

The Power of Automation and State-of-the-Art Technology to Promote Staff Safety & Efficiency

Arlex Matulac, Vice President, Perioperative Services

Anita Cassell, Assistant Vice President, Sterile Processing

RWJBarnabas
HEALTH

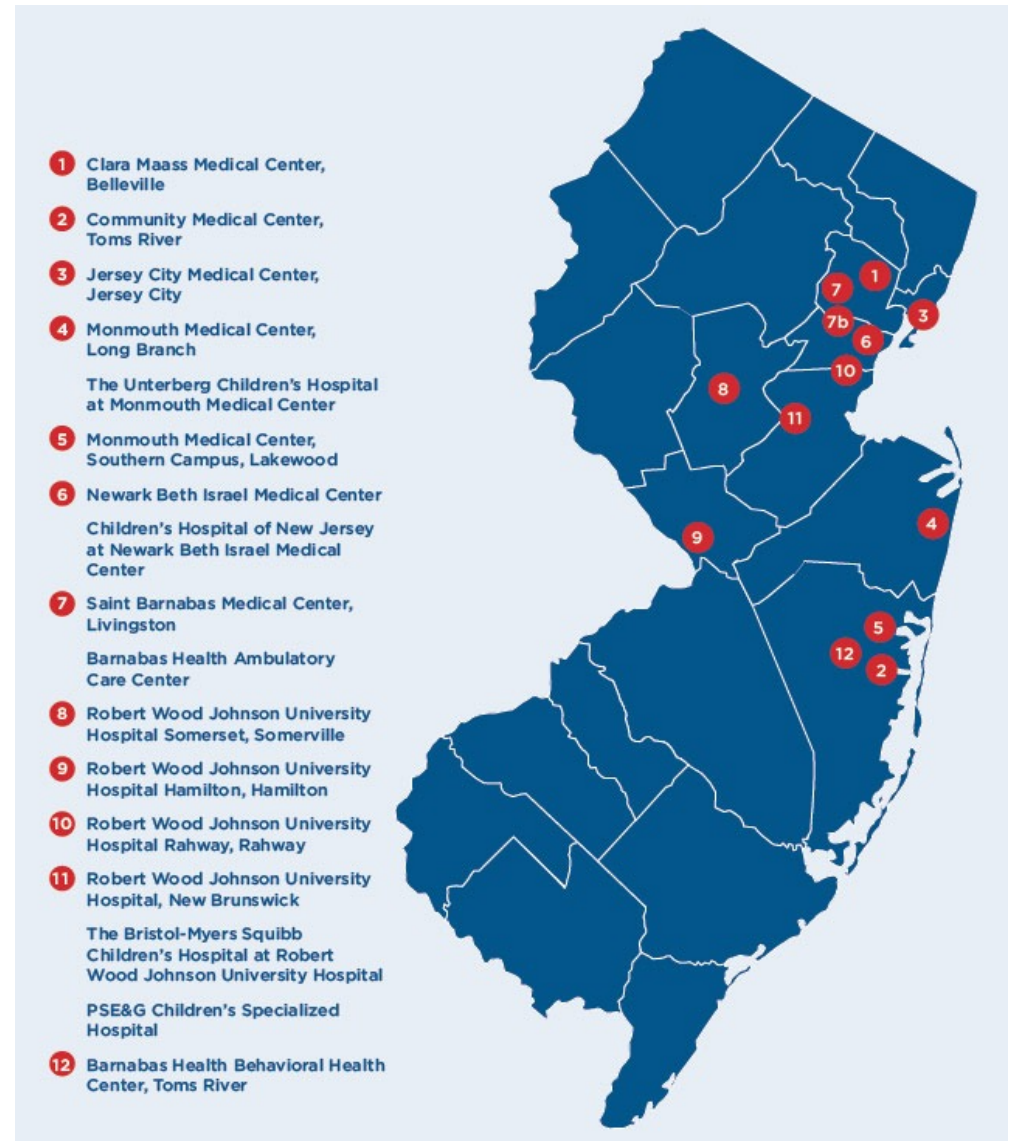
Robert Wood Johnson
University Hospital

Agenda

- About RWJBarnabas Health
- About Robert Wood Johnson University Hospital
- Review of Sterile Processing Department
 - Before
 - After
- Project Overview
 - Aim
 - Methods
 - Results
 - Conclusions
- Questions/Open Discussion

