

Curriculum Design Challenges in Evidence-based Medicine (EBM)

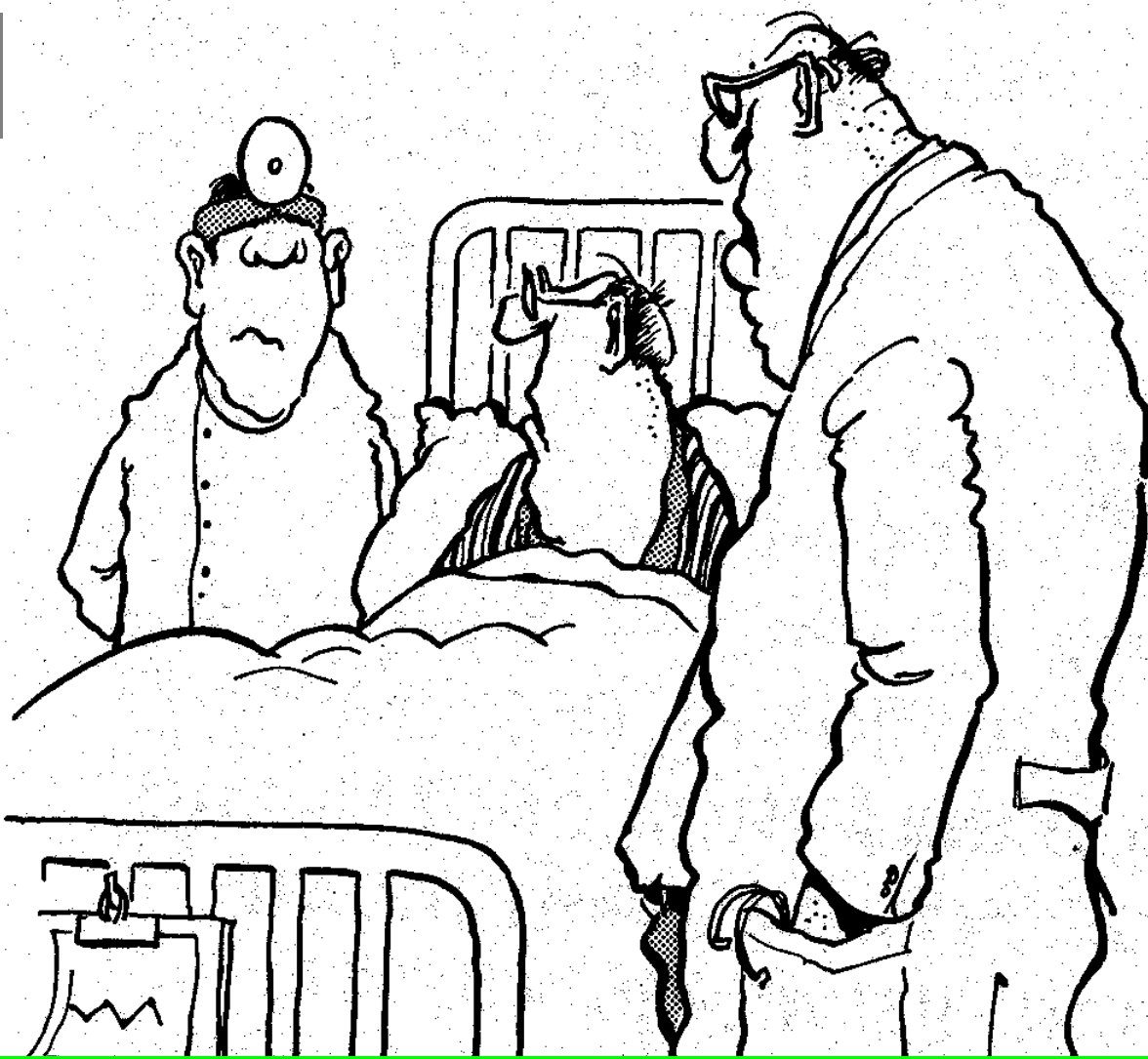
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EVP, Chief Medical Officer, CardinalHealth

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With permission
from Jim Unger.



“You’ve got to start sometime. Why don’t you operate on this one.”



Main Challenges

- Definition of EBM, what it is and what it is NOT
- Taking the theory into what's practical/believable
- Buy-in from students/residents where it is needed the most; in the formative years of education
- Behavior change in physicians is difficult
- External reimbursement pressures are great
- Consumer expectations clash with EBM preferences



Evidence- based Medicine

Defined: **Conscientious, explicit and judicious
use of current best evidence in making
decisions about the care of individual patients**

...David Sackett
Professor, NHS Research and Development
Centre for Evidence-Based Medicine, Oxford



Unexplained Variability

- Wennberg established concept of “unexplained variability”, *Science, 1973; NEJM, 1982*
- As physicians we have not been as accountable for our care decisions as we should
- “This is how we have always done it...”



What EBM is NOT!

