Emerging Changes, Tools and Techniques for Continuing Medical Education

How CME is evolving and the opportunities it presents in terms of effecting health outcomes, especially outcomes related to addiction

Orientation

- Title: Emerging Tools and Techniques for Continuing Medical Education: Assessing Their Impact on Learning and Practice Change
- Available online at: http://cmefuture.blogspot.com/
- By: Bradley Tanner, M.D., President, Clinical Tools, Inc., and Clinical Associate Professor of Psychiatry, University of North Carolina, Chapel Hill
- Date/Time: 10/28/2011 @ 8:15pm to 8:45pm
- Sponsor: American Society of Addiction Medicine
- Meeting: 2011 Course on the State of the Art in Addiction Medicine | Brochure
- Session #6. Integrating Addiction-Related Competencies Into Physician Training and Practice)
- At: Washington Hilton Hotel 1919 Connecticut Ave, NW Washington, DC 2009

Disclosure

Bradley Tanner is President and 100% owner of Clinical Tools. Inc, which is a small business that creates and delivers online CME. He and Clinical Tools receive no money or support in any form (educational or non-educational) from pharmaceutical or medical device manufacturers.

Objectives

The learner will ~~know, be aware of, describe, recognize, be familiar with, understand, appreciate~~... **NO!**
The learner will be able to:

1. discuss with colleagues the trends in CME and describe what changes have occurred, and are likely to occur in the future, as we move toward CHPD - Continuing Health Professional Development
2. explain to other educators the rationale for pursuing a different approach to providing CME and help them in the process of developing CME/CHPD that is more focused on improving competence, performance, and health outcomes
3. champion the cause of increasing the frequency, acceptability, interest in, and effectiveness of CHPD in the field of addiction in their conversations with others in the medical field

Why a blog?

When asked to give a talk on on where CME is going, I was struck by the irony of delivering a standard talk using Powerpoint to highlight the future of CME. After struggling with creating "slides" to explain something as dynamic as the recent evolution of CME and huge changes ahead, I eventually settled on a blog as a more appropriate venue to "present" the idea. This format can support ongoing revision and improvement, as well as participation by others.

Current CME

CME is extremely expensive. The CME market that ACCME is aware of is worth $2.242 billion. This likely does not include indirect costs, direct payments to speakers by pharma, or travel compensation to speakers (currently not disclosed publicly). By comparison, here are some other costs:

- $1.5 Billion: 2010 appropriation for NIDA and NIAAA combined
- $2.8 Billion: Medical school tuition paid to train a years worth of physicians at all US medical schools (based my estimate of UNC's out of state tuition * 18,665 medical student enrollees/year * 4 years of training)

This CME financial support paid for:

- 81,000 activities
- 660,000 hours of available instruction
- Over 19 million participants (11.5 million physicians, 7.8 million non physicians)

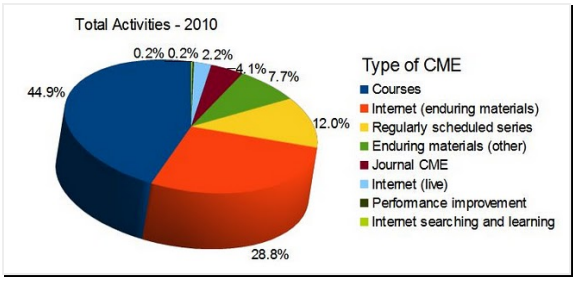
In 2010, for the first time, < 50% of funding came from industry [commercial support + exhibits/advertising]. This breaks down as:

- $831,000,000 (37%) in commercial support [a decrease of 25 million and 2.9%]

- $277,000,000 (12%) in advertising and exhibit revenue

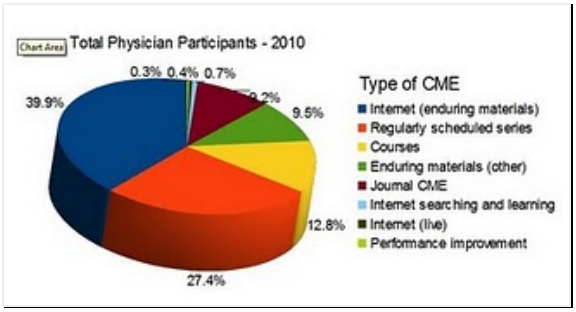
In terms of total activities the breakdown is as follows:

