CME HIGHLIGHTS

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Boonshoft School of Medicine
WRIGHT STATE UNIVERSITY

In this issue:

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Objectives

After reading this newsletter, the CME professional will be able to

- develop educational interventions employing andragogical strategies.
- employ learner-centered strategies to improve educational experience
- identify appropriate ACCME-defined desirable physician attributes
- recognize the best training method needed for the type of educational intervention

Message from the Director

Andragogy and the Physician as Learner

During my formative years in academics at the University of North Carolina from 1974–1977, I had the good fortune to meet and be enlightened by the "Father of Adult Learning," Malcolm Knowles, who was ending his illustrious career at North Carolina State University. In his notable body of work, including 13 books and more than 230 articles, Dr. Knowles changed the approach of how to educate adults (andragogy) versus teaching children (pedagogy).

His principles rested on five basic assumptions about "grown ups" versus kids in education:

1. **Self concept:** Adults move from dependence to self-direction in maturity.
2. **Experience:** Adults develop a vast reservoir of experience for learning over time.
3. **Readiness:** Adults develop more readiness to learn as a result of social roles.
4. **Orientation:** Adults move from "postponed" to "immediate" application for learning and from "subject" to "problem" centeredness.
5. **Motivation:** Adults move from external to internal motivation to learn.

Dr. Albert F. Painter Jr., Psy.D., CME Director, Associate Professor of Family Medicine and Psychiatry, Assistant Dean of Faculty Affairs

As I reflect on how we are educating physicians and other health care clinicians, I find great agreement with Dr. Knowles' theories. Content is certainly still an important component in learning but falls far short of the mark without the inclusion of interaction and application to "real world" patient problems. Debate, argument, disagreement, and point-counterpoint discussions are some of our most potent learning processes in which the participants possess the information and experience crucial for cognitive and behavior change. I would go so far as to state that our most important role as adult educators is to create the conditions for learning with the adult participants as subject experts. We need to be mindful of these principles as we design and present continuing medical education offerings for physicians and other health care professional learners.

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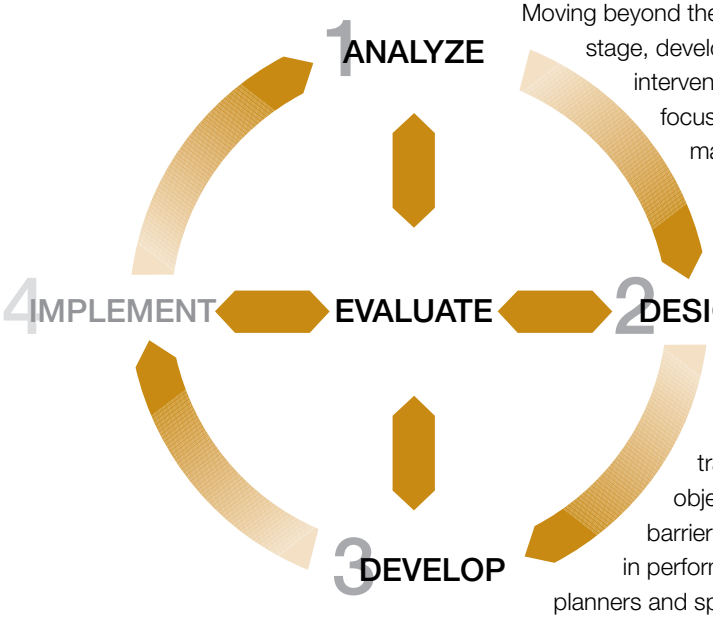
After the planning committee has completed the gap analysis and has developed the goals and objectives, the planning committee should start developing an educational intervention to close the practice gap and fulfill the goals. See *CME Highlights Vol. 1(1)* for more information on step one: gap analysis, including finding learning barriers; and *CME Highlights Vol. 1(2)* for more information on step 2: developing goals and objectives. This issue will focus on the third step in instructional design.

Step Three: Develop



Moving beyond the analyzing and designing stage, developing an education intervention such as CME focuses on details relating the material to the audience. Analyzing the target learner is essential to creating a successful educational intervention. Planners need to pick the most time- and cost-effective training to achieve the objectives, while balancing barriers that may affect changes in performance. At this point, planners and speakers should collaborate to develop actual content, presentation style, and performance aids. The development stage doesn't end once the CME application is complete or approved. Educators should keep in mind the learner's needs, preferences, and desires up to and including the implementation phase.

Quick Minute

Take this mini-test before you read this issue to test your current knowledge and attitudes.