- It is not “cook book medicine”
- External evidence can inform, but never replace individual clinical expertise
- *...clinicians who fear top-down cook-books will find the advocates of EBM joining them at the barricades... (Sackett, et al)*



What EBM is *NOT!*

- EBM is not cost-cutting medicine.
- Suggests fundamental misunderstanding of principles of EBM for managed care entities who embrace it as cost-cutting strategy
- Cause to identify most efficacious approach—may or may not save \$

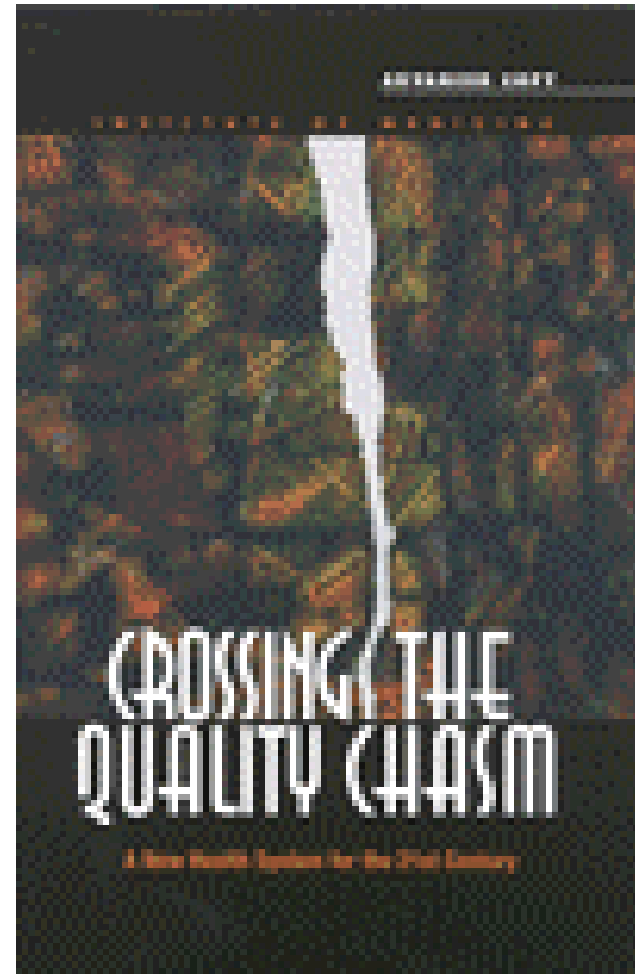


What EBM is *NOT!*

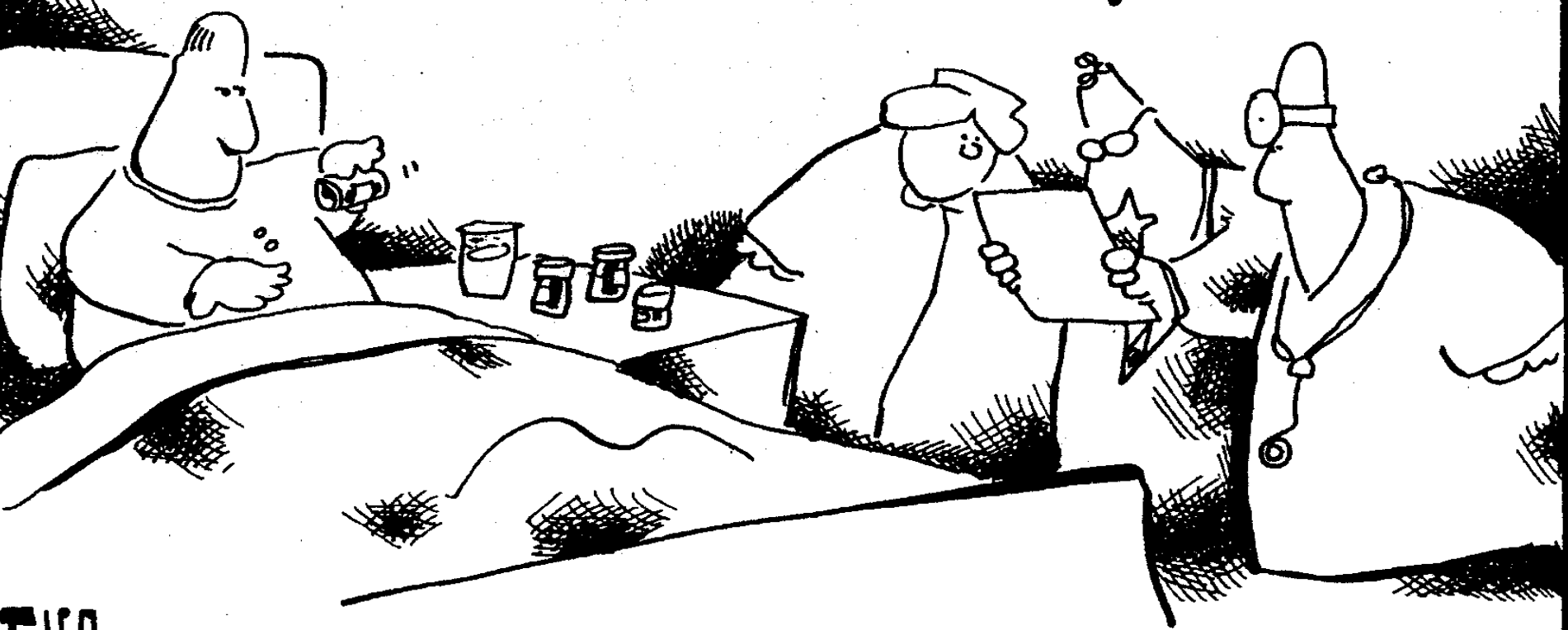
- EBM is not restricted to randomised trials and meta-analyses- *it involves tracking down the best external evidence with which to answer our clinical questions.*

Era of Accountability

- **Patient Safety and Error Management**
- **Dealing with unexplained clinical variability**
- **Emphasis on EBM from a problem-based setting**
 - *acute otitis media demo*
 - *evidence-based "fear"*
 - *disease mgmt exercise*



THIS REPORT SAYS MEDICAL ERRORS
SUCH AS INDECIPHERABLE PRESCRIPTIONS
CAUSE THE DEATHS OF 98 PATIENTS A YEAR,
OR IS THAT 98,000? IT'S HARD TO READ THIS.
IN ANY CASE, WE'RE SUPPOSED TO REPORT THEM,
OR IS THAT REPEAT THEM?



