

Nurse-drawn blood work makes SENSE: Initiatives to promote developmental care in the NICU

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Aim

- To promote developmental care through the implementation of nurse-drawn bloodwork.
- To have 100% of staff educated and trained to collect bloodwork around touch times.
- To improve accuracy and efficiency of nurse-drawn bloodwork while minimizing the occurrence of blood sample clotting.

Background

- Promoting and implementing developmental care strategies in the NICU creates an environment that reduces painful stimuli, protects sleep cycles, minimizes stress, and promotes the growth and well-being of each infant.
- A gap exists in the standard practice of technician-drawn blood work, where routine schedules disregard the infant's developmental requirements.
- This focused quality improvement initiative aimed to address this existing gap.

Data/ Results

Cycle 1: Moving away from Technician-Drawn Bloodwork to improve developmental care January- March 2023

- Discussions ensued between NICU and Lab management, emphasizing the importance of developmental care in the NICU setting.
- A comprehensive presentation was crafted and presented to the Lab Manager, delineating developmental care strategies and underscoring the advantages of nurse-drawn bloodwork in the NICU.
- Educational materials on nurse-drawn blood collection were prepared, resulting in the successful training of all NICU nurses.
- A group of clinical practice nurses i.e., the Nursing Practice Group (NPG), created a quick reference lab manual for the unit with the support of the laboratory management.
- Project leads among the nursing staff were identified.
- Equipment availability was ensured: heel warmers, correct tubes, and appropriate lancets.
- A data tracking tool was developed, and Health Unit Clerks were taught how to maintain this log.

*16.8%

March 2023
Laboratory
discontinued services

Cycle 2: Nurse- Drawn Bloodwork March-June 2023

- All bloodwork collected by NICU nurses at touch times unless otherwise indicated.
- Developmental care strategies used to reduce painful stimuli, minimize stress and ensure well-being of each infant.
- New nurses were encouraged to seek assistance from more experienced nurses for the blood collection process.
- Education material available on unit.

* 20.4%

Cycle 3: Enhancing and Facilitating further education for Nurse-Drawn Bloodwork July- December 2023

- Tips & Tricks to decrease clotting rates was prepared and posted in each pod after exploring strategies that were used by staff who had complete success with the process.
- Education letter reinforced process with all staff members.
- The lab was contacted to assist with further information to improve the process (some suggestions were ensuring anticoagulant versus volume for CBC collection and mixing gently 10 times by inversion after replacing the cap).
- Blood collection skills were reviewed with front-line nurses.

* 23.1%

Cycle 4: Improving CBC clotting rates through multifactorial approach Jan 2024- onwards

*** Please note:** The percentage displayed in the orange circles reflect clotting rates at different stages of the project (i.e. when the laboratory was carrying out blood collection, 3 months into the project- all samples were nurse-drawn & 6 months post second wave of education/ training). These percentages were collected through a daily log maintained on the unit and compared monthly to percentages the laboratory provided. Data showed a 6% increase in CBC clotting rates since NICU nurses took over blood collection; this is not an unexpected finding, given it was also a new skill. In 2024, the plan is to reduce CBC clotting rates by exploring multiple factors, including education of front-line nurses, patient's primary diagnosis in relation to possible clotted CBC, and length of time between CBC draw and analysis.

Conclusion/ Next Steps

This major practice change for bedside nurses has proven successful, with 80 NICU nursing staff now trained and proficient in blood collection, addressing crucial components of developmental care. The introduction of new skills brings its own challenges.

Next Steps:

- Implementing standardized nurse-drawn bloodwork protocols applicable to all nurses.
- Collaborating with neighboring sites where nurse-drawn blood collection is established and blood clotting is not an issue.
- Hands-on training for newly hired staff, dedicated Neonatal education days, and monthly reports will be pivotal in sustaining this progress.
- A systematic initiative will be pursued to address external and internal factors, aiming to reduce CBC clotting rates.