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How to be an Effective and Efficient Clinical Instructor

To Anesthesia Providers in California

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Learning Objectives

Upon completion of this activity, participants will be able to

- Describe actions a CRNA can take to effectively teach a nurse anesthesia student in the OR.
- Explain successful teaching strategies for teaching students in the clinical area.
- Describe negative, ineffective teaching styles that prevent effective learning by the SRNA.

Socratic Method for Teaching

- Usually associated with one-to-one clinical instruction (as done in the OR)
- Has a tone of openness to dialogue
- Stresses importance of questioning concepts for this type of instruction to succeed

Socratic Method for Learning

- Students must realize they will make mistakes as they are reciting what they learn; this will enhance their educational learning, not label them as stupid
- Students should not be embarrassed to ask questions
- Their goal in the classroom is to gain knowledge and judgment that will make them excellent clinicians
- The goal in the clinical area is to use their knowledge and judgment and to hone their skills in order to give excellent patient care

Using a Conceptual Model for Nurse Anesthesia Education

- Patient-centered strategic thinking evolves in learners as a result of real OR experiences with a variety of cases
- Using knowledge to administer anesthesia for new cases requires guidance from expert mentors
- Mentors should aim instruction within the student's zone of proximal development
- Dialogue between student and teacher is essential

Seven Themes of Cognitive Flexibility

- *Students must adapt knowledge to tasks involving new situations; this requires metacognitive strategies (predicting, planning, checking, evaluating and revising)*
1. Avoidance of oversimplification and overregularization
 1. Multiple representations (Inc HR does not only represent light anesthesia)

Seven Themes of Cognitive Flexibility

3. Centrality of cases (cases vary greatly)
4. Conceptual knowledge is knowledge in use
5. Schema Assembly (from rigidity to flexibility)
6. Noncompartmentalization of concepts (multiple interconnectedness)
7. Active participation

From Novice to Expert: How RNs Become CRNAs

- Novice
- Advanced Beginner
- Competent
- Proficient
- Expert

From Novice to Expert: How RNs Become CRNAs

- Changes in behavior, not the passage of time, indicate movement from one stage to another and maturation into the role of nurse anesthetist
- Although they start out as advanced CC nurses, they need new rules to guide their behavior because they lack experience in the anesthetic environment

From Novice to Expert: How RNs Become CRNAs

- Competent students demonstrate greater confidence because of improved situational awareness and technical and organizational skills that enable them to prioritize and respond more quickly in complex situations
- Proficient students have achieved an identity and are able to perform appropriately in challenging situations. The proficient student is exemplified by the recently graduated student nurse anesthetist

From Novice to Expert: How RNs Become CRNAs

- The expert level is unlikely to be attained by SRNAs because it requires a tremendous amount of experience in a variety of situations and development of an intuitive ability to accurately identify the most important aspects of a problem without needing to consider a range of alternatives

Important Points

- Students advance at different rates
- Some learn quickly; others take longer
- All have periodic growth spurts when things suddenly come together (“ah-ha”)
- A few students will not progress much beyond the advanced beginner stage (“Failure to thrive”)

Important Points

- These students may perform competently with simple cases, but not with more complicated cases
- The novice-to-expert model can help educators recognize students who are progressing normally and those who are not
- This model fails to take into account the important role that clinical instructors play in modeling the behavior of the student

Important Points

- Students generally hold their instructors in high esteem and view them as mentors
- An instructor should not make the student feel humiliated, threatened or unwelcome
- Instructors must realize the impact they have on their students; thus, they can facilitate or hinder learning

Clinical Education

- Students gain confidence in their skills and gain ability to function in a range of situations through repeated practice and confirmation by others that they are making progress
- The working relationship can be facilitated by a friendly and open demeanor, with the instructor discussing his rationale for decision making and sharing clinical pearls

Learning Styles and Their Effects on Clinical Education

- A student will adopt a certain learning style based on psychological, behavioral, cognitive and affective factors
- Learners can be classified:
 - Diverger
 - Assimilator
 - Converger
 - Accommodator

