.

Student Duties –

The student researcher will begin with a thorough literature review related to the topic of parental knowledge of airway clearance of the newborn. Clinical hours will be provided to the student researcher to shadow intrapartum, neonatal and mother-baby nurses. The student learning objective for these clinical experiences will be to observe the process of airway clearance of the newborn and the process of parental education that occurs in the hospital setting.

A review of methods for obtaining knowledge related to airway clearance of the newborn will occur by the student researcher. This will include attending local parenting class classes, interviewing instructors, review course curriculum and contacting national organization that certify parenting educators. An additional method of reviewing methods of obtaining knowledge related to airway clearance of the newborn will be to search, obtain and review materials available to parents such as books, videos, social media, and websites to learn this information.

The student researcher will also search, obtain and review newborn airway clearance devices, both hospital grade and those available commercially in order to have a thorough understanding of the mechanisms for facilitating airway clearance of the newborn. Student duties will also include attendance at the national convention of the Association of Women's Health, Obstetrics and Neonatal Nurses to consult with vendors of newborn airway clearance devices and to discuss issues of airway clearance with experienced neonatal nurses.

From these processes, the student researcher will work together with the nursing/research mentor to begin development of an instrument to measure the knowledge of new parents related to airway clearance of the newborn.

A report of conclusions in the form of a thesis will be developed and submitted to the UAH Honors Program. Additionally, the student researcher will be expected to develop a publishable manuscript or poster presentation detailing this project.

This project will afford multiple benefits to the student researcher. First, is the opportunity to conduct field research in an active healthcare setting. Secondly, is the benefit of learning alongside an experienced nurse researcher and practicing nurses in a clinical setting. This is a benefit rarely gleaned by an undergraduate student at this stage of nursing school.

Mentor Supervision and Mentoring –Dr. Adams will supervise this research activity as an Honors course requirements. The student will maintain weekly four hour sessions for the purpose of reviewing and synthesizing literature, knowledge obtained in the clinical setting and other information gathered during the student's review. Approximately 120-150 hours will occur in the clinical/community setting. Later in the semester, weekly sessions will be used to guide the student researcher in instrument development, writing the results, poster production and manuscript development. Written and verbal feedback related to all aspects of the research process will be provided to the student resesarcher. Ideally the honor student will be enrolled in an honors section of NUR 307 and a letter grade will be awarded.