

UNIVERSITY OF SOUTH FLORIDA

Making Evidenced-Based Practice Work for You and Your Learners



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Tampa -- Hurricane Paths of 2004

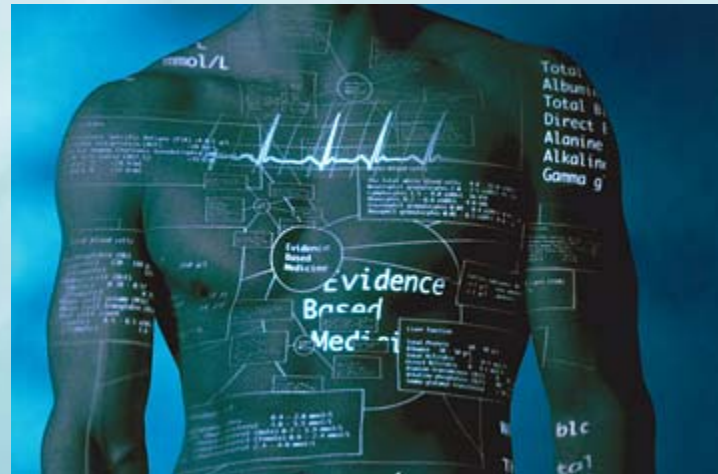


EBM again...Why, Why, Why?

TIME

Are Doctors Just Playing Hunches?

THURSDAY, FEB. 15, 2007 By CHRISTINE GORMAN



Objectives

- Introduce effective and efficient literature search strategies
- Demonstrate EBM and Point of care (POC) resources
- Discuss settings to implement EBM curriculum
- Use tools to evaluate components of EBM competency

EBM Definition

Evidence-based medicine (EBM) is the integration of best research evidence with clinical expertise and patient values.

Sackett DL [et al] Evidence-Based Medicine How to Practice and Teach
EBM 2nd Ed. Churchill Livingstone, 2000

EBM Basics

- “Frame” the patient care answerable question
- Search and find the best evidence
- Appraise critically the evidence
- Integrate the critical appraisal with expertise and patient’s unique values
- Evaluate the effectiveness and efficiency of steps 1-4

Sackett DL [et al] Evidence-Based Medicine How to Practice and Teach EBM 2nd Ed. Churchill Livingstone, 2000

Just a few questions

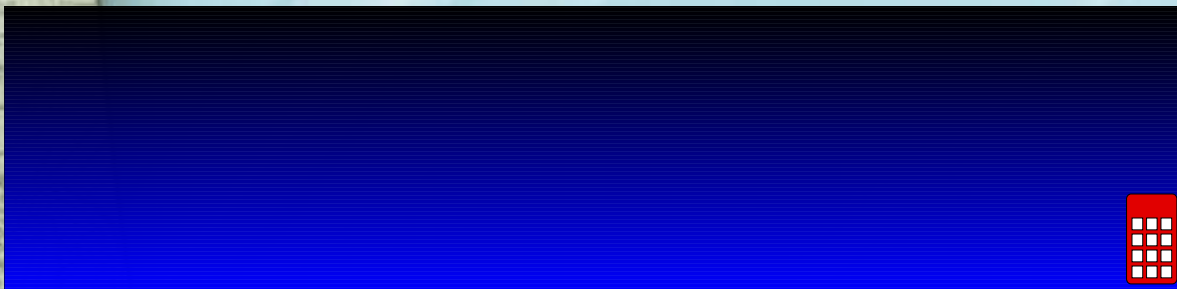
Who are you?

- Faculty
- Program director
- Department chair
- EBM course director
- Just a curious person



Choose a response that *best* describes your level of understanding of EBM

- I do not understand the principles of EBM
- I understand the principles of EBM, but have difficulty applying them
- I understand the principles of EBM and can apply them
- I understand the principles of EBM can apply and teach them
- I am an EBM expert



Is EBM a part of your curriculum?

- Yes
- No



In what format is EBM taught?

- Morning report
- Journal club
- Lecture series/workshop
- At the bedside
- More than one of the above



What is your primary goal for this workshop?

