Newsletter of the International Society for Evidence-Based Health Care
Newsletter 22, Issue 1, 2016

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.

Evidence-Based Clinical Practice Office
McMaster University, Canada

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Editorials

Editor's choice

So many conferences to go to, but one you won't want to miss is the 2016 ISEHC conference on Kish Island in December 7-9. This resort island is part of Iran but no Visa is necessary to visit, and it's a great venue for networking and relaxation. The local organisers are from the Centre for Evidence Based Practice in Tabriz who are regional leaders in teaching EBM. More details in our Events section - and while your diaries are open you might want to note the 2017 ISEHC conference is a joint event with Cochrane, Campbell and G.I.N. in Cape Town.

Have you been have ever been asked what the evidence for evidence based practice is? This common and tricky question has been addressed in previous issues of the ISEHC newsletter but page 12 summarises and critiques an new study from San Sebastian in Spain where are natural experiment showed improvements in outcomes from a EBM support unit compared to standard care.

Finally, we all struggle with the appropriate curriculum for teaching evidence based practice, and the ISEHC curriculum subgroup is currently working on a Delphi survey refine and extend the Sicily statement. Meanwhile you might be interested in the set of Key Concepts developed for teaching for the public about critical evaluation of claims about the effects of treatments. I think you'll find these concepts are familiar and relevant for teaching healthcare professionals too.

Paul Glasziou
Twitter: @PaulGlasziou

Is 85% of health research really "wasted"?

Paul Glasziou, Iain Chalmers

First published in BMJ Blogs, January 2016

Our estimate that 85% of all health research is being avoidably "wasted" [Chalmers & Glasziou, 2009] commonly elicits disbelief. Our own first reaction was similar: "that can't be right?" Not only did 85% sound too much, but given that $200 billion per year is spent globally on health and medical research, it implied an annual waste of $170 billion. That amount ranks somewhere between the GDPs of Kuwait and Hungary. It seems a problem worthy of serious analysis and attention. But how can we estimate the waste?

Let's break up the 85% figure by its components. The easiest fraction to understand is the fraction wasted by failure to publish completed research. We know from follow up of registered clinical trials that about 50% are never published in full, a figure which varies little across countries, size of study, funding source, or phase of trial [Ross, 2014]. If the results of research are never made publicly accessible – to other researchers or to end-users - then they cannot contribute to knowledge. The time, effort, and funds involved in planning and conducting further research without access to this knowledge is incalculable.

Publication is one necessary, but insufficient, step in avoiding research waste. Published reports of research must also be sufficiently clear, complete, and accurate for

others to interpret, use, or replicate the research correctly. But again, at least 50% of published reports do not meet these requirements [Glasziou, 2014]. Measured endpoints are often not reported, methods and analysis poorly explained, and interventions insufficiently described for others – researchers, health professionals and patients - to use. All these problems are avoidable, and hence represent a further "waste".

Finally, new research studies should be designed to take systematic account of lessons and results from previous, related research, but at least 50% are not. New studies are frequently developed without a systematic examination of previous research on the same questions, and they often contain readily avoidable design flaws [Yordanov, 2015]. And even if well designed, the execution of the research process may invalidate it, for example, through poor implementation of randomization or blinding procedures.

Given these essential elements – accessible publication, complete reporting, good design –- we can estimate the overall percent of waste. Let us first consider what fraction of 100 research projects DO satisfy all these criteria? Of 100 projects, 50 would be published. Of these 50 published studies, 25 would be sufficiently well reported to be usable and replicable. And of those 25, about half (12.5) would have no serious, avoidable design flaws. Hence the percent of research that does NOT satisfy these stages is the remainder, or 87.5 out of 100. In our 2009 paper, we rounded this down to 85%*.

Although the data on which our estimates were based came mainly from research on clinical research, particularly controlled trials, the problems appear to be at least as great in preclinical research [Macleod. 2014]. Additionally, our 2009 estimate did not account for waste in deciding what research to do and inefficiencies in regulating and conducting research. These were covered in the 2014 Lancet series on waste, but it is harder to arrive at a justifiable estimate of their impact.

