

CME Professionals Meeting
Children's Healthcare of Atlanta
September 29, 2009

Robert L. Addleton, EdD, CCMEP
Executive Vice President
Physicians' Institute for Excellence in Medicine, Inc.

How Physicians Learn



Physician Learners Are.....

Audience
Participation
Please!



The problem?

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, **17** years

Clancy CM. Testimony before the Joint Economic Committee: Arming health care consumers with better information and incentives. Available at: (<http://www.hhs.gov/asl/testify/to60510a.html>). Accessed April 8, 2009.

Another problem

- Physicians have about one hour a week to read/keep up with the literature
- 13,000 biomedical journals published worldwide
- There are over 18,000,000 articles from 5200 medical journals indexed in MEDLINE
- As of June 2007, PubMed Central had over 1,000,000 items indexed and is growing by 7% a year

Session Objectives

- Provide an overview of basic adult learning theory applied to physician learning
- Cover three models of how learners come to change their practice
- Discuss how CME has used and adapted these theories in light of the updated criteria
- Brief consideration of where/modality physicians like to learn

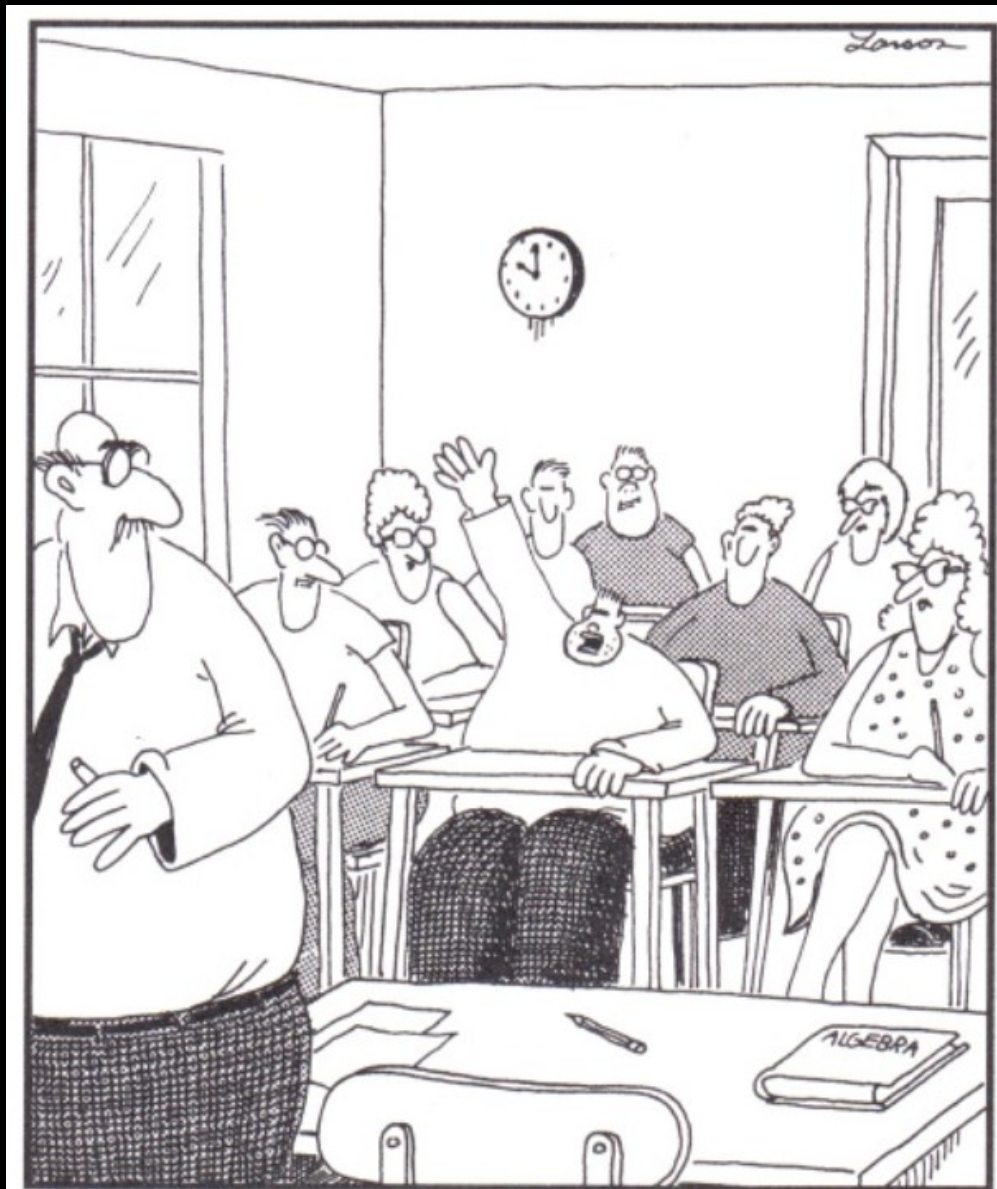
Adult Education Basics 1

- Adults will commit to learning when the goals and objectives are considered realistic and important to them. Application in the “real world” is important and relevant to the adult learner's personal and professional needs.
- Adults want to be the origin of their own learning and will resist learning activities they believe are an attack on their competence. Thus, professional development needs to give participants some control over the what, who, how, why, when, and where of their learning.
- Adult learners need to see that the professional development learning and their day-to-day activities are related and relevant.
- Adult learners need direct, concrete experiences in which they apply the learning in real work.