HOW ABOUT REPRESS THEM?
DOES THAT WORK FOR YOU?

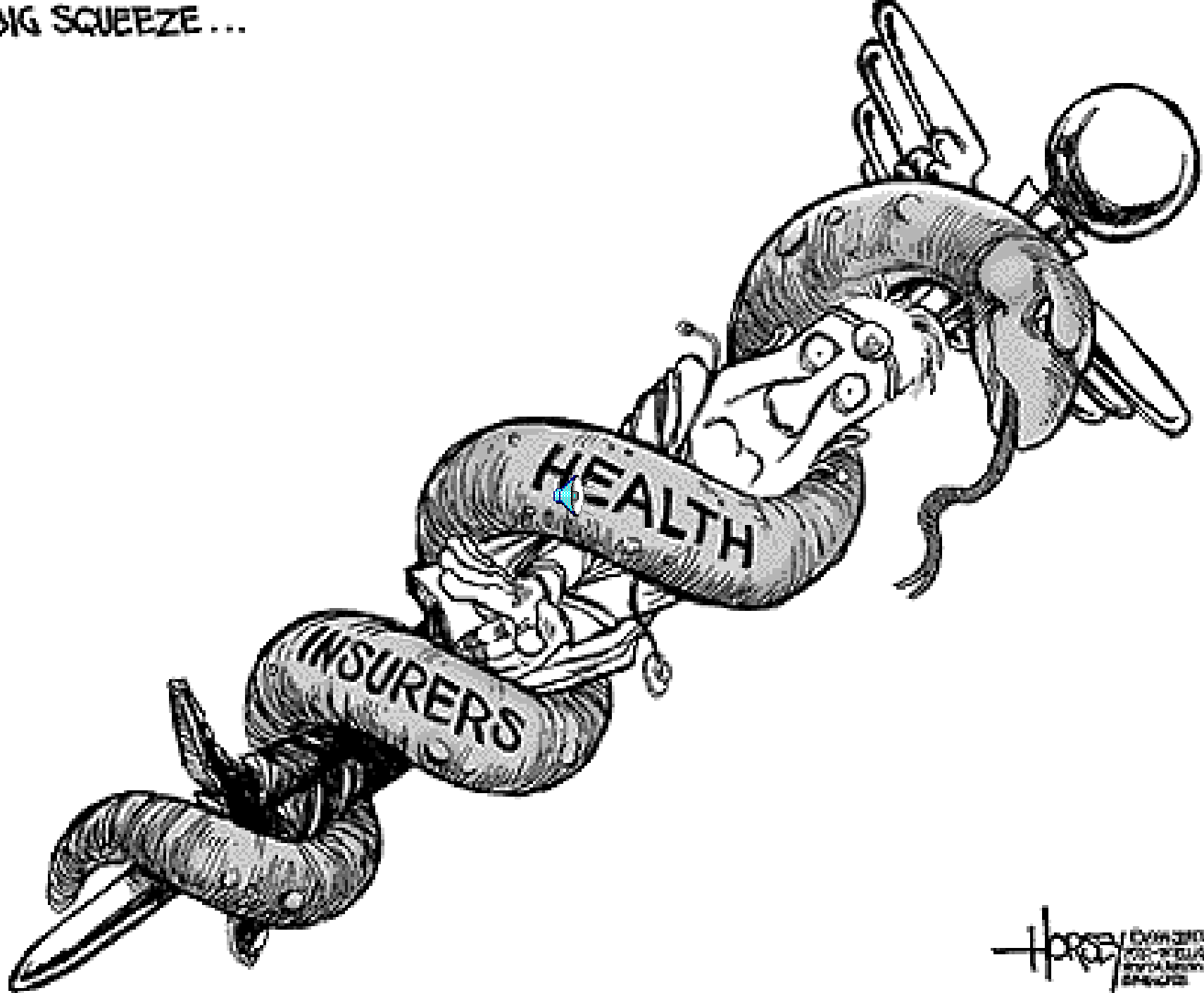
Changing Physician Behavior




“It is possible to improve care and dramatically lower costs”

...Donald Berwick

THE BIG SQUEEZE ...



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AND ILLUSTRATOR
OF THE NATIONAL
AMERICAN



Emerging Power of Consumerism and eHealth



Thomas
Jefferson
University

Jefferson
Medical
College



The proliferation of information across the Net often leaves consumers scratching their heads over what is and what is not accurate.

Bert and Ernie's "Future of Health Care Neighborhood"



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The Premise Behind The “Interactive” Approach

- As a learner, Lenow bores easily in routine “talking head lectures”...made a solemn promise not to do it to his students.
- Great degree of subjectivity in health policy issues, requires a different teaching approach, “current” and “flexible”- ready to change on the fly!
- EBM best learned in an interactive “hands on” environment
- *You don't learn if you're not having fun!*



Educational activities that use

interactive techniques such as case discussion

or *hands-on practice sessions* generally are

more effective in changing behavior and

patient outcomes which can result in changes

to knowledge or skills...



