Newsletter of the International Society for Evidence-Based Health Care
Newsletter 2, January 2011

The International Society for Evidence-Based Health Care

Mission

The mission of the International Society for Evidence-Based Health Care is to develop and encourage research in evidence-based health care and to promote and provide professional and public education in the field.

Vision

The society is inspired by a vision to be a world-wide platform for interaction and collaboration among practitioners, teachers, researchers and the public to promote EBHC. The intent is to provide support to frontline clinicians making day-to-day decisions, and to those who have to develop curricula and teach EBHC.

Key objectives of the Society

- To develop and promote professional and public education regarding EBHC
- To develop, promote, and coordinate international programs through national/international collaboration
- To develop educational materials for facilitating workshops to promote EBHC
- To assist with and encourage EBHC-related programs when requested by an individual national/regional organization
- To advise and guide on fundraising skills in order that national foundations and societies are enabled to finance a greater level and range of activities
- To participate in, and promote programs for national, regional and international workshops regarding EBCP
- To foster the development of an international communications system for individuals and organizations working in EBHC-related areas
- To improve the evidence systems within which health care workers practice.

Centre for Evidence-Based Medicine
University of Oxford, UK
www.cebm.net

Evidence-Based Clinical Practice Office
McMaster University, Canada
www.ebm.mcmaster.ca

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EDITORIALS

Healthcare Information for All by 2015: Evidence-Based Health Care in developing countries.

Dr Neil Pakenham-Walsh

Co-director, Global Healthcare Information Network

Summary: This is the first of two editorials. My aim is twofold. First, to raise awareness among proponents of Evidence Based Health Care (EBHC) about the pervasive lack of access to relevant, reliable healthcare information in developing countries, with particular reference to EBHC. This editorial focuses on the information needs of healthcare providers in low-income countries, with an emphasis on the role of researchers, systematic reviewers, and EBM practitioners and trainers - and how you can contribute.
Second, to encourage you to join a large, thriving global email forum - Healthcare Information For All by 2015 - to explore these issues further over the coming weeks and months. We shall aim to synthesise these discussions into a second editorial in this publication, to be published later in 2011. This would provide perspectives from different stakeholder groups on possible ways to empower healthcare providers to deliver safer, more effective care, and progressively to adopt the 'conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients'[1].

'Wherever health care is provided and used, it is essential to know which interventions work, which do not work, and which are likely to be harmful. This is especially important in situations where health problems are severe and the scarcity of resources makes it vital that they are not wasted.'[1]

All healthcare providers - from parents in a rural village to medical specialists in a national hospital - need access to relevant [see Box, below], reliable healthcare information to prevent, diagnose and manage disease and injury, and to reduce avoidable suffering and premature death. In developing countries there continues to be a low level of availability of such information, especially for those working in primary care and small district hospitals. Such health workers are further disadvantaged in that many or all of their basic needs are unmet. These have been described by the current author with the acronym SEISMIC: Skills, Equipment, Information, Structural support, Medicines, Incentives, Communication facilities[2]. As a result, clinicians are disempowered from providing the care they were trained to provide. This results in chronic and progressive disillusionment and demotivation for the healthcare provider. This disempowerment is tragic for healthcare providers individually and professionally, dangerous and potentially lethal to their patients, detrimental to the public health, and a major barrier to achieving the Millennium Development Goals: "The only route to reaching the Health MDGs is through the health worker: there are no shortcuts."[3]

Box: 'Relevant' information is appropriate to the language and educational level of the user, as well as his or her geographical, epidemiological, and sociocultural context; it is presented in a style and format (e.g. book, CD-ROM, website, voice) that is appropriate to the needs of the user at the time it is needed. Relevant information is appropriate to the available level of resources - if it is not actionable it is not relevant.

A recent (non-systematic) review of the information needs of health workers in developing countries, with a focus on Africa, concluded 'The studies suggest a gross lack of knowledge about the basics on how to diagnose and manage common diseases, going right across the health workforce and often associated with suboptimal, ineffective and dangerous health care practices.'[4]

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[1] Sackett DL et al. Evidence-based medicine: what it is and what it isn't.
BMJ 1996; 312 : 71 (Published 13 January 1996)
www.bmj.com/content/312/7023/71.full

[2] Pakenham-Walsh, NM. Meeting the needs of healthcare providers. id21 Viewpoint.
http://www.eldis.org/id21ext/Pakenham-Walshfeb08.html

[3] Chen L et al. Human resources for health: overcoming the crisis. *The Lancet*, Volume 364, Issue 9449, Pages 1984-1990.
http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(04)17482-5/fulltext

[4] Pakenham-Walsh N & Bukachi F. Information needs of health care workers in developing countries: a literature review with a focus on Africa. Human Resources for Health 2009, 7:30doi:10.1186/1478-4491-7-30
http://www.human-resources-health.com/content/7/1/30

The deficiencies in knowledge and care are not primarily about decisions that rely on direct access to systematic reviews. They are far more fundamental. For example:

4 in 10 mothers in India believed that they should *withhold* fluids if their baby develops diarrhoea[5] (worldwide, 1.8 million children die every year from dehydration due to diarrhoea).

3 in 4 doctors caring for sick children in district hospitals in Bangladesh, Dominican Republic, Ethiopia, Indonesia, Philippines, Tanzania, and Uganda had poor basic knowledge of leading causes of child death such as childhood pneumonia, severe malnutrition, and sepsis.[6]

4 in 10 family doctors in Pakistan used *tranquilisers* as their first-line treatment for hypertension.[7]

7 in 10 children with malaria treated at home are mismanaged, contributing to 2000 deaths every day in Africa alone.[8]

7 in 10 women giving birth in health facilities in Africa and South Asia were incorrectly managed during the 3rd stage of labour, predisposing them to postpartum haemorrhage. PPH kills more than 500 young women every day in the developing world.[9]

More than half of patients attending primary health centres in India were incorrectly prescribed a **harmful** treatment. [10]

What can be done to address these problems? Part of the solution is to ensure that healthcare providers have access to relevant, reliable information. How? There is clearly no single solution; meeting the information needs of different cadres of healthcare provider requires a combination of approaches. Whether or not these approaches deliver 'the right information to the right person at the right time' is dependent on a complex global system of diverse stakeholders - policymakers, researchers, publishers, systematic reviewers, guideline developers, producers of secondary reference and learning materials, information technologists, librarians, trainers and frontline healthcare providers.

The way I have listed the stakeholders above reflects the current prevalent paradigm, whereby evidence is 'pushed' into practice. An alternative paradigm is to put the information needs - actual and perceived - at both the starting point and the centre of all our efforts - our priority therefore is to engage, listen to, and develop a collective understanding of needs and how to meet those needs. As in any system, it is imperative to identify barriers and drivers in the production, availability and use of evidence-based information, which in turn requires an understanding of processes at all stages in the knowledge cycle. There is a growing consensus that the various stakeholders are interdependent but are disconnected, and it is largely for this reason that the system is not working and healthcare providers remain uninformed.[11]

The global campaign and learning network 'Healthcare Information For All by 2015' aims to mobilise all stakeholders together around the central purpose of understanding the information needs of frontline healthcare providers, and ways to more effectively meet those needs. It uses an innovative strategy based on communication, understanding and advocacy, underpinnned by a unique, value-added approach called Reader-Focused Moderation'[12]. More than 5000 professionals are involved, interacting on three email forums: HIFA2015, CHILD2015, and HIFA-Portuguese (in collaboration with the WHO initiative, ePORTUGUESe). We have also recently (October 2010) launched a fourth forum in collaboration with EVIPNet, the Evidence for Informed Policy Network at WHO. HIFA-EVIPNet-French focuses on the information needs of policymakers in French speaking countries.

Evidence-based health care is as important, if not more so, in low-resource settings as it is in high-tech

[5] Wadhwani N. An integrated approach to reduce childhood mortality and morbidity due to diarrhoea and dehydration. http://hetv.org/india/mh/plan/hetvplan.pdf

[6] Nolan T et al. Quality of hospital care for seriously ill children in less-developed countries. *Lancet* 2001;357(9250):106-10

[7] Jafar TH et al. General practitioners' approach to hypertension in urban Pakistan: disturbing trends in practice. *Circulation* 2005;111(10):1278-83.