- Adult learning has ego involved. Professional development must be structured to provide support from peers and to reduce the fear of judgment during learning.

Adult Education Basics 2

- Adults need to receive feedback on how they are doing and the results of their efforts. Opportunities must be built into professional development activities that allow the learner to practice the learning and receive structured, helpful feedback.
- Adults need to participate in small-group activities during the learning to move them beyond understanding to application, analysis, synthesis, and evaluation. Small-group activities provide an opportunity to share, reflect, and generalize their learning experiences.
- Adult learners come to learning with a wide range of previous experiences, knowledge, self-direction, interests, and competencies. This diversity must be accommodated in the professional development planning.
- Transfer of learning for adults is not automatic and must be facilitated. Coaching and other kinds of follow-up support are needed to help adult learners transfer learning into daily practice so that it is sustained." (pp. 36-37)

Speck, M. (1996, Spring). Best practice in professional development for sustained educational change. *ERS Spectrum*, 33-41.



“Mr. Osborne, may I be excused? My brain is full.”

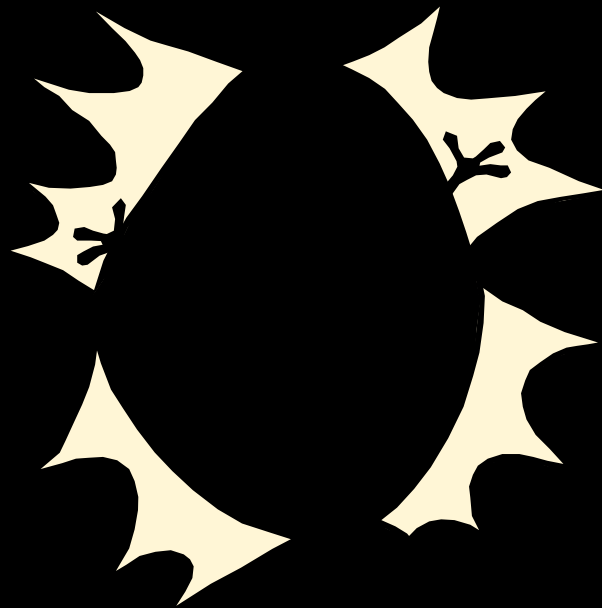
Houle: Three Modes of Professional Learning

- Inquiry
- Instruction (Self-Directed & Group)
- Performance



Houle: The Teachable Moment

- The person needs to learn it
- A means of learning it is readily available
- The learning can be applied to a present need



The Problem of Not Knowing



Unanswered Questions

- Physician seeing 25 patients per day will have 15 questions (2 questions per 3 encounters)
- 33% related to treatment
- 25% to diagnosis
- 15% drug treatment
- 50% of answers to questions come from textbooks and colleagues
- 66% of questions go unanswered
- 50% of answers to unanswered would have had impact on care