Cynicism

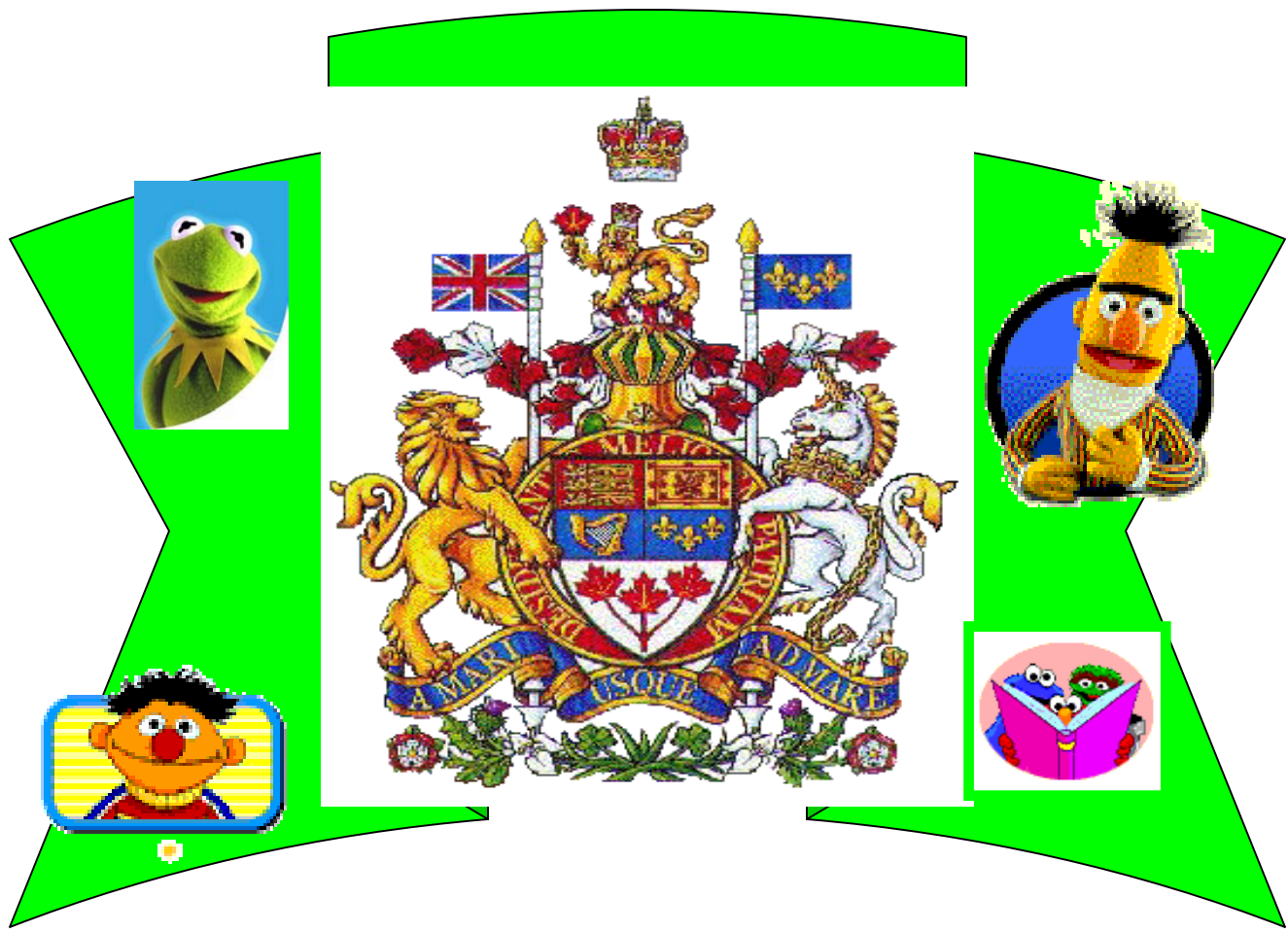
Change

Irreverence

Challenge

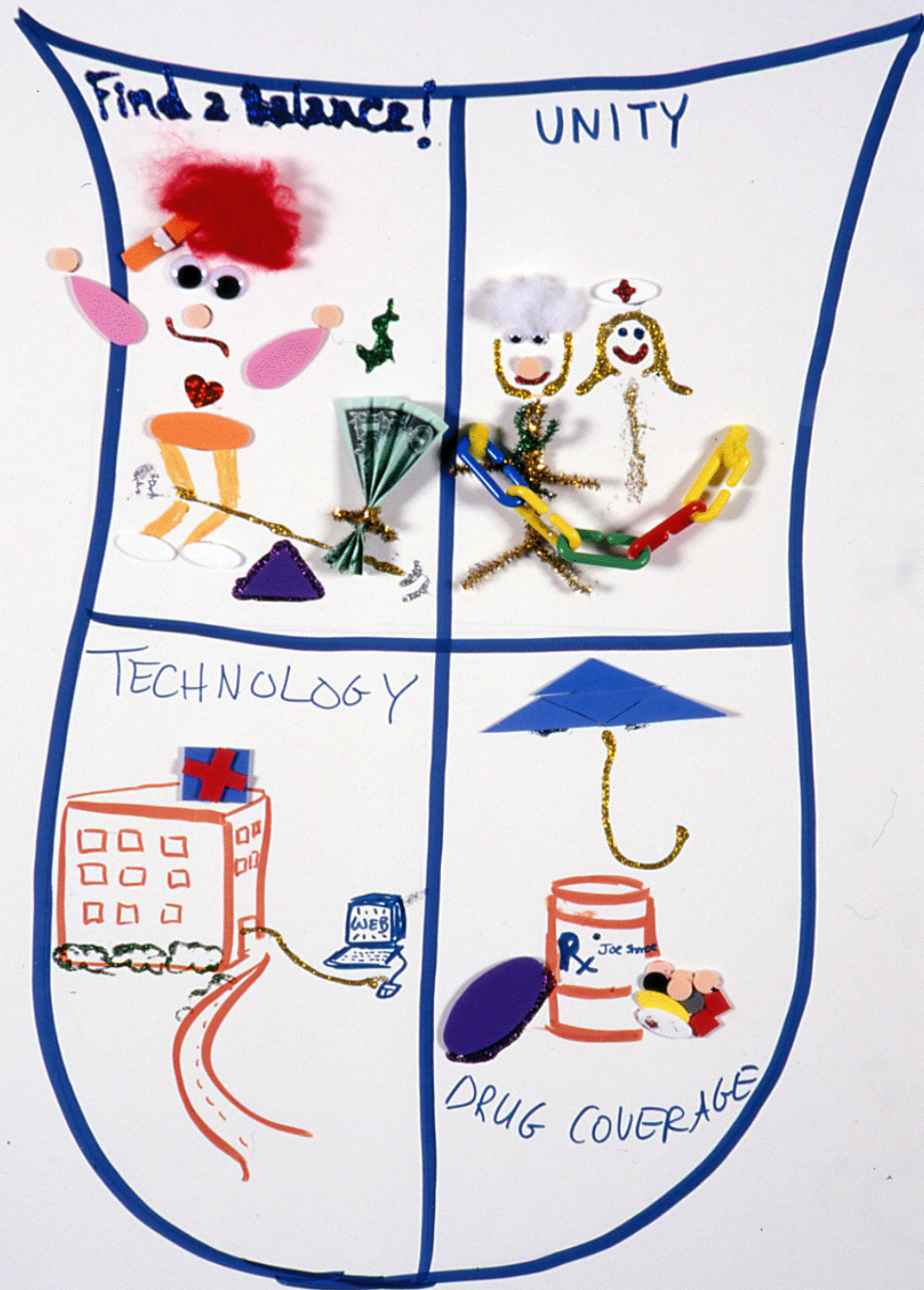
**Lenow's Apocalyptic
Approach to
Traditional Curriculum !**

The Coat-of-Arms Exercise



Themes from the “Coat of Arms” Exercise

- *Balancing cost and quality*
- *Importance of new technologies*
- *Improving access for patients in need*
- *A New Era of Accountability*
- *Culture of Safety/Error Mgmt*
- *Costs of pharmaceuticals*





The Future of Health Care

Program Focus

Themes identified in Coat of Arms predictably match the pre-set week's agenda:

- ***Accountability: EBM, Safety and error mgmt.***
- *Provider Advocacy and Leadership*
- *The new consumerism and e-health*
- *Ethics and care delivery in business*
- *Technology and Pharma cost- a balance*
- *Politics of access and future directions*
- *future health care industry partnerships?*

Sample Curriculum

Monday, 10/18	Tuesday, 10/19	Wednesday, 10/20	Thursday, 10/21	Friday, 10/22
8:30 - 12:00	8:30-12:00	8:30-12:00	8:30 - 12:00	8:30-12:00
OPENING SESSION - Welcome/Introductions - Scope and Purpose - Politics of Healthcare - Introduction Mgd Care Principles	Trends in HealthCare, (8:30-10:00) Provider Relations (10:15- 11:45)	Managed Care Site Visit Health Partners; (Medicaid managed care practicum) (JeffCare) (9-11)	