Prevention of Endophthalmitis
An Ophthalmic Focus Study on Surgical Site Infections
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Element 4: Evidence of Data Collection
Data collection in preoperative, intraoperative, and postoperative areas revealed the following issues:

➢ Older instrument trays found to have rusty instruments and rust particles down in tray mats.
➢ Staff were found leaving trays closed with moisture overnight increasing risk of rust and bacteria growth.
➢ Review showed potential for surgery center drops to be contaminated due to 2 cases in one week.
➢ Older instrument trays found to have large quantities of instruments. Instruments on bottom were being reprocessed but rarely used.
➢ Instrument trays could have residual debris. Some are having hinge issues but overall look intact and rust free.
➢ Quick Rinse bottle not being cleaned correctly at end of day.
➢ Quick Rinse bottle was leaking. Staff felt there could be a pressure issue when using on human instruments.

Staff were concerned about residual BSS being left in bottles that were reprocessed. The small, silicone bottles are hard to clean the interior or confirm any previous BSS was cleared. The current bottles were getting older, and the cannula lumens were not consistently being flushed postoperatively.

➢ Culture and Sensitivity reports show Staph Epidermidis strain is resistant to Ciprofloxacin and levofloxacin. Ciprofloxacin is our main antibiotic drop in the ESC preop and postop. Many drops being administered to the patients are in the same class of fluoroquinolones.
➢ Preparedaromate not stored correctly overnight in the refrigerators
➢ Statim autoclave inspection identified over usage of sterilizers.
➢ Increase in iris prolapse incidents was also noted.

Element 5: Data Analysis
All findings were discussed with the governing board and quality committees. Immediate action was recommended for areas of concern. The data collected did reveal there was opportunity for improvement in several areas. The potential for contamination did exist and must be corrected immediately.

Per the Quality Benchmarking Report for 2019, Infection rates had drastically increased.
1st Qtr 2019 – 0.000  2nd Qtr 2019 – 0.928  3rd Qtr 2019 – 0.974  4th Qtr 2019 – 4.669. The 2019 annual average was 1.684. (for reference 2018 was 0.261)

Element 6: Comparison of Current Performance to Performance Goal
Our goal for infection rates was not met and was missed by 1.461.
Baseline performance: 1.684 (2019 average) vs ASC QC quality benchmark performance: 0.223

Element 7: Corrective Action

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<tr>
<th>Identified Issue</th>
<th>Corrective Action</th>
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| Older surgical trays found to have rusty instruments and rust particles down in tray mats. | 1. Ordered replacement trays for all autoclaves. 2. Education of staff on identification, prevention, and rust awareness completed. 3. Removed and replaced all instruments with visible rust. Ensured staff are leaving the instruments open to dry in the evenings. We identified that one technologist was leaving them sealed up all weekend and the moisture was being contained. Replaced all multidose drops in the whole center.
| Staff were found leaving trays closed with moisture overnight increasing risk of rust and bacteria growth. Review showed potential for surgery center drops to be contaminated due to 2 cases in one week. Older surgical trays found to have large quantities of instruments. Instruments on bottom were being reprocessed but rarely used. Instrument trays could have residual debris. Some are having hinge issues but overall look intact and rust free. Quick Rinse bottle (lumen flushing device) not being cleaned correctly at end of day. Quick Rinse bottle was leaking. Staff felt there could be a pressure issue when using on human instruments. | To improve airflow and decrease instrument reprocessing, the trays were lightened. Scheduled deep cleaning/inspection of all remaining instruments by Kimney Surgical IFUs show that alcohol should be used at end of day to rinse bottle. Alcohol ordered and put into use. Replaced quick rinse bottle that is used to flush all lumen instruments. It was mildly leaking, and we feared it was losing pressure to force air through. Discontinued use of reusable BSS bottles. Switched over to disposable syringes that techs can use to irrigate cornea with disposable bishop harm tips.
| The reusable BSS bottles were hard to clean and/or confirm any previous BSS was cleared. The current bottles were getting older, and the cannula lumens were not consistently being flushed postoperatively. Administrator wanted to confirm that sterilizers where processing correctly. Increase in iris prolapse incidents. | Swabbed a sterilized tray for culture to confirm the autoclaves were processing correctly. (All measurements read accurate, Spore tests passed daily) Negative findings on culture. Discussion with physicians regarding possible correlation between iris prolapse increase and endophthalmitis increase. Physicians changed to a smaller incision size (2.4mm).
| Patient culture and sensitivity reports showed staph epidermidis strain was resistant to ciprofloxacin and levofloxacin. Most ESC preop and postop ordered drops are in the same class of fluoroquinolones. Prepararomate storage inadequate. | Review of ordered antibiotics compared to C&S reports. Doctors felt adding Poly Trim to preop/postop prep would help add antimicrobial coverage. Staff were keeping multidose prepararomate unrefrigerated after opening. Staff switched to keep it refrigerated moving forward.
| Sterilization process review | Completed OQSS Sterilization survey
| Statim autoclave inspection | Biomed completed 6 month inspection with card, seal, and filter replacements. PMA’s to be done every 6 mo/900 uses. Statim were used avg 725 times/6 mo. Implemented change to rotate low volume statim 3 into high volume statins 1 & 2s rotation.

Element 8: Re-measurement
➢ Per the Quality Benchmarking Report for 1st Qtr 2020, the goal was met. Zero infections were reported bringing the score to 0.000.
➢ Consistent and sustained reduction in surgical site infections proved our goal was met.

➢ The supervisory staff and QAPI committee continued reviewing reports for the remainder of 2020 to confirm no outbreaks occurred. Regular monitoring of new processes is essential to sustain improvement measures.

Element 9: Additional Corrective Action
➢ Final review – One infection for 2020 (2nd Qtr). Zero Infections for 2021. No additional correction actions were identified.
➢ The QAPI committee agreed that a continuous monitoring of infection prevention standards must remain in place including monthly and quarterly auditing.

Element 10: Communication of Findings
Reported to:
➢ QAPI Committee
➢ Governing Body
➢ Staff In-Services
➢ Other education
Monthly staff infection control trainings

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