If research was a transport business, we would be appalled by these data. Half the goods carried would be badly designed, half lost in shipping, and half of the remainder broken by the time they arrived - a truly heart breaking waste. The "good news" is that there is vast potential gain from salvage operations! Either rescuing sunken trials from the bottom of the ocean, or repairing the damaged ones, might retrieve up to 75% of the waste (we cannot retrospectively fix poor design). These salvage and repair operations may be the most cost-effective way of improving the yield from research: a few percent of the current budget could be used to recover lost and poorly reported research, as proposed by the AllTrials campaign. However, we need to press on with that salvage: data from studies are being lost forever at a rate of perhaps 7% per year [Vines, 2014]. We certainly should, and must, attend to that – indeed it seems both an economic and an ethical imperative – but we also need to improve the processes and incentive systems in research. This is the motive that led to the launch of the REWARD Alliance, which held its first conference in Edinburgh in September 2015 (www.rewardalliance.net/). The Alliance is currently working with funders, regulators, publishers, organisations, and others to reduce waste and add value.

*Footnote: If you are concerned about the correlation between steps, first note that the studies of reporting were of the published studies only, so the dependence in those steps is accounted for. We do assume independence between avoidable design flaws and publication, but the Ross study suggests the correlation is only modest, so the rounding to 85% we still think gives a reasonable assessment.

Paul Glasziou & Iain Chalmers, January 2016

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AGHAST! The Day the Trial Terminator Arrived

Hilda Bastian

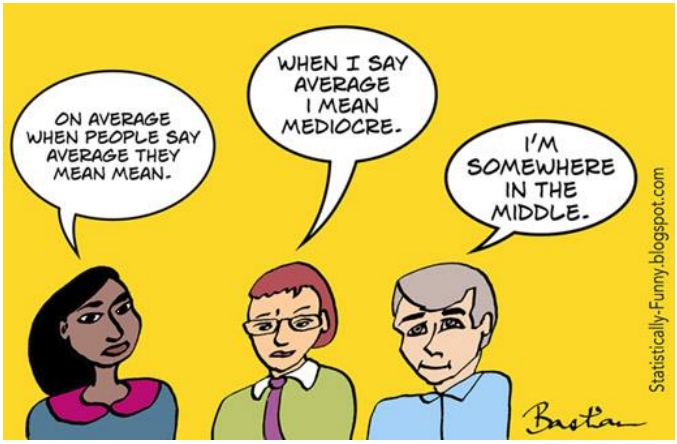
Clinical trials are complicated enough when everything goes pretty much as expected. When it doesn't, the dilemma of continuing or stopping can be excruciatingly difficult. Some of the greatest dramas in clinical research are going on behind the scenes around this. Even who gets to call the shot can be bitterly disputed.

A trial starts with a plan for how many people have to be recruited to get an answer to the study's questions. This is calculated based on what's known about the chances of benefits and harms, and how to measure them.

Continue reading here http://statistically-funny.blogspot.com.au/2015_09_01_archive.html

More Than Average Confusion About What Mean Means Mean

Hilda Bastian



She's right: on average, when people talk about "average" for a number, they mean the mean.

The mean is the number we're talking about when we "even out" a bunch of numbers into a single number: 2 + 3 + 4 equals 9. Divide that total by 3 - the number of numbers in that set - and you get the mean: 3.

But then you hear people make that joke about "almost half the people being below average" - and that's not the mean any more. That's a different average. It's the median - the number in the middle. It comes from the Latin word for "in the middle", just like the word medium. That's why we call the line that runs down the middle of a road the median strip, too.

Continue reading here: http://statistically-funny.blogspot.com.au/2015_11_01_archive.html

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Teaching & Practice Tips

What are the Effects of Teaching Evidence-Based Health Care (EBHC)? Overview of systematic reviews.

Young T, Rohwer A, Volmink J, Clarke M

PLoS One, 9(1):e86706

Journal Club Summary by Loai Albarqouni, PhD candidate, Centre for Research in Evidence-Based Practice

1. Background

An evidence-based approach to health care is recognized internationally as a key competency for healthcare practitioners. Various systematic reviews assessing different teaching approaches, and including different target populations, have examined the effects of teaching EBHC. This paper is of a particular interest to those who are engaged in practicing and/or teaching EBHC.