1. T/F The best teaching method for adults is lecture
2. T/F Adult learners care about the topic
3. T/F Covering topics through lecture once a year is adequate to achieve a change in practice
4. T/F Adults are mostly motivated by external factors like credit
5. T/F Adult learners need to apply new information immediately
6. T/F A 50-minute lecture with 10-minute Q&A session is not learner centered
7. T/F Adult learners want to interact with new knowledge, skills, or behaviors
8. T/F Speakers should not worry about what type of experiences the adult learner may have had
9. T/F Using complicated examples is more effective than simple examples
10. T/F ACCME was the innovating structure to create medical education competencies

Answers:

False: 1, 3, 4, 8, 10

True: 2, 5, 6, 7, 9

At the end of this issue, you will be asked to complete a complement of this quiz to help your reflection and application of the material.

Since the 1960s, the term “andragogy” was used as a label for the growing body of knowledge and technology in regard to adult learning. Often it is used to describe the process for engaging the adult learner.

The Message from the Director on page one describes five assumptions that underlie the andragogical model of learning: self-directedness, experience, need to know, real-world application, and motivation. These five assumptions have revolutionized adult learning and continuing education.

Generally, adults are used to learning by a teacher-centered philosophy or pedagogy: instructor at the front of the room, various students at various levels of understanding sitting in desks passively listening to the lecture. This philosophy can succeed for only a certain number of students, leaving behind those who learn through doing, reading, discussing, or watching a demonstration. Using a different approach to developing training may increase the success of completing the objectives.

The andragogical assumptions are used to create adult learning principles:

- Adults must recognize the need to learn
- Adults want to apply new learning back on the job
- Adults need to integrate past experience with new material
- Adults prefer the concrete to the abstract
- Adults need a variety of training methods
- Adults learn better in an informal, comfortable environment; adults want to solve realistic problems
- Adults prefer the hands-on method of learning

Note: these principles do not attempt to point to any one style of learning. Some learners maybe visual, while others may learn through listening or watching a demonstration. No one learning style is better than another. A variety of learning techniques should be used during an educational activity to maximize understanding.

CME Trends

Based on data collected in 2009 and 2010, the CME program is growing.

Snapshot of Wright State University Boonshoft School of Medicine CME

Directly Sponsored

Live events: increased 100%

RSS: decreased 25%

Internet enduring materials: increased 21%

Journal-based: decreased 50%

Total individual activities increased 28%

Jointly Sponsored

Live events: decreased 85%

RSS: increased 50%

Internet enduring materials decreased 100%

Total individual activities increased 60%

The andragonial model focuses on what a learner is able to take away from the experience. Research shows that learner-centered training is more effective than information-centered training. Regardless of the approach to the training, focusing on the learner's needs is paramount. As a trainer, use strategies developed from the andragonial theory:

Top 10 Behaviors to Create Learner-Centered Training

1. Organize the training to include the learner
2. Establish expectations (goals and objectives) at the beginning
3. Create a supportive learning environment for learners to take risks, discover, ask questions, and try out different ideas and ways of doing things
4. Be aware of both verbal and nonverbal communication
5. Maintain high energy and make the experience enjoyable
6. Learn from the audience; be accepting of other ideas and do not be defensive
7. Show respect to all learners
8. Do not be afraid to admit what you don't know. Be willing to follow up with learners
9. Use positive reinforcement
10. Employ improvement by seeking feedback from the group about your behavior

Learner-Centered Approach Facts	
Stated objective	To improve performance of participants
Underlying objectives	Meet participants' need to know and do
Role of trainer	Facilitator; coach
Methods	Trainer asks questions; does no more than 50 percent of the talking
Participant's role	Active participant in learning process; learns by doing
How feedback Is obtained	Opportunities to apply skills through role plays, case studies, simulations, and other structured experiences
Purpose of feedback	To see whether participants can apply what they learned; to see whether they need more practice or remedial instruction
Advantages	• Two-way communication • Participants directly involved in learning; opportunities to apply learning • Participants receive immediate feedback through application opportunities • Greater satisfaction with learning experience • Increased understanding and retention • Addresses different learning styles
Disadvantages	• Takes longer because participants have opportunities to practice • Less content covered in a given time period • Can be expensive because of smaller class size

Developing the Physician through Competency

In the mid-2000s, the Accreditation Council on Graduate Medical Education (ACGME) collaborated with the American Board of Medical Specialties (ABMS) to develop six competencies and required all residency programs to implement them as a way to evaluate the effectiveness of the training program. They are "specific knowledge, skills, behaviors and attitudes, and the appropriate educational experiences required of residents to complete GME programs." These competencies are now used by the LCME (undergraduate medical education accreditation association) in conjunction with the AAMC's Medical School Objectives Project and the physician roles summarized in the CanMEDS 2000 report of the Royal College of Physicians and Surgeons of Canada to define characteristics appropriate for a competent physician.

