FREE Orthopaedic Surgical Education

As opposed to temporal case sequence ("start the approach" or "skin to skin") of progressive autonomy, Orthopaedic Surgery offers the opportunity to attain progressive autonomy for more than one surgeon in each case based on their level of psychomotor skill and knowledge synthesis (intellectual quality and practical utility).

The following progression involves higher levels of psychomotor skill up to stage three, while each progression involves higher and higher knowledge synthesis.

Fixation: Safe and efficient application of hardware

Reduction: Obtain and Maintain

Exposure: More than just "approach". Limiting biologic consequence of dissection. Exposure is what is required to achieve and assess the reduction. Includes tools, techniques, and retractor placement that will optimize exposure.

Evaluation: (a.k.a. "Am I done?", Evaluate reduction, stability, safe hardware placement). Hardest part for young surgeon. How will you assess reduction? Direct visualization? C-arm (special views like Broden's, lateral sacral, etc.) How assess length, rotation, alignment? Safe corridors for hardware. In bone?

As a young surgeon moves up the progression, he/she will obtain surgical autonomy.

For example, a junior surgeon-in-training may have attained the skill to safely and efficiently apply hardware, but has not yet attained the skill to obtain and maintain the reduction in a complex case. The junior surgeon-in-training will perform the Fixation, with the more senior surgeon-in-training will perform the Reduction and Exposure. Translation of knowledge is required to perform the Evaluation step. Mastery of this step is the final step to autonomy.