

Understanding Orthopedic Surgery Resident Perspectives on Robotic TKA Training and Education

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INTRODUCTION: Utilization of Robotic TKA is increasing year over year, but its role in surgical training has not yet been evaluated. There remains a paucity of literature examining the effect of a robotic curriculum in orthopedic residency programs. The goal of the study is to survey resident experiences and perspectives on robotic vs traditional TKA training nationwide.

METHODS: A 15-question survey was sent to residents nationwide asking about demographics (e.g. training year, geographical region of program), experience with robotic TKAs, understanding of TKA concepts, experience with manual TKAs, and future robotic use preferences. An analysis of 32 survey responses was performed by calculating percentages of responses for each answer choice per question and summary statistics to assess for skew or bias in questions.

RESULTS: 53.1% of residents report that the time spent on robotic TKA is “just right”. 42.8% of residents feel “confident” or “very confident” working with a robotic system. With regards to understanding coronal and sagittal plane balancing, most residents thought its use was the same as manual TKA, or “slightly improved” their understanding of these concepts. 52.4% of residents felt the time spent on traditional TKA techniques in their training was “just right.” However, only 40.3% of residents felt confident performing a manual TKA, with a PGY-4/5 subgroup analysis yielding 53.1% “confidence”. In the future, 46.9% of these residents would choose a residency program again based on robotic TKA teaching.

DISCUSSION AND CONCLUSION: Over half the residents report that the time given to robotic TKA vs. traditional TKA in training use is adequate. Residents appreciate the use of robotics during TKA to understand balancing concepts. However, over two-thirds of residents still are not confident performing a manual TKA. This study can provide insight on the role of robotic TKA in resident education and its benefits in understanding arthroplasty techniques.