Focus on Creative Inquiry   Research and Innovation Month

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Neonatal Intensive Care Unit App Development

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Abstract

This research aims to address how educating and empowering Neonatal Intensive Care Unit parents in areas of health and nutrition can improve their satisfaction during their child's stay. Since technology is becoming more and more prevalent in the healthcare system, the research team decided to further explore how the use of technology can empower parents in the care of their child. In today's society, technology is a crucial tool for communication, as well as education. The student research team aims to utilize software application technology to determine if and how parent involvement significantly contributes to an enhanced NICU experience for both the family and infant. By addressing how these parental needs in the NICU can be met, preterm infant care can ultimately be enhanced.
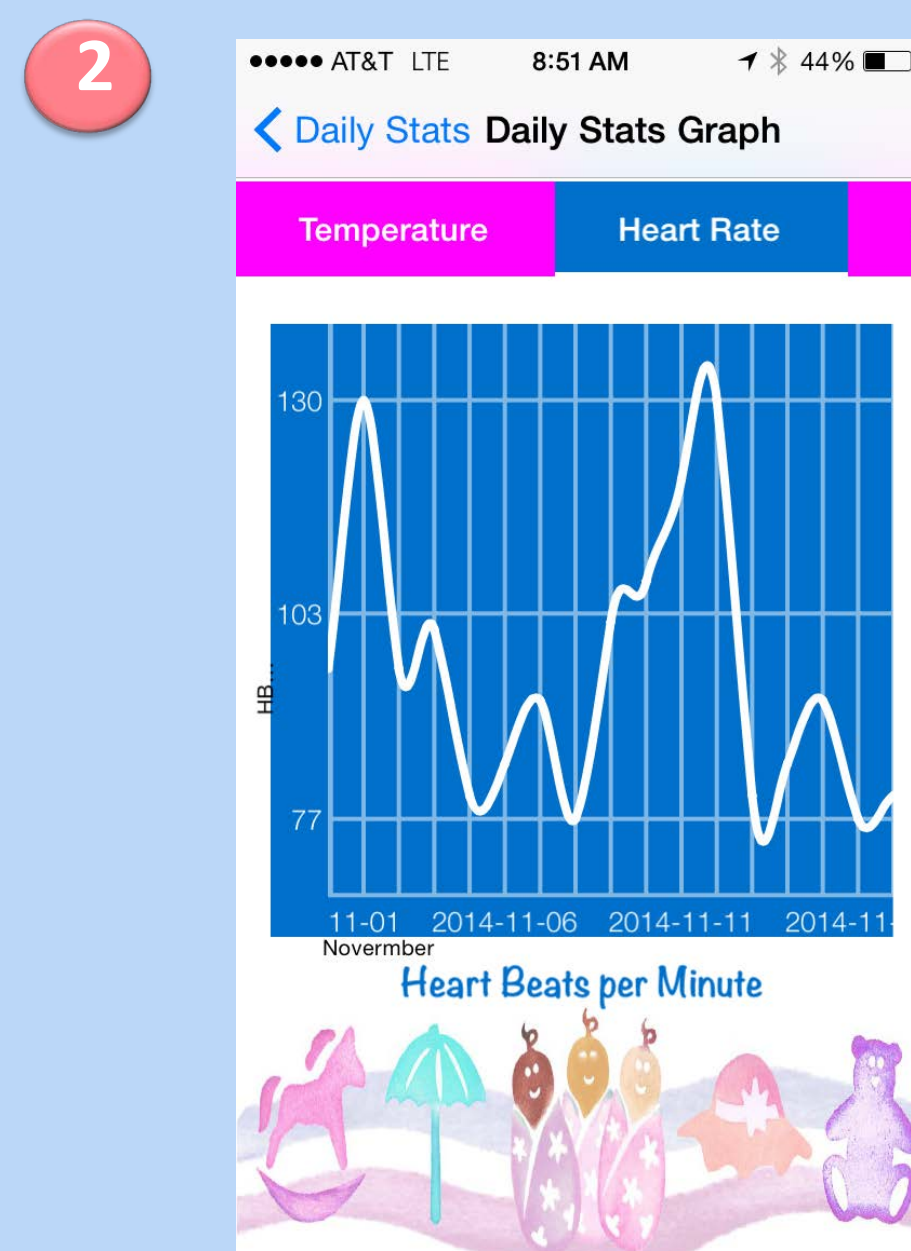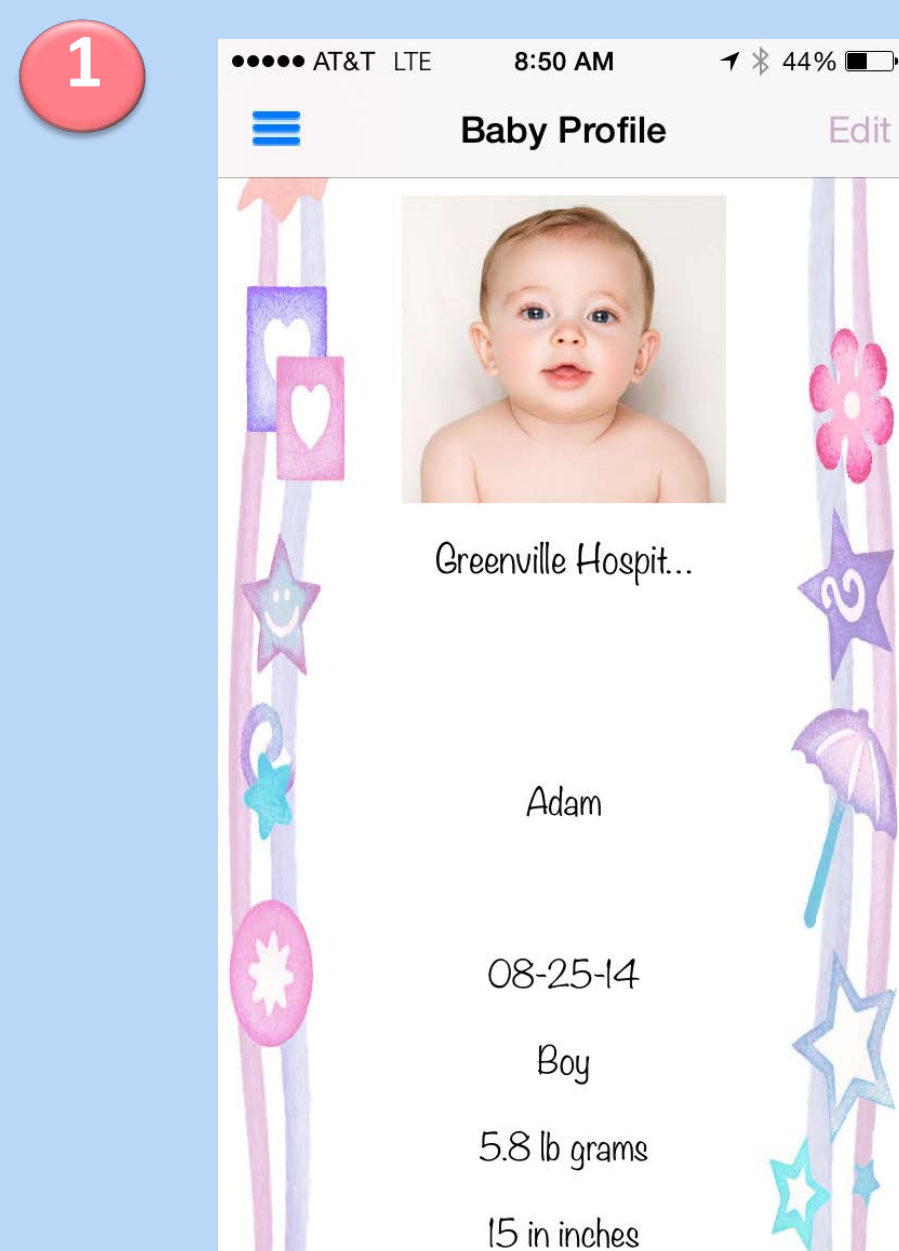
What is the NICU?

