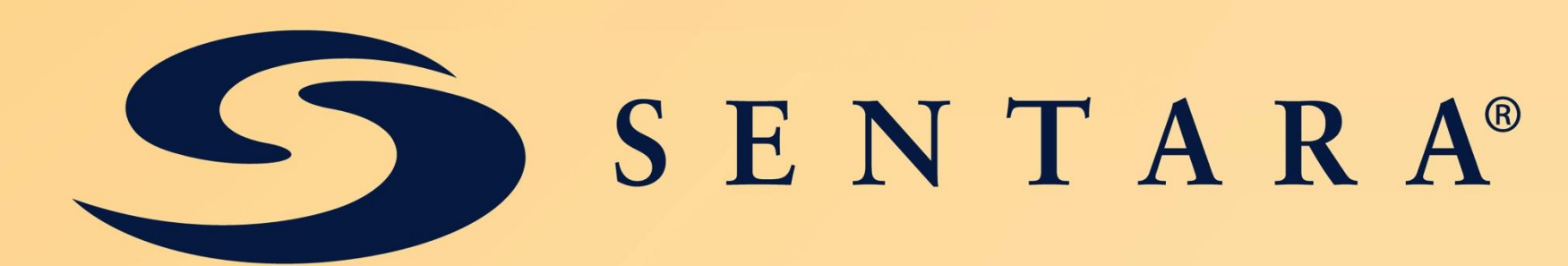




sentara nurse

Improving Operational Efficiencies and Satisfaction in Surgical Services Through Lean Process Improvement

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BACKGROUND

In today's highly competitive healthcare market, hospitals are facing tremendous number of challenges and pressures both internally and externally. Transition of the US healthcare system puts more pressures on the healthcare organizations for cost containment, cost reduction, waste elimination to achieve the efficiency, patient centered care, and the development of value-based structure. These challenges continue to engage health care administrators, healthcare providers, payers, and policy makers throughout the nation and the quality improvement implementations result in large cost savings as well as improvement in efficiency.

In line with the Affordable Care Act (ACA), the reimbursement system in surgical services was changed and separated from other units. Therefore, providing good quality services with excellent clinical outcomes became much more important.

The purpose of this project is to analyze the surgery delays in surgical services of Sentara Northern Virginia Medical Center to implement the improvement plan to achieve the operational effectiveness and increase in patient, surgeon and staff satisfaction.

PROBLEM

The Operating Room (OR) leadership team that there were issues in surgery on-time starts which led to decreased effectiveness in operating rooms and perceived decrease in patient, surgeon, and staff satisfaction.

METHODS

- Lean Six Sigma-DMAIC Methodology
- Quantitative Data (October-December 2014 - January 2015)
- Qualitative Data OR leadership team survey (n= 6/7, 86% response rate)
- Opportunity cost calculation for delays
- Cause and Effect diagram
- Time schedules – January through April 2015
- Expected outcomes – need for an ongoing follow up on process improvements.

