Resident Confidence in Intraoperative Cholangiography: The Case for Simulation-Based Training

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INTRODUCTION

- General surgery resident autonomy and readiness for independent practice has been decreasing.
- Intraoperative cholangiography (IOC) is a required skill within the American Board of Surgery's Gallbladder Disease Entrustable Professional Activity (EPA).
- The number of IOCs performed in the United States has been declining, raising concerns about adequate operative exposure and training.

OBJECTIVES

- Assess general surgery resident confidence in performing IOC.
- Identify perceived gaps in experience and knowledge.
- Explore resident perspectives on additional training needs.

METHODS

- Design: Anonymous needs-assessment survey
- Participants: General surgery residents at multiple military residency programs
- Survey Content:
  - Demographics
  - Prior IOC exposure and experience
  - Knowledge of IOC
  - Confidence performing IOC
  - Confidence teaching IOC
- Measures:
  - 5-point Likert confidence scale (1 not at all confident, 5 completely confident)
  - Short-answer responses assessing:
    - Barriers to confidence
    - Suggested strategies for improved training

RESULTS

- 14 responses with all PGYs represented
- 2.3 mean confidence performing IOC
- 1.9 mean confidence teaching IOC to a junior

RESULTS

Figure 1. Number of IOCs performed in past year by training level

Figure 2. Confidence in ability to perform IOC by training year

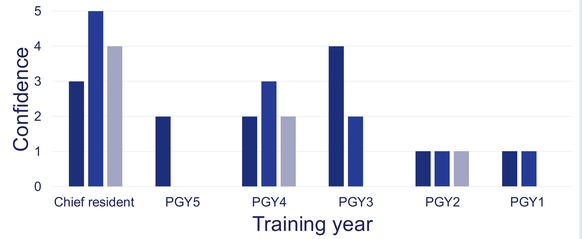
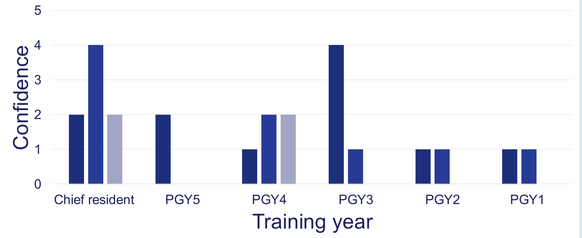


Figure 3. Confidence in ability to teach IOC by training year



DISCUSSION

- Residents reported low confidence in both performing and teaching IOC.
- The most significant contributors were low case volume and limited operative autonomy.
- Learners strongly endorsed formal didactics and simulation-based practice.

NEXT STEPS

These findings support development of an IOC simulation model and structured curriculum to improve competency and confidence.

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