Learning Styles and Their Effects on Clinical Education

- A particular strategy a student adopts that arises from psychological, behavioral, cognitive and affective behaviors
- Each type of learner prefers certain types of learning activities
- No specific learning style is more associated with academic success than another
- Healthcare education is more formal & rank-driven than other disciplines

Preferred Learning Activities Associated with Learning Styles

<i>Learning Style</i>	<i>Characteristics</i>	<i>Activities Preferred</i>
<i>Converger</i>	Abstract Active	Receiving practical tips from an expert on how to intubate
<i>Diverger</i>	Concrete Reflective	Observing how other people intubate; writing down thoughts
<i>Assimilator</i>	Abstract Reflective	Reading and then understanding the theory and concept of intubation
<i>Accommodator</i>	Concrete Active	Picking up a laryngoscope and attempting to intubate; practicing the skill

Learning Styles and Their Effects on Clinical Education

- Instructors should be familiar with the different learning styles of students and how they may effect how the student processes what is taught to him/her
- Students are capable of adapting their learning styles to the teaching styles of their clinical instructors.
- However, if clinical educators can incorporate techniques that match the student's learning style, then the student may benefit and learn more

Generational Dynamics in Nurse Anesthesia Education

- Generational differences affect anesthesia education clinically and didactically
- In the US, there are a 4-generation workforce:
 - Traditionalists (64-89 yrs old)
 - Sacrifice, hard work, respect for authority, follow rules, patience
 - Baby boomers (45-64 yrs old)
 - Optimism, teamwork, health/wellness, personal development
 - Generation X (29-44 yrs old)
 - Balance, technoliteracy, fun, independent, worry about retirement
 - Generation Y (9-28 yrs old)
 - Optimism, confidence, sociable, diverse, civic duty

The Four Generations

	<i>Traditionalists</i>	<i>Baby Boomers</i>	<i>Generation X</i>	<i>Generation Y</i>
<i>Future Outlook</i>	Practical	Optimistic	Skeptical	Hopeful
<i>Turnoffs</i>	Profanity	Political incorrectness	Cliché, hype, name brand items	Techno-illiteracy, intolerance
<i>Work Ethic</i>	Dedicated	Driven	Balanced	Determined
<i>Relationships</i>	Personal sacrifice	Self-gratification	Reluctance to commit	Crave community
<i>View of Authority</i>	Respectful	Love/hate	Unimpressed	Team-oriented

Generational Dynamics in Nurse Anesthesia Education

- Commonalities exist between Generation X and Y that lend to effective teaching strategies
- Cross-generational conflict can hinder both student achievement and faculty satisfaction
- Advances in technology has had the greatest impact on the learning styles of Generation X and Y

Generational Dynamics in Nurse Anesthesia Education

- Instructors must shift from primarily giving lectures to doing creative learning techniques
- The focus is no longer on effective teaching but on effective learning.

The Importance of Effective Communication

- Effective communication can improve the work performance of both students and faculty
- Student nurse anesthetists must develop advanced skills in communicating with their patients and with all HC professionals involved in pt care
- Clear and accurate communication can help to prevent errors and increase patient safety

The Importance of Effective Communication

- Effective verbal communication means speaking clearly and concisely
- Important points should be emphasized
- Giving orders or suggestions to students should be specific and to the point
- Good verbal communication skills takes time to learn

The Importance of Effective Communication

- Before talking to a student about negative behavior, write down your major points
- Do not make derogatory statements (That was stupid), but ask the student why he did what he did
- Take time to listen; do not interrupt; silence is golden!

