

Trainee involvement in robotic bariatric surgery: an early Canadian academic center experience

Naser AlAli^{1,2}, Ali Safar³, Rachel Hart^{1,2}, Christopher M Schlachta^{1,2}, Ahmad Elnahas^{1,2}, Elaine Tang^{1,2}, Jeffery Hawel^{1,2}

Background

Robotic bariatric surgery remains less common in Canada due to system-level constraints. Data describing outcomes, efficiency, and trainee involvement in Canadian settings are limited. We aimed to describe perioperative outcomes and operative efficiency in a robotic bariatric surgery program at a Canadian academic center, with particular attention to trainee participation.

Methods

We performed a retrospective descriptive analysis of all robotic bariatric procedures performed from February to December 2025. Patient characteristics, operative metrics, length of stay, trainee involvement, and 30-day outcomes were collected. Cases were stratified by trainee role: bedside assistance only versus console involvement.

Results

A total of 100 robotic bariatric procedures were analyzed, including 61 primary RYGBs, 11 SGs, and 28 adjunct (Hiatal/ventral hernia repair during bariatric procedure) or revisional procedures. Median operative time was 145.5 minutes (IQR 127–165), and median length of stay was 1 day (IQR 1-2). Trainees' console participation was in 49% of cases. The 30-day major complication rate (Clavien Dindo \geq III) was 4%, with 6% readmissions, 2% reoperations, and 1% conversion to laparoscopic surgery. 30-day complication rates were similar between bedside-only and trainee console cases (3.9% vs 4.1%). Trainee console participation was associated with modest increases in console times (114 vs 107 minutes) without increased major morbidity.

Conclusion

In a Canadian setting with lower robotic bariatric volumes comparatively within North America, robotic bariatric surgery was performed safely and efficiently. Trainee console participation did not compromise major outcomes, supporting the feasibility of structured robotic training in lower-volume healthcare systems.

¹ Division of General Surgery, Western University, London, ON, Canada

² Canadian Surgical Technologies and Advanced Robotics (CSTAR), London Health Sciences Centre, London, ON, Canada

³ Division of General Surgery, McGill University, Montreal, QC, Canada