Reducing Nurse Workaround Behaviors: A Barcode Specimen Collection Quality Improvement Project

PURPOSE
The aim of this study was to improve barcode scanning compliance by reducing nurse workaround behaviors. The study was set in a 34-bed IMCU within a 444-licensed bed community hospital.

BACKGROUND
It is estimated that greater than 160,000 adverse patient events occur each year in the United States because of patient or specimen identification errors. The primary goal of barcode technology in the healthcare setting is to aid in the prevention of medical errors by providing accurate real-time information at the point of patient care. Despite the evidence regarding the ability of barcode scanning to decrease misidentification errors, parallel studies have shown that barcode scanning technology can be disruptive to the nursing workflow resulting in an increase in workaround behaviors.

METHODOLOGY
The Workaround Motivation Model (WAMM) was used as a guideline to identify and categorize workaround behaviors. Multiple workaround behavior predictors and influencers were mitigated based on the post-implementation evaluation survey, staff interviews, and workflow observations using the Plan-Do-Study-Act quality improvement method.

RESULTS
An analysis of barcode scanning compliance scores was conducted to evaluate the intervention. Positive patient identification (PPID) barcode scanning scores improved from 45% to 83%. In addition, the total number of workaround behavior influences captured from the survey, observations, and interviews were reduced from a frequency of 17 to 10.

IMPLICATIONS
Executing a comprehensive evaluation after each health information technology implementation can help with early identification of workaround behaviors. Understanding the rationale for developing workaround behaviors can lead to better-targeted interventions and positive behavioral changes that will improve compliance with barcode technology during specimen collection.

Ongoing nursing and laboratory leadership engagement will be required for sustainability beyond this study and a single nursing unit.