[8] Mozumder P & Marathe A. Role of information and communication networks in malaria survival. *Malaria Journal* 2007;6:136

[9] Stanton C et al. Use of active management of the third stage of labour in seven developing countries. *WHO Bulletin* 2009;87:207-215

[10] India Development Policy Review, 2006

[11] Godlee F et al. Can we achieve health information for all by 2015? Lancet 2004;364(9430):295-300 & http://www.lancet.com/journals/lancet/article/PIIS0140-6736(04)16681-6/fulltext

[12] Pakenham-Walsh N. Healthcare Information for All by 2015: a community of purpose facilitated by Reader-Focused Moderation. Knowledge Management for Development Journal, Vol 3, No 1 (2007) http://journal.km4dev.org/index.php/km4dj/article/view/96

environments. Chinnock et al have outlined many of the issues in their open-access paper: 'Is Evidence-Based Medicine Relevant to the Developing World?'[2] (see Box)

Reasons Why the Relevance Is Limited (from Chinnock et al)

- 'Most of the reviews produced to date address health conditions that are priorities in the developed world'
- 'The authors of systematic reviews seem, by and large, to prefer to take on the task of assessing the evidence for more recent (and generally more expensive) technologies.'
- 'Systematic reviews are based largely on research that has been done in rich countries.'
- 'The difficulties of conducting randomized controlled trials in resource-poor situations result in the exclusion of many developing country studies.'
- 'Practitioners in low-income countries have questioned the "transferability" of evidence derived from studies conducted in richer nations'
- 'Features of the typical health care experience of a patient living in the developing world [are very different] as compared with features of the typical health care experience of a patient in a clinical trial in a developed country.'

What Can Be Done?

- 'The writers of systematic reviews... need to find ways to make a good product better, and we must do more to make sure that people in the majority world are able to access the reviews that are published.'
- 'How can we involve more people from developing countries in the writing and peer reviewing of systematic reviews?'
- 'How can we get more reviews written on (a) health problems that are priorities, and (b) interventions that are affordable and feasible in the majority world?'
- 'Should reviews focus on specific contexts in relation to the location of the condition and the delivery of the intervention?'
- 'How can we encourage reviewers to look at conditions/interventions globally, and not just as they affect the United States and Western Europe?'
- 'How can we make it easier to find and review data from research done in developing countries?'
- 'Should reviewers be encouraged to consider whether heterogeneity between study results might be due to differences in underlying resources?'
- 'Should conclusions address whether any recommendations apply everywhere, or just in settings similar to those in which the included studies were done? Or is this beyond the recommendations of a review?'
- Should reviews be circulated as they are, or should they be seen 'merely a stage in the production of more accessible evidence-based health information materials?'
- 'What proportion of reviews are relevant to health care in low-resource settings? Are evidence-based sources used to set policy in different countries? How widely are the Cochrane Library and/or Cochrane reviews used by health care workers, and what are the barriers to use? How widely are these resources used by other people involved in decisions about health care, including patients, their carers, and policy makers? Has the use of Cochrane evidence influenced practice? What do these users and potential users think would make reviews more useful?'

We invite you to join HIFA2015 or one of its sister forums to explore these and other issues further and to identify ways to empower healthcare providers to deliver EBHC. To join, see www.hifa2015.org

Join HIFA2015 and CHILD2015 - send your name, organisation and brief description of your professional interests to hifa2015-admin@dgroups.org and child2015-admin@dgroups.org (or direct to Neil PW at neil.pakenham-walsh@ghi-net.org)

"Healthcare Information For All by 2015: By 2015, every person worldwide will have access to an informed healthcare provider"

With thanks to our 2010 financial supporters: British Medical Association, International Child Health Group (Royal College of Paediatrics and Child Health), Network for Information and Digital Access, Rockefeller Foundation (M&E), Royal College of Midwives, Royal College of Nursing, and TRIP Database

Dr Neil Pakenham-Walsh MB,BS, DCH, DRCOG
Coordinator, HIFA2015
Co-director, Global Healthcare Information Network
16 Woodfield Drive
Charlbury, Oxfordshire OX7 3SE, UK
Tel: +44 (0)1608 811338
Email: neil.pakenham-walsh@ghi-net.org
HIFA2015: *http://www.hifa2015.org*

What should we call weak recommendations?

[1]Lee Yee Chong, [2]Mona Nasser, and [3]Paul Glasziou for the GRADE e-list discussants.

[1]Senior Research Fellow National Clinical Guideline Centre
[2]Research Associate Department of Health Information, German Institute for Quality & Efficiency in Health Care
[3]Director Centre for Research in Evidence-Based Practice Bond University

Currently GRADE[1] classifies the quality of evidence as very low, low, moderate, or high and the strength of recommendations as weak or strong. Strong recommendations are usually provided in circumstances that the panel is confident that the desirable consequences are greater than the undesirable ones; weak recommendation are provided when the panel is less confident about this balance[2]. In the latter cases, the assumption is that many informed patients would follow the recommendation but a number of them would not.

Although it is expected that practitioners would always involve patients in making decision about their own health, this has greater importance for weak recommendation and practitioners are encouraged to take more consideration of its conditional aspects and spent more time to understand the patient circumstances and values and preferences to arrive on a "shared decision" about the preferred treatment (Andrews 2010). The factors that affect the strength of recommendations are quality of evidence, uncertainty about the balance between desirable and undesirable effects, uncertainty or variability in values and preferences and uncertainty about whether the intervention represents a wise use of resources [1]

Because many people find the term "weak" inappropriate or distasteful, there have been discussions about developing an alternative such as using "conditional". For example, Jeff Andrews suggested: "... the term 'weak' has many detractors in the user-world (guideline producers, clinicians, patients)" and suggested conditional was a reasonable alternative term.

Other options have been suggested, but weak and conditional are the main contenders, but there are other contenders such as "qualified" and "discretionary". Tara Horvath pointed out the historical development of the means of these words: "weak descends from the Proto-Indo-European (PIE) base of "weik-", or "to bend." Although by 1300 in Old Norse the cognate "veikr" had the sense of "not strong," the Old High German "weih" and the the Old English "wac" conveyed "pliable," "soft," "yielding." There are connotations in literary usage from the late 14th century onward of "lacking authority," "lacking moral strength," as well as, of course, the meaning we intend of "not strong." In contrast, "conditional," is from PIE "kom-" ("beside," "nearby") and "deik-" (to point out). It came down to Latin as "condicere" ("to speak together") and "condicionem" ("an agreement," "a proviso," "a stipulation").

A clear problem is that the "not strong" recommendations involve some of the meanings of both weak and conditional.

Why two strengths of recommendation?

The split into two strengths is arbitrary. As Kameshwar Prasad pointed out: "Ultimately, everything is grey, rather than black and white", but we also need to keep the classification simple. Not all recommendations have equal strength though, and Jeff Andrews suggest that "Weak recommendations are linked to greater importance and consideration of conditional aspects - more time is spent on this during the decision-making process". So "weak" is a signal to use added consideration in application.

What makes a Recommendation not "strong"?

Several things influence whether a recommendation is strong or weak: quality, effect size, cost, values and preferences, local applicability and that conditional applies only to the last few. An example of local applicability where "on evidence and patients' preferences, a guideline may strongly recommend 'coiling' of a saccular cerebral artery aneurysm, instead of 'clipping'. The evidence is strong, and most patients would like to avoid cranial surgery. However, there may not be any expert to do coiling in the health care facility, in the vicinity (or even in the country). Therefore, the recommendation, even though strong, may not be applicable." The factors might be set out as in the Table below, with an indication of how well the terms might suggest these factors.

Factor	Weak	Conditional, Discretionary	Advisable	Qualified
Quality	Y	N	N	Y
Effect Size	Y	N	Y	N
Cost	N	Y	Y	Y
Values	N	Y	Y	Y
Preferences	N	Y	Y	Y

Does choice of word influence consequences or implementation of recommendation?