2. Paper presented

What are the Effects of Teaching Evidence-Based Health Care (EBHC)? Overview of systematic reviews. **By Young T, Rohwer A, Volmink J, and Clarke M[1].**

Design: Overview of systematic reviews

Eligibility Criteria (PICO)

P: Undergraduate and postgraduate health professionals (including doctors, dentists, nurses, occupational therapists, physiotherapists, dieticians, audiologists, mental health professionals, psychologists, counsellors, and social workers).

I: any single or multiple educational interventions (defined as a coordinated educational activity, of any medium, duration or format) to teach any component of EBHC.
C: No intervention or different strategies.
O: short-term (Knowledge and skills), medium-term (attitude and behaviour) or long-term (practice and health outcomes).
Study designs: Systematic reviews which included RCT, CT, CBA, BA. Systematic reviews should have predetermined objectives, eligibility criteria, searched at least two data sources (one electronic) and performed data extraction and risk of bias assessment.

Study critical appraisal
This article was appraised using the **FAITH** method:
Find: the authors conducted a comprehensive search (without language restriction) in various databases (7 databases covering medical, health-related and educational databases) and searched for ongoing and unpublished review, reference lists of included studies and contacted expert in the field. It might be better to use MeSH terms and consider searching relevant conferences abstracts as well. The overview eligibility criteria were clear and well defined.
Appraise: Two authors independently extracted the data using a predefined and piloted data extraction sheet. The authors used the AMSTAR (A MeaSurment Tool to Assess Reviews) instrument. The overall quality of included systematic reviews was poor (only 4 assessed high quality).
Include: the authors gave a clear rationale for excluding studies which was not dependent on their quality. Sufficient information about each included review was provided in the supplementary materials.
Total:
The presented article is an interesting well conducted article of high quality. The authors could not pool the effects of teaching EBHC as the included reviews were poorly reported.
Heterogeneity:
The authors found considerable variations in the tools used to assess the outcomes both within and between systematic reviews. The authors planned to pool the effect of teaching EBHC but the findings were poorly reported in most of the included reviews (no effect sizes or significance tests).

3. Summary of results
Sixteen systematic reviews (15 published + 1 unpublished) + 2 ongoing and 2 awaiting assessment systematic reviews met inclusion criteria. These included 81 deduplicated separate studies (Figure 3).

- Multifaceted, clinically integrated interventions, with assessment, led to improvements in knowledge, skills and attitudes.
- Considering single interventions, EBHC knowledge and attitude were similar for lecture-based versus online teaching.
- Journal clubs appeared to increase clinical epidemiology and biostatistics knowledge and reading behaviour, but not appraisal skills.
- EBHC courses improved appraisal skills and knowledge where short workshops using problem-based approaches increased knowledge but not appraisal skills.

4. Discussion/Journal Club commentary
The presented article is an interesting example of high quality well-conducted overview of

systematic reviews. The authors concluded that EBHC teaching strategies should focus on implementing multifaceted, clinically integrated approaches with assessment.
Our journal club discussed the minimum components for EBHC intervention that could be equally effective, and the equivalence between lecture-based and online EBHC training which resonate the findings of a recent RCT of blended learning vs. didactic learning approaches for teaching EBHC[2,3].
We have also discussed the inconsistencies in describing the content of EBHC educational interventions in the included separate studies which impede the replication and implementation of their findings. We referred to the currently developing reporting guideline for educational intervention for EBP[4].
Our Journal club have also discussed the heterogeneity of outcome measures both between and within included systematic reviews which prevent the authors from providing a pooled effect estimate of the effect of teaching EBHC[5]. It is worthwhile to have acceptable standardised outcome measures to assess the effect of teaching EBHC.