- Learn principles of EBM
- Learn ways to incorporate EBM into a curriculum
- Learn resources available to answer clinical questions
- Learns ways to evaluate residents in EBM



Our USF Experience

- Morning report format
- Noon conference lecture series
- Bedside teaching
- Fellow conferences
- Faculty journal club

Time for the great divide



- **GROUP 1**

- EBM case study
- Review EBM resources
- Demonstration of POC tools

- **GROUP 2**

- EBM curriculum settings
- EBM Tools
 - Application tools for various settings
 - Evaluation tools
 - Connecting to ACGME competencies

Overheard

“I couldn’t find an article”

Information Management

The internet era of to easy access to mountains of medical literature

PLUS

The push to practice evidence-based medicine

EQUALS

Requirement to develop skills to *find, evaluate and use* information at the point of care

Relevance

- Clinicians generate questions at the rate of 1-3 questions for every 3 patient visits
- Only 40% of questions get researched
- Only 30% of questions get answered
- One of the major obstacles cited is time to search for information

Grandage KK [et. al] J Med Libr Assoc 2002 July; 90(3): 298-304

Pediatric Competency Outcomes

- Searching the literature
 - **Patient Care:** Identifies and accesses available resources (medical literature, consultants) to support the chosen therapeutic path.
 - **Patient Care:** Uses information technology to practice evidence-based medicine and to enhance patient care
 - **Medical Knowledge:** Seeks and locates resources to answer clinical questions
 - **Practice-based learning and improvement:** Demonstrates the ability to effectively search the literature

EBM Resources: A Case Study

- A senior resident doing a ward rotation presents a 14 month old patient with croup. The patient had received Dexamethsone IM and Racemic epinephrine in the emergency department. During the night the patient's condition deteriorated and the resident administered another Racemic epinephrine dose and started humidified air. While she had vaguely remembered that humidified air was not helpful, she "wanted to throw the book at him." The next morning on rounds, the resident's attending wanted her to justify her use of humidified air in the treatment of croup. The resident researched the question and presented the case in EBM morning report.

Question #1

What would be your next step to assist this resident?

- Use an educational Rx
- Help formulate a searchable question

R_x Educational Prescription

Patient's Name:

Learner:

3-part Clinical Question

Target Disorder:

Intervention (+/- comparison):

Outcome:

Date and Place to be filled:

Presentations will cover:

1. search strategy;
2. search results;
3. the validity of this evidence;
4. the importance of this valid evidence;
5. can this valid, important evidence be applied to your patient?
6. your evaluation of this process.

- A RCT of 48 medical residents showed a simple educational intervention can increase resident searching activity
- Education on clinical question building increases # of searches performed

Cabell CH et al J Gen Intern Med. 2001 Dec;16(12):838-44.

First frame the PICO question

- P= In pediatric patients with moderate croup,
- I=does administration of humidified air
- C=versus room air
- O= result in clinical improvement (lower croup score)?

Question #2

What resources do you have to help her?

- Librarians
- Educational courses in literature searching
- Internet access to databases
- PDA resources
- Other?

The search...where to begin?



USF Pediatric Resident's Survey

6. What resources do you use to make evidence based decisions?

		Response Percent	Response Total
Texts		46.9%	23
Journals		89.8%	44
Non-medical search engines (Google, Yahoo etc.)		49%	24
Pub Med		44.9%	22
OVID		34.7%	17
Cochrane Data base		16.3%	8
Up to Date		87.8%	43
Dyna-Med		2%	1
Infopoems/Inforetriever		6.1%	3
ACP Journal		12.2%	6
BMJ		4.1%	2
<input type="button" value="View"/> Other (please specify)		2%	1
Total Respondents			49
(skipped this question)			2

Information seeking behavior

- Residents generate 1.3 questions per patient encounter
- Seek answers to 66% of questions
- Most commonly used another person or pocket reference, rarely evidenced-based source

Ramos K, et al Fam Med. 2003 Apr;35(4):257-60.

Question #3
What Databases would you suggest?

Databases

- [BMJ Clinical Evidence](#) PDA
- [The Cochrane Library](#)
- [DynaMed](#) PDA
- [FIRSTconsult](#) PDA
- [InfoPOEMs](#) PDA
- [PubMed](#) PDA *Free*
- [UpToDate](#) PDA

Use of information dictates database

- Many start with Medline (PubMed or Ovid)
- Use clinical queries to narrow search
- Use limits/filters
- Use in house librarians when possible

Demonstration

- [PubMed](#)

BMJ Clinical Evidence

- “*BMJ Clinical Evidence* systematic reviews summarize the current state of knowledge and uncertainty about the prevention and treatment of clinical conditions, based on thorough searches and appraisal of the literature.”
- Demonstration

BMJ Clinical Evidence

- Covers 230 conditions
- Categorizes Rx as effective or ineffective
- Concise version available
- Updated every 6 mo
- PDA version
- Only therapy and prevention addressed
- Cost \$239