Type of CME	Activities	%
Courses	36,374	44.61%
Internet (enduring materials)	23,310	28.59%
Regularly scheduled series	9,740	11.94%
Enduring materials (other)	6,230	7.64%
Journal CME	3,329	4.08%
Internet (live)	1,767	2.17%
Performance improvement	168	0.21%
Internet searching and learning	143	0.18%
Total	**81,543**	**100.00%**



CME experience in terms of physician participation include

Type of CME	Physicians	%
Internet (enduring materials)	4,589,342	39.88%
Regularly scheduled series	3,147,545	27.35%
Courses	1,474,725	12.82%
Enduring materials (other)	1,089,537	9.47%
Journal CME	1,053,741	9.16%
Internet searching and learning	75,844	0.66%
Internet (live)	46,909	0.41%
Performance improvement	29,371	0.26%
Total	**11,507,014**	**100.00%**



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The future of CME

The combination of technological growth and the debt crises, as well as the ever increasing cost of health care in developed countries, is forcing a close scrutiny of CME and a demand that it:

- utilize and adapt to technology
- help the country provide higher quality medical care for less

Other than CME and related work in MOC (Maintenance of Certification), how else can we ensure the health care workforce is adapting to a scientific field with constant change and that their practice is up to date and effective? We need the health care workforce to ...

- Evaluate their current practice
- Obtain new skills in reaction to evolving science
- Stop practices based on old evidence when new evidence shows that what was working is no longer
- Apply new practices when new approaches eclipse old solutions

How else can we ensure that our physician and health professional workforce is giving us the most ROI for our health care dollars?

Let's consider:

- What we see now
- Calls for change in CME
- Changes that are currently happening
- Changes that will likely happen

May we live in interesting times! For those of us in the CME/CHPD field - **We Do!**

An opportunity for addiction professionals

Approaches to changes in CME:

- Accept that changes can and will happen
- It's important to adapt to the changing CME environment if these credits are required for you
- Don't approach changes in a "this is going to make my life harder" mindset

See this discussion from the public health perspective!

View this discussion from the perspective of a professional interested in a skilled and effective population of health care providers. Health professional addiction education has received little attention in terms of CME, despite the large ROI on addiction interventions and the prominent practice gaps that exist in health care related to the identification and treatment of addiction disorders.

In terms of improving the effectiveness of the health care workforce's ability to screen for, adjust practice for and treat addictive disease. **We have a lot to gain from improvements in the system!**

Do we need to change how we fund CME?

Money is moving away from commercial support. Why?

Imagine we are deciding where to go for dinner and we ask the cab driver where we should go. Here are 5 scenarios:

1. The restaurants pay the cab driver's salary.
2. The cab driver receives funds from restaurants, but we don't know about it.
3. We know the cab driver receives funds from restaurants, but we don't know how much.
4. We know that the cab driver doesn't receive money from restaurants.
5. We know that the cab driver receives money and we know exactly how much in money or other gifts the cab driver receives from restaurants.

Here is how it matches up the CME equivalent:

- Remote Past: Speakers who are employes of pharma companies have an obvious conflict of interest. This is no longer allowed for CME.
- Pre-disclosure rules: Speakers who are paid by pharma companies, but don't tell us is no longer acceptable for CME credit.
- Current state of CME: Speakers are grouped into those who receive unknown amount of funds or no funds whatsoever. Sources of funds are identified but not amount or type of compensation.
- Starting September 2013: Compensation amount to speakers is public and will be known, but the amount is not required as a part of disclosure. Learners will need to figure it out on their own. (Sunshine Act)

Reference

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What do we mean by bias?

To continue the analogy, we can potentially get a free (or reduced fare) trip if we accept the cab driver's recommendations.

Let's assume we're comfortable that Cab Driver A is paid a some amount of money by a restaurant (the amount of which you are currently not privy to). In exchange for the cab driver disclosing the arrangement, we willingly pay a lower fare.

