Robotics Team

I. Background

Robot-assisted surgery is a rapidly growing technological innovation in health care with a tripling of numbers of cases performed worldwide between 2007 and 2010. In some instances, robotic-assisted approaches have improved surgical precision and reduced blood loss, pain and length of stay. However, learning curves for surgeons and perioperative teams to master the new technology are variable and costs are substantial. This team will analyze local data and focus on innovative ways to quickly and effectively train interdisciplinary team members and optimize efficiencies in the unique robotic surgery setting.

GOALS:

A. Decrease turnover time by 50% (Reduced turnover time by 41% from 1-hour to less than 40-minutes on four (4) occasions)

B. Complete three (3) 3-hour cases by 5:00p (Created a framework to make this possible)

C. Create a plan to incorporate recommendations into workflow

Project Team

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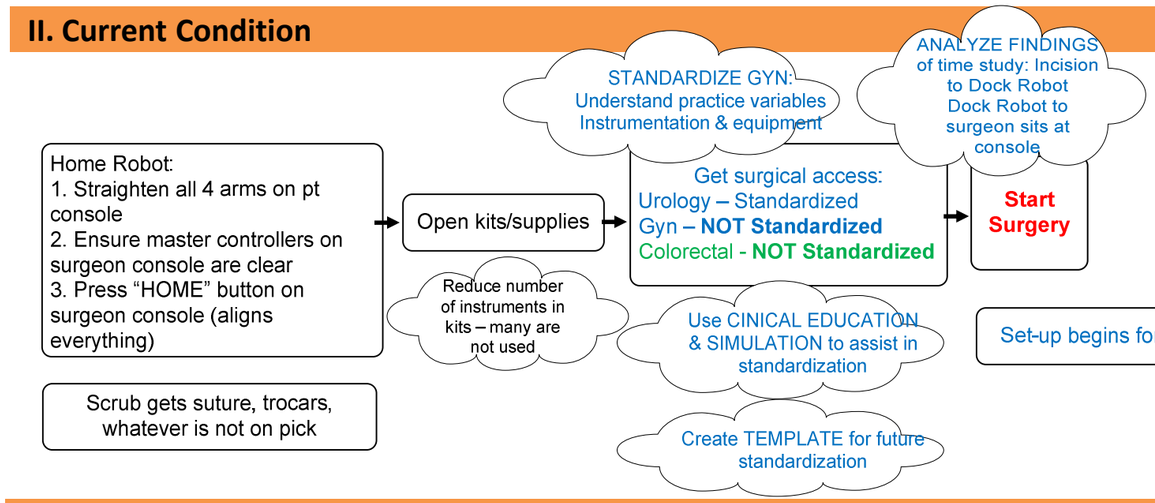
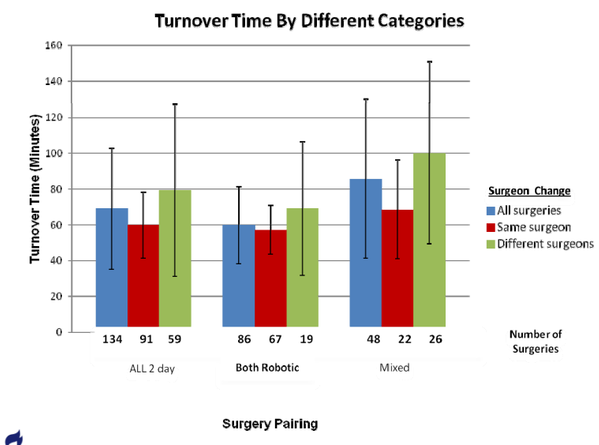
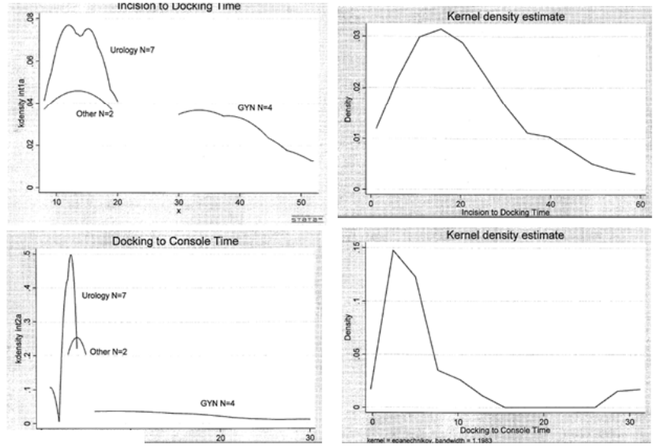
Jeff Keane	Babak Litkouhi, MD	Ross Simon	
Michael Kent, MD	Joyce Mechaber	Andrew Wagner, MD	

