

Current practices for IV infusion labeling led to RN frustrations, labeling inconsistencies, and increased risks for CLABSI's. Through shared decision making, an innovative new on-demand printer was trialed and implemented to improve all 3 metrics.

## BACKGROUND

### Continuous Infusion Current Best Practices:

- Infusions are labeled with the date and time at which they should be changed
- In CCU, infusions are also labeled with the name of the medication in 3 different locations to help reduce the risk of medication errors

### Current State Problems:

- Labels for date and time needed to be hand written which led to RN frustrations
- Pre-printed labels to identify the medication infusing could no longer be ordered
- Compliance for labeling infusions was lower than expected

### Scope of Project

- Nurses and Patients in the Critical Care Unit at Delnor

### Project Goals

- Implementing an on-demand IV infusion label printer will improve RN satisfaction, decrease CLABSI rates, and increase compliance with current IV infusion labeling best practices

Figure #1: RN Satisfaction Pre-Data (N=20)

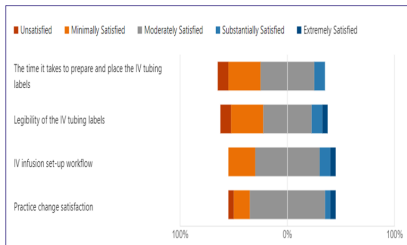


Figure #2: IV Date/Time Label Baseline Compliance

Month	Jan 2022	Feb 2022
Total Audits	173	78
Compliance	60.7%	67.9%

## METHODS

### Methodology:

- Data from audits and feedback from frontline staff nurses was gathered and brought to the Critical Care Quality and Practice Council
- Critical Care Clinical Director was approached by a company with a new innovative way to print on-demand labels that would allow for quick, safe, and efficient labeling of IV tubing with both the date/time and the name of the infusion
- Clinical Director completed a hands-on demonstration at a monthly Council meeting with Council members
- Through shared decision making, the Council team members approved the trial of this new technology in Critical Care

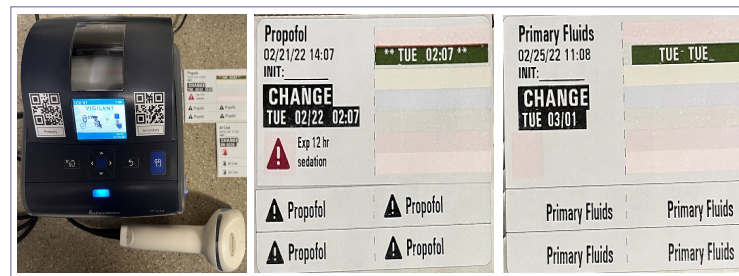
### Education:

- Clinical Director partnered with a Professional Development Specialist to create an online learning module for nurses to complete, which would educate them on how to properly use the printer

### Implementation:

- One on-demand infusion printer was placed in each medication room, which aligned with nurses workflow

Figure #1: On-Demand IV Infusion Printer and Labels



### Metrics Monitored:

- IV tubing labeled with date and time compliance
- Nurse satisfaction post-implementation
- IV tubing labeling time study
- Reduction in CLABSI rate

## RESULTS

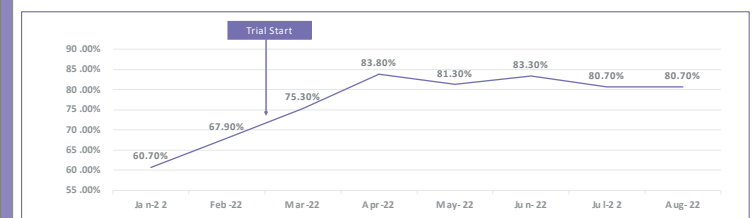
### Outcomes:

- Post implementation data showed increases in Nurse satisfaction related to the IV infusion labeling process and improved compliance with labeling the tubing with date and time infusion was primed and when it was due to be changed
- Time study showed that a Nurse saves 1-2 minutes of work time on average for each IV tubing that is primed

Figure #1 – RN Satisfaction Post-Data (N=20)



Figure #2 – IV Tubing Labeled/Dated Appropriately



### Control Plan:

- Due to the success of the trial, printers were permanently adopted in Critical Care
- Outcomes of the trial were presented to the Inpatient Clinical Directors
- Printers were purchased and implemented in the med rooms of all inpatient med rooms at Delnor Hospital

## CONCLUSIONS

- The use of an on-demand IV infusion label printer reduces time required to label infusions, improves nurse satisfaction, improves compliance with IV tubing labeling, and can reduce risk of CLABSI's by ensuring tubing is changed prior to it becoming expired
- Recommend that all inpatient units adopt an on-demand IV infusion label printer in each medication room
- Recommend new rolls of labels are stocked in each med room to ensure ease of access when the roll is empty