- Do we lose some control over where we are going to go?
- Will our chance of going to the best restaurant be lessened?
- If you know the cab driver was paid a certain amount, say $50 vs. $500 vs. $5000 vs. $50000, would that change your answer? (Note that currently you can't find this out and folks won't tell you.)

In other situations, we understand that the less control we have, the cheaper it gets--hotel shuttles work just this way. But most of us would assume that we've lost something when agreed to the lower fare.

But surprisingly enough, most physician in one study (88% in Tabas, 2011) believed that commercial support introduces bias, however when asked if bias exists most physicians most said no (Kawczak 2010, Steinman 2010).

The key to a discussion of bias is not to attack the integrity of the recipient of funds, but to ask ourselves as experts in human nature if we believe there is a relationship between compensation and recommendations. Or perhaps, conversely, do we believe there is no relationship to between compensation and recommendation?

- If CME is 1/2 the price as usual, is that just a good deal or have we lost some control?
- Is "free" CME offering equal value to CME that costs us some money?
- If the speaker is paid more, does that increase the chance of bias?

Findings from review panels:

1. "In general, industry financial relationships do not benefit the educational missions of medical institutions in ways that offset the risks created." (IOM 2009).
2. Conflicts created by a range of common interactions with industry can for "medicine generally, and for academic medicine in particular … have a corrosive effect on three core principles of medical professionalism: autonomy, objectivity, and altruism" (AAMC 2008).

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Access to speaker payment data is coming

Partial disclosure of amounts is currently available from companies that have started to voluntarily collect and report that data.

Starting in 2012, pharma will be required to **collect** data regarding payments, whether cash or in-kind transfers to all covered recipients (Physicians and teaching hospitals - PhDs are safe for now) including: (See #1 Sunshine Act)

- compensation
- food
- entertainment
- gifts
- travel
- consulting fees
- honoraria
- research funding or grants
- education or conference funding
- stocks or stock options
- ownership or investment interest
- royalties or licenses
- charitable contributions
- any other transfer of value

Soon (Sept 2013) anyone will be able to go online and see who is paying the speaker (aka cab driver) and how much.

- Are we still more likely to end up at the restaurant that paid the cab driver?
- Does knowing the amount of compensation change the learner's perception?
- Does financial disclosure resolve the prior issues?

There is still no plan for a requirement that speakers will provide this data prior to giving a talk. In other words, imagine a talk starting--

- *Hi, I'm John, and I receive $20,000 in speaker fees from Pharma #1 and travel benefits of $5600 from Device Manufacturer #2.*

They won't, but you will be able to go online and find it out yourself.

Unfortunately, disclosure may not have the intended effect (Cain 2011, Loewenstein 2011). "While transparency is essential, disclosing financial relationships is necessary but not sufficient to mitigate the potential for influence in CME" (McMahon 2011).

In the (more distant) future, perhaps we'll pay for the trip and cab driver will get money from only our fares (or our organization), and we will decide where we go for dinner.

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Access to learner compensation data is coming too!

That same currently available partial disclosure of amounts also includes payments to learners from some companies that have started to voluntarily collect and report that data. Yes, it is possible that the "free CME" you received wasn't free after all and the cost to the pharma/device manufacturer is being reported to the Internet and thus inspectable by your patients and your affiliated organizations.

As mentioned, starting in 2012, pharma will be required to **collect** data regarding payments whether cash or in-kind transfers to all covered recipients (including all physicians) including:

- food
- entertainment
- gifts
- travel
- any other transfer of value

And as mentioned, your patients or any anyone with access to the Internet will be able to go online in September 2013 and see how you have received in terms of free meals, entertainment, and gifts. If you let pharma pay for pizza for your staff, the pizza cost will be listed under your name.

- Will you tell your patients the value you obtain from pharma/device manufacturers?
- If they searched themselves and asked you about it, what would you say?

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Madates: Who decides what health professionals should learn?

The tend is toward states [pdf] and federal governments requiring certain topic of CME. Personally, you may hate mandates, but mandates tend to be in topics we care about as addiction professionals.

