Soyring Consulting
a Press Ganey Solution

CASE STUDY: SURGICAL SITE INFECTION

ROOT CAUSE FOR A COMMUNITY HOSPITAL

SURGICAL SITE INFECTION

Over a year and half period, the Operating Room (OR) and Central Sterile Services (CSS) experienced chaos beginning with black flecks appearing intermittently in both CSS washers, loss of staff, a cluster of surgical site infections, loss of specialty surgeons, and loss of volume.

Background

Due to the black flecks, cases were cancelled and instrument trays were sent to a neighboring hospital while the hospital attempted to find a solution. First, the following measures were taken to address the issue:

- Replaced water filters
- Replaced some steel piping plugs with brass plugs
- Flushed the system

The flecks began to reoccur again six months later which resulted in delays in orthopedic surgical procedures. The flecks were traced and attributed to a single washer/sanitizer; the vendor diagnosed the problem by replacing the check valve leading to the heating element and replaced the heating element. The facility also changed the water filter to a lower micron filter.

Throughout the following month the following issues arose:

- Black flecks reoccurred intermittently
- A brown residue appeared on an instrument
- White residue appeared in the instrument containers
- A blue fleck appeared in the loaner instrument set container

Once the instrument and container vendors were notified:

- The loaner instrument company replaced the blue trial component
- The other instrument company did nothing; the tech claimed the residue was “highly unlikely due to the instrument”
- The container company recommended changing the cleaning process due to a highly alkaline product (Hi-Tor) that breaks down the aluminum over time. This product was used for the past decade.
    - A new process was tested and implemented:
        - A sterile water rinse and hand dried items with lint free towels
        - Wooden tongue depressors used for set and instrument identification were removed

Loss of Staff, Specialty Surgeons, and Surgical Patients

- **OR Staff:** Staff resignations occurred due to a variety of reasons in the OR resulting in the need to hire agency nurses, some recent grads and RN’s with several years’ experience, but not in the OR.
- **CSS Staff:** Due to the black fleck issues, conflict arose between the OR and the CSS staff resulting in loss of staff and ineffective communications. OR staff, including OR agency staff, were used to supplement the loss – another source for conflict.
- **Management:** Due to continuing quality, equipment, and personnel issues in CSS and the OR, the Director of Nurses / VP Patient Care Services took over the management responsibilities for CSS. Turmoil also resulted in turnover of other senior leadership positions.
- **Surgeons:** Some longstanding conflicts increased exponentially during this time between a group of specialty surgeons and the rest of the medical staff. This ultimately led to some specialty surgeons moving operations to another hospital in the community.

Due to the loss of staff, specialty surgeons, and surgical patients throughout the year, Soyring was contracted approximately a year after the initial event, for an assessment and implementation of action items. The assessment focused on adherence to best practices, standards, as well as overall organization quality. The program analysis combined interviews and a staff survey to gain insight into perceptions, observations to understand standards of practice in both CSS, the OR and interfacing departments, and data review to objectively validate findings.

An Action Plan was then developed for each area – OR and CSS. Following the initial process, the OR Consultant stayed on site for implementation of the Action Plan. All items were addressed and implemented over a 9 month period, including:

Sample Recommendations:

- Best Practice:
  - Contract with a mobile instrument repair/ maintenance program
  - Acquire a testing device for insulated instruments
  - Obtain a subscription that provides ongoing updated Instructions for Use (IFU) information
  - Add additional instruments to reduce instrument reprocessing time
  - Establish monthly staff sessions and education programs based on staff input and / or needs
  - Reinstitute instrument containers after professional quality checks and acquire additional ones as needed
  - Decommission Ethylene Oxide (EtO) sterilizer after identifying alternative measure to replace the few items requiring low temperature sterilization
  - Explore possibility of removing glutaraldehyde from CSS
  - Explore labeling options for instrument trays to facilitate storage location
  - Install Reverse Osmosis (R/O) water pump
  - Design efficient space for OR nursing work stations

- Standards
  - Acquire appropriate organizations' / agencies' current standard /guideline publications
  - Establish continuing educational sessions to address changes in processes and /or standards; Focus on "Back to Basics"
    - Review & Revise OR, PACU & CSS policies to conform to latest standards and guidelines from the appropriated organizations / agencies; Monitor compliance:
- Aseptic technique
- Handwashing / Install additional gel dispensers
- Personal protective equipment (PPE) guidelines
- Gowning & gloving
- OR preparation
- Monitoring sterile field
- OR traffic control during sterile set-up / procedure
- Safety measures for OR tourniquet use
- Pre-operative skin preps; Avoid clipping in an operating room
  - Review Universal Protocol; Revise Time Out policy & educate staff; Monitor for compliance
  - Establish competencies for CSS personnel
  - Install compressed air gun to allow drying of cannulated instrument
  - Establish weekly and annual cleaning schedules for sterilizers
  - Investigate appropriate Challenge packs to use for each steam sterilizer load
  - Weigh instrument trays and modify if above weight standard
  - Initiate daily sonic machine testing
  - Investigate and develop appropriate method to manage instruments post procedure on off hours / days
  - Charge CSS for all sterilizers Quality Improvement (QI) monitoring and documentation

- Overall Organization Quality
  - Develop modules for hospital competency review / testing online program
  - Set up Process Improvement/Lean projects between CSS and OR to address point of care cleaning of instruments, optimization of tray configurations, and team building exercises
  - Develop a CSS Quality Benchmarking monthly program
- An additional assessment was also conducted for Senior Leadership to address the volume decline
  - Marketing Analysis
  - Review of surgical efficiency and strategic growth planning

After hiring Soyring and implementing recommendations:

- The hospital reduced SSI's to 0
- Improved culture and relationships between the OR and CSS
- Mediated surgeon disputes
- Assisted in bringing back volume from specialty surgeons who had departed
- A plan for growth was also put in place based on the market analysis and surgical planning recommendations presented by Soyring.

About Soyring Consulting

Soyring Consulting, acquired by Press Ganey in 2017, provides clinical and managerial consulting services to healthcare facilities of all sizes, including For-profit, Not-for-profit, Community, University, and Faith-based facilities and systems. Our team has worked in more than 35 states across the United States in all areas, including surgical services, sterile processing, hospital and facility design, nursing/clinical units, and others. By combining our experience, proven knowledge, and time-tested skills, we work with your team to create targeted opportunities, along with the plan and achievable goals to reach them.

For more information, visit www.soyringconsulting.com or call our corporate office at (727) 822-8774 to speak with a representative of our leadership team.

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