Network Devel 8:30 - 9:30 1015 Chestnut, Ste. 1100 Performance Benchmarking Intro to Evidence-based Decision Support Guidelines (10-11)	Medical Director/ Disease Management (group will plan operational plan and defend to "board of IDS") Exercise 8:30 - 10:00 (JeffCare)
	Noon sessions are for guest preceptors from Industry, Politics, (i.e- Mayor Rendell was a guest) for our UME-21			
End- of- Life Care (12:00 - 12:50) JeffCare (LUNCH)	LUNCH - Guest Speaker Andrew Wigglesworth, President DVHC (JeffCare)	Guest Facilitator- Douglas Peters, CEO Jefferson Health System (noon lunch)	Strategic Planning at the System Level (11:15 - 12:15) 2240 Gibbon	Point - Counter Point 10:15 - 12:00 (JeffCare)
1:00 - 4:30	1:30 - 4:30	1:00 - 5:00	1:00 - 4:30	1:00 - 4:00
Disease Management Introduction/Evidence Based Medicine 1:00 - 4:00 (JeffCare)	The Care Management Continuum Panel Discussion (Ambulatory, Hospital- based, Discharge planning, Social Service representation) Case-based forum please see site assignment	Managed Care Site Visit (One-on-One Medical Director experience) Independence Blue Cross (1901 Market Street 31st Floor)	Ethics in Managed Care (Role-play based on actual vignettes from students/residents) (JeffCare)	- Exam: Practical Written - Survey Form - General discussion/feedback

