Improving First Case Starts for a Neurosurgery OR

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What we are trying to accomplish

Global Aim: To achieve first case on-time starts (FCOTS). Definition is patient in room by 0745 for 90% of the 10 Operating Rooms (OR).

Project Aim: Improve the FCOTS for the service line with the lowest on-time starts by 20% within three months from baseline.

Background

Setting: Medium sized hospital in Northern California, 12 OR's, average weekly cases 600-700.

OR time is expensive, the average cost for a OR minute is $15 to $20 (Chua, et al., 2021). When rooms do not start on time there is waterfall of effects which lead to increased cost, decreased utilization of room, supplies and staffing. Also, dissatisfaction of patients, staff and physicians.

This facilities on time starts average 40-60%. Industry standard ranges from 10-65% (Allen, et al., 2019, Chua, et al., 2019, Matthews et at., 2015). Streamlined processes will improve patient flow and utilization of services.
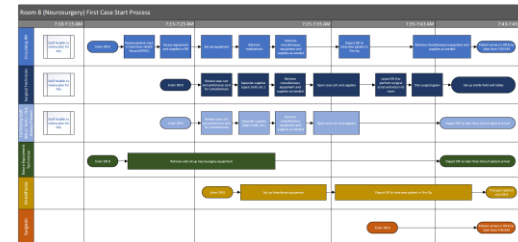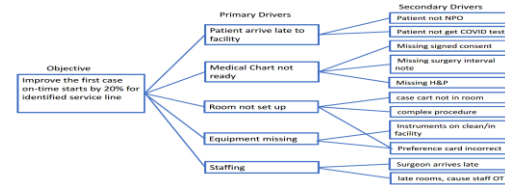
How we will know there is improvement

Measures

Measure	Data Source	Target
Outcome		
% minutes the is late patients in OR by 0745	Chart Review-Health connect [EPIC]	90%
Process		
Create OR FCOTS algorithm with team.	Chart Review-Health connect [EPIC]	Within next 4 weeks
Develop FCOTS template	Chart Review-Health connect [EPIC]	
Create standard room set up	Team input	Within next 4 weeks
Balancing		
Looking at the # missing consent	Chart Review-Health connect [EPIC]	During the implementation
Identifying # of missed H&P interval notes	Chart Review-Health connect [EPIC]	During the implementation

Tools

Primary Drivers / Secondary Drivers

Objective: Improve the first case on-time starts by 20% for identified service line

Primary Drivers:
- Patient arrive late to facility
- Medical Chart not ready
- Room not set up
- Equipment missing
- Staffing

Secondary Drivers:
- Patient not NPO
- Patient not get COVID test
- Missing signed consent
- Missing surgery interval note
- Missing H&P
- case cart not in room
- complex procedure
- Instruments on clean/in facility
- Preference card incorrect
- Surgeon arrives late
- late rooms, cause staff OT

Room 8 (Neurosurgery) First Case Start Process

ROI

OR time averages $20/minute.
- Aug delay: 279 mins, cost of $5580.
- Sept. delay: 176 mins, cost of $3520. Improvement of 36.9%.
- Oct delay: 189 min, cost of $3780. Improvement of 32.3%.

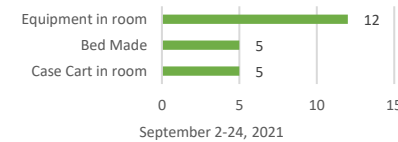## What changes can we make

Interventions
1. Create yes/no form indicating room set up from previous shift.
2. Standard room set up guide created.
3. Track/trend delay reasons.

Worksheet

Date: _____

Was Case cart in room: Y/N   Was Bed made: Y/N   Was equipment in room: Y/N
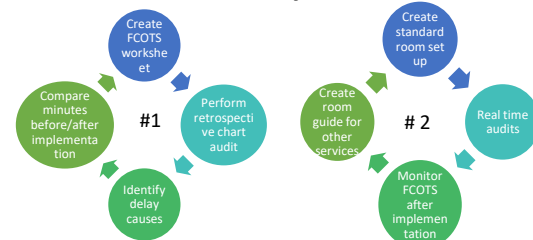
First case worksheet results

Equipment in room	12
Bed Made	5
Case Cart in room	5

September 2-24, 2021

Room Set-up Guide

Cranial Procedures
- Pictured is Left-sided Cranial procedure, for **right side procedure** all equipment will be opposite side
- Head towards the wall opposite sub-sterile core.
- Stealth, microscope placed against the wall with patient entry door
- Bovie, suction, drill console at foot of bed.

PDSA Cycles

#1
- Create FCOTS worksheet
- Perform retrospective chart audit
- Identify delay causes
- Compare minutes before/after implementation

#2
- Create standard room set up
- Real time audits
- Monitor FCOTS after implementation
- Create room guide for other services

Each Cycle took 4 wks. to complete.

Results

Delay Reason Data

August 2021 Delay Reasons

September 2021 Delay Reasons

October 2021 Delay Reasons
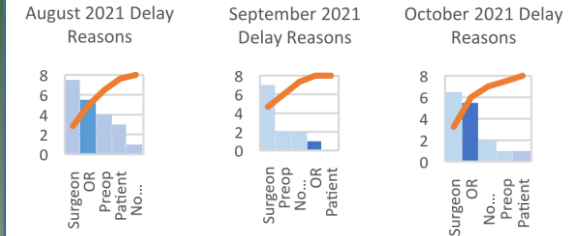
Monthly Delay Minutes 2021

	August	September	October
Minutes Delayed	279	176	189
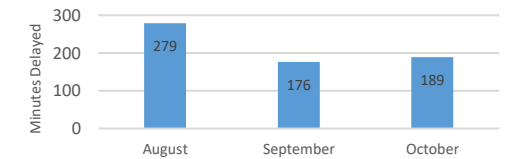
Conclusion
Triaging causes affecting FCOTS is key to begin improvement, staff and leadership buy-in is required.

Next steps
- Further breakdown the FCOTS by procedure and surgeon.
- Look at standardization of procedure packs.
- Increase additional staff comfort working in specialty.

References