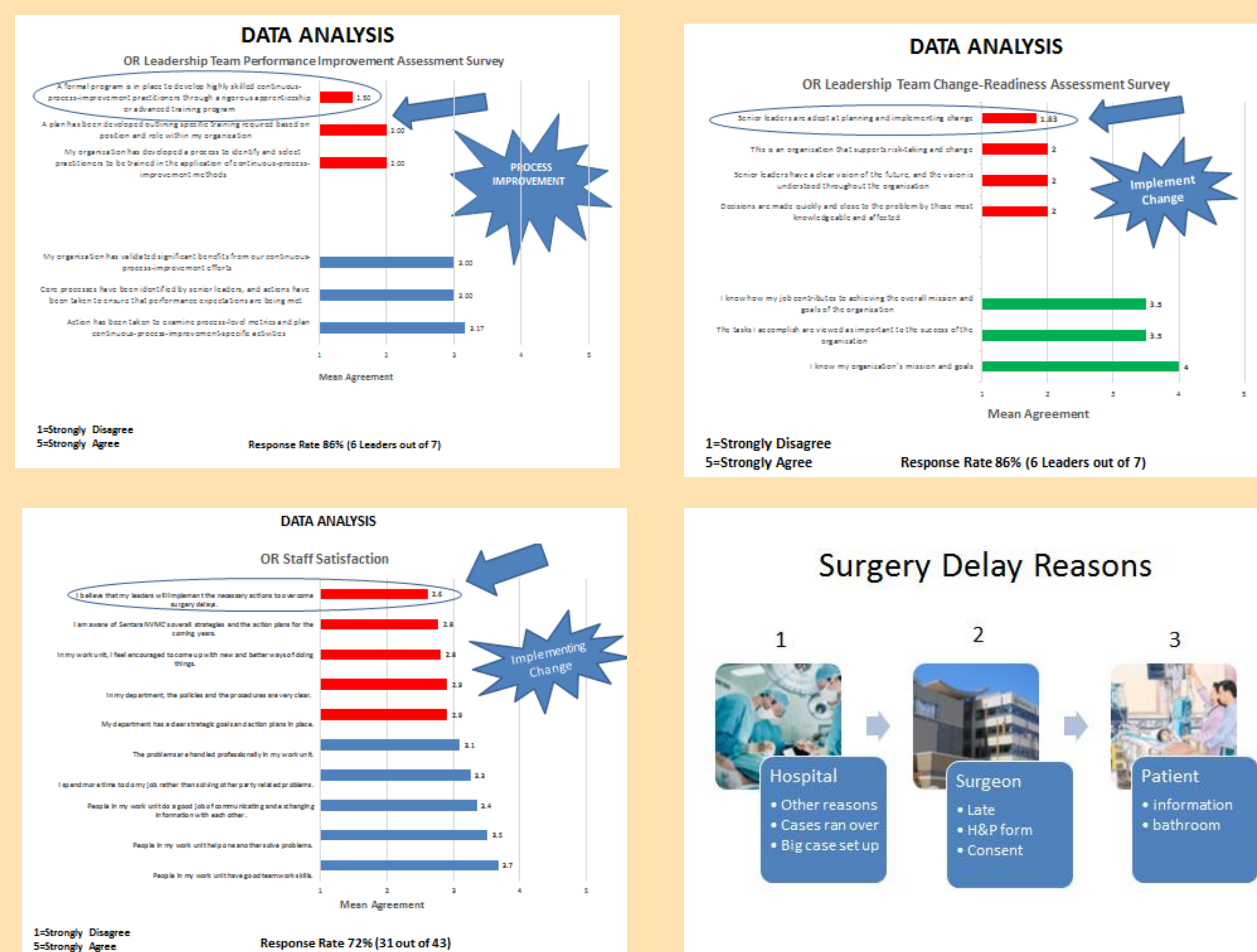
Quantitative data collection will consist of::

- On-time vs. Delay Reports (4 months)
- Delay Reports by Reasons (4 months)
- On-time vs. Delay Reports by Surgery (4 months)
- Delay Reports by Minutes (4 months): delay cost calculation of the first and the last cases

Qualitative data collection will consist of:

- OR Leadership Team Change-Readiness Survey
- OR leadership Performance Improvement Assessment Survey
- OR Staff Satisfaction Survey
- HCAHPS Patient Survey
- Surgeon Satisfaction Survey