The Importance of Effective Communication

- Faculty must acknowledge the student's nonverbal communication to see if it adds meaning to what the student is saying or if it is contradicting what the student is saying
- If a confusing message is felt, restate what you think the student is saying to clarify it
- If reprimanding a student, this should also be put in writing to make sure the student understands what you are saying and what the plan of action is

Using Evidence-Based Practice

- Evidence-based practice is critical to improving patient outcomes
- Implementing evidence-based practice requires a thorough assessment of the best available evidence
- The strength and applicability of the evidence that is out there requires practitioner judgment

Using Evidence-Based Practice

- In contrast to research utilization, evidence-based practice incorporates the experience and judgment of the HC practitioner and the patient's desires
- Using evidence-based practice may pose challenges, but the rewards for patients is substantial
- Synthesizing the best evidence with clinical judgment along with the uniqueness of each patient is the real challenge when practicing evidence-based nurse anesthesia

Evidence-Based Process Steps

1. Form a PICO question.
2. Identify and retrieve best available evidence.
3. Appraise the evidence.
4. Integrate clinical expertise and patient values and needs with research.
5. Evaluate the intervention's effectiveness.

In the surgical patient (population), how effective is dexamethasone (intervention) vs ondansetron (intervention comparison) in preventing nausea (outcome)?

Participating in a Mentoring Program

- Mentoring a student should include obtaining specific goals that are established by the mentor and the student at the beginning of the learning process.
- Goals should not only be broad but also specific and should include both short-term and long-term tasks.
- Mentoring involves four phases: the initiation phase, cultivation phase, separation phase, and re-defining phase.

Participating in a Mentoring Program

- Mentoring can lead to job recruitment and retention.
- Mentoring can lead to a desire to serve as a mentor to a student in the future, especially when the process becomes a positive experience.
- Mentoring can be a rewarding experience for both the mentor and the student.

Functions of a Successful Mentor

- Demonstrates role expertise and serves as a role model
- Introduces student & promotes role socialization
- Provides support by listening, befriending, expressing positive expectations
- Challenges the student & engages in spirited discussions
- Sets high standards & demands top performance of student
- Encourages autonomy through competency, self-confidence, responsibility

Advantages of a Mentoring Program

- Decreases stress of the student
- Offers advice, support and empathy to the student
- Enhances the learning process
- Increases professionalism and prevents “eating of our young” by building professional relationships
- Promotes self-confidence, role socialization and professional networking
- Provides job enrichment and professional growth of mentor
- Increases success in one’s profession

Negativity of a Mentoring Program

- Time-consuming for mentor
- Mentor may not have good teaching skills
- Personality mismatch may negatively impact experience
- Mentor may not be available when student needs mentor
- Work and school schedules may prevent mentor and student from being paired
- Often times, no financial reward for the mentor

The Importance of Evaluating the Student

- Evaluating the student's clinical practice complies with the requirements of the COA of NAEPs, protects the public, meets institutional standards and satisfies student expectations
- An evaluation should be clear, specific, and appropriate to the level of proficiency expected
- Reflective learning is a key to helping the student to progress clinically; feedback is important

The Importance of Evaluating the Student

- The instrument should be competency-based with the skills needed for safe practice forming the matrix of the evaluation.
- Good documentation of a student's poor performance is critical to assist both the student and the program in formulating a specific plan of remediation.
- If remediation fails, good documentation serves as a tool in substantiating dismissal from the program.

The Importance of Evaluating the Student

- The evaluation should send the same message that the CRNA has given to the student throughout the day and should include positive and negative remarks.
- The evaluation should be given to the student at the end of the day and both the CRNA and the student should discuss the day's performance
- If improvement is needed, a plan should be discussed

Stressors of Teaching and Learning

- Stress can have a major effect on teaching and learning
- People respond differently to stress; may be positive and high energy or may be negative
- Stress can have a major influence on performance and interpersonal relationships among faculty and students

Stressors of Teaching and Learning

- Stress may compromise health and well-being in pronounced ways
- The concept of wellness is a major factor affecting workforce productivity
- Patient safety is affected by the healthcare provider's health and wellness

Stressors of Teaching and Learning

- Faculty must understand the stress and anxiety that students experience in order to devise the best techniques to help them cope with daily stressors
- Stress and burnout may impede effective teaching and learning and will likely intensify unless interventions are implemented
- Students must have the support of faculty in order to successfully deal with stress

Using Simulation to Teach: Types of Simulations

- Computer, screen-based simulators
- Task trainers
- High fidelity, full-body simulators
- Standardized patients

METI Simulator

- HPSN, the Human Patient Simulation Network, is one of the largest education, training and networking medical simulation communities in the world.