About RWJBarnabas Health

- New Jersey's largest integrated academic health care delivery system
- 12 hospitals throughout the state of New Jersey
- Primary teaching facility for Rutgers Medical School and Rutgers Robert Wood Johnson Medical School
- Annual Facts & Figures:
 - Over 3 million patients treated
 - Over 2 million outpatient visits
 - Over 283,000 surgeries
 - Over 700,000 ER patients treated
 - Over 200,000 pediatric patients treated
 - Approximately 26,000 births
 - 37,000 employees
 - 9,000 physicians
 - 1,000 residents/interns



RWJBarnabas Health Awards



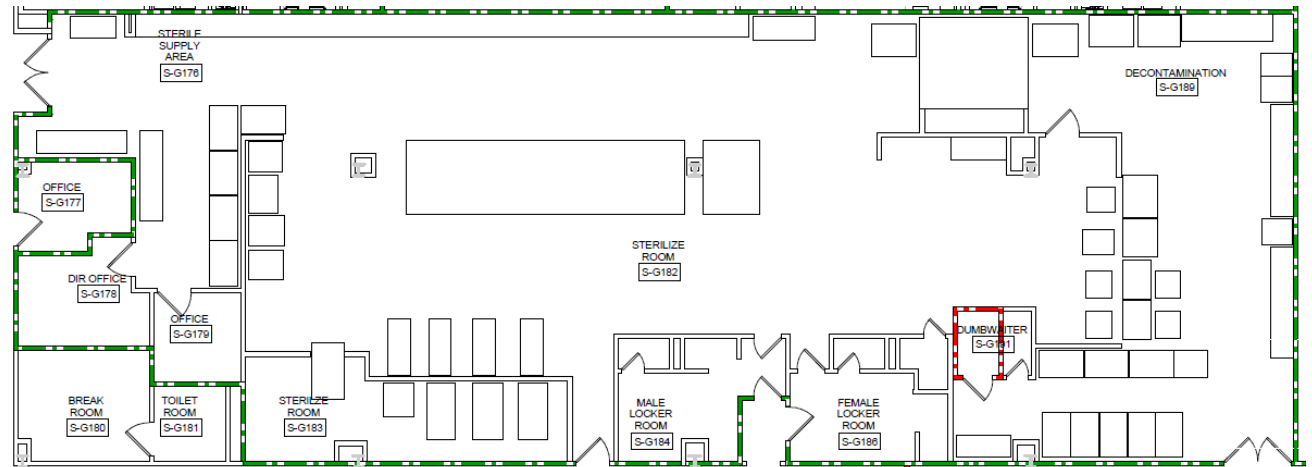
About Robert Wood Johnson University Hospital

- Flagship Hospital of the RWJBarnabas Health System
- Campus Includes:
 - 650+ Bed, Level 1 Trauma Center
 - 105 Bed Children’s Hospital
 - The 1st Children’s Trauma Center in New Jersey
 - National Cancer Institute-designated Comprehensive Cancer Center
 - 6 time Magnet Designation
 - State-of-the-Art Operating Rooms
 - Designations from Joint Commission, Leap Frog, CMS, US News & World