Mandate examples in the substance use field:

- DATA 2000 Buprenorphine Training (was supposed to be for PCPs)
- California Pain Treatment 2006 (which covered opioids some), Oregon
- SBIRT NY OASAS
- REMS and the FDA

Does standard (passive-learning) CME work?

Imagine your colleague prescribes a drug that has no/minimal evidence that it works. "We're scientists," you say, "Physicians should practice based on science not fiction or wishful thinking."

- So what is the evidence that all the money and time spent on CME is producing results?
- How can we measure outcomes if we don't collect data?
- Who is going to collect the data and who is going to pay for it?
- Is satisfaction an outcome?

To outline the future of CME, let's first review the findings of reviews of existing passive CME (including webminars, journal CME, PDF CME and other examples of passive CME).

- "Widely used CME delivery methods such as conferences have little direct impact on improving professional practice" (Davis 1995). The data on the effectiveness of standard CME is not impressive.
- "Based on a small number of well-conducted trials, didactic sessions do not appear to be effective in changing physician performance" (Davis 1999).
- "Education in small doses (days) is ineffective, likely because it pales in comparison with the prior 20 years of education physicians have already received. Guideline dissemination is too passive to effect behavior change without active implementation strategies" (Smith 2000).
- "Didactic sessions alone are unlikely to change professional practice" (O'Brien 2001).
- "Educational meetings alone are not likely to be effective for changing complex behaviours" (Forsetlund 2009).

"Even though the most-effective CME techniques have been proven, use of least-effective ones predominates. Such use of ineffective CME likely reduces patient care quality and raises costs for all, the worst of both worlds" (Bloom, 2005).

We face an inconvenient truth that our strategy to keep health professional skills up to date is not working and certainly not efficient.

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What makes for more effective CME?

To outline the future of CME, the reviews highlighted several strategies that would improve the likihood of impact:

- "More effective methods such as systematic practice-based interventions and outreach visits are seldom used by CME providers" (Davis DA 1995).
- "Strategies which enable and/or reinforce appear to 'work' in changing physician performance or health care outcomes, a finding which has significant impact on the delivery of CME, and the need for further research into physician learning and change" (Davis D 1998).
- "Our data show some evidence that interactive CME sessions that enhance participant activity and provide the opportunity to practice skills can effect change in professional practice and, on occasion, health care outcomes" (Davis 1999).
- "The review shows improved results with the use of multiple media and multiple educational techniques; this finding is entirely consistent with principles of adult learning theory" (Davis 2009).

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Recent examples of effective CME

The first step is that all CME must start to include non-satisfaction outcomes. Some examples of CME that work:

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What you know vs. what you do - the end of knowledge focused education

Existing CME and physician training and education

- is often passive and didactic
- focuses on knowledge transfer,
- does not seek to directly enhance clinical skills or improve performance.

ACCME asks us to focus instead on competence, performance and outcomes. **Knowledge attainment as the focus of CME is no longer sufficient.**

To effect practice gap and improve patient health outcomes, we need to effect simple improvements in physician competency and performance and attitudes.

- Without a focus on skills training, practice does not change and patient care remains the same.
- Most existing physician education is notably devoid of novel approaches to learning including interactivity.

CME is now required to collect non-satisfaction outcomes so we can find out what approaches are most successful and demonstrate impact.

Are terms important?

Terms for Addiction:

- Who wants DSM-V to dump abuse/dependence?
- Who wants to go with substance use disorders or perhaps addiction?

CME is a popular and familiar term, but like other terms it is tired and outmoded.

- It only applies to physicians.
- It is a legal term that almost always refers to an educational experience in compliance with the ACCME's rules that qualify for *AMA PRA Category 1 Credit (TM)*.

A New Term: CHPD or Continuing Health Professional Development

- Interdisciplinary, not just "medical." (which to most other health professionals means physicians). Coordinated care is the future of health care - we need coordinated health professional development.
- Focused on professional development (skills) not education.
- It is a term that is evolving and flexible and not tied to specific solutions.

Structural changes

Does it makes sense to measure impact in terms of the reported hours spent attending a CME activity?