The interpretations of both "weak" and "conditional" were very similar from the implementation point of view. The sense of "uncertainty" was interpreted as implying that "one should learn more about it" or "discuss" before taking actions because this is "not straight forward". "I should better look", "let's talk about it", "only if the

stipulation is clear". Therefore, it was felt that question are asked before implementing the recommendation: "what are the patient preferences?", "what are these conditions that I should be paying attention to, to determine the subgroup of patients/individuals that would benefit from this recommendation" .

Is one word preferred to another?

It was interesting to note that although the limitations of "weak" were widely pointed out, most of the respondents still expressed a preference for "weak". Reasons include:

- Some discussants believe that all recommendations are conditional
- Conditional is not representative of situations where evidence quality is very poor (high uncertainty)
- Preferable to have the same descriptive pair (weak-strong is a pair, but unconditional –conditional an unlikely pair)
- Conditional "too loaded" with meaning s to be applied to weak recommendations
- Likely to cause confusion

There are many though, who found both terms acceptable – "just a change of label". It was also pointed out that using "conditional" instead of "weak" may overcome some of the limitations of "weak" such as reluctance of making "weak" recommendations and ignored in implementations. Conditional also describe the "cause" for "weak" recommendation and just the implication of "weak" recommendations. Those who preferred "conditional" pointed out some potential advantages. A "conditional" recommendation sends a clearer signal that the user should think "what are these conditions that I should be paying attention to, to determine the subgroup of patients/individuals that would benefit from this recommendation".

What are the options?

The GRADE members have suggested a number of options. First, is using conditional instead of weak, or using both weak and conditional depending on the reason for being "not strong".

Other suggestions were:

1. Using a graphical method using up or down arrows (Regina Kunz)
2. Using "advise" and "recommended" instead of "weak" and "strong" recommendation respectively (Joseph Watine) which Robin Harbour supported, but Hans de Beer suggested that may not work well in other languages such as Dutch, and proposed.
3. Drop BOTH words, and use Strong Recommendation and Recommendation.
4. Drop weak and strong, and use conditional and unconditional (Tara Horvath), but this was not well accepted as some folk think that no recommendations are unconditional.

What should we do now/going forward?

Issues of words are often dull affairs, but this one is important. The discussion highlighted the uncertainties around the impact of selecting "terms" on the categorization of recommendation and their interpretation. Most guideline writers will want to avoid the term "weak" or use it sparingly. So if we stay with "weak" we will end up with strong recommendations that should not be!

There were no obvious conclusions on what is the best way forward – it will be difficult to find the perfect words to describe and distinguish the strength of recommendations. Future research on how the selection of the terms affect the recommendation given by a guideline panel in a guideline or how it might affect clinical practice can help us in making better decisions about terminology. In the meantime, guideline methodologists and panels might want to consider the following issues in deciding upon the terms:

- Are these commonly used terms? Will these words be interpreted or understood in the same way by different user groups (including patients)?
- Are the terms easily translated to different languages without losing their meanings?
- Are there overall benefits in changing the terms? What is the impact (willingness of panels to make recommendations, implementation, and potential confusions?)

So further suggestions are welcome.

Note: This article is a summary of an online discussion of the GRADE group – see www.gradeworkinggroup.org/

References:

1. Guyatt GH, Oxman AD, Vist GE, Kunz R, Falck-Ytter Y, Alonso-Coello P,Schünemann HJ; GRADE Working Group. GRADE: an emerging consensus on rating quality of evidence and strength of recommendations. BMJ. 2008 Apr 26;336(7650):924-6.

2. Andrews J, Guyatt G, Oxman AD, Dahm P, Falck-Ytter Y, Nasser M, Meerpohl J, Post P, Kunz R, Brozek J, Vist G, Rind D, Schünemanm H. Going from evidence to recommendations: the significance and presentation of strong and weak recommendations. Journal of Clinical Epidemiology (submitted).

What should be in the Evidence-Based Health Care Curriculum?

Paul Glasziou

Director Centre for Research in Evidence-Based Practice Bond University

Something labelled as "Evidence-based Medicine" has become common in health sciences curriculums across the world. However the elements taught and learnt range from a rebadged version of statistics or epidemiology to EBM that is integrated into bedside teaching. So what should and should not be included in an EBM curriculum at undergraduate and postgraduate levels?

The Sicily statement (see below) in 2005 has been a very successful attempt to define the EBM curriculum. Since publication it has become a Highly Accessed articles and been cited over 100 times. A crucial feature of the statement was that the curriculum should include teaching and skills for all four steps of EBM: formulating questions, searching for evidence, critical appraisal, and application to individual patients. Given a tendency to focus on the 3rd step - critical appraisal and statistics - this was an important broadening of the curriculum.

Since its publication both EBM and its teaching methods have continued to evolve, and so a revision seems appropriate. For example, psychological research on the integration of intuition ('system 1') and analysis ('system 2') has important implications for the integration of evidence and clinical expertise.
A small group meet at the Sicily conference in 2009 to start work on this revision, which will continue over 2011. If you have ideas to contribute or energy to devote to this revised curriculum, please contact us at:
Paul Glasziou – pglaszio@bond.edu.au

The 2005 Sicily Statement

Dawes M, Summerskill W, Glasziou P, Cartabellotta A, Martin J, Hopayian K, Porzsolt F, Burls A, Osborne J; Second International Conference of Evidence-Based Health Care Teachers and Developers.
Sicily statement on evidence-based practice. *BMC Med Educ.* 2005 Jan 5;5(1):1.

BACKGROUND: A variety of definitions of evidence-based practice (EBP) exist. However, definitions are in themselves insufficient to explain the underlying processes of EBP and to differentiate between an evidence-based process and evidence-based outcome. There is a need for a clear statement of what Evidence-Based Practice (EBP) means, a description of the skills required to practise in an evidence-based manner and a curriculum that outlines the minimum requirements for training health professionals in EBP. This consensus statement is based on current literature and incorporating the experience of delegates attending the 2003 Conference of Evidence-Based Health Care Teachers and Developers ("Signposting the future of EBHC").

DISCUSSION: Evidence-Based Practice has evolved in both scope and definition. Evidence-Based Practice (EBP) requires that decisions about health care are based on the best available, current, valid and relevant evidence. These decisions should be made by those receiving care, informed by the tacit and explicit knowledge of those providing care, within the context of available resources. Health care professionals must be able to gain, assess, apply and integrate new knowledge and have the ability to adapt to changing circumstances throughout their professional life. Curricula to deliver these aptitudes need to be grounded in the five-step model of EBP, and informed by ongoing research. Core assessment tools for each of the steps should continue to be developed, validated, and made freely available.

SUMMARY: All health care professionals need to understand the principles of EBP, recognise EBP in action, implement evidence-based policies, and have a critical attitude to their own practice and to evidence. Without these skills, professionals and organisations will find it difficult to provide 'best practice'.
(Free full text access at:
http://www.biomedcentral.com/1472-6920/5/1)

CALL FOR PAPERS

***Evidence-based Medicine (EBM)* seeks to expand its content by including new article types. Further information on article types and submission instructions are available at:**

http://ebm.bmj.com/

Current content is largely brief summaries of the latest high quality literature with expert clinically relevant commentary. The Editors wish to expand the journal's offerings to include original papers from systematic reviews, to perspectives relevant to the study and practice of evidence-based medicine.

Article types (at http://ebm.bmj.com/site/about/guidelines.xhtml):
Perspectives express a point of view and highlight an evidence-based medicine issue
Methods papers describe innovative methodologies or evaluate EBM-relevant training
Systematic reviews
EBM Primer focuses on tools and concepts relevant to teaching and practicing EBM
Letters
Book reviews

Editors Note: The Editor of the EBM journal will consider articles published in the ISEHC Newsletter for possible publication in the EBM Journal. The articles would likely need some revision and/or expansion.

