Decreasing Central Processing Deficiencies in an Ambulatory OR

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BACKGROUND

Problem Definition – The ambulatory surgical center at Boston Medical Center is a busy suite of operating rooms at an urban safety net hospital. A delay in one case can delay all those that follow. One cause of delays is deficiencies in equipment and kits prepared by the Central Processing Department (CPD). Our purpose was to define the number and types of CPD deficiencies in order to reduce the number of deficiencies and also delays in OR start times.

Baseline performance – In November 2017, CPD deficiency data started to be collected via use of a paper form with information entered by the circulating nurse. Deficiencies per day ranged from 2 to as high as 6, some of which caused delays in on time surgery starts.

AIM

Our aim is to decrease the deficiencies related to CPD instrument processing for scheduled surgeries in Ambulatory Surgery to <3 deficiencies per day by Sept. 1, 2018

METHODS

- Original method for data collection - paper forms, attached to all sterile kits, and completed by the circulating nurse at the end of the surgical procedure
- Converted to wireless bar code scanners for deficiency data collection that would track instrument/kit specific data based on information stored in the instrument tracking software system.

- QI workgroup defined "deficiency", and compiled a master list of all possible deficiency types to standardize reporting.
  - "Deficiency" defined as an error in CPD instrumentation and/or processing that leads to a returned kit to CPD possibly delaying an OR case.
- A CPD QI workgroup met weekly at the beginning of the project and decided to implement PDSA cycle method for changing workflows that were immediately identified as having deficiencies

SOLUTIONS

The group created a current state Process Flow map and identified fifteen (15) obstacles in the instrument processing process. The group identified four (4) changes we could immediately implement to decrease deficiencies.

PDSA #1: CPD not being notified of deficiencies in timely manner
P: Chose single point person in CPD to triage issues from ambulatory OR
D: Triage process started May 1, 2018
S: CPD point person able to report on all issues and notice trends. Problems fixed by CPD in real time at faster pace. Not all deficiency issues being reported by RN to point person.
A: RNs slow to adopt new notification process so we:
     1) posted phone and pager number for CPD point person on OR phones
     2) created new process tip sheet for RNs

PDSA #2: Kits getting scanned to OR room instead of to patient
P: Scan kits to specific patient instead of the Case Cart or OR room
D: Created OR schedule with case log ID for each surgical case so CPD can scan kits to case log ID
S: Kits scanned to patient log ID # by CPD staff sending kits to OR -kits now associated with specific patient
A: Continue to scan sterile kits to patient specific case log ID

**PDSA #3:** RNs not completing deficiency forms sent to CPD
P: Scan deficiencies directly into Instrument Tracking software
D: Install wireless bar code scanner into each OR
S: Scanners not consistently working, RNs not saving data properly, no scanning done at all in some ORs
A: IT desktop support re-installation of all scanners, re-education of OR nursing staff, pushed out expansion of scanning to Surgical Techs

**PDSA #4:** Kit not scanned back to proper storage location in CPD
P: CPD leadership to re-educate staff on proper kit storage locations in CPD
D: CPD tech to review all kits in all CPD storage locations and re-scan to proper location; CPD staff re-education of new kit locations
S: Kits still being returned to incorrect locations
A: CPD manager to run scan report to identify specific staff doing location scanning and do 1:1 retraining