Attention is required for learning. Why don't we measure attention to the task?

Prediction: CME is going to verify participation by measuring actual attendance and time expenditure.

- Is this so unreasonable?
- Can you ski and attend a lecture at the same time?
- If our kid is taking driver's ed, would we expect them to attend all of the classes before we got in the car with them?

Expect:

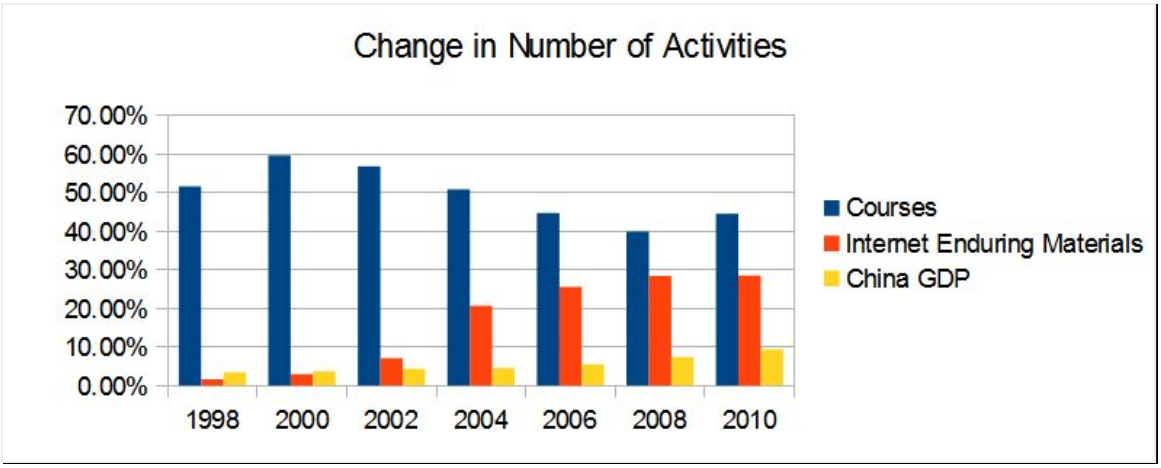
- Electronic tools to track attendance such as RFID tags when you enter/exit (or being asked to scan a badge when you enter).
- Required measurements to assess pre-existing skills and post-training changes.
- Electronic tools to track effort and task accomplishment such as required post-test score attainment and timers to measure time spent on a certain task.

At the same time, these tools may free us from the "we measure learning in terms of hours" mindset that we've all grown accustomed too. (Do we measure resident performance by hours spent?)

- Maybe we can distinguish between efforts that are more time efficient? We could thus get more credit for activities which are more challenging but shorter in duration.
- Maybe we could get more credit for longer-term learning activities that yield disproportionally greater returns in terms of improved patient outcomes.

Online enduring materials (non-live) CME is growing

CME as a time to sleep, zone out, play with the iPhone, eat is not compatible with what we know about more effective strategies to confer skills and enhance practice. To be effective we need CME that requires attention and effort.



Online has grown and keeps growing. What is so great about online?

- Reproducable and consistent yet updateable
- Scalable
- Manageable and trackable
- Available 24/7
- Supports different learning styles
- Can track outcomes
- CAN be interactive (can also be a canned lecture so interactivity is not guaranteed)

