

Data Analysis Internship: Improving Health Outcomes of Sick Neonates in Relation to Neonatal Nutrition

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Early nutritional exposures for infants are crucial both before and after birth, as any changes in these variables can impact growth patterns and potentially lead to lifelong consequences. The primary aim of this project was to develop a comprehensive database of the identified nutritional and developmental factors from neonates admitted to the Neonatal Intensive Care Unit (NICU) at St. Joseph Medical Center in Tacoma, Washington. Building on a neonatal nutrition database previously created with data from the University of Washington, this research group sought to redevelop and enhance the data collection process to expand on discoveries from previous studies. Data were extracted from the EPIC healthcare software and securely stored in an encrypted REDCAP database. Key variables identified and recorded included growth metrics (length, weight, and head circumference), laboratory results, daily nutritional outcomes, long-term nutritional status, and skin-to-skin interactions. By collecting and analyzing this nuanced dataset, including the above metrics, this ongoing research aspires to contribute significantly to evidence-based practices in neonatal care, enhancing health outcomes for vulnerable patients in the NICU, and reducing infant mortality rates at St. Joseph Medical Center and worldwide.