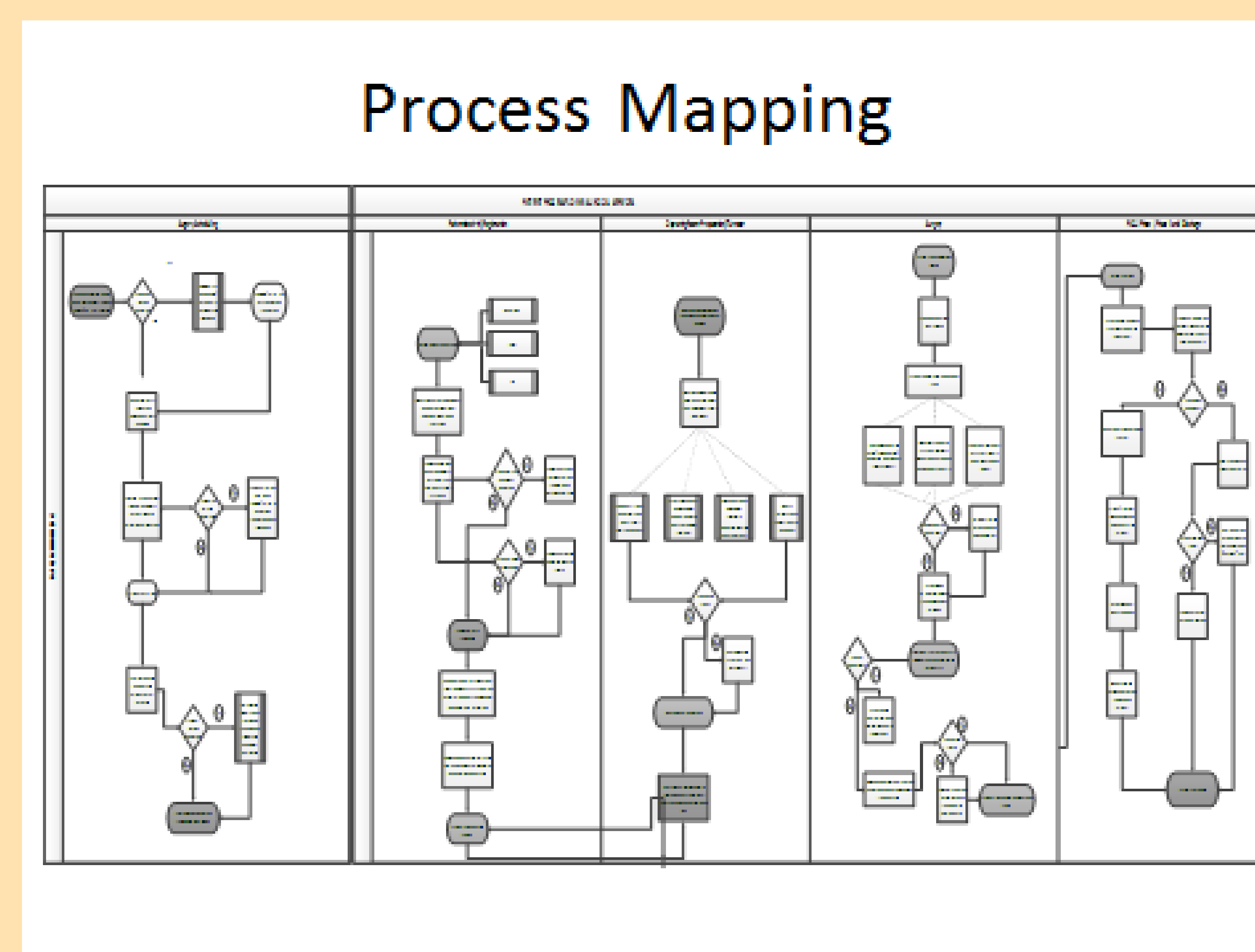
RESULTS



The quantitative data analysis indicated that 73% of the surgeries did not start on time due to; 1) Hospital related delays (38%), 2) Surgeon related delays (32%), 3) Patient related delays (17%), and others (13%).

OR leadership survey indicated a strong need for process improvement throughout the organization, communication improvement between the senior leaders and OR leadership team, and change implementation. OR staff survey showed that implementing change in surgical services was challenging.

PROCESS MAPPING



CONCLUSION

The significance of this project supports that the majority of hospital delays (83%) will be solved by:

- Allocating set up time for larger cases to prevent cases from running over (48%)
- Solving equipment/supply issues (24%)
- Solving staff issues (11)
- Creating a culture/agreement with surgeons to be at the Pre-Operative area 15 minutes prior the scheduled time (7.15 am instead of 7.30 am) will significantly decrease the surgeon related delays.

Further analysis in surgeon block time utilization, automated inventory management system, and continuous process improvement follow up is strongly recommended.

Cost to the Hospital

Cost Calculation Methodology

Prime Day First Cases:

Patient Scheduled In OR – Patient Actually In OR
Delay from schedule: 1,434 minutes/ 4 months

Average 1 minute OR Cost: \$62*
1,434 x 62 = \$88,908 x 3 = **\$266,724/year**

Prime Day End Cases:

Working on it!



*What does one minute of operating room time cost?
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