

## ***Section 3.5.2***

# **Educational Interventions**

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# Section Overview

What is education?

What are the purposes of education?

What is the process for education?

What educational interventions can we use to effect KT?

What are some current trends in CME?

Future research



# What is education?

- AMA defines continuing medical education (CME) as: “any and all ways by which physicians learn and maintain their competence”
- Broad and holistic definition, but...
- CME often involves large group sessions that rarely demonstrate evidence of effect on clinician performance or health care outcomes
- We describe educational interventions to promote the use of best evidence into health professional practice



# What are the purposes of education?

External forces for change:

- Knowledge explosion
- Specialty society interests in CME
- Need for documenting knowledge and skills maintenance
- Pharmaceutical and commercial interests in CME
- Innate professionalism



# What are the purposes of education?

Internal forces for change:

- Recent personal experience
- Changing demographics (e.g. aging or changing populations and patient demands)
- Self-appraisal and awareness built from clinical experiences
- New and expanded competency or “zone of mastery”



# What are the purposes of education?

Types of change:

- Small adjustments or accommodations (e.g. adding a new drug to a regimen)
- Larger redirections (e.g. adopting an entirely new method of practice)



# What are the purposes of education?

Traits of the self-directed learner:

- Discipline and motivation
- Analytic abilities
- Ability to reflect and be self-aware
- Curiosity, openness and flexibility
- Well-developed information-seeking and retrieval skills
- Good general learning skills

(Candy, XXXX)



# What is the process for education?

Steps in the change process:

- Rogers' "decision-innovation process"
- Prochaska and Velicer's "transtheoretical model"
- Pathman's "awareness-agreement-adoption-adherence" process
- Stages of learning important in studying effect of education interventions





# What is the process for education?

<b>Learning/ change continuum</b>	<b>Awareness</b>	<b>Agreement</b>	<b>Adoption</b>	<b>Adherence</b>
<i>Elements of change:</i>	<i>Predisposing elements:</i>	<i>Enabling Strategies:</i>	<i>Enabling strategies:</i>	<i>Reinforcing elements:</i>
Possible roles for educational interventions	Conferences, lectures, rounds, print materials	Small group learning activity; interactivity in lectures	Workshops; materials distributed at conferences; audit and feedback	Audit and feedback; reminders



# What is the process for education?

Using only one technique rarely produces change, but...

- Awareness of new evidence, conferences, print materials and rounds may predispose to change
- Exposure to other learners at conferences may provide a setting for discussing new findings or guidelines
- Workshops or on-line learning experiences may facilitate adoption of new methods
- Audit/feedback may facilitate sustainability



# What educational interventions can we use?

Large group sessions produce little performance change, but...some useful and effective strategies to increase impact on performance and health care outcomes:

- Determining needs and setting objectives
- Formatting the large group session
- Variation in the educational method



# What educational interventions can we use?

Determining needs and setting objectives:

- Driven by patients and health care system, not just needs of learners
- Subjective needs assessment strategies (questionnaires, focus groups, structured individual interviews, and diaries or log books)
- Objective tools (standardized measures of knowledge and/or skills, chart audits, peer review, observation of practice and reports of practice patterns and physician performance data)



# What educational interventions can we use?

Improve formatting of large group sessions by:

- Employing multiple methods
- Increasing interactivity of the sessions
- Using other strategies to increase reach and impact



# What educational interventions can we use?

Employing multiple methods:

- Use a variety of presentation media  
(e.g., audio tapes; actual or standardized patients or videotapes; panel discussions; debates; quizzes on learning needs or outcomes)
- Distribute practice enablers  
(e.g., patient care reminders, protocols and flow sheets, patient education materials, wall charts)
- Use clinical scenarios and vignettes to increase relevance and applicability of materials
- Staging two workshops instead of one  
(e.g., one month apart)



# What educational interventions can we use?

Increasing interactivity of the sessions:

- Increase the frequency and duration of Q and A sessions
- Encourage “buzz groups” and pyramiding or snowballing techniques (e.g., think-pair-share)



# What educational interventions can we use?

## Small group learning:

- Groups of 5-10 learners who meet regularly
- Led by a facilitator
- Common in Canada and Europe
- Demonstrate an impact on competence and performance (possibly due to concentration on evidence-based material, peer pressure and influence)





# What educational interventions can we use?

Distance education techniques:

- Web, video, or audiocasts
- Must be interactive to engage the learner
- Have shown increases in physician knowledge and knowledge retention
- Online communities of practice (promotes networking and consulting among peers)



# What educational interventions can we use?

## Self-directed learning:

- Traditional textbooks, monographs, clinical practice guidelines, and journals supplemented by...
- Printed or computerized self-assessments that provide feedback
- Portfolio-based learning (document learning, quality of learning, learning gaps, examples of learning plans, objectives and resourced required)



# What are some current trends in CME?

- Changing construct of CME (no longer just information transfer)
- Need for rapid response educational technologies for new and emerging disease states
- Improved chronic disease management
- Maintenance of licensure and certification (focus on demonstration of improved practice)
- Increasing focus on health care outcomes and performance



# What are some current trends in CME?

## Outcomes for continuing education/continuing professional development

Level	Outcome	Metrics or indicators
1	Participation	Attendance
2	Satisfaction	Participant satisfaction
3	Learning	Changes in knowledge, skills, or attitude
4	Performance	Changes in practice performance
5	Patient health	Changes in patient health status
6	Population health	Changes in population health status

Moore, 2003

# Future research

## The learner...

- Are self-assessment and self-directed learning core character logic traits or can they be taught?
- If the latter, how can this best be accomplished?

## The communication vehicle...

- What knowledge transmission vectors work best? (PDA-mediated educational messages vs. traditional educational ones)

## The context of learning...

- The seeing of learning, its remuneration pattern, and its linkage to IT resources

## The effect on learning and uptake...



# Future research

How is the uptake of information effected by the nature, complexity, compatibility and level of evidence to be adopted?