J Am Board Fam Pract 12(3):225-235, 1999

Knowles: Andragogy Assumptions

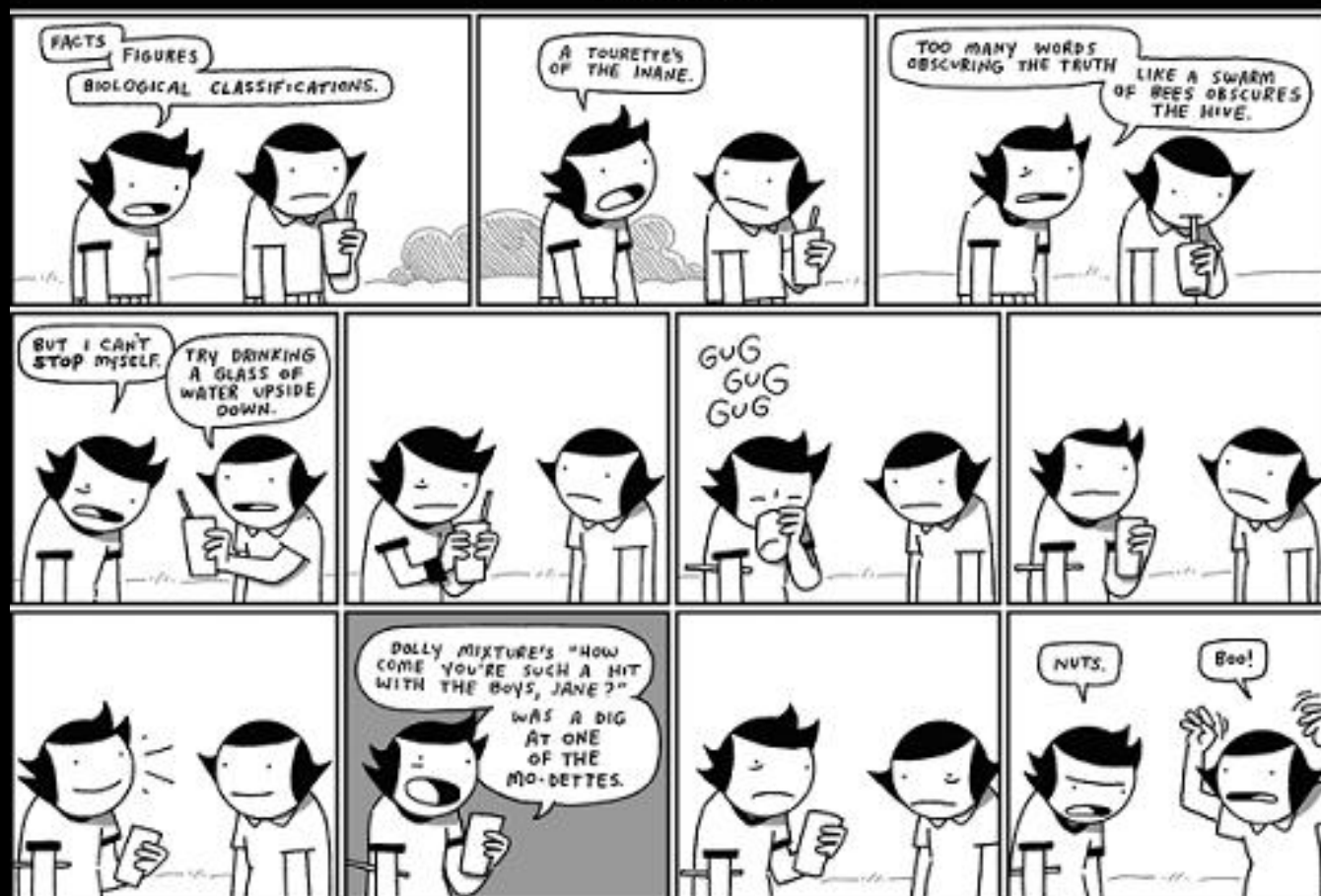
- Adults need to know why they need to learn something
- Adults need to learn experientially
- Adults approach learning as problem-solving
- Adults learn best when the topic is of immediate value

Knowles: Andragogy Principles

- Adults need to be involved in the planning and evaluation of their instruction.
- Experience (including mistakes) provides the basis for learning activities.
- Adults are most interested in learning subjects that have immediate relevance to their job or personal life.
- Adult learning is problem-centered rather than content-oriented.