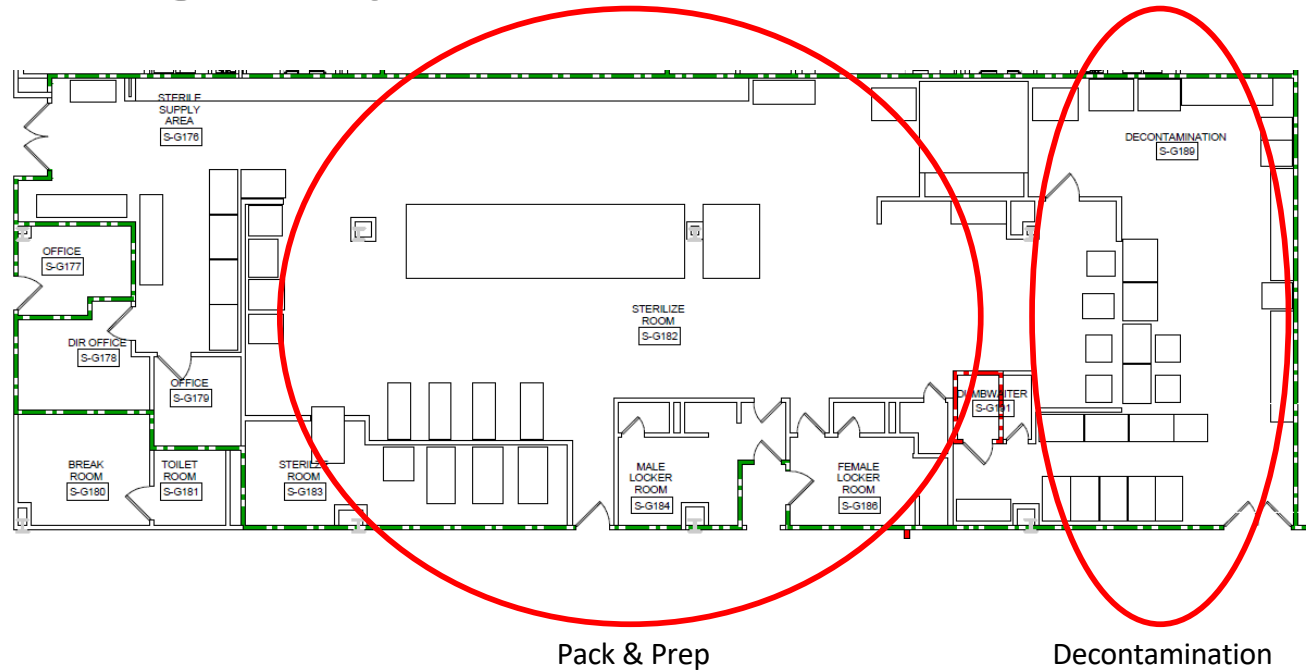
Sterile Processing Department: Before

- < 7,000 sq. ft. of space (650 sq. m.)
- Annual tray volume: 182,000
- Equipment:
 - Washers: 4
 - Sinks: 3
 - Sterilizers: 4
 - Pack & Prep Stations: 10
 - Cart Washers: 1
 - Dirty Elevator: 1
- Areas Serviced:
 - Adult Operating Rooms
 - Children’s Operating Rooms
 - On-Site Clinics
 - Patient Units