Call for Newsletter Articles

If you are interested in submitting an article for the ISEHC newsletter – an editorial, a teaching tip or exercise, an EBM resource review, a regional report, or an original research or viewpoint piece, please email one of the editors – see page 21.

TEACHING AND PRACTICE TIPS

Teaching Tip: Understanding weighted averages in Meta-analyses

Kameshwar Prasad

Prof. of Neurology & Director, Clinical epidemiology unit, All India Institute of Medical Sciences, New Delhi

The following tip may help to introduce the basis of weights assigned to a study in a meta-analysis with binary outcomes: It has two parts:

Part I: What is the average weight of students?

Pose this question to the learners: *You are interested to know the average weight of students in a class (just a curiosity-driven question - may be used to decide the capacity of lift just outside the class). There are 200 boys and 100 girls in the class. Someone finds out that the average weight of boys is 70 kg; whereas average weight of girls is 40 kg. So, what will be the average weight of the class?*

Some students will answer 55 kg, others will answer 60 kg. Ask them to explain. As the second answer is trickier (and correct), ask one or two learners to come and explain on the board. Finally ask if everyone agrees with the answer: 60 kg. (200 x 70 + 40 x 100)/300 or (2 x 70 + 1 x 40)/3. Emphasize that the boys are double in number and hence their average weight to be counted twice but that of girls only once. An average calculated in this way is called 'weighted average'. Meta-analysis is essentially a calculation of weighted average. One factor on which the weight depends is the number of subjects (patients) in the study. In other words, one factor determining weight is 'sample size' of the study.

Part II: What is the average of two trials?

Consider a situation when two groups of investigators are asked to carry out a 7-year follow up study to determine whether daily exercise and weight reduction prevents heart attacks. Seven year follow-up was the most daunting part of the study.
Study 1*- One group comes up with a brilliant idea to do the study at a school, because school children with thousands of enrollees and some teachers at a school are easy to follow, say from class V to XII. They recruit 2000 overweight students (and some teachers) and randomize them into two groups: one intervention group (receives daily exercise and weight reducing diet); and a control group (without the intervention).*

Study 2 *by the second group of investigators recruits 1000 overweight people aged >45 years and randomized them into two groups in a similar fashion.*

Ask the learners: Which study is likely to yield more information? Learners quickly realize that study 2 is likely to yield more information as there are more persons likely to get heart attack (event of interest), whereas the school subjects are very unlikely to get heart attack (some teachers might!). Therefore, in a meta-analysis, which study should be given more weight? Some learners will reply: study 2 should be given more weight than study 1, even though it has only half the sample size of study 1. The weight does not only depend on sample size, but also on the information that a study provides. The information content of a study depends on the number of events in the study.

Conclude by emphasizing that the weight assigned to a study in a meta-analysis with binary outcomes is determined by two factors (i) sample size; (ii) no. of events. In case of two studies with the same number of events in each group (intervention and control), the weight will depend on their sample size but otherwise, the no. of events is more important than sample size.

Clinicians need not know the exact formula used for weighting but enough to know that these two things go into the formula determining weight of each study in a meta-analysis.

Finally, to reinforce the points, illustrate them with a couple of real meta-analyses using the forest charts.

Note: To do this in class, put the two sections in italics on a PowerPoint slide or a handout.

How to generate enthusiasm, not antibodies, to EBP

Amanda Burls

Director of Postgraduate Programmes in Evidence-Based HealthCare (EBHC) at the University of Oxford

Many of us around the world are committed to evidence-based practice (EBP). An important element of promoting EBP is to convince colleagues, medical students and juniors of its importance and help them acquire the skills required for evidence-based practice. However even excellent evidence-based practitioners can elicit resistance to EBP, instead of enthusiasm for it when talking to others.

Tip to avoid this: When teaching or promoting EBP, use a learner-centred, problem-based approach.

- Identify uncertainties that colleagues or learners have and use these to demonstrate how evidence-based methodology can help them address this uncertainty
- Refrain from presenting EBHC as the requirement that all practice should be based on the best available evidence.

With the former approach EBP is presented a solution to existing problems, with the latter it is can be perceived as unachievable goal which can demoralise practitioners and make them feel guilty or inadequate.

"I suppose you know you're doing that all wrong."

The hardest conviction to get into the mind of a beginner is that the education upon which he is engaged is not … a medical course, but a life course, for which the work of a few years under teachers is but a preparation.

Sir William Osler (1849-1919),
from: The Student of Medicine

The birth of the ACP Journal Club. An interview with Brian Haynes

(Interview done by Paul Glasziou Nov 2010 at BMJ editorial meeting in London).

I am here today with Brian Haynes the founder of the ACP Journal club and a physician in Canada and we are here at a BMJ meeting.

Paul: Could you tell me a little bit about your clinical setting and clinical work first.
Brian: I am trained in internal medicine, diabetes clinic; I choose to work in the diabetes clinic to narrow the scope of practice that I would have to master while I was also engaged fairly substantially in research.

Paul: Can you tell me how did you get interested in Evidence-Based Medicine, and how did you get interested in the problem of keeping up to date?
Brian: When I was in graduate school we did research related to helping patients follow treatments particularly anti hypertensive therapy and in doing that we discovered that the doctors often did not prescribe the appropriate treatments and therefore we felt we needed to go back a step and see if we could help doctors keep up to date - that became the beginning of a trial or a path that we tried to beat to figure out how to get evidence into practice through practitioners through patients. That was the origin of EBM the idea was perhaps we could begin to teach doctors to appreciate the medical literature by being able to master certain principles of quality of evidence and then pay attention to the articles that were of high quality.

Paul: I know you have been involved in the McMaster process of the ask a question, do the search, appraise etc but you are also the originator of the ACP journal club – can you tell us about the origin of the ACP journal club and how you go the idea and how you started in up.
Brian: We quickly realised after starting the starting the first workshops on how to critically appraise evidence that the principles were interesting to practitioners but they did not have the time to do this. In fact in our own practices we found it difficult to keep up by appraising the literature ourselves. So we started to think about ways that the appraisal part of this could be done centrally and then people could take out the high quality evidence and take that to try to learn. The first version of this was to develop structured abstracts for journal articles in which the authors of the articles would describe the key details that you would need for a critical appraisal this would appear in the abstract this would make it easier for practitioners and we then took that to Ed Huth who was then the editor of Annals of Internal Medicine he liked the idea he already had ideas of synoptic content and it became the sponsored approach for the American College of Physicians and their Journal Annals of Internal Medicine and it was co sponsored in the UK by to the editor of the BMJ at the time Stephen Lock so we had good backers for the proposal to provide structured abstracts. But we found that with structured abstracts we had intended it to only for the articles that were of high quality to begin with or at least only the clinical articles but journals either adopted or did not adopt structured abstracts and they applied it to all of their content if they did adopt it so it did not discriminate between the high quality studies and the non high quality studies nor between the clinical or non clinical studies so it did not seem to be as quite as good a signal as we had hoped it would be for practitioners to try to keep up to date. We actually proposed having a section in each journal where the high quality content would be concentrated, this caused apoplexy in the editor of the NEJ of medicine who correctly pointed out it would make their publication look much least robust than it did because the section would be so thin. So that did not work so then we proposed why don't we go across all the journals and have research staff to do the leg work and find articles of high quality and we would prepare a structured abstract for them since the adoption of structured abstract at that time was limited and even when journals had structure abstracts they did not necessarily do a good job so we felt we could do a value added process where we would find the studies of high quality the ones that all along we had wanted to feature to clinicians and we would write an abstract for them and write all the elements that you would need for critical appraisal and we would get a clinical expert in that area to tell us how this would fit into a) research that had been done before and b) the practical application of it in clinical care and that became a CP journal club.