Classification in Adult Learning

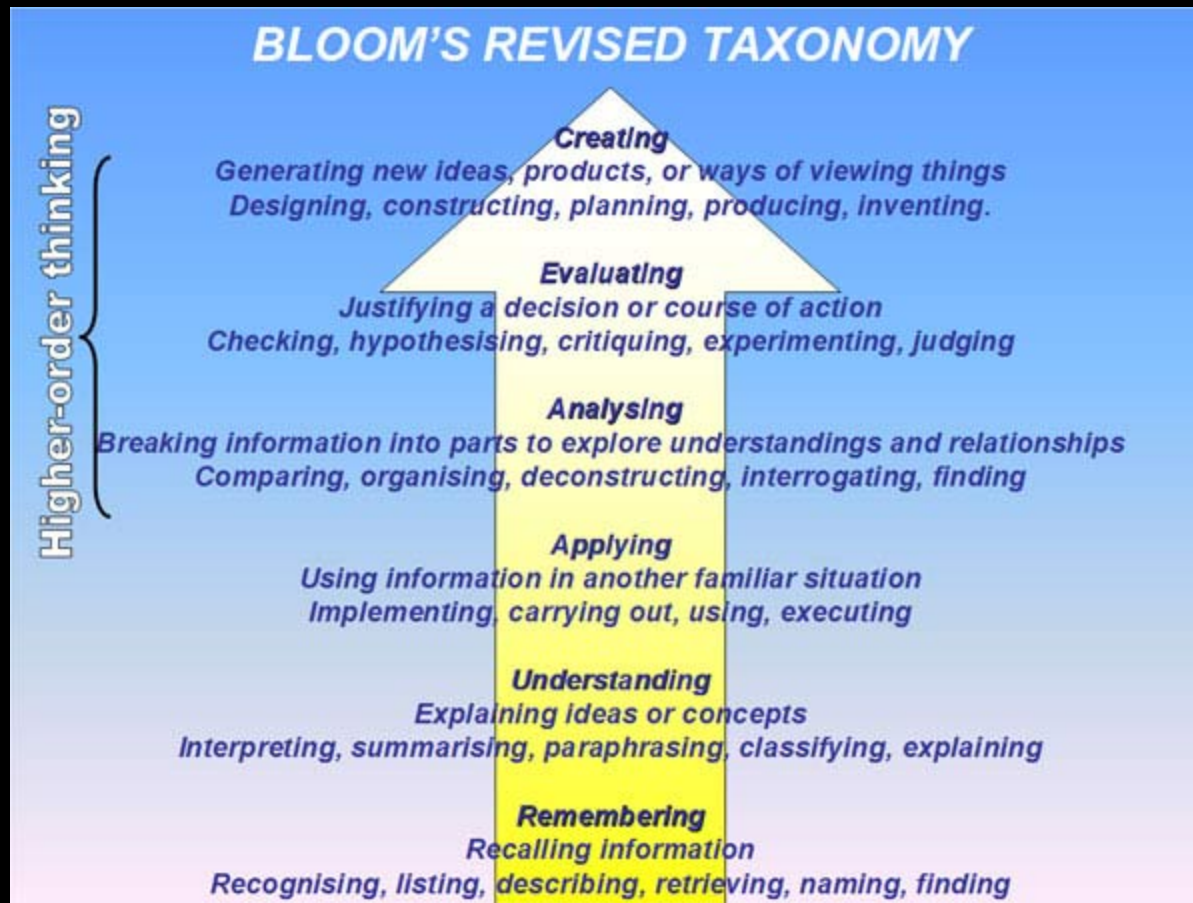
Trivia



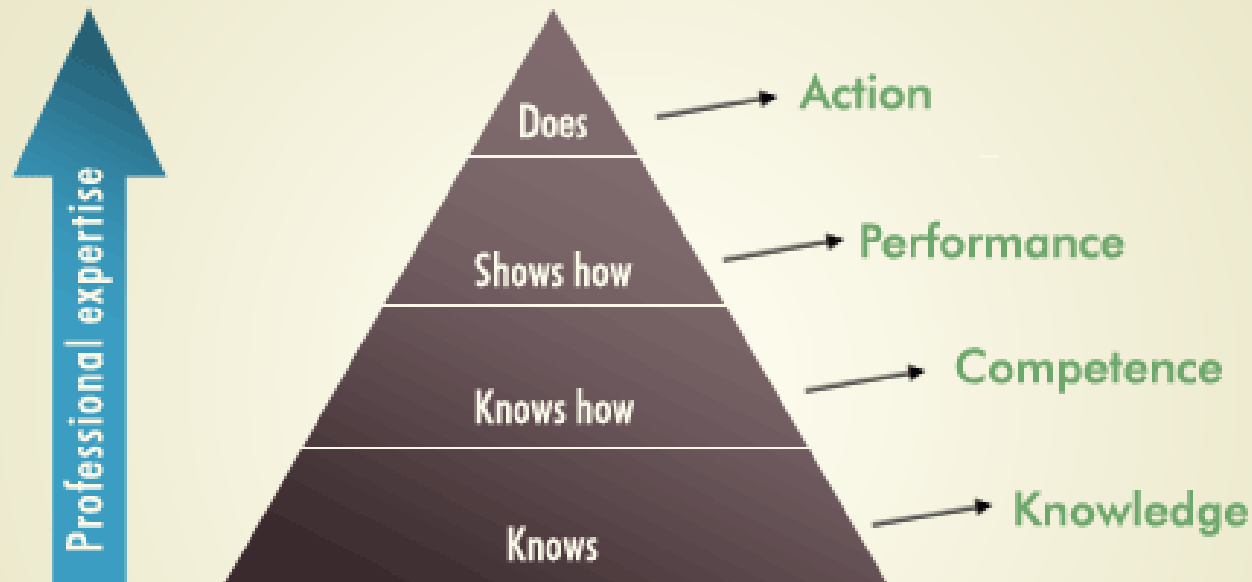
Learning Taxonomies

- Practice and science of classification
- 1956 Benjamin Bloom: 3 domains
 - Cognitive (Knowledge)
 - Affective (attitudes)
 - Psychomotor (skills)
- 1990 George Miller, MD (Miller GE. *The assessment of clinical skills/competence/performance. Acad Med* 1990;65:S63–7.)

Bloom's Taxonomy



Miller's Taxonomy



Miller GE. The assessment of clinical skills/performance.
Academic Medicine (Supplement) 1990; 65: S63-S7.

*Miller's pyramid for assessing clinical competence
(adapted from Norcini, 2007, p2)*

And Then Came Dave Davis....