The Cochrane Library

- The Cochrane Library is an electronic publication designed to supply high quality evidence to inform people providing and receiving care, and those responsible for research, teaching, funding and administration at all levels.
- [Demonstration](#)

The Cochrane Library

- 4655 systematic reviews
- Evidence-Based Child Health: A Cochrane Review Journal
- Not point of care tool
- Cost \$235
- PDA version \$29.95 per review

DynaMed

- "DynaMed strives to provide the best available evidence updated daily, and has more than 1,000 clinical topics" with content "derived from systematic literature surveillance" and synthesized with "other clinically relevant information for easy comprehensive browsing."
- [Demonstration](#)

DynaMed

- Over 1800 topics
- Updated daily
- Systematic surveillance of literature
- Provides materials to evaluate practice based learning and improvement
- True POC tool
- \$349

FIRSTConsult

- FIRSTConsult is an evidence-based and continuously updated clinical information resource for healthcare professionals.
- Designed for use at point of care, it provides user-friendly access to the latest information on evaluation, diagnosis, clinical management, prognosis, and prevention.
- Demonstration

InfoPOEMS

- InfoPOEMS consists of two components, InfoRetriever and DailyPOEMs.
- "InfoRetriever simultaneously searches the complete POEMs database along with 6 additional evidence-based databases, plus a leading quick-reference tool, to enable rapid lookup and application of information and tools while you practice.
- DailyPOEMs© points out valid, relevant research to you via daily e-mail synopses."
- Demonstration

InfoPOEMS/Info retriever

- Over 3200 POEMs
- Patient oriented outcomes
- Daily Poems email (evidence that finds you)
- Monthly Archive of POEMs
- Clinical Decision Rules
- 5-minute clinical consult
- Cochrane Database abstracts
- Individual studies not systematic reviews
- \$249

UpToDate

- A clinical reference designed to provide instant access to the information you need. It is comprised of thousands of original topic reviews written by a recognized faculty of experts who each address a specific clinical issue and provide detailed recommendations.
- [Demonstration](#)

UpToDate

- 7000 topics/ 750 Pediatric topics
- CME available
- Point of Care tools
- Concise and practical
- Patient information
- ? Evidenced-based (new grading system)
- \$495 new subscription/\$395 renewal

Point of Care tools

- ACP PIER
- Clinical Evidence*
- Clinical Resources @ Ovid
- Diseasedex – General Medicine
- DynaMed
- eMedicine
- Evidence Matters
- FirstConsult
- Harrison's Practice: Answers on Demand
- HealthGate**
- InfoPOEMS/InfoRetriever
- Prodigy Knowledge*
- UpToDate
- Zynx Evidence Evidence

*United Kingdom

**excluded from final ranking

Comparison of Rankings

Raw	Evidence	Important/Not As Important	Levels
ACP PIER	ACP PIER	ACP PIER	ACP PIER
eMedicine	Clinical Evidence*	Clinical Evidence*	Clinical Evidence*
DynaMed	DynaMed	DynaMed	Diseasedex – General Medicine
Clinical Evidence*	Clinical Resources @ Ovid	eMedicine	DynaMed
Clinical Resources @ Ovid	eMedicine	Diseasedex – General Medicine	InfoPOEMS/InfoRetriever
UpToDate	UpToDate	Clinical Resources @ Ovid	Zynx Evidence
Diseasedex – General Medicine	Diseasedex – General Medicine	UpToDate	eMedicine
FirstConsult	InfoPOEMS/InfoRetriever	InfoPOEMS/InfoRetriever	Clinical Resources @ Ovid
InfoPOEMS/InfoRetriever	FirstConsult	FirstConsult	UpToDate
Zynx Evidence	Zynx Evidence	Zynx Evidence	FirstConsult
Harrison's Practice: Answers on Demand	Evidence Matters	Harrison's Practice: Answers on Demand	Prodigy Knowledge*
Prodigy Knowledge*	Harrison's Practice: Answers on Demand	Evidence Matters	Harrison's Practice: Answers on Demand
Evidence Matters	Prodigy Knowledge*	Prodigy Knowledge*	Evidence Matters

*United Kingdom

Many ways to get answers

- Many available databases
- Choose most appropriate one for use of information
- Point of care tools may help get more questions answered

Challenges for EBM Curriculum Implementation and Evaluation

- Having 1-2 dedicated/point person faculty EBM champions
- Buy-in from the Chief residents
- Heterogeneous faculty level of comfort and EBM knowledge base

Wrap up

- Own experiences to share with the group?
- How will you implement what you have learned today?
- Please complete the evaluation

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