RESULTS

Baseline data from paper documentation: 11/13/17 – 3/29/18
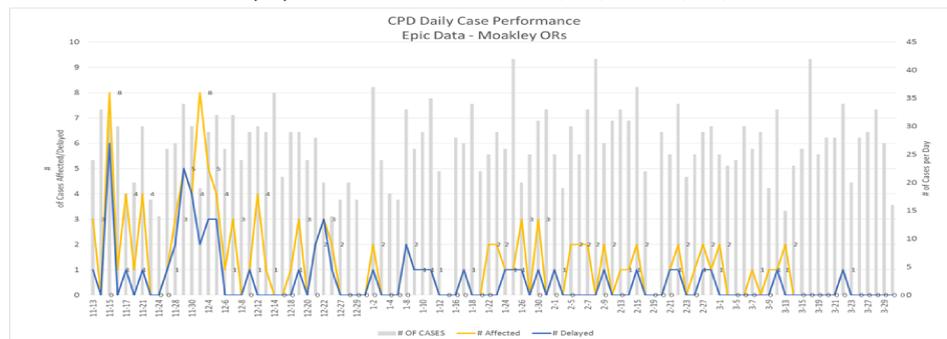
Monthly data after bar code scanning implemented
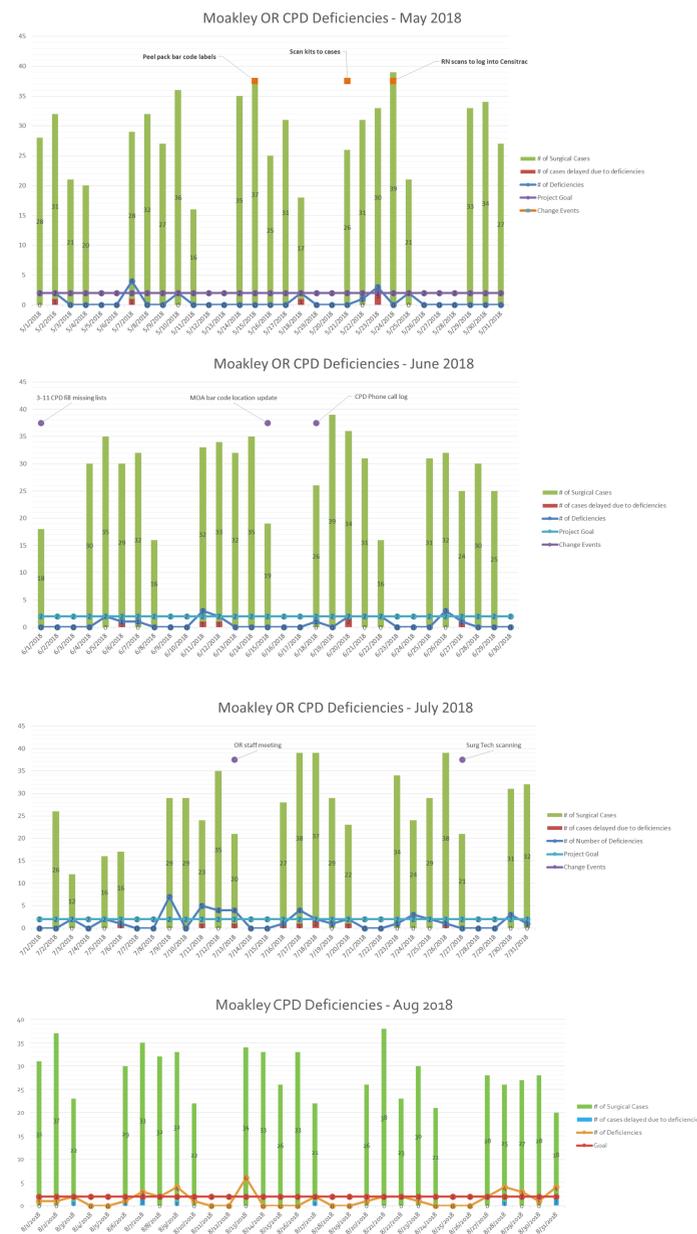
CONCLUSIONS

RNs were not documenting deficiencies via paper due to time constraints. We implemented a bar code scanning process that would decrease data entry from > 3 min. to < 1 min. Bar code scanner technical issues, which were resolved in June, prevented reporting deficiencies early in the project. We saw an increase in reporting in July, which allowed us to have real time data we could analyze to identify and address common deficiencies. We were able to meet our goal by 9/1/18.

Barriers:
1. Bar code scanners kept breaking down
2. Low scanning compliance with OR staff
3. OR staff wanted more information and feedback during change process

What worked well:
1. Enthusiastic participation by multiple stakeholders
2. Bar code scanning decreased reporting process to < 1 min.
3. Improved CPD triage process – one point person triaging all issues
4. Real time data sharing with staff for immediate feedback

NEXT STEPS

- CPD QI project workgroup will continue to meet monthly and assess scan data and implement PDSA cycles
- At end of calendar year will migrate to Main OR – propose to implement by surgical specialty
- Transition data reporting to CPD management