rates were analyzed and compared between the two cohorts including hematoma, seroma, hypertrophic scarring, wound dehiscence, DVT/PE formation, re-operation, and infection. Subgroup analysis was performed to evaluate if increased surgeon experience over time correlated with decreased post-operative complications.

**Results:** 271 charts from 2010 to 2019 were retrospectively reviewed. Mean patient age was 18.3 years and 76.4% of patients were natal females. Body mass index (BMI), mass of resected breast tissue, total operative time, ASA classification, and incidence of comorbidities were comparable between the groups. Patients in the TXA cohort were on average older and more likely to be transgender as compared to the control cohort. 195 patients did not receive TXA and 76 patients received TXA. On average, patients who were given TXA received 3163±1076 mg (42.3±12.3 mg/kg).

Indications for surgery included gender affirming female-male top surgery (n=98, 36.2%), macromastia (n=110, 40.6%), and gynecomastia (n=63, 23.2%). The patients who received TXA did not have a statistically significant lower likelihood of hematoma, seroma, hypertrophic scarring, wound dehiscence, DVT/PE formation, and reoperation when each of these complications was assessed as a separate variable. Since TXA administration began in June 2018, regression analysis revealed that increased surgeon experience did not appear to account for the observed reduction in complications for the TXA cohort.

Overall, patients who received intraoperative TXA were less likely to experience a post-operative complication compared to those patients that did not receive TXA (22% vs. 8%, RR = 0.358, 95% CI 0.16-0.80 p = 0.0132). Additionally, patients in the TXA cohort were less likely to experience a postoperative infection (12.8 vs. 2.7%, RR = 0.21, 95% CI 0.05 – 0.85, p =0.03).

**Conclusion:** This study suggests that administration of intravenous tranexamic acid during breast/chest surgery appears to be correlated with a lower likelihood of having any postoperative complication and specifically, a postoperative infection. This data also demonstrates that TXA administration is safe in patients undergoing breast/chest surgery and may help surgeons choose an appropriate dose. A prospective study to evaluate the efficacy of intravenous TXA is required to corroborate these findings.
as underweight had an OR of 2.39 of developing a HAPI compared to those who were normal or overweight while those with morbid obesity were 28% less likely to develop a HAPI. The area under the curve for this model was 0.77, indicating good predictive accuracy in this patient cohort.

**Conclusion:** This proposed prediction model showed good accuracy at predicting which patients are more likely to develop a HAPI, incorporating patient factors from race/ethnicity and payer status to medical history and ICU unit. While the tool should be externally validated on a different cohort of patients, it is a starting point to help focus interventions and quality improvement for the prevention of this disease. The use of this predictive model can be used to more prudently allocate scarce resources in the delivery of health care.

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**Occupational Exposures In The Operating Room: Are Surgeons Well-equipped?**

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**Purpose:** Surgeons are subjected to an array of occupational hazards in the operating room, including infection, chemicals, radiation, smoke, excessive noise, musculoskeletal injuries, as well as emotional and psychological disturbances. Although education and training exist for traditional hazards, such as bloodborne pathogens and radiation, no policies exist on unestablished hazards, such as chemical exposures, surgical smoke, or ergonomics. We investigated the extent to which surgeons are trained on workplace hazards and evaluated the self-reported frequency of exposure.

**Methods:** An electronic survey (Qualtrics) was distributed to 280 surgeons at a large institution. Participants received questions regarding formal training, adequacy of the training, and frequency of the training. Self-reported frequency of exposure was also examined. Descriptive statistics were calculated for the survey cohort. Statistical analyses were performed using Mann-Whitney U, Kruskal Wallis, and Odds Ratio. P-values were two-sided and considered significant at p=0.05.

**Results:** Of 159 respondents (57% response rate), 99% were most frequently exposed to bloodborne pathogens and surgical smoke on a daily basis; however, not all respondents received training on bloodborne pathogens (96%) and surgical smoke (29%). Upon subgroup analysis, residents and fellows had a greater frequency of exposure to surgical smoke, radiation, methylmethacrylate, and cytotoxic drugs compared to attendings ($p=0.01$). Moreover, residents and fellows had lower odds of receiving formal training related to surgical smoke, radiation, methylmethacrylate, and cytotoxic drugs when compared to attendings ($p=0.03$). On further analysis, residents and fellows still experienced a greater frequency of exposure to surgical smoke, radiation, and cytotoxic drugs compared to attendings, regardless of whether formal training on the occupational hazard was received. Additionally, exposure to occupational hazards was not equal across surgical specialties. Surgical smoke was encountered daily or a few times per week by all surgical specialties except OBGYN who reported weekly exposure ($p=0.01$). Orthopedic surgeons reported weekly exposure to methylmethacrylate and increased odds of receiving training or supplemental information on methylmethacrylate while other surgeons had only monthly or yearly exposure ($p=0.01$). Finally, OBGYN and Orthopedic surgeons reported the lowest frequency of exposure to cytotoxic drugs (never) while urologists had the greatest frequency of exposure (monthly) ($p=0.01$).

**Conclusion:** Occupational exposures are unavoidable in the operating room. Reporting of these hazards is a critical step in initiating formal training and instilling policies. Our study demonstrates the need for resident trainees and consulting specialties to be indiscriminately provided with formal training on all occupational hazards independent of their risk of exposure.

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**Human Nrf2-Active Multipotent Stromal Cell Exosomes Reverse Pathologic Diabetic Wound Healing**

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