Development of a Laparoscopic Skills Curriculum Based on a Needs Assessment Among Trainees and Faculty at a Canadian Academic Institution

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BACKGROUND

- Simulation is an essential component of surgical training and is especially important for advanced laparoscopic skills.
- Simulation training maximizes teaching efficiency in the operating room so learners can focus on fine tuning skills they have already performed in the skills lab.
- The aim of this study was to perform a needs assessment regarding a laparoscopic skills curriculum amongst trainees and faculty at a Canadian academic institution.

METHODS

- The survey was distributed to all trainees (residents and fellows) and faculty within the Division of General Surgery at Western University in London, ON, Canada.
- Participants were surveyed about their experience with basic and complex laparoscopic cases, their experience with advanced skills such as laparoscopic suturing, and how operative learning was allocated.
- Participants were also asked about their opinions on instituting a formal laparoscopic curriculum.

RESULTS

- 23 trainees completed the survey.

Table 1. Training level of respondents and ability to perform a laparoscopic interrupted or running suture in the operating room

Training Level	Total	Simple Interrupted	Running
PGY-1	5	0	0
PGY-2	3	1	0
PGY-3	7	7	1
PGY-4	3	3	3
PGY-5	3	3	1
Fellow	2	2	2

Figure 1. Number of basic and complex laparoscopic cases performed by trainees as primary operator

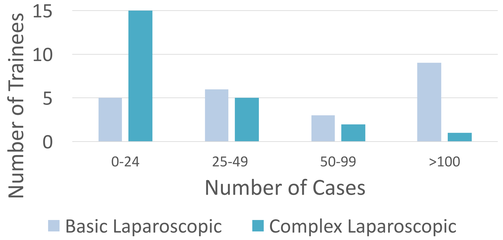


Table 2. Response of trainees to the statement that a laparoscopic suturing curriculum will facilitate intraoperative learning

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	0	0	13	9

- 17 faculty members completed the survey.

Figure 2. Number of basic and complex laparoscopic cases performed by faculty annually

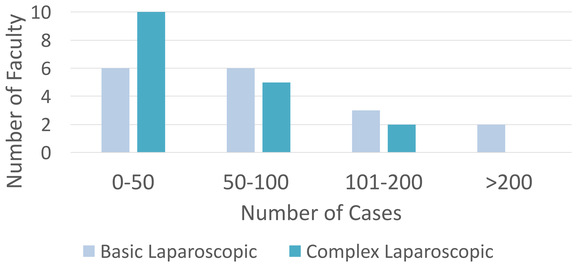


Table 3. Factors used to assess a resident's skill level prior to working with them in the operating room

Response	N
Prior Experience with the resident	16
PGY level	12
Colleague feedback on the resident	12
Resident self-reported experience	10

Table 4. Factors used to decide how much a resident will perform during intraoperative laparoscopic suturing

Response	N
Prior Experience with the resident	10
Degree of difficulty/progress on the procedure	9
PGY level	5
Resident self-reported experience	5

CONCLUSIONS

- A large majority of both trainees and faculty agree that a formal laparoscopic curriculum would be beneficial for trainee learning in the operating room.
- As a result of the feedback from survey participants, we developed a formal laparoscopic suturing curriculum (the Jedi Academy).
- The Jedi Academy consists of four levels:
  1. Proficiency of simple interrupted suture on FLS trainer box
  2. Proficiency of intracorporeal simple interrupted suture in the operating room
  3. Proficiency of running suture on FLS trainer box
  4. Proficiency of intracorporeal running suture in the operating room
- The curriculum provides faculty with an objective measure of the laparoscopic skills of trainees.
- By ensuring trainees can demonstrate proficiency in a skill prior to performing the skill in the operating room, intraoperative teaching efficiency is maximized.