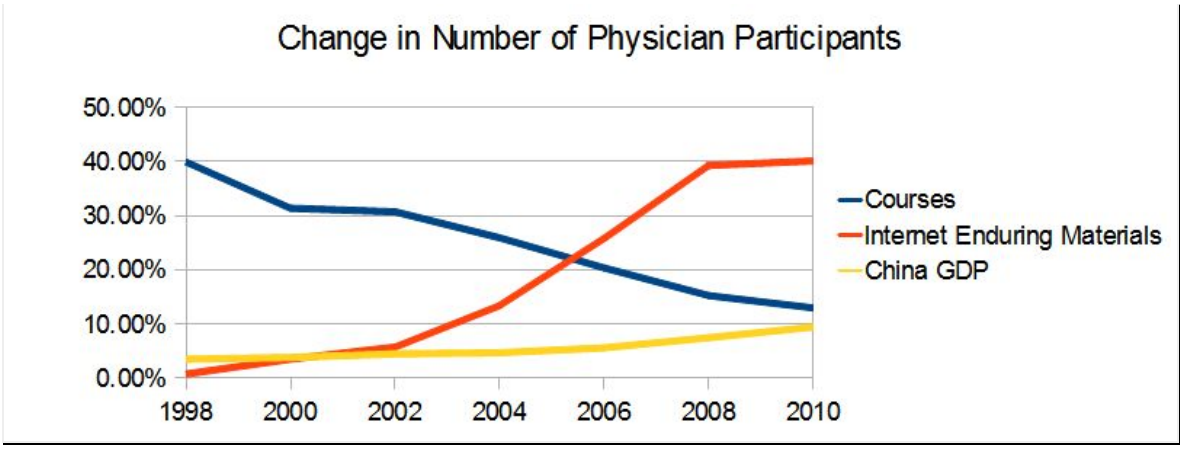
Will online enduring material based CME keep growing?
Who wants to bet against China?

References

- Accreditation and Annual Report Data http://www.accme.org/index.cfm/fa/home.popular/popular_id/127a1c6f-462d-476b-a33a-6b67e131ef1a.cfm
- GDP growth in China 1952-2009 http://www.chinability.com/GDP.htm
- List of countries by GDP (nominal) http://en.wikipedia.org/wiki/List_of_countries_by_GDP_(nominal)

Online physician participants

Online is even more impressive in terms of physician participants. Although the relative number of courses is staying mostly stable, actual participation is dropping quickly.



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- Accreditation and Annual Report Data http://www.accme.org/index.cfm/fa/home.popular/popular_id/127a1c6f-462d-476b-a33a-6b67e131ef1a.cfm
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Interactivity over the years

1980:

- Panel discussions and Q&A Sessions at the end of lecture
- Great if you are asking the question

1990:

- ARS, polls, and simple feedback

2000:

- Case-based
- "Hey this talk actually relates to patient care!"

Games and simulation: Actions and consequences

"Simulation technology is a powerful tool for the education of physicians and other healthcare professionals at all levels. Its educational effectiveness depends on informed use for trainees, including providing feedback, engaging learners in deliberate practice, integrating simulation into an overall curriculum, as well as on the instruction and competence of faculty in its use. Medical simulation complements, but does not replace, educational activities based on real patient-care experiences" (McGaghie 2009).

Reference

- McGaghie WC, Siddall VJ, Mazmanian PE, Myers J; Lessons for continuing medical education from simulation research in undergraduate and graduate medical education: effectiveness of continuing medical education: Chest. 2009 Mar;135(3 Suppl):62S-68S. American College of Chest Physicians Evidence-Based Educational Guidelines. PMID 19265078. http://chestjournal.chestpubs.org/content/135/3_suppl/62S.full.html

Patient outcome focused, integrated with EMR

"The interventions that best succeed in changing performance and health care outcomes are those using practice-enabling strategies (office facilitators or patient educational methods, for example) or reinforcing methods (feedback or reminders) in addition to predisposing or disseminating strategies" (Davis 1995).

"Knowledge is clearly necessary but not in and of itself sufficient to bring about change in physician behavior and patient outcomes. Such didactic interventions should ... receive less credit than do more effective methods and perhaps no credit" (Davis 1999).

References

1. Davis DA, Thomson MA, Oxman AD, Haynes RB. Changing physician performance. A systematic review of the effect of continuing medical education strategies. JAMA. 1995 Sep 6;274(9):700-5. PMID 7650822 http://jama.ama-assn.org/content/274/9/700.full.pdf+html
2. Davis D, O'Brien MA, Freemantle N, Wolf FM, Mazmanian P, Taylor-Vaisey A. Impact of formal continuing medical education: Do conferences, workshops, rounds, and other traditional continuing education activities change physician behavior or health care outcomes? JAMA. 1999 Sep 1;282(9):867-74. PMID 10478694. http://jama.ama-assn.org/content/282/9/867.long

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