

Evidence Based Practice-The Future

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“Not all that is measurable is of value, and not all that is of value can be measured”

Bradley and Field 1995 Evidence Based Medicine,
Lancet 346:8338-839

“The medical literature can be compared to a jungle. It is fast growing, full of dead wood, sprinkled with hidden treasure and infested with spiders and snakes.”

*Peter Morgan, Scientific Editor,
Canadian Medical Association*

Is Evidence Based Practice a Radical Change?


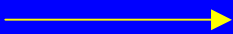
Combines with other drivers of change

- “Consumerism”; the resourceful patient
- The internet
- The desire of owners to manage more the clinical process
- Growing gap between what could be done and what can be **afforded!**

Has EBP Changed the World?

- Source of knowledge is expert opinion → Source of knowledge is systematic review of evidence
- Clinical skills are seen as semi mystical → Clinical skills can be audited and managed
- Research is marginal to practice → Research and evidence go together

Has EBP Changed the World?

- Analysis of research is haphazard  Analysis of research is systematic
- Not important to gather new evidence from patients routinely  Patients should be included in trials wherever possible

Has EBP Changed the World?

- Main information sources are experts, selected journals, and books → Essential to have immediate (electronic) access to systematically collected evidence
- Most of what doctors need to know is in their heads → Doctors must use information tools constantly

Has EBP Changed the World?

- Only lip service is paid to keeping up to date and learning new skills → Essential to keep learning new skills
- Most medical care is assumed to be beneficial → Widespread recognition that there is a balance between doing good and **harm**

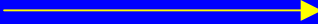

Has EBP Changed the World?

- Clinical performance is not systematically audited → Clinical performance is regularly reviewed and managed
- Managers have little involvement in clinical processes → Managers are involved in clinical processes

Has EBP Changed the World?

- Organisational model is hierarchical —→ Organisational model is much more democratic, based on ability to use evidence
- Doctor patient relationship is essentially **master/pupil** —→ Patient partnership is the norm

Has EBP Changed the World?

- Patients do not have easy access to the knowledge base of doctors  Patients have as much access to the evidence base of medicine as doctors
- The doctor is smartest  Often the patient is smarter

What May Happen?

Alex Jadad, Director McMaster Evidence Based Practice Centre

- Shift from evidence based medicine to evidence guided or evidence informed decisions
- Development of user friendly ways to present information to users
- Implications of the internet and other informatics developments on EBM
- Misuse of evidence (i.e., by funders, media, industry e.g. **Garlic/beetroot**)

Alex Jadad

- Better integration of evidence and anecdotal information
- More respect for **TEMPERED** anecdotal information
- **Strategies to help consumers understand evidence (Herceptin)**
- Strategies to help decision makers accept and feel more comfortable with uncertainty

Iain Chalmers , Director UK Cochrane Centre

- Increase the attention paid to psychologically mediated effects of health care
- Encourage health professionals to find out what we don't know rather than leave it to researchers (CME)
- Address the perverse influences that lead to “the scandal of poor medical research” and the gross distortions of the health research agenda.

Iain Chalmers

- Face up to the reality that some ill people--for perfectly rational reasons--do not wish to go on living
- Get involved with the rationing debate

Brian Haynes

- Re-engineer treatments that don't work well enough--some treatments that do more good than harm under research conditions are useless in practice because no one can follow them without more help than the health care system can afford e.g **Clopidogrel and eluting-stents**
- So we should be directing researchers to go back and get it right. (e.g. **Digoxin**)

Efficacy and Effectiveness

- **Effective** treatments work at the “XXX Manufacturer”.
- Treatments at GSH are selected on their **effectiveness!**

Brian Haynes

- Improve research into helping patients follow treatments
- Help practitioners to cope with new treatment tests
- Improve our understanding of decision making

How to Move From Information to Change

**Information on Its Own Hardly
Ever Leads to Change!**

Interventions That Have Little or **No** Effect in Changing behaviour

- Educational materials - distribution of printed information, **guidelines**
- Didactic educational meetings

Interventions That Will Sometimes Change behaviour

- Audit and feedback
- Local opinion leaders
- Local consensus process
- **Patient** mediated interventions

Interventions That Will Usually Change behaviour

- Educational outreach
- Reminders (manual or computerised)
- Multifaceted interventions (two or more of audit and feedback, reminders, local consensus process, marketing)
- Interactive educational meetings

Moving up from data to action/change

Action
Know how
Know about
Information
Data



Thoughts on Learning

Learning

- Knowledge is the capacity for effective action: know how.
- All doing is knowing. All knowing is doing.
- Good practice is “**know how**” not “know about.”