Acute Otitis Media

Example

- Premise of a routine 18 mo child with hx and presentation indicative of AOM
- Group is polled as to what needs to be identified on otoscopic exam to confirm Dx
- Group is polled secondarily about treatment recommendations



High Degree of Response Variability

- “redness”
- “retraction”
- “poor light reflex”
- “bulging of membrane”
- “absence of movement of Tympanic Membrane
- “absence of bony landmarks”

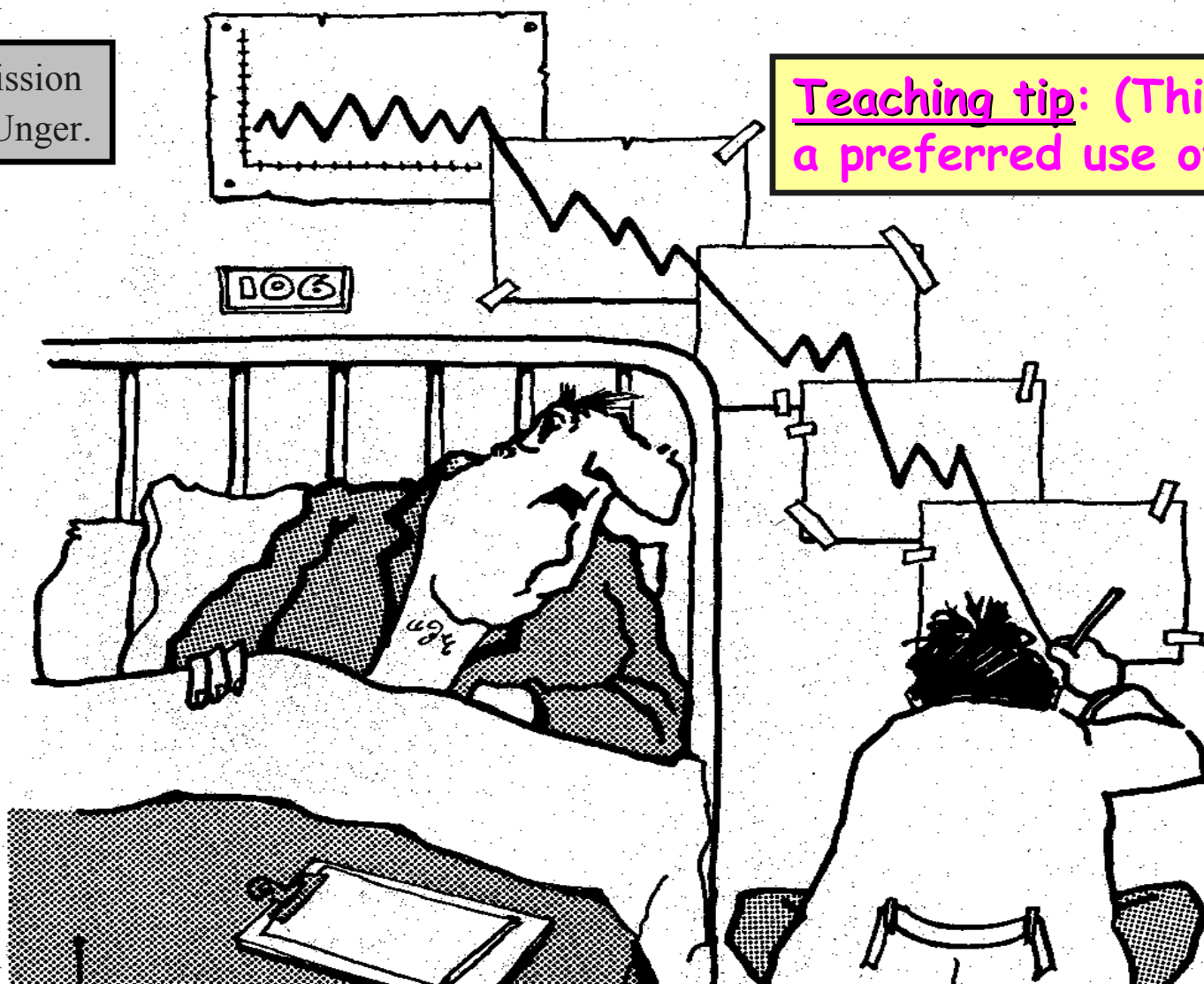


High Degree of Response Variability

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- **“absence of bony landmarks”**

With permission
from Jim Unger.

Teaching tip: (This is not
a preferred use of EBM !!)



**"I really look forward to your
cheery little visits"**

Some Learner Feedback...

- ***"Clearly the greatest learning adventure in my entire academic experience, no my life..."***
- ***"This program makes me want to become a leader of physicians in these troubled times...."***
- ***"Dr. Lenow has simply got to be the finest instructor on earth- I revere him as a God !!"***



OK...Some REAL Learner Feedback To Date...

