Education of Residents in the Operating Room

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Educating Residents in the Operating Room- The Influence of Intraoperative Dialogue on the Educational Experience

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Background

- Technical skill is critical in the operating room and teaching surgical skill, techniques, and procedures is critical in various procedurally-based specialties
- There is limited time during a surgical procedure for attending surgeons to teach residents; Effort must be focused and optimized
- Debriefing during and after the case has shown to increase the educational value of the experience
- There are few studies evaluating the influence of communication in the operating room between an attending and resident surgeon and its influence on the experience

Methodology

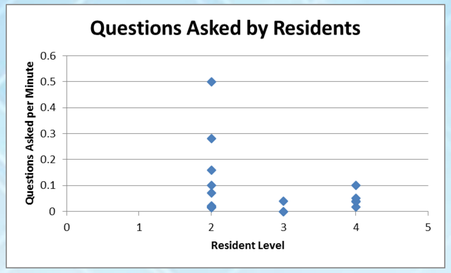
- Residents from a single OBGYN training program, at 3 levels of training, were observed participating and performing common surgical procedures (Cesarean sections, Hysteroscopy, Laparoscopy, Robotic Hysterectomy).
- The number of questions asked by the resident and a tally of teaching points the attending offered intraoperatively was monitored and recorded for each case
- A Communication quotient (CQ)was developed:

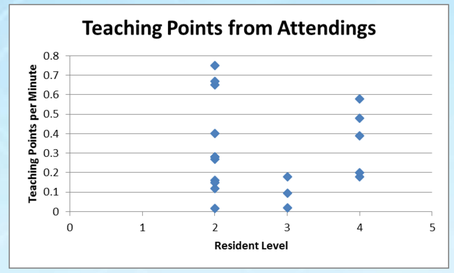
$$CQ = \frac{\#\text{ Questions asked} + \#\text{ Teaching points}}{\text{Time of the Case (Mins)}}$$

- Standard evaluation forms were completed by residents and attending surgeons following each case (OPRS and Milestone Surveys), as was a brief educational survey relating to the value of the experience.
- Debriefing session occurred as well….
  - Resident and attending discussed areas that went optimally and potential areas for improvement
  - Video footage of case was available for review

Results

- During the 6-week study period 40 cases were performed and underwent data collection
- Intraoperative communication data was adequately completed for 38% of these cases.
- The number of questions asked by residents varied (0-11) as did the number of teaching points offered by the attending surgeon (1-47)
- The learning experience from collected cases was high with a mean value of 4.5 (1-5 point Likert scale)





PGY Year	CQ	OPRS Score	Educational Value
2	0.02	4	4
2	0.25	3.5	4
2	0.29	3	x
2	0.44	3.5	x
2	0.50	3.5	x
2	0.50	2.5	4.5
2	0.52	2.5	4.5
2	0.58	3.5	3.5
2	0.71	3	4.5
2	0.74	3	5
2	1.25	2.5	3.5
	0.53	3.136363636	4.1875
3	0.13	3.5	4
3	0.21	3.5	4.5
3	0.30	3.5	3.5
	0.21	3.5	4
4	0.03	3.5	5
4	0.09	4	4.5
4	0.17	3.5	4.5
4	0.20	2.5	x
4	0.22	3	4.5
	0.14	3.3	4.625

Conclusion

- Junior level residents (PGY 2s) have higher CQ's then senior level residents (PGY3,4's)
- Evaluation of surgical performance was not influenced by the CQ value or the level of training.
- Senior Level residents (PGY3,4's), although they have lower CQ scores, continue to see cases as highly educational
- The value of intraoperative communication, albeit important in the training of residents in the operating room, varies and remains uncertain requiring further study

Limitations

- Small sample size – Residents and case number
- Subjectivity: What defines a question? What defines a teaching point?
- Results may be specific to chosen procedures small assortment of procedures
- Logistically often difficult to hear conversation between residents and attending surgeons

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