Interdepartmental Process for Improving Intravenous (IV) Access and Turnaround Times in CT

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Background

- IV defects in CT and incomplete patient preparation result in extended procedural wait times and may exacerbate ED crowding.

- What is an IV defect?
  - Incompatible IV gauge
  - Incompatible IV site
  - Incompatible IV tubing
  - Loose connection
  - Non-working IV
  - Painful/sore/infiltrated IV site
Goals

- Implement measures that would achieve a substantial reduction in the IV defect rate for ED and inpatients seen in the CT department.
- Target Defect Rate: 0%
- Successful contrast administrations
- High-quality scans & fast results
- Fewer repeats or additional exams
- Fewer interventions in CT
- Shorten time away from primary care staff & resources
- Elimination of bottlenecks
- Reduced procedural wait times

Bending the curve

Design, Methods, Implementation

- A team of CT Technologists, Registered Nurses, and Patient Transport Staff designed and implemented the new “CT Handover & Preparation Sheet.” The sheet demonstrates correct patient preparation as well as IV placement standards required for successful CT examinations. The completed sheet needs to accompany every patient coming to CT.
- The same multi-departmental team streamlined and put into effect a standardized “CT Patient Preparation Communication Process.” This process aims to make the communication between CT staff and primary nursing staff clear, effective, and prompt.
Results

Weekly IV Defect Rates
Since implementation

BASELINE RATE JULY 2012: 8%

Conclusions & Further Study

- Since the house-wide rollout of the “CT Handover Sheet” and implementation of the standardized “CT Communication Process” in July of 2012, we have achieved and maintained a substantial reduction in IV defects for ED and Inpatients seen in our department. The pre-rollout baseline rate for IV defects was 8%; in September of 2014, the average defect rate was 0.38%.

- IV defect rate reduction is an ongoing process.
- IV defects are documented by CT staff.
- IV defect reports are calculated weekly and distributed to nurse managers.
- Our department continues to identify opportunities for improvement & remediation through education.
- Staff huddles are an effective way to educate and disperse information to the nursing staff regarding IV defect prevention.
- Feedback and cooperation between CT staff and primary nursing staff is essential to maintaining the low defect rates we have achieved.