Learning

- Know how does not transfer as information transfers. Know how comes from learning.
- Those who know do not speak. Those who speak do not know.
- Where is the wisdom we have lost in knowledge? Where is the knowledge we have lost in information?

Learning

- Endless invention, endless experiment/Brings knowledge of motion, but not of stillness; Knowledge of speech, but not of silence.
- In order to arrive at what you do not know
You must go by a way which is the way of ignorance?
- Innovation spreads through people not on paper.

Three Models of Learning

Imagine trying to get somebody to learn to tie their shoes through writing it down and publishing it in the **NEJM**

Model One: 1%

- **Person A----->information on good practice-----> Person B**
- Sometimes information transfer will lead to new knowledge
- But only if the two people have a great deal of knowledge in common and the learner is motivated to learn and trusts the “teacher”
- For example, a chess master teaching another chess master a new gambit

Model Two: 4%

- **Person A** <-----> **Information on good practice** <-----> **Person B**
- Information can transfer in this way if the learner is interested and motivated and trusts the teacher
- For example, a chess master teaching somebody very interested

Model 3: 95%

- **Person A and person B are in a different place from where they usually are (a “learning field”) and they DO something together; both “teacher” and “learner” are altered**
- 95% of learning happens in this way
- If a group of people learn a lot together through model 3 then this may allow learning through models 2 and 1

The Story of Robins and Titmice

- In the late 19th century milkmen in Britain left milk at peoples' doors in open bottles
- Robins and titmice drank the milk
- In the 1930s milkmen introduced aluminium seals
- By the 1950s all the titmice in Britain could pierce the aluminium seals but very few robins could do so

Characteristic	Robins	Titmice
Innovative individuals	Yes	Yes
Mobility	Yes	Yes
An effective system of communication and propagation of knowledge	No, territorial. Lots of communication, but usually they say: “Keep out. Keep out.”	Yes, “flocking.” They flock in groups of 8, 10, or 12, fly from garden to garden and play and feed.

Preconditions for Learning

- Fun
- At ease with one's self
- Trust
- Support
- The chance to have conversations

Combining EBP and Improvement

- EBP has been primarily about doing the right thing, improvement is about **doing the thing right**
- They come from different intellectual traditions (EBP from clinical epidemiology; Improvement from organisational behaviour and management--although both have important statistical roots)

The Essence of Improvement

- Patient defined
- Constant experimentation
- No blame. “Fear must be abolished”
- No bad people, only bad systems
- Based on measurement - for learning, not punishment
- Every defect is a treasure

Don Berwick (Paediatrician and President of the Institute for Improvement in Healthcare): A Primer on Improvement

- Not all change is improvement, but all improvement is change
- Real improvement comes from changing systems, not changing within systems
- To make improvements we must be clear about what we are trying to accomplish, how we will know that a change has led to improvement, and what change we can make that will result in an improvement

Primer of improvement

- The more specific the aim, the more likely the improvement; armies do not take all hills at once
- Concentrate on meeting the needs of patients rather than the needs of organisations
- Measurement is best used for learning rather than for selection, reward, or punishment

Primer of improvement

- Measurement/audit helps to know whether innovations should be kept, changed, or rejected; to understand causes; and to clarify aims

Primer of improvement

- Educating people and providing incentives are familiar but not very effective ways of achieving improvement
- Most work systems leave too little time for reflection on work
- You win the Tour de France not by planning for years for the perfect first bicycle ride but by **constantly making small improvements**

EBP and quality improvement: learning from each other

- Better methods of evaluation
- A broader rang of methods for studying what we do, why we do it, and what might work

Utility of information

Utility = relevance x validity x interactivity
work to access information

The “thing”

- The information tool that will replace books and journals and answer doctors and patients questions within 15 seconds - as they consult
- There is a worldwide search for the “thing”

Characteristics of the “thing”

- Must be able to answer highly complex questions-- so will have to be connected to a large valid database
- Electronic
- Portable
- Fast
- Easy to use
- Will prompt doctors rather than simply answer questions

Characteristics of the “thing”

- Doctors must find it helpful rather than demeaning
- Probably be connected to the patient record
- A servant of patients as well as doctors
- Will provide psychological support and affirmation.
- Probably there will be no single tool but a family of tools

Conclusions

- **EBP** does mark a radical break from the old world
- It is a new world in which the traditional authority and skills of doctors are questioned
- There are many ways in which it might/will develop
- **Information** on its own doesn't change practice

Conclusions

- **We must learn more about how we move from evidence to change, but we know it's hard**
- **We need to put together our understanding of EBM and improvement**

Conclusions

- **We need to improve the dissemination of evidence based information and help those who are not skilled in the ways of EBM to practice in a more evidence based way**
- **There will be new information tools, some of which will help clinicians and patients as they consult**

**THANK YOU FOR
LISTENING**