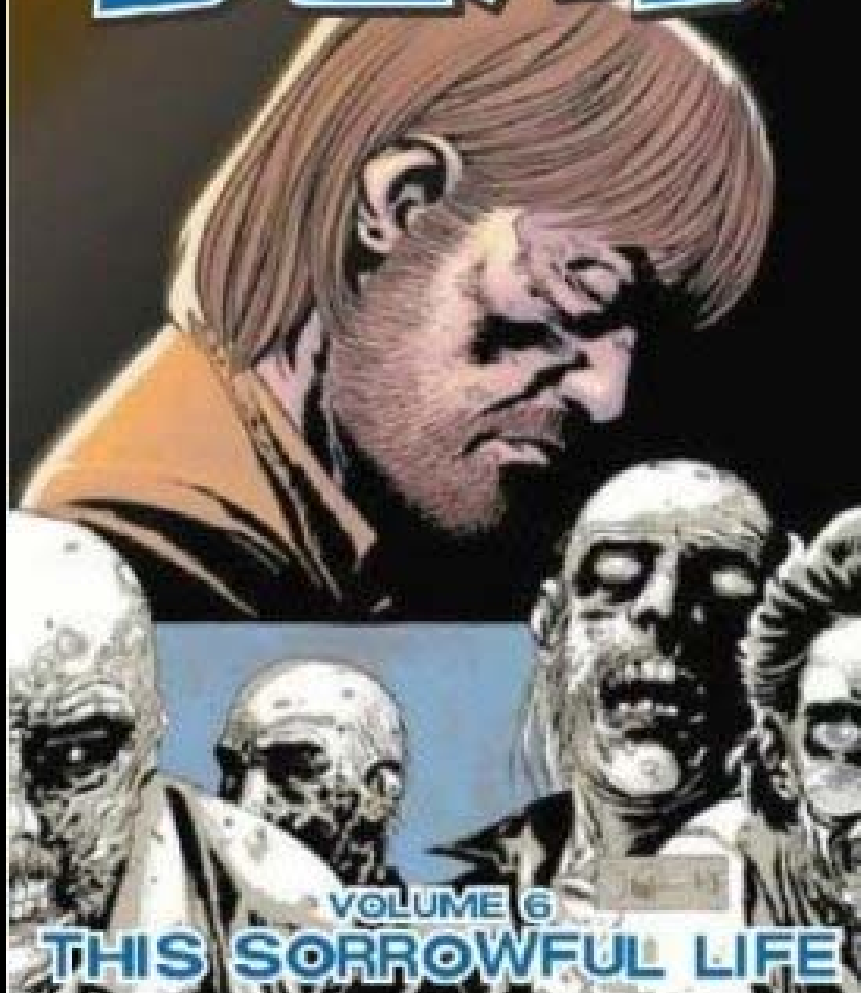
Dave Davis Bombshell – JAMA 1999

- Meta analysis of educational research database
- CME that provides for active participation and opportunity to practice skills can affect change in professional practice, and on occasion, health outcomes
- Didactic sessions do not appear to be effective in changing physician performance

JAMA, Vol 282 (9) PP 867-874, 1999

ROBERT KIRKMAN CHARLIE ADLARD CLIFF RATHBURN

THE WALKING DEAD



VOLUME 6

THIS SORROWFUL LIFE

Davis Did Not Say

- Didactic CME is worthless
- Or it should not be done
- Or it is totally irredeemable
- Or it is counter-productive
- Etc.



Mazmanian & Davis, 2002, 2006

- Needs assessment crucial to convincing physicians that their behavior needs to change
- Tests of knowledge and practice skills improved learning
- Didactic methods primarily aid in overcoming resistance to change
- Sequenced and multifaceted activities best
- Davis, et al, 2006: Physicians have a limited ability to self-assess learning needs

JAMA Vol 288(9), 1057-1060, 2002

JAMA Vol 296(9), 1094-1102, 2006

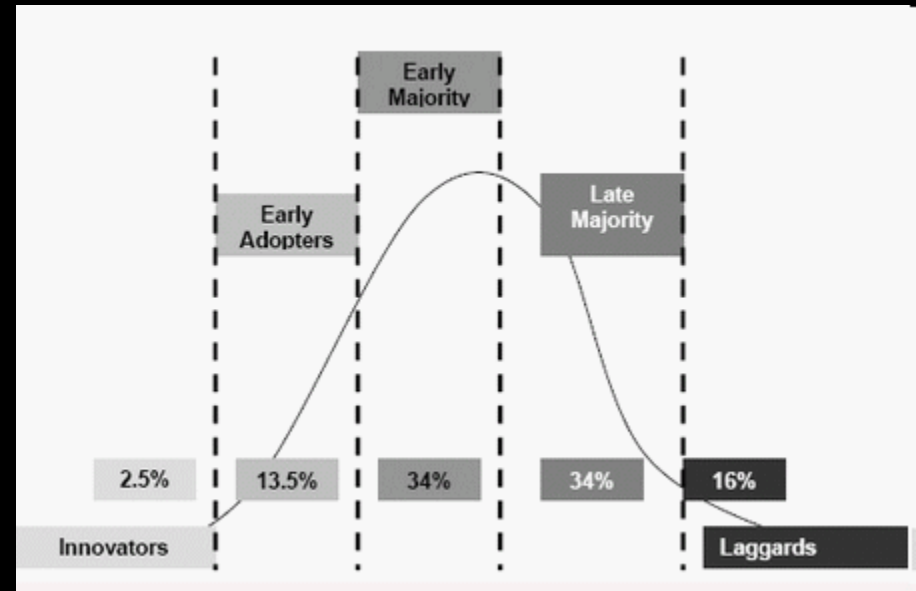
Process of Change Model: Fox

1. Forces
2. Imagining
3. Assess learning needs
4. Learning adoption

Fox RD. Implications of the model of change and learning for undergraduate medical education. *J Contin Educ Health Prof.* 1996; 16:144 –151.

