Increasing the Compliance Rate of Human Breastmilk Barcode Scanning Using an Evidence-Based Process in Neonatal Intensive Care Nurses: A Process Improvement Project

PURPOSE
The purpose of this process improvement project goal is to increase the compliance rate of human milk barcode scanning using an evidence-based informatics process in neonatal intensive care nurses.

BACKGROUND
The quality improvement project was conducted in a 148-bed NICU unit located in a community hospital that has been using barcode scanning technology for human milk for the last four years.

METHODOLOGY
The project was conducted using evidence-based informatics process of engaging the nurses and stakeholders of a NICU unit in a community hospital. The process included educating the nurses on the new workflow with the evidence-based teach-back method. The Socio-Technical Model for studying health information technology in complex adaptive healthcare systems was selected to guide this quality improvement project.

RESULTS
After the implementation of the one-page education and workflow process document, the post-implementation analysis showed that 95% of the nurses surveyed understood the process of the human breastmilk scanning process. The post-implementation barcode scanning variance report graph showed a decrease in the scanning variance time from a high of 12 hours late scanning to a low of 5.59 hours.

IMPLICATIONS
A systematic approach is required for effective process improvement implementation and requires an understanding of the system impact on the nursing workflow. Leveraging other experienced nurses and staff members is a must for an effective implementation of any process improvement project. Successful changes also require leadership buy-in because change is risky and very political. A culture of safety is also a foundation; this means putting in place structures that safely deal with mistakes as a system-wide issue and not an individual or a unit issue.

The sustainability of the projects depends on the combined efforts of the team. The processes have been established with the flowchart. The findings from this project may lead to the purchase of human breastmilk only scanning device that will produce better metrics for tracking the compliance rate of nurses while collecting valuable data that could be easily accessed.