

REBUILDING A ROBOTIC SURGERY PROGRAM AT AN ACADEMIC MEDICAL CENTER WITH BUY-IN FROM A MULTIDISCIPLINARY GROUP OF STAKEHOLDERS

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BACKGROUND

The introduction of laparoscopic-based procedures presented surgeons with an opportunity to perform surgery through small port incisions, replicating techniques they had only done through large open incisions until that time. This soon became the standard of care for many common surgical problems. As technologies improved, the robotic approach garnered similar attention. Our medical center realized the importance of the robotic approach in the mid-2000's, investing in the da Vinci system, however over recent years deficient utilization, lack of training, and a weakened industry partnership resulted in lack of patient access to minimally invasive surgical approaches.

PURPOSE

To describe a pathway for rebuilding a diversified robust robotic surgery program at a large, tertiary academic medical center by garnering buy-in from a multidisciplinary group of stakeholders, establishing and strengthening industry partnership, and through support from administrative leadership.

METHODS

A gap analysis to review the robotic surgery program at our institution was conducted. Best practices were subsequently instituted in January 2024 including development of an objective-based training curriculum for surgical staff, increase in surgeon access to the robotic surgery platform, improvements to the scheduling process for robotic surgery cases, and the formation of a dedicated robotic surgery team. These interventions comprised the pillars of programmatic excellence which were strongly supported through the direct involvement of executive leadership, the development of a multidisciplinary task force of stakeholders, and the re-establishment of industry partnerships.

PILLARS OF PROGRAMMATIC EXCELLENCE



RESULTS

Robotic utilization analyses prior to implementation of a multi-pronged intervention based on evidence-based best practices and institutional goals revealed low robotic utilization on two da Vinci surgical systems, the absence of a dedicated intraoperative robotic surgical support system, weakened industry partnership, and lack of executive-physician alignment. Since implementation in January 2024, we demonstrated a 64% increase in robotic surgical volume, increase in prime-time utilization, the formation of a formal dedicated robotic surgical support team, the re-establishment of a strong industry partnership, strong executive support and direct engagement, and an increase in the number of credentialed robotic surgeons at UMC. Post-analysis at one year post-implementation will be completed using industry-standard key performance indicators.

CONCLUSIONS

In rebuilding the robotic surgery program at University Medical Center using a multidisciplinary team with support of industry partners and administrative leadership, our team will be able to offer patients a minimally-invasive approach to a wide range of surgical pathologies, aligning our hospital's mission with surgical evidence-based approaches to a diverse group surgical problems.

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