

#184 Elizabeth Kasparov

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### **Resident Involvement in Plastic Surgery: Effects on Short-Term Patient Outcomes, A Meta-Analysis**

Previous reports analyzing plastic surgical outcomes with and without resident involvement have yielded mixed results. The purpose of this study is to determine the effect of resident involvement on patient outcomes in plastic surgery. This study is significant because teaching hospitals should ideally prepare the next generation of physicians without negatively impacting patient outcomes. We hypothesize that with the supervision of an attending physician, resident involvement in plastic surgeries does not result in negative effects on short-term patient outcomes.

This study was a meta-analysis, following the Preferred Reporting Items of Systematic Reviews and Meta-Analyses guidelines. Two independent reviewers searched PubMed, Embase, and the Cochrane Library to find studies assessing the impact of resident involvement on patient outcomes in plastic surgery cases. Twenty-four preoperative patient characteristics were compared between cohorts, resident involvement vs. non-resident involvement, to investigate participant similarity. To assess the potential impact of resident involvement, thirty-two outcome variables were compared via meta-analysis. Study quality was assessed using the Newcastle-Ottawa Scale for cohort analysis and given a quality label based on Agency for Healthcare Research and Quality standards. As several of the included papers relied on data from the American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP), sensitivity analysis was done to assess for patient overlap between papers. The ACS-NSQIP reports 30-day patient outcomes.

Resident involvement in plastic surgeries demonstrated a statistically significant, negative effect on patient outcomes. Statistically significant postoperative variables associated with resident involvement that were particularly salient include longer length of stay, increased return to the operating room, increased superficial surgical site infections, increased overall complications, etc

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