The road to expert performance: a case series of deliberate practice in pediatric anesthesiology education

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What is Deliberate Practice?

• Deliberate practice is a tool for achieving peak performance, validated in multiple settings, including: chess, sports, music, memory tasks and medicine.
• In deliberate practice, learners attempt to excel beyond their habitual performance by setting new specific goals exceeding their current skill level.

What is the rubric to engage in deliberate practice?

In the deliberate practice model, the learner:
1. Is motivated to practice and improve.
2. Engages in intentional tasks that challenge/exceed skill level.
3. Is coached (receives feedback and actively reflects on the task(s) performed).
4. Practices the skills acquired.

11 month-old male with PMH of CCAM s/p resection, currently healthy with adequate lung reserve, presenting for left inguinal hernia repair

• Skill intention: improve difficult intubation skills
• Feedback/Coach: Attending anesthesiologist using intraoperative photos
• Outcome/Practice: Identified areas for improvement (ergonomics, process, compromised ventilation, and coordination of the assistant)
• Practice/modifications: skill components repeated, with modifications of time pressure, lack of assistant help

13 month-old healthy female for soft tissue cyst excision

• Skill intention: improve induction technique and evaluate perception of the induction
• Feedback/Coach: Self-directed (with GoPro video camera) and mentor directed evaluation and feedback
• Outcome/Practice: Identified areas for improvement (unnecessary steps, inadequate closed-loop communication, and technical skill)
• Practice/modifications: technical skill components repeated, closed-loop communication assessment, attention to induction events previously not observed

How is this different than what I do every day?

• Deliberate practice differs in the sense that it is the premeditated engagement in improvement using a learning oriented paradigm.
• If the goal is not to have a perfect intubation, but focus on specific components/process that can be improved.

Conclusions

• This case series demonstrates the implementation of deliberate practice in a single day in the OR, and provides examples of modifications that can facilitate learning and performance improvement.
• The intention tasks were planned and a coach was identified in advance.

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  2. Sports
  3. Music
  4. Memory tasks
  5. Medicine

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