

Using JBJS Clinical Classroom in Residency Programs

JBJS Clinical Classroom was designed for use by individual clinicians to assist with continuing education and maintenance of certification, but residency programs have been adopting its use as an adjunct to residency education, to prepare for in-training exams, and ultimately board certification. Residents who begin using Clinical Classroom during their residency can continue as they move into fellowship and independent practice – a lifetime of orthopaedic education in one educational tool!

JBJS Clinical Classroom’s adaptive algorithm works the same way for residents as it does for individual clinicians. It can be used independently or incorporated into a program’s curriculum.

Advantages for residents

- **Advanced technology.** Most residents today are technology-native learners and JBJS Clinical Classroom is user-friendly and completely mobile. Residents can use Clinical Classroom anywhere, at any time on their phone or tablet.
- **Clinically-based, frequently updated content.** The content in JBJS Clinical Classroom is developed by clinical experts, peer-reviewed and based on the best-available, clinically relevant information. It is updated regularly as standards are changed and new procedures are added to practice. Questions are linked to additional
- **Autonomy and flexibility.** Residents can access Clinical Classroom on their own to answer questions. The adaptive learning algorithm directs the resident to educationally weak areas and they can access resources and references to see where they can improve, thus teaching good, lifelong learning habits.
- **Prepare for in-training and board certification exams.** Residents can use Clinical Classroom throughout their residency and continue to do so as they prepare for board certification. Questions are clinically-based and provide assessment on a broad range of orthopaedic topics.



Advantages for educators

- **Current, relevant content.** The questions in Clinical Classroom are written to address learning objectives developed by experts in each subspecialty area and are based on information contained in the content outlines for the board certification and maintenance of certification examinations.
- **Tracking learner performance.** Clinical Classroom has a robust reporting system providing program directors and faculty with the ability to track progress through Clinical Classroom providing information about their performance in each subspecialty area, the amount of time spent answering questions, and their confidence level in their own knowledge.
- **Assessment and remediation.** Clinical Classroom provides residency directors and faculty with the ability to assign random or customized quizzes to any or all residents for assessment and remediation. For example, if a resident doesn't score as well as desired on the in-training examinations, quizzes can be assigned at different time intervals to assess that resident's learning – and provide faculty with the quiz results to track a resident's improvement.
- **Curriculum enhancement:** Clinical Classroom can be incorporated into the curriculum by adding an assessment component to clinical rotations. This can be done by creating customized quizzes or assigning independent completion of questions within a subspecialty module that coincides with a particular clinical rotation.

NEJM Group interviewed several ACGME-accredited program directors to identify some best practices based on the use of NEJM Knowledge+.

Key recommendations

- **Introduce JBJS Clinical Classroom on NEJM Knowledge+** at the beginning of an educational year. It's harder for residents to incorporate a new learning activity at mid-year when habits are set. Also, consider a training session so residents understand how Clinical Classroom works and how to make the best use of it.
- **Recognize that this is a culture change.** Residents that are further along in their training (e.g. 3rd year and beyond) may have more difficulty adapting to a new way of learning and preparing for in-training examinations. Offer Clinical Classroom as an additional learning strategy so they are not asked to give up tools they are comfortable using.
- **Promote the idea that usage drives success.** Setting reasonable usage goals for residents using Clinical Classroom may increase the success of the tool. Reasonable goals will get motivated learners into using the tool and all will be required to participate to reach assigned usage and goals.
- **Avoid treating the use of Clinical Classroom as punitive.** Clinical Classroom should be promoted as a benefit to enhance learning and improve scores on the in-training examinations¹.

¹ Massachusetts Medical Society. Best practices in applying adaptive learning technology: How residency programs benefit from NEJM Knowledge+. 2018