II. Current Condition



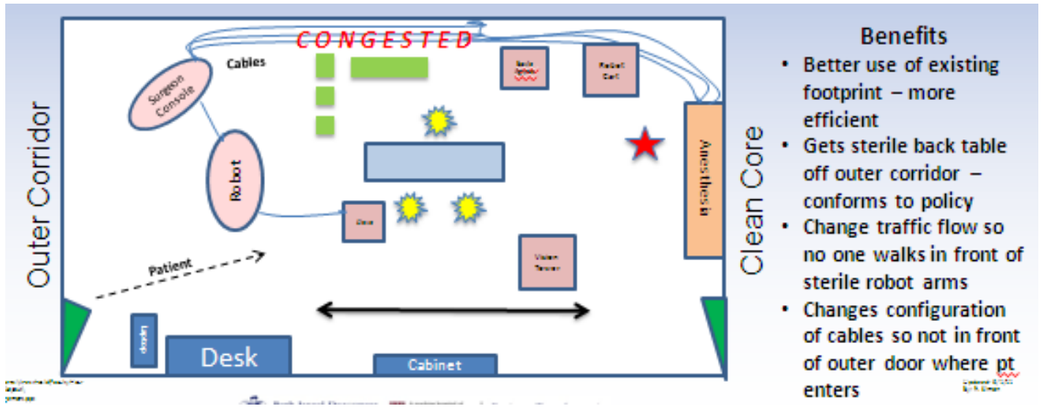
III. Analysis





IV. Accomplishments

1. Prepared a Value Stream Process Map to layout all process steps complete with problems and opportunities for improvement
2. Analyzed turnover time, pt in to pt out, pt in to incision open, set-up start to incision open, incision open to incision close, incision close to pt out and communicated these metrics to all concerned to raise awareness of their importance. On four (4) occasions we reduced turnover time by 41% from 1-hour to less than 40'.
3. Created a template for standard basic robotic cases to include Endobasics, Robotic Access and Lens and added specialty kits, modeled after GU. For prostatectomies, reduced the number of instruments that need to be opened by 53% (from over 160 to 75); by doing so we reduced case breakdown time and the workload on CPD.
4. Changed layout of FD OR7 on a trial basis to set-up room earlier, count sooner, make room for more people, be able to drape with people in room, do set-up on interior wall to get farther away from peripheral wall and allow parallel work. Lessons learned will be applied to expansion of the robotics program.



5. Visited Bay State Medical Center in Springfield, MA where they do 3-4 cases/day. We identified best practices that can be implemented at BIDMC to improve productivity.

V. Recommendations

Highest Priority

1. Call for turnover early (before pt leaves the room), moved by an extra person
2. Consider having Resource Nurse come in at 0630 to spend first 30-minutes assisting in Robotic Room
3. Consider dedicated positions focused on the program and with a sense of urgency:
   - Resource Nurse
   - Equipment Tech
   - Assigned attendant who shows-up before the pt leaves the room
4. Increase efficiency of opening kits (by, for example, paring down content of kits and combining them)

Next Highest Priority

1. Prepare kits properly so no work-arounds
2. Bring pt into room early – anesthesia must be on-board
3. Utilize consistent Surgical Assistant who helps with positioning
4. Consider non-taping pt positioning which would save a couple of minutes
5. Develop a way to have staff that is on-board, ready to go with a *sense of urgency*; the "staff" includes:
   - Anesthesia team
   - Attendants
   - Nursing
   - Surgical Technicians
6. Capture opportunities for competency development such as training attendants to remove drapes from the robot.

For More Information Contact

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