



Assisting Surgery Learners to Identify the Principles and Variations of their Attendings

BACKGROUND

Surgeons employ specific approaches because they believe there is a best course of action (principle) or because a course of action is preferred by that surgeon or that circumstance (preference). As learners become more competent in their abilities, they must learn to identify and negotiate their attending's principles, preferences, and thresholds for accepting variations on a procedure. Attendings who intentionally discuss these aspects of practice with learners can facilitate learning.

DEFINITIONS

Principles - "rules regarding unequivocally acceptable or unacceptable procedural variations"; "unchanging—a permanent fixture or inviolable rule that clarifies the decision-making process." ¹

Preferences - "procedural variations that are perceived to be unlikely to have significant influence on the outcome of the procedure and are thus interchangeable" ¹

Threshold – "surgeon's stance toward the possible variations for a given procedural step and is determined by his/her management of residents' intraoperative choices." ¹

Spotting and Mapping Thresholds – when a resident recognizes (spotting) presence of procedural variation and noting (mapping) how each attending has a different tolerance/willingness for a variation

Negotiating threshold – exploring with an attending if a variation can be tolerated/employed

Defending threshold – explaining a choice or a variation

SUGGESTIONS

- Articulate principles vs preferences, provide explanation for basis of the choices.
- Inform learners how and when you prefer for them to ask about variations and your thresholds
- Pre-op or post-op briefings are opportunities to discuss these variations
 - Note: Learners may have limited mental capacity to discuss variation as they are performing procedures (e.g., closing).

WANT MORE?

[Teaching During Surgery](#)

RESOURCES

¹ [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.](#)