The Neonatal Intensive Care Unit is a specialty area in the hospital that cares for infants that are either ill or were born prematurely. This area is reserved for critically ill infants who need special attention in order to survive. Children who were admitted to the NICU often need to be monitored closely after leaving the hospital to ensure that they are healthy and developing normally. This is because illness early on in a child's life can have negative effects or complications. It is very important to monitor the child to detect these problems early on. In order to monitor how well babies who were in the NICU are developing, health care professionals use graphs that compare the development of the baby to average data at that age.

Significance

Parents have an innate need to be involved in their child's care and development. However, this privilege is immediately stripped from them at the premature birth of their infant. To promote family-centered care in the NICU, parents must be informed of the health status of their baby and how to properly care for their child. The team hypothesizes that those parents who are able to track and learn about their child's nutritional and health status will have high rates of satisfaction with their child's progression in health status.

Features of the App

1. **Baby Profile** - Provides an overview of the baby's demographic information including date of birth, sex, birthplace, name, birth weight/height.
2. **Daily Stats** - Displays infant assessment information, including weight, length, head circumference, vitals (temp, pulse, respirations, BP, mood). These are summarized in a table and graphed linearly.
3. **Baby Book** - Gives parents the ability to track infant progress, achievements, daily activities. Includes pictures and videos.
4. **Education Section** - Includes educational articles, websites, books, and videos as well as medical terms, procedures, equipment, medications, and roles of medical personnel.
5. **To Do List** - A notes section that aids parents in remembering their questions for the health care team.