More recently, the ACCME has adopted the ACGME competencies along with the five Institute of Medicine (IOM) competencies as a way to continuously measure physician development and improve the quality and safety of patient care. ACCME Competency C6 states: The provider develops activities/ educational interventions in the context of desirable physician attributes (e.g. IOM competencies, ACGME competencies).

The CME program at WSU BSOM is committed to providing quality medical education and requires every topic in every activity must be developed to include at least one desirable physician attribute as defined by the ACCME to qualify for *AMA PRA Category 1 credit™.*

The AMA and ACCME recognize that a presenter or author may learn while preparing an original presentation and have created a special activity type to document that learning. The AMA defines the common term "speaker credit" as "learning from teaching." This credit is calculated based on the presentation time. The formula is two (2) credits for every one (1) hour presented. With all CME activities, the credit can be broken down into quarter-hour increments. This credit recognizes the personal learning that occurs while preparing an original presentation as part of an *AMA PRA Category 1 Credit*™ activity.

"Learning from Teaching" activities are expected to be developed in compliance with all applicable ACCME requirements. The CME program has developed an application for a presenter or author to complete to adhere to those ACCME requirements. The questions are based on an ACCME tutorial on the implementation of "Learning from Teaching."

Through self-assessment, the presenter identifies areas of professional practice of improvement. This may be clinical knowledge but is not limited to clinical areas. The following are questions the presenter will be required by this CME program to complete to achieve a planning process and evaluation of the educational intervention:

1. Describe the area of your professional practice that this learning project will/ did inform, or improve:
2. Describe this in terms of new knowledge sought or gained, or a new strategy or practice developed for you:
3. Describe where and when you can apply this learning:
4. What outcome for your practice did it/ will it have?
5. What assistance or resources did/ would you need from us in this learning project?
6. Describe what you did or will do, as an active learner, to complete this project?
7. Can we/did we assist you by,
   a. Connecting you with other persons with a similar project?
   b. Connecting you with a local physician with experience in this area?
   c. Making available our simulation center for you to work on this project?
8. Did you encounter any barriers to achieving your desired result while working on this project?
9. As an end to this project we ask you to describe for us,
   a. What you learned?
   b. What the outcome of this learning will be for you, or your patients, or the system in which you work?
   c. What barriers to implementation exist for you?

Active Training Credo

Old Chinese Proverb

What I hear, I forget

What I hear and see, I remember a little

What I hear, see, and ask questions about or discuss with someone else, I begin to understand.

What I hear, see discuss, and do, allows me to acquire knowledge and skill,

What I teach to another, I master.

Today's medical education audience is diverse. Health care teams not only work together, but learn together. Trainers now need to develop CME for health care professionals belonging to generation Y (1982-1995), to the silent generation (1925-1945), and with gender, cultural, and professional differences. Adaptation is the name of the game in our evolving world.

At an Alliance for CME conference in June 2009, Marcia Jackson, Ph.D., president of CME By Design, identified some specific approaches relating to physicians.

1. Enable learners to be active participants
2. Use content related to learner's current experiences—focus on clinical issues
3. Allow learners to identify and pursue their own learning goals
4. Provide practice with realistic "messy" examples
5. Support and nurture self-directed learning
6. Provide feedback to learners
7. Facilitate learner self-reflection
8. Role model behaviors

Jackson also mentioned that physicians must recognize the opportunity to improve/learn. They seek out resources to improve and engage in that learning. Physicians then experiment with that educational intervention. If the results are positive, they incorporate it in their practice. As CME professionals, we develop the resources physicians engage. Not only must we anticipate the need, we must make sure it is available when the physician needs it.

The planning committee is responsible for picking a venue to hold the audience, with appropriate accommodations such as breakout rooms, food services, or an exhibitor hall. Picking topics that promote improvements in health care and speakers is a main priority for the committee, but they are also responsible for identifying barriers to implementing changes in practice, and factors outside of control that impact patient outcomes. This part of planning can be difficult and demands creative thinking for the committee when creating an educational intervention with the maximum impact. In addition to creating instructional materials for the participants, they should keep in mind non-education strategies to enhance change as an adjunct to the educational intervention, such as hand washing when discussing reducing infections or chart reminders for certain type of patients.

Feedback

Questions or comments on what you have read? Please fill out the online evaluation.

