Improving Safety of Neonatal Intensive Care Patients During Intrahospital Transport at The Johns Hopkins Hospital

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Introduction

The intrahospital transport of critically ill neonatal patients to procedures such as MRI and CT are high risk times for preventable events and near misses. These transports negatively impact patient safety and nurse satisfaction as they require the bedside nurse to leave the critical care unit for extended periods of time creating an unbalanced nurse to patient ratio-increasing nursing workload and risk for error. Current practice for intrahospital transport is limited by the lack of guidelines and standards specific to the neonatal population. Because of this, the Neonatal Intensive Care Unit (NICU) at The Johns Hopkins Hospital needs a safe, consistent, efficient standard for transporting neonatal patients to required testing and procedures. Current literature shows evidence of improvements in safety and nurse satisfaction through the incorporation of standardized checklists and dedicated patient transport teams. The implementation of a dedicated patient transport team has shown to reduce adverse events by 1.7%. To improve current practice, the following research question was evaluated: Does the use of a standardized intrahospital transport checklist improve nurse satisfaction and patient safety throughout the intrahospital transport process within the Neonatal Intensive Care Unit at The Johns Hopkins Hospital?

Methods

Using current literature regarding intrahospital transports, an online survey measuring nurse satisfaction and care flow during intrahospital transports utilizing Qualtrics® was developed. The survey was distributed to all nursing staff within the Neonatal Intensive Care Unit at The Johns Hopkins Hospital. One free-response and fifteen Likert Scaled questions were evaluated. Sixty nurses completed the survey. Additionally, quantitative data regarding intrahospital transport length of travel time, destination, and frequency was collected via a nurse self-report form.

Results

NICU Intrahospital Transport Data Collection:

- Figure 1. Intrahospital transport duration measured in minutes. The median length of transport was 31 minutes and the maximum length of transport was 121 minutes.
- Figure 2. Year of day in which intrahospital transport took place. The majority of transports took place between the hours of 12am to 6am in Pediatrics Radiology.
- Figure 3. Intrahospital transport checklist.
- Figure 4. Intrahospital transport nurse educational tool.

Likert Scaled Survey Results:

- There is adequate coordination between nurses, doctors/NPs, and transport location staff when planning an intrahospital transport.
- I understand Johns Hopkins Hospital’s policy and procedures related to transport.
- I know how to classify the level of acuity of my patient to properly plan for transport.
- My patient is receiving the same level of care during transport as they would on the unit.
- My patients that remain on the unit while I am away on a transport are receiving the same level of care as if I had stayed.
- I am confident in my ability to manage an additional patient while my colleagues are on a transport.
- The responsibility of transporting a patient off the unit negatively impacts my job satisfaction.
- Having to care for an additional patient while my colleague is off the unit on a transport impacts my ability to deliver quality care.
- Overall, I am satisfied with the flow of care during an intrahospital transport.

Tool Development

In order to improve nurse satisfaction and patient safety, a checklist and intrahospital transport educational tool were developed in collaboration with NICU nurse leaders utilizing survey results, current literature, and hospital policies.

Conclusions

- Intrahospital transports are time consuming—removing nurses from the floor for hours at a time, decreasing nurse satisfaction.
- Current areas for improvement of intrahospital transport include: acuity level classification, communication, and standardization of transport process.
- The use of a standardized tool such as a checklist may improve patient safety and nurse satisfaction.
- Many nurses in the Neonatal Intensive Care Unit would be open to the utilization of a standardized tool to improve intrahospital transports.

There is a lack of evidence related to patient safety and nurse satisfaction involving the intrahospital transport of neonates. Further investigation regarding the transport of this vulnerable population is essential to improving the quality and safety of patient care at The Johns Hopkins Hospital.

Future Work

Currently, our team is working to educate NICU nurses on the intrahospital transport process and how to utilize the newly developed transport checklist. Once all nurses are educated on this tool, the team will evaluate the effectiveness of improving nurse satisfaction by re-administering the initial 16 question survey via Qualtrics®. A review of Hopkins Event Reporting Online (HERO) will be conducted to evaluate our tool’s effectiveness at reducing preventable events. Our intention through this work is to illuminate safety concerns associated with intrahospital transports, and that one day the Neonatal Intensive Care Unit will have a dedicated Neonatal Intrahospital Transport Team.

References


