INDIANA UNIVERSITY
SCHOOL OF MEDICINE

Lessons Learned from Interdisciplinary Simulation with Pediatric Anesthesia Fellows and Otolaryngology Residents

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Background

- Poor interdisciplinary communication among healthcare providers is limiting patient care
- The use of simple and explanatory language is preferred over more specific language and technical terms unique to a specialty
- Stakes of miscommunication have been reported to be as high as 40% in some surgical environments, highlighting the influence communication has on both patient safety and general error[2]
- We propose simulation as an effective learning tool to improve interdisciplinary communication

Benefits of Simulation

- Provide both frequent and infrequent clinical scenarios
- Low stakes environment
- Control over the order of events
- Time for frequent assessment and feedback[3]
- Concrete and engaging involvement of learners
  - Associated with higher knowledge retention and higher rates of changed behavior compared to no intervention[4]

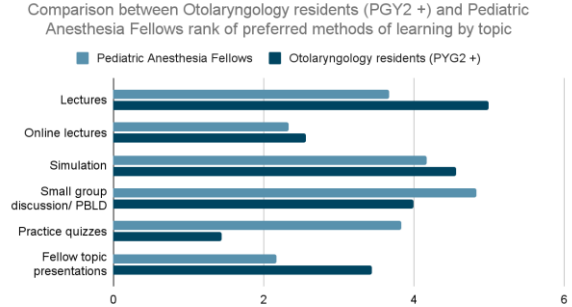
Materials and Methods

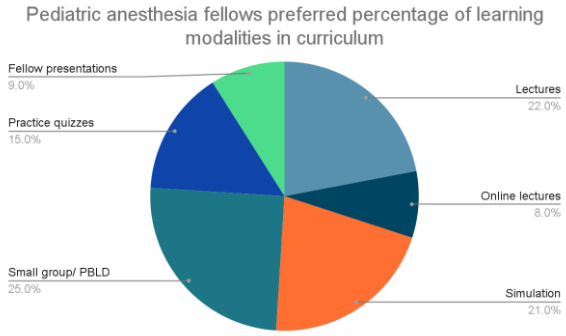
- When: 2017—2018
- How: Survey Monkey
- Who:
  - 8 Pediatric Anesthesia Fellows (PGY5+)
  - 12 Otolaryngology (ENT) Residents (PGY2+)
- Details:
  - Pre-survey agreement describing the intent of the data
  - Some questions asked for comparison of simulation with other common learning modalities
    - Lectures
    - Online lectures
    - Small group discussions/ PBLDs Practice quizzes
    - Fellow topic presentations

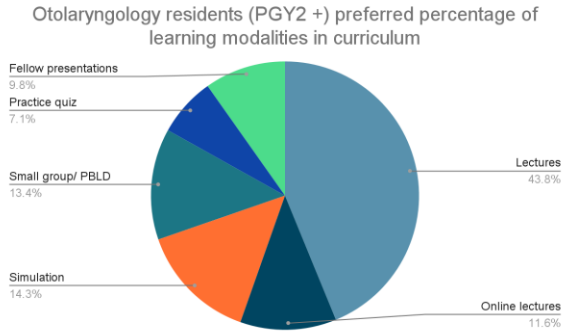
Survey Questionnaire

1. **Overall, I find simulation to be a useful learning modality.** *Rating scale 0-100*
2. **Simulation with the pediatric anesthesia fellows/ENT residents is a useful learning experience.** *Rating scale 0-100*
3. **For ENT – Having real anesthesiologists increases the fidelity (realism) of our simulations.** *Rating scale 0-100*
4. **For anesthesia – I prefer to do a simulation directed to me as the learner versus me playing the embedded participant (the anesthesiologist for ENT sims).** *Rating scale 0-100*
5. **I wish we had time to do more simulation events.** *Yes, No, Maybe*
6. **For ENT – By participating in simulations with the pediatric anesthesia fellows, I learned some useful things from the anesthesia perspective.** *Yes, No, Maybe*
7. **For anesthesia – By participating in simulations with the ENT residents I learned some useful things.** *Yes, No, Maybe*
8. **Please rank your preferred methods for teaching ENT resident/pediatric anesthesia fellow topics.** *Lecture, Online lecture, Simulation, Small group discussion/PBLD, Practice quiz, Fellow topic presentations*
9. **If you prefer a mixture of the above learning modalities, what percent of each modality would be ideal for you?** *Lecture, Online lecture, Simulation, Small group discussion/PBLD, Practice quiz, Fellow topic presentations*
10. **Would you have liked to learn how to design and run a simulation event as a resident/ fellow?** *Yes, No, Maybe*
11. **I am practicing or planning on practicing in …** *Academics, Private practice, Mixed practice with some learners*

Results







Discussion

- Simulation identified as 2nd highest valued learning modality in both cohorts
- ENT residents had strong preference for lecture (44%) in their curriculum
- ENT residents overall valued the role of the in-person anesthesiologists, as opposed to simulated (81/100)
- Pediatric anesthesia fellows identified their top 3 choices within 4% of each other
- Healthcare providers early in their training may prefer more traditional learning modalities
- Healthcare providers later in their training may prefer to learn by group discussions

Conclusions

- Simulation was highly appraised as a learning tool for both ENT residents and pediatric anesthesia fellows at our institution
- Differences in learning styles among the two specialties may indicate trends associated with specialty or individual cohort learning styles
- Simulation can be used to improve and teach interdisciplinary communication
- Early integration of structured interdisciplinary interactions into trainees' curricula, as early as medical school, could help prevent interdisciplinary miscommunication
- Further studies should examine the learning preferences of medical trainees and seek to build curricula to match each cohort and discipline's preference

References

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