- ***Happy to see that Jefferson is starting to educate students about the business aspects of medicine... (cycle 1)***
- ***Need more interactive sessions, like ethics, disease mgt...(cycle 4)***
- ***I thoroughly enjoyed this week...will have an effect on how I practice (cycle 12)***
- ***Re: disease mgt exercise: "role-playing sessions were very instructive because we could better understand different perspectives" (cycle 20)***
- ***(re: Coat of Arms) "great way to start off the course, to introduce topics as well as develop rapport with the others" (cycle 30)***
- ***"overall the course was much more informative and 'attention keeping' than I had imagined it would be. I learned a lot! (c***

Learner Evaluations of “Future of Health Care” Course Modules

Topic	Rating Mean of Cycles (Range of Cycles)
Strategic Planning (didactic component)	3.0 (2.0- 3.9)
Health Plan Visit	3.4 (2.9- 3.8)
Ethics in Managed Care	3.4 (3.1- 4.0)
Provider Relations (didactic component)	3.2 (2.2- 3.9)
EBM/Disease Management	3.3 (2.7- 3.9)
Current Controversies- point-counterpoint	3.3 (2.8- 4.0)
Discharge Planning (<i>since discontinued</i>)	2.7 (1.4- 3.9)
<u>Performance Improvement/Accountability*</u>	<u>3.2 (2.7-3.7)</u>
Coat of Arms Exercise **	3.5 (3.0-4.0)

* start date July 2000

** start date Oct 2001

ACGME Activity

(Accreditation Council for Graduate Medical Education)

- 7800 programs nationally, about 1/2 reviewed yearly
- 1900 field staff visits
- Given program visited every 3.7 yrs
- Process based on self-study document with verification via site visit
- Interval of re-review based on comfort level of RRC



The ACGME “Outcomes Project”

- **Endorsed six general competencies or “domains of learning” in Feb 1999:**
 - *Patient Care*
 - *Medical Knowledge*
 - *Practice-based learning and improvement*
 - *Interpersonal and communications skills*
 - *Professionalism*
 - *Systems-based practice*



General Competencies

Practice - Based Learning and Improvement:

“Residents are expected to be able to use scientific evidence and methods to investigate, evaluate, and improve patient care practices.”



ACGME Outcomes Project

- Current model of learning measures potential of a program to education
- Competencies model attempts to actually provide a means of measuring educational achievement-profiling of residency training achievements
- Easier said than done- requires “tools” to make it a viable strategy



Project Phases

Phase 3 (July 06 – June 11)

- Programs

- *Show evidence of learning in six domains*
- *Use of stakeholder assessments to improve program*
- **Linkage of clinical quality and educational outcomes**

- RRCs

- *Provide more guidance to programs*
- *Evidence that programs use assessments for improvements*
- *Sharing best practices among RRCs for assessment purposes*

Vol. 293 No. 6, February 9, 2005

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Editorial

Theme Issue on Medical Education

Call for Papers

Robert M. Golub, MD

JAMA. 2005;293:742.

doc·tor *n* [. . . fr. *L*, teacher, fr. *docere* to teach . . .]

Even if unaware of these Latin roots, all doctors are teachers. Some physicians may carry that literal title during interactions with students, residents, fellows, and peers. However, all physicians are teachers for their patients, and much of the success of that relationship depends on effective teaching. Given the ubiquity of this role, it is ironic that few physicians are formally trained to be educators. Moreover, in a discipline that generally requires that research of the highest standard be used to guide professional activities, the evidence base for medical education remains dominated by anecdote, limited

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“...and we are particularly seeking studies that either incorporate the most relevant educational outcomes or address better techniques for their measure. Specifically, while many studies focus on the educational process, learner satisfaction, or demonstration of skills within a study setting, far more challenging is a measure of the effects on the delivery and quality of health care. Yet that is the ultimate goal of medical education, and that is the type of rigorous outcome study that will receive highest priority for publication.”

A focus on Systems-based and Practice-based learning competencies

The UME-21 and PQE Experience

Section I: Introduction

The UME-21 Project: Connecting Medical Education and Medical Practice

John M. Pascoe, MD, MPH; David Babbott, MD; Karen L. Pye;
Howard K. Rabinowitz, MD; Kenneth J. Veit, DO, MBA; Douglas L. Wood, DO, PhD

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the Primary Care Organization Consortium (Table 1),
DMD leaders created a national medical education

U.S. Department of Health and Human Services	 Bureau of Health Professions Questions? Search
 Health Resources and Services Administration	
Grants	
Student Assistance	
National Health Service Corps	
National Center for Health Workforce Analysis	<p>UME-21 Undergraduate Medical Education for the 21st Century: A National Demonstration of Curriculum innovations to Keep Pace with a Changing Health Care Environment, 1997-2002</p>
Health Professional Shortage Areas	<p>Participant Schools Each received \$375,000 over 3 years</p>
Support for Training Programs	<p>Dartmouth Medical School Community Partners: Blue Cross/Blue Shield of New Hampshire Healthsource</p>

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UME-21 Charge

(8 “partner” schools, 10 “associates”)

- Curriculum in health economics and health systems finance
- **Evidence-based population focused programming efforts**
- Development of effective patient-provider communications
- Ethics
- Medical Informatics
- Leadership
- Systems-based practice methodologies
- Quality improvement, performance measures, especially in patient satisfaction
- Wellness and prevention



PARTNERSHIPS FOR QUALITY EDUCATION

"Today's physicians need to be bi-lingual: fluent not only in the traditional clinical fundamentals but versed in new areas of medical knowledge such as outcomes research, epidemiology, patient satisfaction, and disease management. [Managing care calls] for the integration of newer and older knowledge bases"

*-Lawrence D. Brown, Ph.D.
School of Public Health, Columbia University*

About PQE

Partnerships for Quality Education (PQE) was launched in 1996 with an \$8.3 million grant from [The Pew Charitable Trusts](#). Guided by Pew's vision of better preparing primary care residents for practice in the evolving world of health care, PQE used its resources to foster collaboration between academic medical centers and managed care organizations. Between 1996 and 1999, PQE funded 66 partnerships to develop new curricula and new models for training future clinicians in the skills and competencies of managing care. While the core objective of the partnerships was to redesign residency education, PQE's fundamental goal was to create a movement that would change the very nature of medical education.

