Conclusion

• Success required the implementation of several interventions.
  • Standardization of shift report improved nursing monitoring of heparin infusions, suggesting more effective communication.
  • Nursing memory lapse was reduced by scheduling lab monitoring times as evidenced by less variation in the times between lab draws.
  • Plan to spread this standardized practice throughout UAB hospital.

Results

- **Baseline data:**
  • Average time between Anti-Xa lab draws: 758 minutes (Range: 90-2231 minutes)

- **PDSA 1:** Standardized Shift Report Tool
  • Average time between Anti-Xa lab draws: 518 minutes (Range: 101-1360 minutes)

- **PDSA 2:** Standardized Scheduled Anti-Xa Lab Draw Times
  • Average time between Anti-Xa lab draws: 464 minutes (Range: 185-554 minutes)

ANOVA:

- The difference in the baseline and post intervention was significant ($F = 25.205; p < 0.001$).
- There was no significant difference in standardized shift report and standardized lab times.

Methods/Evaluation

Plan: Form multi-disciplinary team. Develop standardized paper shift report tool. Determine times to schedule standardized Anti-Xa lab draw times for patients on therapeutic heparin infusions (0800, 1600, 2400).

Do: Implement standardized report tool for first four weeks. Then add implementation of standardized lab draw times for next 4 weeks.

Study: Analyze data (time between Anti-Xa lab draws) separately during each implementation. Analyzed using MS Excel with QI Macros and SPSS v. 23.


**Time Between Lab Draws (Average)**

- **Standardized Shift Report**: 781.1 hours
- **Standardized Lab Draws**: 492.2 hours

In Process Mapping of Unit’s Actual Performance:

- Process Mapping of Unit’s Actual Performance
  - Heparin infusion initiated
    - Anti-Xa serum drawn at 12 hours (average).
  - Infusion titrated based on Anti-Xa
    - Anti-Xa serum drawn 6 hours after each titration
  - RNs forget about the drip

In Process Mapping According to Protocol:

- Heparin infusion initiated
  - Anti-Xa serum drawn at 6 hours after initiation
  - Infusion titrated based on Anti-Xa
  - RNs continue process unit therapeutic
    - RNs discuss drip in shift report for continuity of care

Process Improvement

- Improve nursing adherence to heparin protocol and increase patient safety through a toolkit of nursing aids.
  1. Standardized shift report tool
  2. Transitioning shift report to the bedside
  3. Scheduling Anti-Xa lab draw times

*INCREASING NURSE-DRIVEN HEPARIN INFUSION ADMINISTRATION SAFETY: A QUALITY IMPROVEMENT INITIATIVE*

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Background

- Anticoagulants are one of the top five drug types associated with patient safety incidents in the United States.
- UAB hospital protocol requires patients on a therapeutic heparin infusion to have Anti-Xa serum lab draws every 6 hours after titration, however this is not being followed.
- The cause for this was investigated and found to be related to lack of communication during shift report and nursing memory lapse.

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