






# The Structured Clerkship: A Competency-Based Model for Undergraduate Anesthesiology Training

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Dear Editor,

Anesthesiology education in undergraduate medical training is crucial for ensuring patient safety and preparing future physicians for common and potentially life-threatening clinical situations. However, available evidence and real-world educational experience show that traditional observation-based clerkships alone are not sufficient for developing the essential practical and clinical decision-making competencies required in this field. The persistent gap between theoretical instruction and actual bedside performance, particularly in skills such as airway management and cardiopulmonary resuscitation, remains a major challenge in medical education (1,2).

In response to this challenge, a structured educational program was designed and implemented in which anesthesiology training for undergraduate medical students was deliberately reorganized around clearly defined clinical competencies. Within this process, the learning pathway was intentionally structured to progress from targeted theoretical preparation to guided skills training and, subsequently, to supervised participation in real clinical settings. Face-to-face instruction, simulation-based practice, and focused e-learning were deliberately integrated to support a safe and effective transition from knowledge acquisition to clinical performance, in alignment with competency-based medical education principles (3,4).

Within this educational process, expected competencies were explicitly defined, and learner progress was monitored not only through knowledge-

based assessments but also through workplace-based evaluation methods, including direct observation of procedural skills and structured documentation of clinical activities in a skills logbook. Assessments were embedded in the learning processes rather than functioning solely as a summative judgment, thereby playing an active role in guiding learner development and performance improvement (5).

Observations from the implementation of this process show that when anesthesiology training is delivered through a structured, skills-focused, and performance-based approach, learners demonstrate marked improvement in clinical readiness, confidence, and active participation in real patient care environments. Furthermore, systematic documentation of skill acquisition and analysis of educational data enable targeted program refinement and progress, which is an element largely absent from traditional clerkship models (6).

From an educational scholarship point of view, such educational processes characterized by systematic design, authentic implementation, performance-based assessment, and iterative refinement represent key components of sustainable quality improvement in clinical education. Continuous monitoring and data-informed revision of these assessments empower alignment between educational objectives, learning experiences, and assessment strategies, and ultimately enhance accountability and educational effectiveness (7).

Accordingly, the experience of designing and implementing a blended, competency-oriented anesthesiology training process for undergraduate medical students suggests that revising clinical education is not merely a theoretical recommendation but a practical necessity for narrowing the theory-practice gap and improving patient safety. This approach may also serve as a transferable model for improving skills-based training across other clinical disciplines.

### Footnotes

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