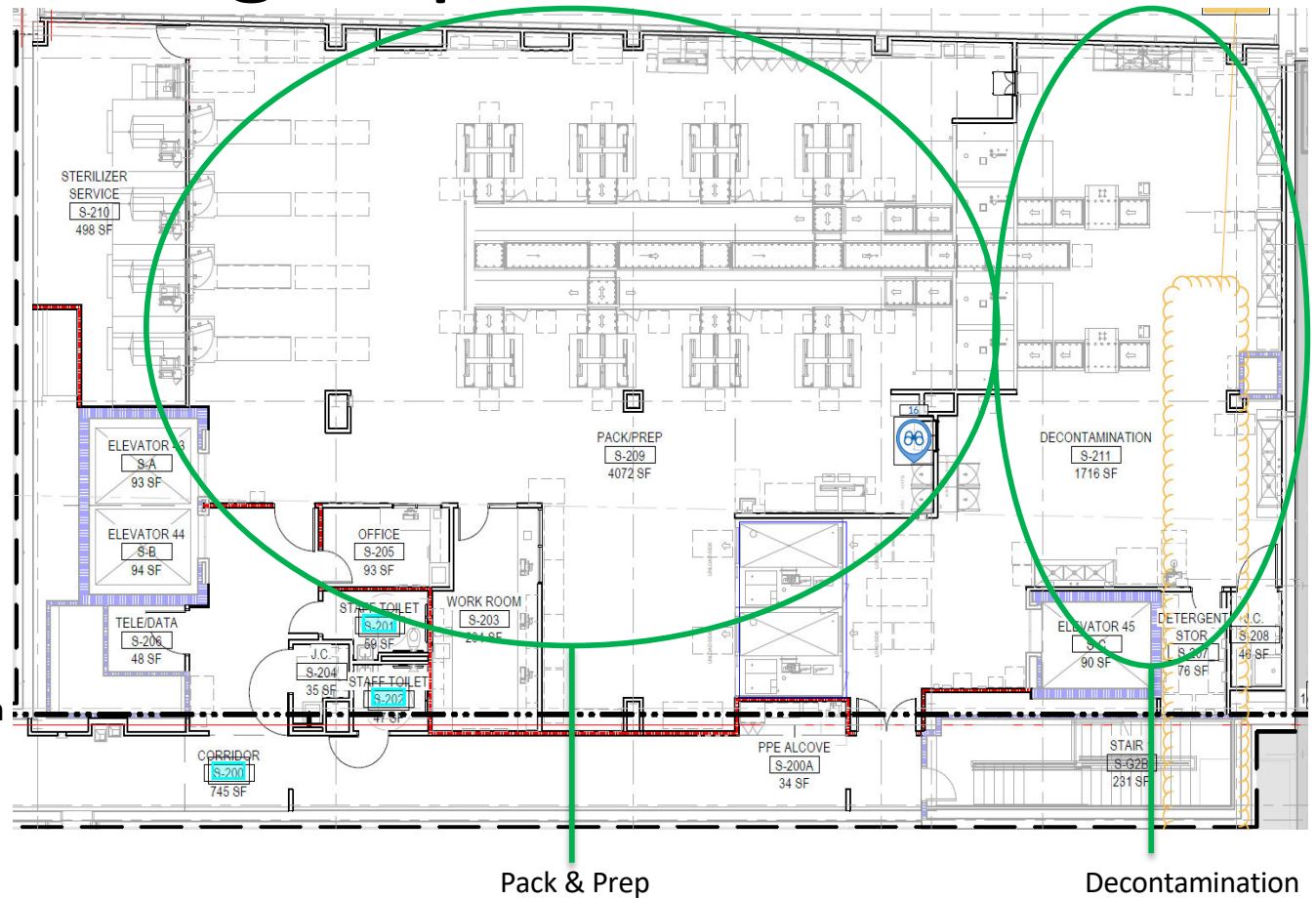
Sterile Processing Department: Before

- < 7,000 sq. ft. of space (650 sq. m.)
- Annual tray volume: 182,000
- Equipment:
 - Washers: 4
 - Sinks: 3
 - Sterilizers: 4
 - Pack & Prep Stations: 10
 - Cart Washers: 1
 - Dirty Elevator: 1
- Areas Serviced:
 - Adult Operating Rooms
 - Children’s Operating Rooms
 - On-Site Clinics
 - Patient Units



Sterile Processing Department: After

- > 20,000 sq. ft. of space (1,850 sq. m.)
 - 2 Floors
- Annual tray volume: 182,000
- Equipment:
 - Washers: 4
 - Double Tunnel
 - Sinks: 5
 - Sterilizers: 5
 - Pack & Prep Stations: 16
 - Cart Washers: 2
 - Dirty Elevator: 1
 - Clean Elevator: 2
 - Automation: Conveyor System
 - Dedicated Staff Elevator
 - Direct Access to Operating Rooms
- Areas Serviced:
 - Adult Operating Rooms
 - Children’s Operating Rooms
 - On-Site Clinics
 - Patient Units

