The Integration of a Formalized Robotic Training Curriculum Within the General Surgery Residency Program

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Introduction

- 40 fold increase in robotic surgery over the past decade
- 92% of residency programs have residents involved in robotic surgery
- 44% track these surgeries
- 54% have some sort of training

- Few programs have a formalized training program integrated within the residency with tracking of skills

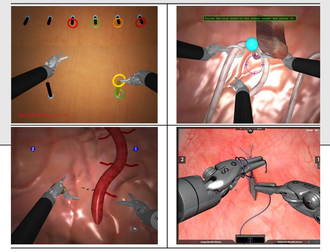
Methods

- Developed a formalized programs with goals for each level of resident
- Implemented this within our program.
- Current graduating chiefs (2022 class) is first group to officially complete entire program
- Track robotic case numbers and proficiency.



Curriculum

Interns	Junior	Seniors
- robotic training class: docking, the basics - online modules - console modules - complete bedside docking cases - start to sit at console and observe procedures	- start to perform parts of procedures and gradually gain independence - should be able to suture, troubleshoot robot, visuospatial understanding	- independently perform basic procedures (inguinal/ventral hernias, cholecystectomies) - begin completing more complex procedures (sleeves) - gain experience in complex procedures (whipple, colorectal, esophagectomies, gastrectomies)



Results

- Improved autonomy
- Average cases increased
  - "surgeon junior cases"
  - Average 5 by end of pgy2
  - Average 10 by end of pgy 3
  - Average 15 by end of pgy 4
  - Average 20 by end of pgy 5

- Easier tracking with new changes to ACGME

Conclusions

- All surgical residents formally learning robotic surgery
- On track for all chief residents to graduate with robotic certificate
- Significant increase in robotic case numbers during each year
- Improved resident autonomy when working with different attending surgeons