



MCG MEDICAL EDUCATOR MINUTE

#12

Teaching During Surgery

BACKGROUND

Teaching a surgical motor skill requires a different approach than the cognitive coaching involved in other clinical teaching. A progression from modeling to faded assistance is warranted when a learner is developing and demonstrating his/her ability to complete a procedure.

QUOTE

“So I very much liken teaching residents [in the operating room] to driving a car on ice cause when they’re operating, you really don’t have control of the car and you really don’t know when it might skid out of control. So you accelerate gradually, brake gradually, turn gradually one little step at a time.” [Torbek et al. 2015](#)

SUGGESTIONS

(Excerpted from DeRosa et al)

Stage of Supervision	Attending Behaviors	Resident Behaviors Commensurate with This Level of Supervision
Show and Tell	<ul style="list-style-type: none"> • Does majority of key portions as the surgeon • Narrates the case (i.e., thinks out loud) • Demonstrates key concepts, anatomy, and skills 	<ul style="list-style-type: none"> • Opens and closes • First assists and observes
<i>Cues to advancement</i>		When first assisting, begins to actively assist (i.e., anticipates surgeons' needs)
Smart Help	<ul style="list-style-type: none"> • Shifts between surgeon and first assist roles • When first assisting, leads the resident in surgeon role (active assist) • Optimizes the field/exposure • Demonstrates the plane or structure • Coaches for specific technical skills • Coaches regarding the next steps • Continues to Identify anatomical landmarks for the resident 	The above, plus: <ul style="list-style-type: none"> • Shifts between surgeon and first assist roles • Knows all the component technical skills • Demonstrates an increasing ability to perform different key parts of the operation with attending assistance

<i>Cues to advancement</i>		Can execute the majority steps of procedure with active assistance
Dumb Help	<ul style="list-style-type: none"> • Assists and follows the lead of the resident (passive assist) • Coaching regarding polishing and refinement of skills • Follows the resident's lead throughout the operation 	<p>The above, plus:</p> <ul style="list-style-type: none"> • Can “set up” and accomplish the next step for the entire case with increasing efficiency • Recognizes critical transition point issues
<i>Cues to advancement</i>		Can transition between all steps with passive assist from faculty
No Help	<ul style="list-style-type: none"> • Largely provides no unsolicited advice • Assisted by a junior resident or an attending acting like a junior resident • Monitors progress and patient safety 	<ul style="list-style-type: none"> • The above plus: • Can work with inexperienced first assistant • Can safely complete a case without faculty • Can recover most errors • Recognizes when to seek help/advice
<p>*Implicit in all of these stages is the responsibility that the attending has to ensure optimal patient safety and outcomes. To that end, they may at any time correct behaviors that may lead to errors or, if an error has already occurred, to “take over” and correct the error.</p>		

WANT MORE?

[Assisting Surgery Learners to Identify the Principles, Preferences and Thresholds of their Attendings](#)

RESOURCES

[DaRosa DA. et al. A Theory-Based Model for Teaching and Assessing Residents in the Operating Room. Journal of Surgical Education, 2013;70:24-30.](#)

[Apramian T, Cristancho S, Watling C, Ott M, Lingard L. Thresholds of Principle and Preference: Exploring Procedural Variation in Postgraduate Surgical Education. Acad Med. 2015;90:S70–6.](#)

[Torbeck L, Wilson A, Choi J, Dunnington GL. Identification of behaviors and techniques for promoting autonomy in the operating room. Surgery, 2015;158:1102-12.](#)