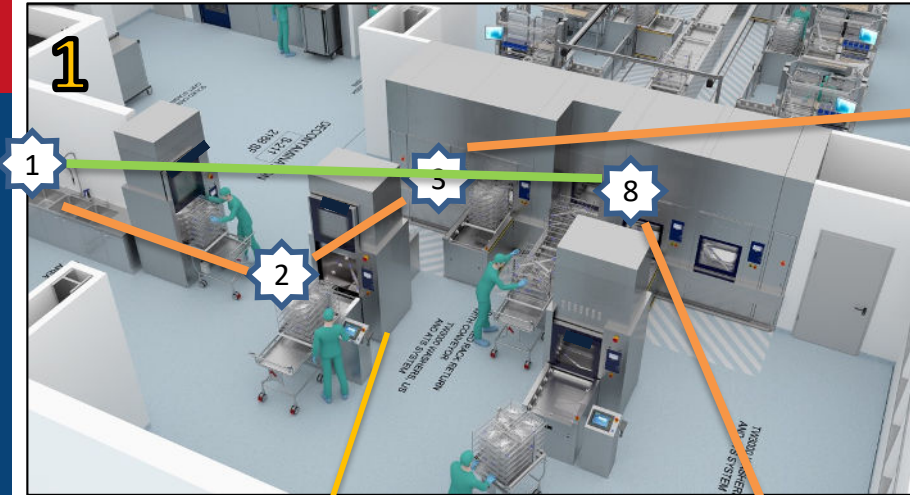


Sterile Processing Department: After

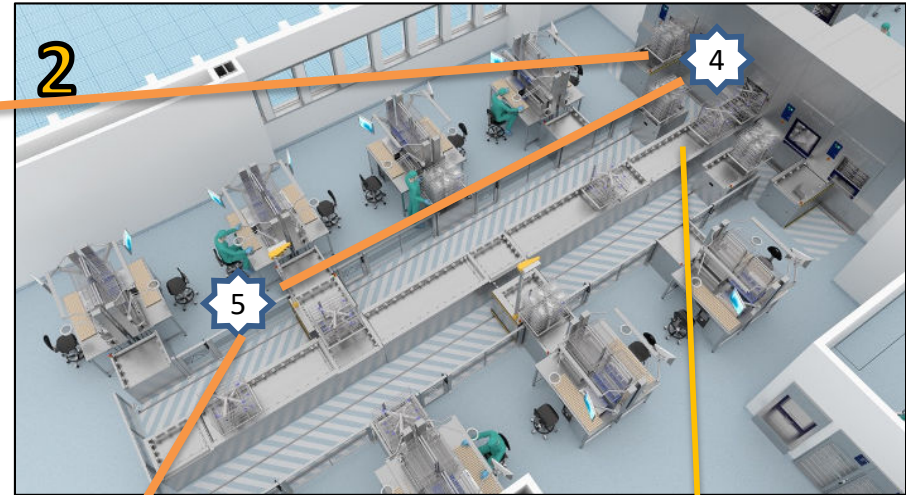
- Additions:
 - Case Cart Staging: 1,100 sq. ft. (102 sq. m.)
 - Instrument Storage: 1,250 sq. ft. (119 sq. m.)
 - Supplies Storage: 2,000 sq. ft. (185 sq. m.)
 - Case Cart Storage- Empty: 630 sq. ft. (58 sq. m.)
 - Vendor Storage: 150 sq. ft. (14 sq. m.)
 - Additional Office Space
 - Dedicated Locker Room
 - Dedicated Break Room



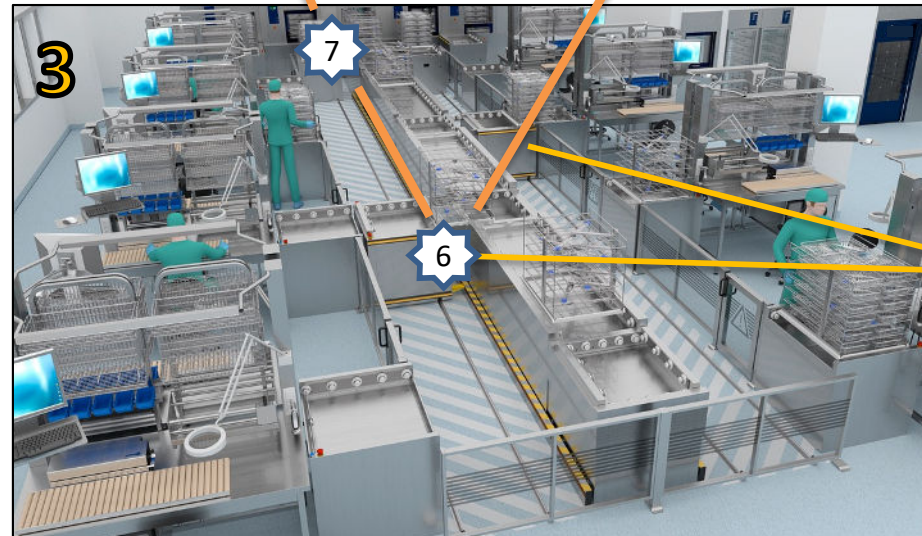
Automation



Automatic conveyor process begins with washers in Decontamination



Clean instrument trays are delivered to each Prep & Pack station



Technicians "call" for trays and the automated system delivers directly to their station- no lifting, pushing or pulling required!