Paul: So that would be a small quality of the average journal, I think you have calculated the number you would need to read – do you recall some of those numbers needed to read
Brian : For the process of ACP journal club we go through 60 thousand articles a year four thousand of them make the grade in terms of adequate quality and then we pick the top 144 per annum so obviously when you are talking about publishing a certain quantity that's an arbitrary number in fact for internal medicine the top 144 make it into a form in the ACP journal club but there is still other content that is worth paying attention to and for that we have developed another mechanism - electronic access where we have writers for different disciplines and provide the user with articles that are of high quality standard and have been identified as their discipline peers gastroenterologist or family physicians whatever, as being interesting and relevant to their practice in that discipline

Paul: So on average then it would be in the order of 1 article in 15 makes it through your initial filter
Brian: Right - But if you then apply the clinical relevance filter to it, it then comes down to about 20 to 30 articles per year per discipline that really are worth paying attention to so that's another step down from the 4000 down to 20 to 30. So the amount of new knowledge that really we need to get traction on that is generated is actually tractable in the sense that if you have a couple of filters, a research quality filter and a clinical relevance filter you can get down to a much more manageable number of articles that practitioners really needs to pay attention to keep their practice up to date.

Paul : *I have heard you talked about researcher to researcher communication and researcher to clinician communication so what you are trying to pick out is the crucial researcher to clinician communication but that a tiny fraction of the world literature*
Brian: Right because most the scientific literature is research to researcher, this is what we have found out more research is needed and only a fraction has come to the point where it's been adequately tested with real patients in clinical settings and has clinical outcomes that is important to the patients that's a small subset of the scientific literature and that is what we are trying to purify or at least try to tune into from the medical literature for these update types of publications and procedures.

Paul : So Brian I wonder if we could finish by getting your advice for someone who wasn't covered by the areas ACP journal club which covers mostly internal medicine but suppose someone in neonatology or ophthalmology wanted to find that fraction of the world literature that was relevant to them how would you have any suggestions on how they could approach getting that done.
Brian: What we have done to provide a much broader community with information which is relevant to practice is supported by the BMJ publishing group in the form of Evidence Updates there we do have other disciplines neonatology, psychiatry, woman's heath, pediatrics, the full spectrum of medical practice so we do cover all of those areas and subscription to that publication is free and its all online and people then sign up according to what they are interested in so they can sign up for neonatology and get all the articles the neonatologists have viewed as relevant to their practice.

If you put evidence update into Google you will get to that publication
http://clinicalevidence.bmj.com/ceweb/index.jsp

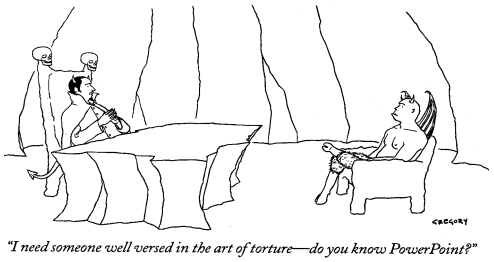
(The full interview, and other interviews can be found at: http://www.cebm.net/index.aspx?o=4648)

TIP: How to jump to the slide you want in PowerPoint

Amanda Burls

Director of Postgraduate Programmes in Evidence-Based HealthCare (EBHC) at the University of Oxford

Although people often groan about the use of PowerPoint, most of us will use it at one time or another for teaching or presentations. One common irritating practice is when presenters click rapidly through a number of slides to skip them when they start to run out of time. This can leave your audience with a sense of having missed out and gives a bad impression of your time management. Similarly when someone in the audience asks about a particular slide presenters will often click through lots of slides to get back to it and waste valuable time.
Tip: All you need to do to get to any particular slide in a PowerPoint presentation is type the number of the slide and press "enter"
I recommend printing out a copy of your presentation as a handout with slides numbers before your talk. This enables you to move slickly to any particular slide. Using this facility, you can build "concertina" presentations which can be expanded or reduced in length so that your presentations always end on time. You can also prepare extra slides that cover a particular area in case they are needed but jump over them if they are not. I recommend having a couple of summary slides to end your presentation and memorizing the number of the first one (or have a picture of a clock and remember its slide number). If you suddenly notice you have no more time you can then simply enter its number and say "In conclusion…". Don't be surprised to find that no-one in the audience notices that you have actually skipped 40% of the absolutely vital information you intended to share with them!



"I need someone well versed in the art of torture—do you know PowerPoint?"

RESEARCH AND REVIEWS

The Evidence 2011 Conference

The *Evidence 2011 Conference* - aimed to be the leading evidence-based healthcare event at the forefront of EBM debate and innovation. This international conference is collaboration between the BMJ Evidence Centre and the Centre of Evidence-Based Medicine, University of Oxford (CEBM).
The aims of the conference were to: * Improve evidence-based decision making and provide practical, evidence-based ideas that can be implemented in practice * Foster effective innovation * Guide effective commissioning * Provide education and training to improve evidence-based healthcare
Below are two abstracts from the conference. The full program and abstracts are viewable at:
http://www.evidence-live.com/

---------- SELECTED ABSTRACTS ----------

Critical Appraisal of Medical Evidence Applied in Health Technology Assessment for the Ministry of Health Brazil: The case of surrogate endpoints in rheumatoid arthritis treated with anti-TNF

MR Nobre, FM Costa
Unidade de Epidemiologia Clínica, InCor-HCFMUSP
University of São Paulo Medical School

Background
Surrogate endpoint may substitute, but often does not predict for sure, patient-relevant outcomes, such as mortality, important clinical events, or quality of life. The use of this alternative endpoint may introduce bias in the benefit assessment and in the decision making process.

Aims
We conducted assessment of the methodological quality of studies that define clinical outcomes as primary endpoint, and compared with studies that prioritize surrogate endpoint in rheumatoid arthritis.

Methods
Medline was searched via PubMed looking for articles reporting rheumatoid arthritis treated with infliximab, etanercept or adalimumab, the final entrez date was 31/12/2009. Critical appraisal was done with Jadad score, the percentual of adequately reported items of CONSORT statement, and with the level of evidence of the Oxford Center of Evidence Based Medicine.

Results
The search yielded 3158 articles of which 77 were selected with the Clinical Queries filter: ?therapy/narrow?. The percentage of Retrieved and Selected articles were respectively: Infliximab 46% and 35%, Etanercept 36% and 39%, Adalimumab 18% and 26%. Surrogate endpoint, mainly radiographic imaging, was observed in 24/77 (31%), Infliximab 13/27 (48%), Etanercept 6/30 (20%), Adalimumab 4/20 (20%). The articles with surrogate endpoints compared with articles with clinical endpoints had Jadad score of 2,6 ± 0,9 vs 3,3 ± 1,1 (p<0,001), and percentage of items of CONSORT adequately reported were 40,6 ± 19,0 vs 52,4 ± 22,3 (p=0.017). The level of evidence is mainly 4 and 2b (55%) in the surrogate group, and 1b (80%) with clinical endpoint group.

Conclusions
Part of clinical research about treatment of rheumatoid arthritis with anti-TNF is based on surrogate endpoint, mainly the infliximab group. The use of surrogate endpoint is associated with a worse methodological quality. The assessment of clinical effectiveness and cost-effectiveness of a health technology should be based on patient-reported outcomes.

Leakages from Awareness to Adherence with Guidelines: a Systematic Review

Sharon Mickan, Amanda Burls, Paul Glasziou
International Programme in Evidence Based Health Care, Dept of Primary Health Care, University of Oxford

Background
Research evidence alone is insufficient to consistently change physicians' behaviour. In 1996 Pathman studied the utilisation of paediatric guidelines using a 4 step model: that physicians need to be aware of, agree with, adopt, and adhere to guidelines. A crucial question is to know where in the 4 steps are the main "leakages".

Objective
To review evidence in different settings on the patterns of "leakage" in the utilisation of clinical guidelines using Pathman's awareness-to-adherence model.

Methods
Design: A systematic review. Data sources: AMED, Embase, Medline and PsychInfo databases since 1996, Web of Science, Scopus and PubMed related articles. Eligibility: Primary studies which examined the utilisation of guidelines provided they report at least three of the four steps (awareness, agreement and adoption and/or adherence) and described appropriate sampling strategies, consistent with the guideline under investigation. Outcomes: Rates of absolute and conditional awareness, agreement, adoption and adherence.