METI.com

The Laerdal Simulators

The New Laerdal Portable Simulator (G-Man)

NOELLE Birthing Simulator

Neonatal Simulators

Pediatric Simulators

Advantages of Simulation

- Can make errors without threat to a real patient
- Avoids pitfalls of interruptions/unplanned events which occur in real clinical setting
- Allows reflection and debriefing of performance
- Can be used for continuing education and research

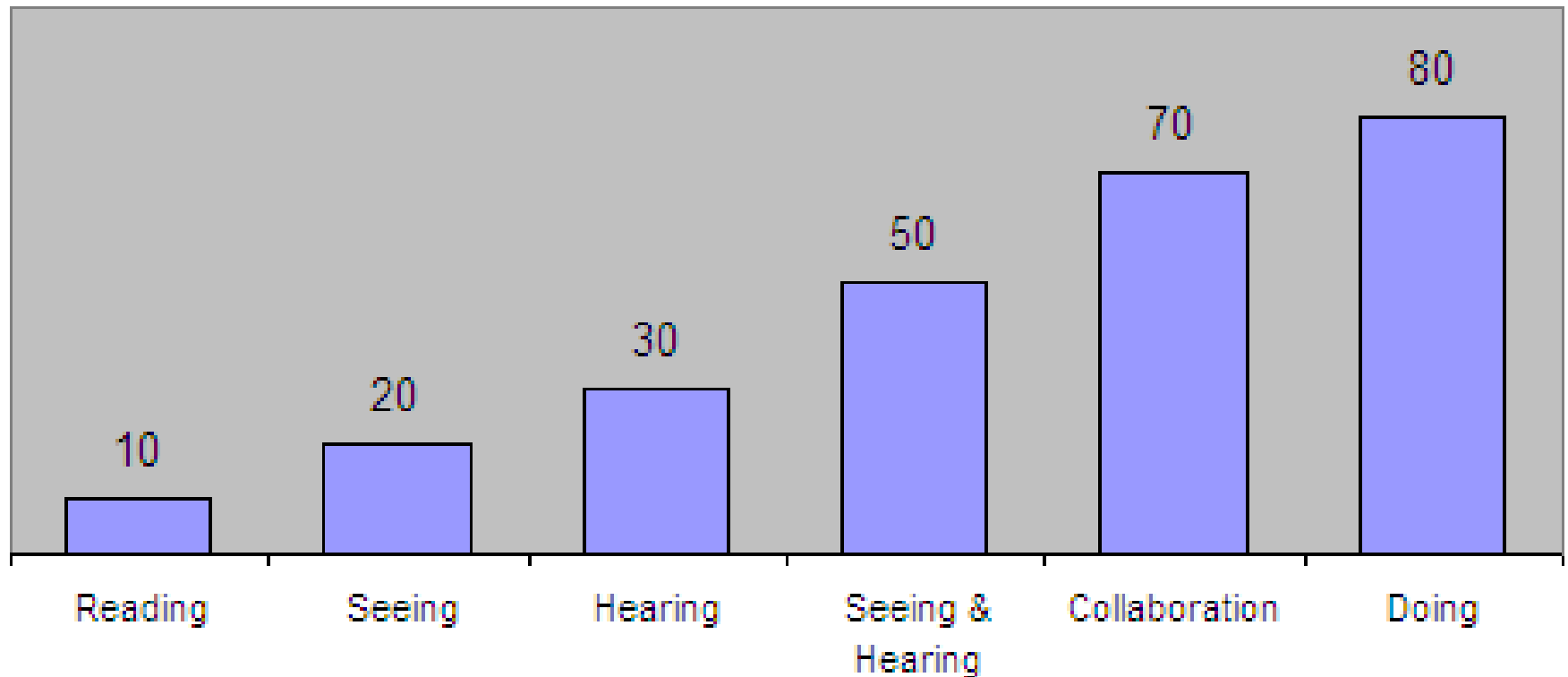
Tell me and I will forget.