Project Aim

- Factors
 - Efficiency of Work
 - Staff Safety
- Mechanism
 - Automation in Technology



Methods

- Techniques:
 - Anonymous Surveys
 - Job Satisfaction
 - Retrospective Data Review/Direct Observation
 - Trays processed/person/day
 - Tray time in wash cycle
 - Trays being ultra-sonic cleaned
 - Staff Safety
 - As determined by LOA due to workplace injury

RWJBarnabas HEALTH | Robert Wood Johnson University Hospital

Employee Satisfaction Survey

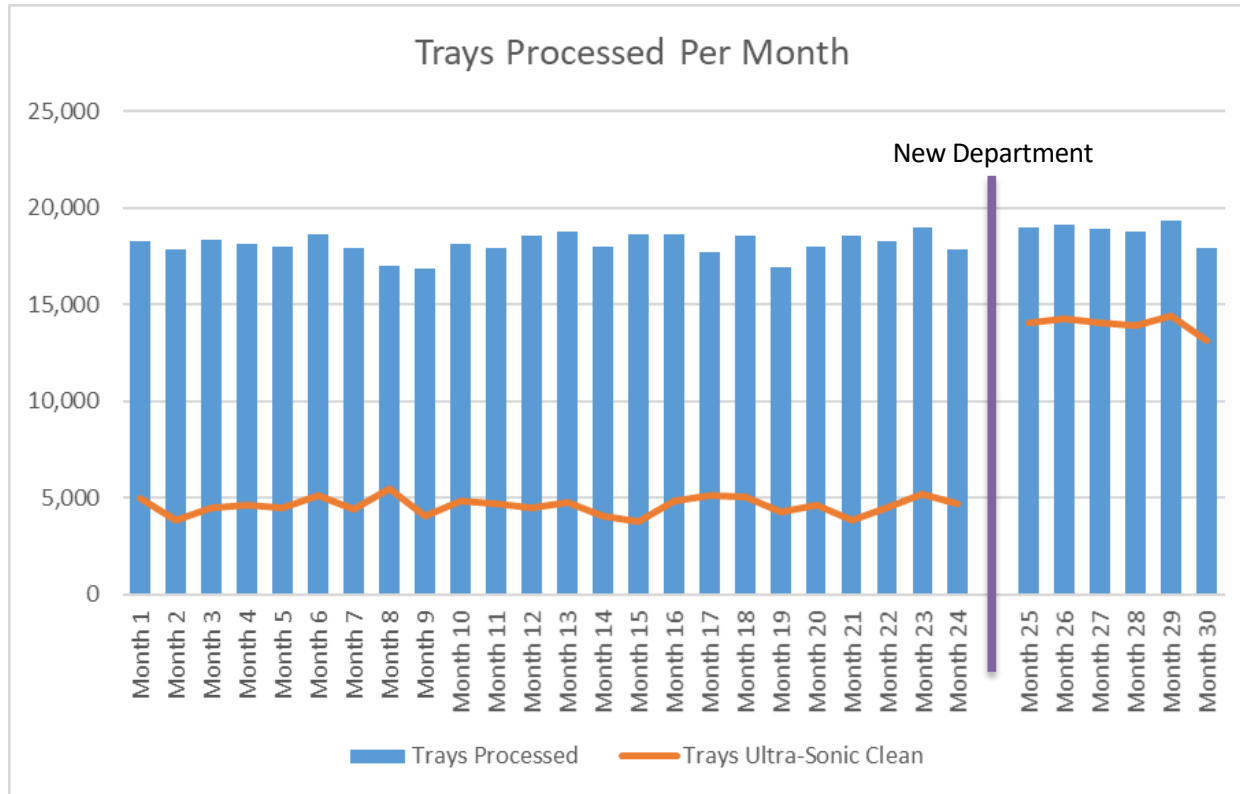
Please complete this anonymous survey regarding YOUR satisfaction with your department and work environment.

1) How satisfied are you with your job?
1-Very Unsatisfied 2-Unsatisfied 3-Neutral 4-Satisfied 5-Very Satisfied

2) Do you feel you have the necessary resources to complete your job?
1-Very Unsatisfied 2-Unsatisfied 3-Neutral 4-Satisfied 5-Very Satisfied

3) How likely are you to recommend this institution?
1-Very Unsatisfied 2-Unsatisfied 3-Neutral 4-Satisfied 5-Very Satisfied

Results



Metric	Old Department	New Department	% Change
Trays Per Day/Tech (# of trays)	16	25	36%
Tray Wash Cycle Time (minutes)	35	15	-57%
Staff Satisfaction (% satisfied)	76%	91%	15%
Workplace Injury (days missed)	2190	0	-100%

Conclusions



Efficiency



Productivity



Staff Safety



Staff Satisfaction



**It is necessary to develop more research in this area as these are only the findings of one hospital*

Questions/Open Discussion