Results
Eleven primary studies, with a total of 29 recommendations meeting the inclusion criteria, were identified. Study participants included specialists and family physicians working in Canada, USA, Europe and Thailand. Quality was moderate to poor. It was not possible to distinguish poor quality from poor reporting. Heterogeneity of the studies prevented meta-analysis. Leakage tended to be progressive but varied across recommendations, including within the same guideline and survey population. Leakage at the level of awareness and agreement was least for drugs and vaccinations. The median adherence from all recommendations was 34% suggesting that much potential health gain for patients is being lost.

Limitations
The reporting and quality of the primary studies was moderate at best. All studies used self-report surveys and it is likely that results overestimate the rates of awareness, agreement, adoption and adherence.

Conclusions
Leakage from research publication to utilisation occurs in a wide variety of guidelines and at all steps of the awareness-to-adherence pathway. It tended to increase along the pipeline and overall recommendations were not being adhered to 2/3 of the time. This review confirms that publication of evidence-based clinical guidelines is insufficient to ensure that research gets into practice, which is a more complex multistep process.

Being Useful - Involving People in Research

Thomas Kabir
NIHR MHRN Service Users in Research Coordinator

My name is Thomas Kabir. I am the Coordinator of the national service user involvement arm of the NIHR Mental Health Research Network am also involved with the JLA's Schizophrenia Priority Setting Partnership. I have been asked to say a little about how I would recommend actively involving people in research. The following is just opinion, but I hope that it may be useful...

1. When you ask for people's opinions on something, make changes!
One gripe many people have about consultations etc carried out by public sector bodies is that nothing ever changes. This breeds a poisonous kind of cynicism. So when you do ask for someone's opinions about a proposal (or anything else) it does wonders to actually make a show of how their contributions have really made a difference.

2. Don't try to please everyone
There are so many different opinions out there about how to involve people and what their role in research is. Frankly, you are doing well if you satisfy half the people that you have to deal with.

3. Allow people to identify themselves in a way that they feel comfortable with
Patient, service user, consumer? There are so many different ways that a person who wants to get involved in research might want to be referred to. It makes sense to allow him/her to choose (within reason) a term that they would be comfortable being identified with.

4. Make every effort you can to be useful to researchers
This is at the heart of what I want to say. The more useful people are to researchers the more involvement opportunities will come your way. Another result of this is that researchers will be more likely to come to believe that involvement really can improve the quality of their research. A good example of involvement which can really help researchers is to ask patients to review patient information sheets and consent forms before the researcher applies to an ethics committee for ethical approval. One of the most common reasons for studies to be rejected by an ethics committee is because the information sheet is gobbledygook. Patient involvement can really make a difference here.

5. Pay people's expenses
Certainly in mental health a lot of people who get involved are on benefits. For these people even very modest costs can mean that getting involved is simply not possible. So I would strongly recommend that (at the very least) the expenses of people who get involved be paid.

6. Give people a plain English introduction to the project that they are getting involved with
Research is laden with jargon. In my experience it pays handsome dividends to provide involved people with a clear plain English introduction to whatever research project they are getting involved with. Without one, people are left struggling to understand what the research is about let alone make a contribution as to how it might be done better.

To find out more about the MHRN and how we involve people please visit
www.mhrn.info.

Thomas Kabir: thomas.kabir@kcl.ac.uk

Editor's Note: This essay was reproduced (with permission) from the James Lind Alliance Newsletter. The **James Lind Alliance** aims to identify the most important gaps in knowledge about the effects of treatments, and has been established to bring patients and clinicians together in '**Priority Setting Partnerships**' to identify and prioritise the unanswered questions that they agree are most important. More details can be found at: http://www.lindalliance.org/

RESOURCE REVIEWS

DYNAMED

Ghada A Bawazeer. MSc, Pharm.D. BCPS

AIM

DynaMed is a clinical reference tool created by physicians and targeting physicians and other healthcare professional for use at the point of care. The database covers more than 3200 topics and is updated daily. Diseases covered in the database are those most commonly seen in the primary care setting, however, specialty topics (surgery, transplant, sport injuries, poisoning), symptoms (e.g. pain, edema, rash) clinical important topics (e.g. breast-feeding) and topics of popular interest (eg. West Nile virus) are also included and/or in the progress stage. In their promotion of the database, the DynaMed editors specified other target users, namely the Medical schools, hospitals and residency programs for the purpose of training residents and students in utilizing best evidence for clinical decision making and as a scholarly activity opportunities (checklist tools are supplied).

METHODS AND QUALITY OF INFORMATION

The database provides comprehensive information on almost all topics some are more than others. Although it is stated to be a peer-reviewed, only some topic summaries are actually peer-reviewed by practitioners with clinical practice experience in the area this is disclosed in the acknowledgment section of each topic. For the most part the editorial board is in charge of writing the topic summary. The section on content/editorial policy explicitly describes the systematic method in identifying, selecting, appraising, reporting, recommending and updating of evidence on the database. This is called the 7-step Evidence-based Methodology. The database utilizes a systematic literature surveillance that encompass highest-yield content sources (including non-USA authorities and organizations, e.g. SIGN, NICE, WHO) and targeted Medline searches (for systematic reviews, randomized clinical trials, selected topic areas and guidelines). The content/editorial policy section beautifully explains each step with examples, however, the process of critical appraisal and reporting of evidence is not fully clear. The level of evidence is not reported for every piece of information; however description of evidence source is mostly supplied. Diagnosis and prognosis fairly linked to level of evidence whenever available. Conclusion statements linked to evidence are written in bold which makes them easily identifiable. Unless reported in the original evidence article, grades of recommendation are not included and therefore users have to come with their own conclusion on how to apply the evidence.

List of contents

The database interface is simple, neat and easy. The pages are clean and free from distracting design or advertisement. Users can search by keyword (supports Boolean and wild card search) or by topic category (opens to multiple subcategories according to the topic) or alphabetically. Search results are rapidly retrieved and listed by relevance. No advance search or refining of retrieved hits (pain retrieved 2050 hits) is available. Inspite of this perceived deficiency hits are displayed according to relevance with documents matching the exact keyword searched is displayed first. In addition, hits containing part of keyword and/or its concept are also displayed under the name of the condition. For example, pain disorders, cancer pain, chest pain, neck pain..etc). Hits are also displayed as hyperlink to the condition, and/or treatment (Tx), and/or the diagnosis (Dx) for speedy access to area of interest of the users. The search will also retrieve medications related to the search keyword and drugs are designated with (Rx) and opens to AHFS drug information database which is limited to drugs licensed in USA market.

Once inside a topic/disease section each summary is organized following a fixed format that covers 14 items and a top part that shows the latest updates on the topic. These items are: general information (including ICD-9/-10 codes), causes and risk factors, complications and associated conditions, history, physical, diagnosis, prognosis, treatment, prevention and screening, quality improvement, references including reviews and guidelines (both US and international), patient information (mainly in the English language and some are in Spanish), acknowledgments and send comment to editor sections. Inside each item, information is presented in a concise manner as bullet points and with satisfactory text and data yet comprehensive to cover all aspects of the topic. The collapsible features of each topic summary are useful in simplifying and focusing the search by the user.

The extensive hyperlink and cross links to related topics and discussions within the same summary and to other related summaries in the database adds strongly to the comprehensiveness of each topic without overwhelming the users with too much text to navigate through. Documents are heavily referenced and linked to either full text or Medline abstract of that reference

CLINICAL USEFULNESS

DynaMed show promising attributes to be clinician primary source to answer clinical questions. Between the daily updates and the free weekly alerts, clinician can fairly continue to be updated with the best evidence available. DynaMed lend itself to the advancement in technology and is available in addition to the online access as in PDA format as well as for Smartphone applications (such as: blackberry, iPhone, iPad, and

iPod Touch). Another useful DynaMed tool is the calculator section, overdose curves and the ability to claim the searching time as CME credit. Integration of DynaMed with the electronic health records (HER) enhances the usefulness and utilization of the product at the point of care in places where it is adapted.

PURCHASING

DynaMed is a product of EBSCO Publishing, it is available for individual and institutional fee-based subscription. Pricing is not disclosed on the homepage of the product and interested parties need to contact the publishing group. However, a free-1-month trial is available.