Process of Change Model: Rogers

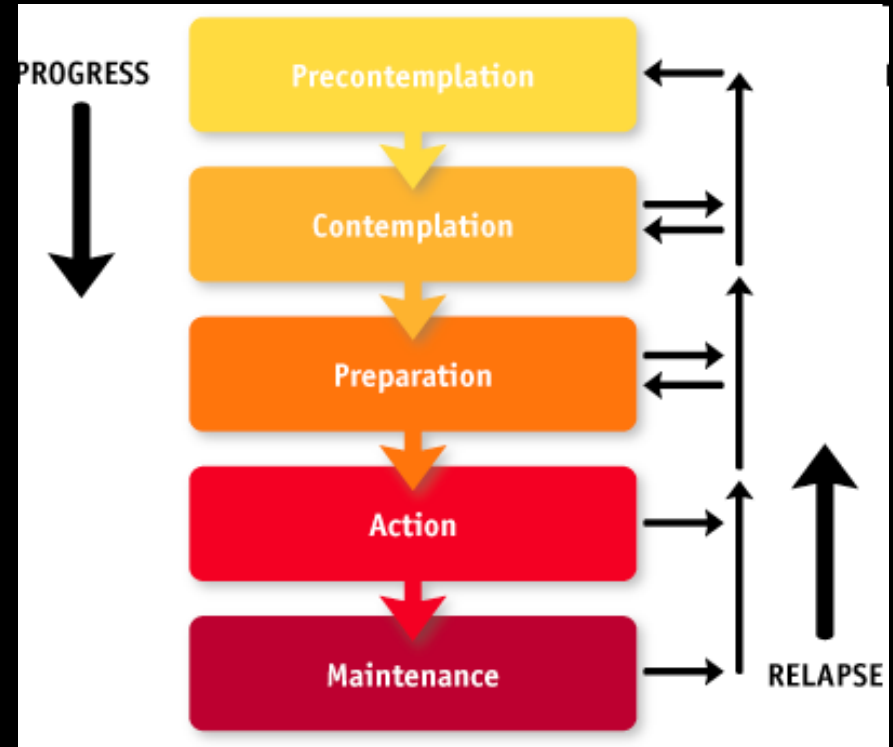
1. Knowledge
2. Persuasion
3. Decision
4. Implementation
5. Confirmation



Rogers EM. Diffusion of Innovation. 5th ed.
New York, NY: Free Press; 2003.

Process of Change Model: Prochaska (Transtheoretical Model)

1. Precontemplation
2. Contemplation
3. Preparation
4. Action
5. Maintenance
6. Relapse



Prochaska JO, Velicer WF. The transtheoretical model of health behavior change. *Am J Health Promot.* 1997;12:38–48.

Medical Meetings Survey 2009

- 6 point scale, 6="extremely effective"
- Lectures with Q&A session 4.8
- Case-based learning 4.3
- Hands-on, skill-building sessions 4.1
- Consulting with colleagues 3.8
- Small-group interactive sessions 3.6
- Lectures with pre- and post- test 3.6
- Lectures without Q&A session 3.4
- Unstructured topic discussion 3.0

Where Physicians Learn (Medical Meetings Survey 2009)

- Attending out-of-town meeting 34%
- Attending local meetings 22%
- Online services 15%
- Reading journals 12%
- Audio CDs/tapes 5%
- Other 4%
- DVDs/CD-ROMs 3%
- Audio conferences 3%
- Performance improvement 2%

Last Survey Points....

- Physicians earned 62% of their online credits through Internet point-of-care activities.
- 47% plan to earn credits through point-of-care activities during the next 12 months.



CME Circa 2006

- Expert-driven
- Didactic
- “Needs” Based
- Structured by “the hour”
- Scheduled, Live
- Minimal Evaluation (likes, speaker, food, room)
- Some use of technology

CME Today

- Evidence-Based
- Learner-Driven
- PRN
- Multiple Formats, Multimedia
- Knowledge, Competence ,or Performance Gap
- Sequential
- Strategic
- More Like Medical Practice
- Evaluation of Outcomes

The King of Adult Learning Design?



PI-CME

Or Not?



So much for knowing, how about doing?

“Knowing is not enough, we must apply.
Willing is not enough. We must do.”

-Goethe

Questions, Comments?