Show me and I might remember.

Involve me and I will understand.

(Chinese Proverb)

Percent Retention



Chi, M. T. H., Bassok, M., Lewis, M. W., Reimann, P., & Glaser, R. (1989). Self-explanations: How students study and use examples in learning to solve problems. *Cognitive Science*, 13, 145-182.

Using Simulation to Teach BLS (CPR)

Using Simulation to Teach ACLS

Using Simulation to Teach Nurse Anesthesia

Using Simulation to Teach Anesthesia

- Preoperative Assessment
- Preparation for Surgery
 - Anesthesia machine, equipment, cart
- Administering the Medications
- Induction and Intubation
 - Routine, Fiberoptic, Emergent/RSI
 - “Can’t intubate-Can’t ventilate”
- Maintenance
- Emergence and Extubation

Simulation-Based Education

- Nurse anesthesia programs should strive to incorporate anesthesia CRM into the curriculum
- Simulation is essential to improving patient safety
- Advancing patient safety is a fundamental driving force for simulation-based education
- Curriculum designs should be longitudinal (throughout length of program) and integral

Simulation and Crisis Management

- Have participants establish clear goals on managing tasks
- Identify resources, exchange information, use authority and assertiveness, reveal one's thinking to the team
- Students should gather information, recognize and be aware of environment and anticipate what may go wrong
- Debrief after the scenario for more effective learning
- Simulation should be integrated throughout the curriculum

Simulation and Effective Learning

- Feedback provided during learning experience
- Learners engage in repetitive practice
- Learners practice with increasing level of difficulty
- Curriculum is adaptable to multiple learning strategies.
- Controlled learning environment: mistakes are allowed
- Individualized learning is possible; outcomes clearly defined

Validating Competency

- **Simulation can be used in the practice environment to validate competency.**
- Using simulation that integrates feedback, debriefing, or guided reflection can help facilitate the link between theory and practice.
- Simulation can increase the learner's ability to synthesize knowledge and promote insight.

Future Recertification

- American Board of Medical Specialties
 - Certification/Recert includes a simulation part
 - Started in 2003 since multiple-choice exams provide limited ability to assess
- Interventional Cardiology Certification
 - Simulation portion optional at this time but increases points
- AANA/ASA
 - Discussions occurring about adding simulation

Summary

Why be a clinical instructor?

Even though there is normally no financial compensation, it can be a rewarding experience, especially when students becoming successful CRNAs.

The future of nurse anesthesia is formed by the instructors of today!



References

- Abrahamson, S. & Denson, J: A computer-controlled patient simulator. *JAMA* 1969, 208(3), 504-508.
- Asbury, A: Simulators for general anesthesia. *BJA* 1994, 73(3), 285-286.
- Cooper JB & Taqueti VR: A brief history of the development of mannequin simulators for clinical education and training. *Qual Saf Health Care* 2004; 13(Suppl 1): i11-i18.
- Gaba, D: Improving anesthesiologists' performance by simulating reality. *Anesthesiology* 1998, 76(4), 491-494.
- Gaba, D, Fish, K & Howard, S: *Crisis management in anesthesiology* 1994. New York: Churchill Livingstone.
- Helmreich, R: *Training and evaluation through simulation in Aviation and Medicine*. <http://www.psy.utexas.edu/psy/helmreich/Simrhh.htm> [1-10-99].
- Kohn LT, Corrigan JM, Donaldson MS. *To err is human: building a safer health system*. Washington, DC, National Academy Press; 1999
- Schwid, H: A flight simulator for general anesthesia training. *Computers and Biomedical Research* 1987, 20, 64-75.