As a user of the DynaMed, I find it very helpful in both answering my clinical questions (mainly in the anticoagulation, cardiovascular diseases) or when preparing for topics for the purpose of teaching.

The Checklist Manifesto by Atul Gawande. Metropolitan Books, 2009.

Reviewed by Paul Glasziou

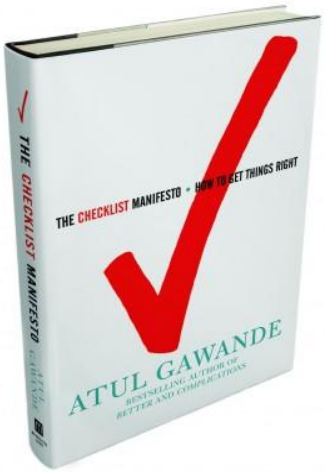
In 2004 WHO recognized an emerging health problem: the number of major surgical procedures per year had grown to exceed childbirth rates, but with death rates 10 to 100 times higher. Surgery had become a public health issue. So WHO asked Atul Gawande, a surgeon in Boston and author of the Checklist Manifesto, to convene a 2-day meeting to recommend ways to reduce the surgical death toll. Given the variety of surgery and the range of countries, this was a daunting task. The eventual result was a surgical checklist, similar to those used by pilots dating back to the crash of a B-17 in 1935. Gawande freely admits he did not invent checklists, or even surgical checklists. But his tour through the emergence of checklists in aviation, construction, and medicine is both entertaining and instructional. The Checklist Manifesto reads a like a good thriller, but one that you underline and mark the pages of. The most dramatic and convincing use of checklists in medicine is probably Peter Provonost's development of a checklist to reduce central line infections to near zero, firstly in his own hospital and then across the state.

I would recommend this to everyone working in health care. But two points are worth underlining. First, "checklists" are not checklists: rather it's a shorthand for a much more complex intervention that involved adaption, persuasion, teamwork, and sometimes structural changes. For example, Provonost got hospital directors involved who could solve problems such as a lack of full length drapes, or giving nurses permission to stop doctors if an item in the checklist had been skipped.

Second, the development of a good checklist is not simple: it needs to be quick, clear, and contain only the "killer items". Attempts to include all items are self-defeating. Piloting is also essential. Gawande amusingly tells the story of his own abject failure when he attempted to use the freshly minted WHO checklist in his own operating theatre. Several crucial defects were corrected retested, until a workable version was found. Even then, most adopting groups adapted it further for their own circumstances.

So what has all this got to do with EBM? Plenty. First, EBM has somewhat neglected issues of implementation, and tended to assume that knowing the best evidence was enough. Often it is not. Simple forgetting, missing steps, and numerous structural barriers can prevent us using what we know. Second, Quality Improvement advocates need to better appreciate EBM to make sure that checklists and other quality improvement procedures are informed by the best available evidence. For this to happen, EBM needs to be more engaged with those working in quality and safety.

Gawande may oversell the checklist as a panacea for quality problems in medicine. Nevertheless, there is a lot to glean from this book, and it is a great read.



Note: If you are interested in writing a resource review for the newsletter please contact Dr Lubna Al-Ansary at lansary@yahoo.com

Associate Professor and Consultant,
Dept of Family & Community Medicine
College of Medicine, King Saud University, Riyadh

An Asia-Europe collaboration in Clinical Epidemiology and Evidence Based Medicine

www.asialink-ce.org

Dr. Indah Widyahening (Department of Community Medicine, University of Indonesia Jakarta) and
Dr. Geert J.M.G. van der Heijden (Julius Center, University Medical Center Utrecht, The Netherlands)

While evidence-based medicine emerged in the 1990's from Canada and the UK, interest has rapidly spread around the world. However, lack of adequate staff and training in the practice and teaching of clinical epidemiology and EBM has been a limiting factor. Hence national capacity development is vital if the principles of EBM are to spread. One example is the AsiaLink project.

In November 2007 the Asia-link project in Clinical Epidemiology and Evidence-based Medicine (CE & EBM) was funded by the European Commission to build competences and capacity in clinical epidemiology and evidence based medicine in Indonesia and Malaysia. The aim was developing durable improvement in CE & EBM teaching and research in Indonesia and Malaysia.

The project intensified collaboration and exchange of researchers between Europe and Asia. The partners were Cipto Mangunkusumo Hospital – Faculty of Medicine University of Indonesia, University of Malaya (Malaysia), Julius Center at the University Medical Center Utrecht (the Netherlands) and the Center of Evidence Based Medicine at Oxford University (UK), with a Steering committee of Yolanda van der Graaf, Arno Hoes, Diederick Grobbee and Helena Verkooijen from Utrecht, Paul Glasziou from Oxford, Awang Bulgiba from Malaysia and Sudigdo Sastroasmoro from Indonesia.

To achieve the above aims, the three main activities were:

- Conduct CE & EBM courses and teaching program at both undergraduate and post-graduate level at the University of Indonesia in Jakarta and the University of Malaya in Kuala Lumpur,
- Establish a collaborative PhD fellowship program, to develop core staff with solid post-graduate training in CE and EBM,
- Establish two regional CE&EBM support units: at the University of Indonesia in Jakarta and the University of Malaya in Kuala Lumpur.

CE & EBM postgraduate courses

By the project's end in November 2010, over 20 post-graduate CE & EBM courses have been conducted, with over 500 participants. While these courses were initially led by staff members from Utrecht and Oxford, as planned, UI and UM staff members gradually took over. To improve their EBM teaching. several staff members from University of Indonesia and University of Malaya also attended the 3-day and 5-day EBM workshops in Oxford, initially as course participants and at later stages as facilitators.

CE & EBM undergraduate teaching program

In 2009, a CE-EBM module was successfully implemented for undergraduate students in Indonesia and Malaysia. This module was designed and implemented in Utrecht since 2004 and originally ran as two separate CE (6 weeks) and EBM (5 weeks) modules. This module was adapted to fit the medical curricula of the University of Indonesia and University of Malaya. In response to local needs, the module in UI was given as a four-week CE-EBM module to the 4th year students, while in UM this module was integrated to the Social and Preventive Medicine module which was given to 3rd year medical students for four months. Prior to implementing the module, a three days Training of Teachers (TOT) course was given at University of Indonesia and University of Malaya. These TOT courses were led by the module developers from Utrecht: Geert van der Heijden and Maroeska Rovers.

PhD fellowship program

Ten PhD fellows, six from University of Indonesia and four from University of Malaya, were given opportunity to deepen their knowledge and expertise in specialized areas of clinical epidemiology on an international level. Nine fellowships were carry-out in Utrecht and one in Oxford. All of them were also actively involved during teaching activities in post-graduate courses and undergraduate modules. All these PhD projects will be completed by the end of 2011.

Regional CE&EBM support units
In May 2009 the Julius Center University of Malaya (JCUM) was established. This CE & EBM unit aims to facilitate regional CE & EBM educational and research activities and promote collaboration between Asia and Europe in the area of CE & EBM. In September 2010 the CE & EBM Center at the Faculty of Medicine University of Indonesia – Cipto Mangunkusumo Hospital in Jakarta was officially opened in the presence of the Minister of Health and the EU Ambassador.

Closing Conference
The international conference "Clinical Epidemiology and Evidence-based Medicine in global perspective" on 27 and 28 November 2010 held in Kuta, Bali, Indonesia, marked the formal closing of the project. Approximately 320 attendees from 11 countries participated in the conference which indicates the growing interest on CE & EBM in Asia. This conference comprised six parallel courses and workshops including basic clinical epidemiology, introduction to EBM, clinical trials, systematic reviews, teaching EBM, and infectious diseases epidemiology and vaccine development. Several experts with international reputation in this area including Paul Glasziou from Bond University (Queensland, Australia) and Oxford University (UK), Arno Hoes and Diederick Grobbee from Utrecht University and Chia Kee Seng from the National University of Singapore were present to share their knowledge.