ACCME criteria focused in this issue:

- The provider generates activities/educational interventions around content that matches the learners' current or potential scope of professional activities. (C4)
- The provider chooses educational formats for activities/interventions that are appropriate for the setting, objectives, and desired results of the activity. (C5)
- The provider develops activities/educational interventions in the context of desirable physician attributes (e.g., IOM competencies, ACGME competencies). (C6)
- The provider utilizes non-education strategies to enhance change as an adjunct to its activities/educational interventions (e.g., reminders, patient feedback). (C17)
- The provider identifies factors outside the provider's control that impact on patient outcomes. (C18)
- The provider implements educational strategies to remove, overcome, or address barriers to physician change. (C19)

INSTRUCTIONAL METHODS

With pressure to prove a change in professional practice, the CME paradigm has shifted from the "one and done" philosophy to an ongoing performance improvement cycle. Although lecture is the most inexpensive teaching method to reach a large audience, it may not be the best for all types of educational interventions. See table at right.

Innovative medical education should use multiple techniques to build on knowledge, to experience it, to develop strategies, to employ it in practice, to evaluating if the education had an impact on patient outcomes. Using multiple sessions, with multiple teaching methods, building on top of the previous educational experience is preferred in today's world of changing patient outcomes. Using this method can improve the match between the learner's current or potential scope of professional activities, and the educational intervention.

Part II of the ABMS Maintenance of Certification is lifelong learning and self-assessment. Specialty boards have created self-assessment instruments to identify areas for improvement and establish a baseline for growth. Physician learners can use these pre-defined instruments or create their own personalized instruments to establish personal learning goals. Below is a list of techniques that the physician may employ:

Lectures convey basic information quickly to a large audience efficiently, however they limit learner interaction and can be considered boring.

Small-group discussions foster collaboration and increase interaction by offering an opportunity for learners to express opinions, share ideas, and solve problems.

Role playing gives the learner an opportunity to experience by practicing a new skill and receiving immediate feedback. The learner can gain insight to his or her own behavior; however, some learners may be resistant to possible criticism in front of colleagues.

Guided mental imagery/discussion helps the learner increase understanding or gain insight in the educational intervention. It can be used for large groups and stimulates creative thinking. It can be used to replace role playing to alleviate the shy learner.

Case studies allow learners to discover through interaction with colleagues. Learners practice problem solving within a specific situation and can apply new information.

Simulations re-create a realistic process, event, or a set of circumstances that elicit the learner's natural proclivities. Learners integrate or apply new knowledge immediately with feedback. Although this method is more expensive and time-consuming, it benefits the learner by allowing immediate experimentation and application.

Observation allows learners to observe the correct way to perform a procedure or apply a skill in a non-threatening way. It generates interest and allows for discussion or debate with immediate feedback from the instructor. Learners who are not given the opportunity to experiment through role play or simulation may not adequately grasp the concepts.

Desired Outcome	Suggested Teaching Method
Knowledge	• Lecture • Small-group discussion • Computer-assisted instruction • Webinar
Attitudes/ Values	• Guided discussion • Small-group discussion • Role play • Case study • Videotape • Simulation • Debate
Understanding	• Guided discussion • Small-group discussion • Role play • Videotape • Computer-assisted instruction • Case studies • Demonstration Dramatization
Skill Development	• On-the-job performance • Role play • Skill practice • Simulation

Post Test

Please take a moment to reflect on what you have learned in this issue of *CME Highlights* and review the following.

1. What is the best teaching method for all adults?
2. Adults must recognize the need to _____.
3. When does change in professional practice happen?
4. What motivates YOU to keep learning? i.e. reading this issue
5. Do you review training materials six months after the training?
6. What is one advantage of developing a more learner-centered training?
7. Thinking back on your training, what motivated you to retain the best or most of it?
8. What is your ideal method of learning? How can you implement that method in a traditional CME activity?
9. Why do you think providing practice to your learner audience by relating complex examples is better than easy examples?
10. What does the term "desirable physician attribute" mean?

Answers:

1. There is no prescribed best method for teaching adults.
2. Learn.
3. The health care learner audience is diverse, and each learner is at a different step in his or her education and practice. One of the most important items for any learner is application of material.
4. This question is intended for self-reflection. Each learner's motivation is different. CME and ABMS principles stress life-long learning and improvement.
5. This question is intended for self-reflection on your habits relating to training. This may help you develop training for others. Most people do not review materials six months after the initial training.
6. Multiple answers apply: two-way communication, learners are directly involved, application, immediate feedback, greater satisfaction, or the benefit of using different learning styles.
7. This question is intended for self-reflection. Most adults find that they retain the most training when new skills, attitudes, or knowledge is immediately applied.
8. This question is intended for self-reflection. Each person has a different preferred learning style.
9. This question is intended for self-reflection on learning behavior and interaction. There are many answers. One answer is asking complex question and having audience members quickly form small groups to discuss allows immediate application and feedback.
10. The ACCME adopted ACGME and IOM competencies to describe ideal abilities that physicians should be evaluated on.

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