Standardizing Intraoperative Eye Care to Decrease the Incidence of Postoperative Corneal Abrasion

PURPOSE
Standardize intra-operative eye care of the surgical patient to decrease the incidence of postoperative corneal abrasions through anesthesia staff education on evidence-based eye protection techniques and implementing an evidence-based eye protection protocol.

BACKGROUND
This quality improvement (QI) project took place at a small community-based surgery hospital that performs a wide range of surgical procedures. Eye protection techniques in the intra-operative setting vary based on the care of individual anesthesia providers, as there is not a standardized approach to evidence based eye care for the anesthesia staff on eye protection techniques and prevention of corneal abrasions. At this facility, the incidence of corneal abrasions was 0.17%.

METHODOLOGY
Quality improvement science using PDSA cycles.

Development phase:
Steps used are:
1. Assessment of anesthesia providers’ current eye protection practices.
2. Develop educational program for the anesthesia staff to address corneal abrasion development, risk factors, and prevention techniques.
3. Staff education on evidence-based eye protection techniques.

Implementation phase:
1. Implemented evidence-based eye care protocol.
2. Performed random chart audits and in-person audits to assess staff adherence to protocol.
3. Assessed the corneal abrasion incidence rate after project completion

RESULTS
At 3-months after project implementation, there was a 0% incidence rate of corneal abrasions, which exceeded the stated aim of decreasing the incidence rate to 0.03%. Staff adherence to the eye protection protocol was 56% which exceeded the desired outcome of 50% at 3 months.

IMPLICATIONS
This project demonstrated that a systematic approach to evidenced-based eye protection using staff education of evidenced-based eye protection techniques and standardization of eye protection practices can reduce eye injury and corneal abrasion incidence rates.