In 1999, [The Robert Wood Johnson Foundation](#) (RWJF) awarded PQE a grant of \$8.9 million to continue its work in developing new models for education in managing care. In addition to its work with primary care residency programs, PQE expanded its focus to include the education of nurse practitioner students, and to support the design of new approaches to preparing trainees for collaborative interprofessional practice. With funding from RWJF, PQE has developed three programs: the [Partnerships Program](#), the [Collaborative Interprofessional Team Education](#) (CITE) initiative and [Take Care to Learn: Teaching Clinical Care Management](#), each of which is aimed at improving both education and care.

- About PQE
- Who's Involved
- Programs
- Conferences
- Newsletter
- Resources
- Contact PQE



PARTNERSHIPS FOR QUALITY EDUCATION

Achieving Competence Today (ACT)

The ACT curriculum, which is implemented over two years, consists of three basic components, each of which is critical to the process of driving curricular change:

1. A four-week web-based action-learning course.
2. Resident design and delivery of a plan for teaching about some component of systems or clinical practice improvement.
3. A year-long process of curricular redesign (both repeated and improved in the second year) culminating in presentation of the redesign plan at the spring ACT meeting.

Eighteen internal medicine programs are serving as development partners to demonstrate the viability of the program. Two residents from each program will participate each year.

The ACT initiative is aimed at helping residency programs meet new ACMGE requirements in systems-based practice and clinical practice improvement. These two competencies represent new domains of education for most programs. The gap between ACGME goals and where residency programs are today is great. Few programs have systematically thought through what they should be doing to deliver experiences and teaching that attain the required level of resident proficiency and yet are interesting for the learners. The ACT curriculum is designed to fill this gap.

About PQE

Who's Involved

Programs

- ACT
- Take Care to Learn
- CITE
- FORCE
- Partnerships
- Related Programs
- Evaluation

Conferences

Newsletter

Resources

Contact PQE

ABIM Coordination with Residencies

– ACGME prep

- ABIM, in conjunction with the Alliance for Academic Internal Medicine, selected 15 internal medicine residency programs
- ACGME competencies targeted by the practice improvement module included practice-based learning and improvement, systems-based practice, and competency of patient care.
- Faculty and residents as a group also will look at the system of their clinic using the ABIM recert diabetes module.
- Ultimately, the goal is to come up with a plan to improve some aspect of care. Patients in the residency's clinic also will be surveyed, but the results will reflect the overall care of the clinic and not the care provided by a particular resident.

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Health Policy and Clinical Practice

Integrating the Accreditation Council for Graduate Medical Education Core Competencies into the model of the Clinical Practice of Emergency Medicine

Dane M. Chapman, MD, PhD [a](#)

Stephen Hayden, MD [b](#)

Arthur B. Sanders, MD [c](#), [*](#)

Louis S. Binder, MD [d](#)

Ann Chinnis, MD [e](#)

Kelly Corrigan, MD [f](#)

Tony LaDuca, PhD [g](#)

Pam Dyne, MD [h](#)

Debra G. Perina, MD [i](#)

Rebecca Smith-Coggins, MD [i](#)

Larry Sulton, PhD [k](#)

Susan Swing, PhD [k](#)

- *“Concurrently, the American Board of Medical Specialties, including the American Board of Emergency Medicine (ABEM), has embraced the competency concept.”*

- *“ABEM has used the Model as a significant part of its blueprint for the written and oral certification examinations in emergency medicine and is fully supportive of the effort to more fully define and integrate the ACGME core competencies into training emergency medicine specialists.”*



The ACCME's values...

(Accreditation Council for Continuing Medical Education)

- 1.1 CME and life-long learning that affects physician performance...**
- 1.2 Reasonable standards and criteria for all CME providers...**
- 1.3 Fair, valid, innovative, consistent accreditation**
- 1.4 Accountability, responsiveness, and leadership**
- 1.5 Collaboration and partnership**
- 1.6 Measuring the effectiveness**



New Standards for Commercial Support

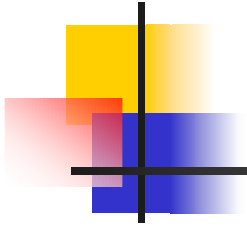
Critical Highlights:

- **Independence** from Grantor
 - *No influence or direction over content of activity*
 - *No influence or control over faculty selection*
- **Resolution of Conflicts of Interest** – Financial Relationships
 - *Mechanisms to identify and resolve COI*
- **Content Validation** – **evidence based and unbiased**
- **Funds Management** – **accountability to grantor and ACCME**



Summary Observations

- EBM is vital to medical curricula and continuing educational strategies
- Focus on patient safety and care efficiency derivative of principles taught in EBM
- Needs to be clear understanding of definitions
- Hands on approach lends for acceptance among new learners in particular, use of problem-based learning makes sense



**Chance Favours
The Prepared Mind**

...Louis Pasteur

With permission
from Jim Unger.



"The results of your tests were
negative... Get Lost!"