Continuation of Collaboration
In order to strengthen and stabilize CE & EBM research and teaching resulting from this Asialink CE & EBM project, Cuno Uiterwaal currently holds a visiting professorship both at University of Malaya. (October-November 2010) then University of Indonesia (December 2010-January 2011). The collaboration established during this Asialink CE & EBM project will be maintained through joint projects.

Some important lessons from this 3-year project were:
- •Flexibility and adaptation are vital: courses must be adapted to fit the needs and structures of the local environment,
- •An early, but staged, transfer of teaching skills is essential: local teachers need to be identified and learn in stages to take over the undergraduate and postgraduate teaching,
- •Start a PhD program early: a core of PhD trained staff are needed for the leadership roles in CE and EBM.

Colloquially these lessons might be summed up by the sayings: "Adapt to adopt" and "The best time to plant a tree is 20 years ago, the second best time is today".

For more information: www.asialink-ce.org

Evidence-Based Practice Competition in Taiwan

Ken N Kuo, MD, Cliff Chen, MD and Daniel Lo, MS
Taipei Medical University, National Health Research Institutes, Taiwan Evidence-Based Medicine Association

Introduction
Healthcare providers are becoming aware of their obligation to deliver clinical recommendation in evidence-based practice (EBP) manners, which requires decisions on health care based on the best available and valid evidence (Dawes et al, 2005). In spite of methodology of finding the best evidence appraisal, healthcare professionals somehow do find the difficulties to practice EBP under a busy and immediate response required clinical context (Bennett et al, 2005). In addition, the majority of continuous educational programs are still organized in lectured style which is often short of clinical relevance, fragmentally among different topics and courses, and without interdisciplinary interaction (Institute of Medicine, 2003).

In order to promote EBM and EBP among healthcare professional, and inspired by the WGT (World GameMaster Tournament), we have developed EBP competition using the already available information infrastructure in our setting and incorporating game specific elements, such as predetermined tasks and challenges. The goal of EBP competition is to provide an opportunity to attract all disciplines of healthcare

professions by introducing the fun and excitement of learning and applying EBP via challenging each other at the same time. The competition was first introduced in 2006 by Taiwan Joint Commission on Hospital Accreditation (TJCHA) with National Health Research Institutes (NHRI) and Taiwan Society of Internal Medicine (TSIM) separately. With the first year pilot experience, TJCHA, TSIM, NHRI and Taiwan Evidence-Based Medicine Association (TEMBA) jointly co-organized the national competition, under information infrastructure support of Taipei Medical University, since 2007 till now.

Components of EBP competition

The organizers of EBP competition have formed a task force to formulate the related policy and game rule for the competition.

General rules

1 Participants requirement: 2~3 healthcare professions with at least two different clinical specialties to form a team.
2 Task requirements:
  - 2.1 Each team has to develop at least 2 PICO questions according to the clinical scenario provided by the organizers at the inception of the competition.
  - 2.2 Each team has to state clearly detail search strategies, search process and related results based on one of the PICO questions they developed above.
  - 2.3 Each team has to describe the tools applied in appraising selected articles, and their judgment according the criteria of their appraisal tool.
  - 2.4 Each team has to elaborate how the study conclusion can be implied to the patient in the clinical scenario and what should be considered.
  - 2.5 Integrate all tasks above and submitted a Microsoft PowerPoint file at the end of competition within a total of 3 hours timeframe.
  - 2.6 Each team has 10 minutes to present their task results in front of the judges and all participants.
3 Evaluation domains and grade weighting
  - 3.1 Judges evaluate participating team performances according 5 domains including quality and quantity of PICO questions, literature search, critical appraisal, clinical application, and presentation. Under each domain, there are several sub-criteria.
  - 3.2 Each domain composes 20% of the total score. Final score of each team are the sum of 5 domain score (weighted).

Successful promotion outcome

The EBP competition has gained excellent responses from all healthcare societies in Taiwan since it started. The participant teams have continuously increased every year. There were only 10 teams participated in 2006. The number of enrolled teams increased to 38 in 2007, 51 in 2008, 67 in 2009, and 77 in 2010. Our survey of the previous participants showed that most of them did not participate the competition in following year. In other words, it indicated that more new EBP adopters joined this activity every year. There are several factors facilitating the success of our national EBM competition. Firstly, a standardized rule and well-organized procedure provided a good learning and training protocol for the learners, and consequently resulted in low entry requirement which makes the competition more acceptable for new learners. Secondly, support of the leaders or administrators of healthcare institutions is also crucial because they realized the excellent educational effect and motivation by assigning more teams to participate the competition. Some of the healthcare institutions even held EBP competition within their own setting before the national competition in order to promote learning and training environment, as well as identifying potential winner for competition. Thirdly, most importantly, perhaps, the activity is co-organized by the hospital accreditation body. The recognition from the authority agency effectively reinforces the motivation of participating EBP competition from healthcare providers.

References

Dawes M, Summerskill W, Glasziou P, Cartabellotta A, Martin J, Hopayian K, Porzsolt F, Burls A, Osborne J. Sicily statement on evidence-based practice. BMC Medical Education 2005 (January); 5:1: doi:10.1186/1472-6920-5-1

Bennett NL, Casebeer LL, Kristofco R, Collins BC. Family physicians' information seeking behaviors: a survey comparison with other specialties. BMC Medical Informatics and Decision Making 2005;5:9

Institute of Medicine. Health Professions Education: A Bridge to Quality. Washington, DC: National Academies Press; 2003.

For more details on running an EBM competition or if you are interested in submitting a report on EBM in your region please contact Prof Ken Kuo at: KENNANK@aol.com

GUEST CONTRIBUTORS

Ghada A Bawazeer
gbawazeer@ksu.edu.sa

Amanda Burls
amanda.burls@dphpc.ox.ac.uk

Lee-Yee Chong
Lee-Yee.Chong@rcplondon.ac.uk

Paul Glasziou
paul_glasziou@bond.edu.au

Geert J.M.G. van der Heijden
G.vanderHeijden@umcutrecht.nl

Thomas Kabir
thomas.kabir@kcl.ac.uk

Ken N Kuo
KENNANK@aol.com

Daniel Lo
danielnote@gmail.com

Mona Nasser
monalisa.nasser@googlemail.com

MR Nobre
mrcnobre@usp.br

Sharon Mickan
sharon.mickan@dphpc.ox.ac.uk

Neil Pakenham-Walsh
neil.pakenham-walsh@ghi-net.org

Kameshwar Prasad
drkameshwarprasad@yahoo.co.in

Richard Saitz
rsaitz@bmjgroup.com

Indah Widyahening
indah_aribowo@yahoo.com

EDITORS

Paul Glasziou
Professor & Director of the Centre for Research in Evidence-Based Practice
Bond University Qld, Australia 4229, &
Emeritus Fellow,
Centre for Evidence-Based Medicine, Oxford University
Paul_Glasziou@bond.edu.au

Gordon Guyatt
Professor, Clinical Epidemiology & Biostatistics
McMaster University, Faculty of Health Sciences
Clinical Epidemiology & Biostatistics
1200 Main Street West, HSC-2C12
Hamilton, ON L8N 3Z5
guyatt@mcmaster.ca

Jason Busse
Assistant Professor, Clinical Epidemiology & Biostatistics
McMaster University, Faculty of Health Sciences
Clinical Epidemiology & Biostatistics
1200 Main Street West, HSC – 2C12
Hamilton, ON L8N 3Z5
j.busse@rogers.com

EDITORIAL ASSISTANTS

Chrissy Erueti
Assistant Professor
Centre Manager
Centre for Research in Evidence-Based Practice
Bond University
Qld, Australia 4229
cerueti@bond.edu.au

Deborah Maddock
McMaster University, Faculty of Health Sciences
Clinical Epidemiology & Biostatistics
1200 Main Street West, HSC-2C9
Hamilton, ON L8N 3Z5
maddock@mcmaster.ca

SECTION EDITORS

Teaching Tips: Kameshwar Prasad (India) - **drkameshwarprasad@yahoo.co.in**
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