5. Reference(s)

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What drove the Evidence Cart? Bringing the library to the bedside

Straus S, Eisinga A, Sackett D† (2015)

JLL Bulletin: Commentaries on the history of treatment evaluation (http://www.jameslindlibrary.org/articles/what-drove-the-evidence-cart-bringing-the-library-to-the-bedside/)

The challenge

We saw an 87 year old woman (Mrs. T) who had been transferred from a long-term care facility with delirium and a pelvic fracture resulting from a fall. She had a past medical history suggestive of moderate Alzheimer's dementia, osteoporosis and type 2 diabetes. She was taking calcium, vitamin D, and metformin. On admission, we found that she

had a urinary tract infection, which we felt was contributing to her delirium. When we reviewed her situation with our clinical team, a few questions were raised about her management plan including:

1. In patients like Mrs. T with a urinary tract infection, what is the effectiveness and safety of a three-day course of antibiotics compared with a seven-day course?
2. In patients like Mrs. T with dementia and osteoporosis, what is the effect of treatment with a bisphosphonate compared with calcium/Vitamin D to prevent fracture and avoid harms?

To answer these questions outside opening hours at our hospital library in 1996 we needed to walk to our office (10 minutes or 3 floors away) and access the CDs for *Best Evidence or the Cochrane Library* that we had purchased. This wasn't a practical solution during busy 'clinical rounds' – meetings of the medical team to review and discuss patients admitted to our service. Our clinical team was on call (or on take) every fourth day, requiring the team to assess patients seen in the Accident and Emergency department for possible admission to the medicine inpatient service. We met during the evening of the on-call period to review and discuss any patients who had been assessed by that time. These are called on-call or on-take rounds. Our medical team also met on the morning after the on-call period to see and discuss all patients who had been admitted. These are called post-call or post-take rounds.

In all of these circumstances we needed information! When we were the team responsible for admissions to the general internal medicine inpatient units, we admitted 20 to 30 patients like Mrs. T during each on-call period. Each day, our clinical team provided care for 40 patients on average. As clinicians providing care for patients with complex healthcare needs like Mrs. T, we were challenged by the need to find and apply evidence in our decision making. "…"

Educational prescriptions and a clinical librarian

Our first attempt to meet this challenge was on the clinical teaching unit at the John Radcliffe (JR) Hospital in Oxford. The discussion about the assessment and management of patients typically led to clinical questions posed by the medical team. If the answer to a clinical question was not known by team members, it was identified as a learning opportunity and a team member was given a paper with the question to be answered. This paper was called an 'educational prescription'.

Even when libraries were in the same building, it took time to go from the medical ward to the library to complete the search, and the libraries were not open then for six am post-call rounds. To help the team answer these questions, the clinician members of the team invited a clinical librarian to join the team. "…"

Despite a highly-motivated team championing evidence-based practice, some of the clinical questions raised were left unanswered, particularly if the evidence sought was not retrieved from the easily assimilated secondary literature sources (usually Critically Appraised Topics (CATs), summary data, or *Best Evidence*). Also, even if the librarian had at all times been able to understand the clinical

issues raised in the questions generated (which was not always the case), and had conducted comprehensive searches of the primary literature on behalf of the team, the team often had little time to appraise the validity and applicability of the articles selected. Service demands on clinical teams allowed for little reading time to assimilate information for clinical problem-solving. This finding suggested the need for a further extension of the clinical librarian's role to include critical appraisal of the primary literature and presentation of the evidence in an accessible summary. "…"

Bringing the library to the bedside

The results of this experience led us to brainstorm about how we could bring evidence to the point of clinical decision making more efficiently. Our approach was also stimulated from comments by Richard Smith, then editor of the BMJ (Smith 1996), who pointed out that 'although most of the questions go unanswered, most of [them] can be answered, usually from electronic sources, but it is time-consuming to do so'. He concluded that the 'ideal information source will be directly relevant, contain valid information, and be accessed with a minimum amount of work' (Smith 1996). "…"

In 1996, we felt the long-term solution to our challenge was handheld computers 'radio-linked' to the evidence; but this technology was in its infancy. As a result, we wanted to see if an 'Evidence Cart' might provide a short-term solution (Sackett and Straus 1998). In particular, we were interested in assessing whether it was feasible to find and apply evidence using an Evidence Cart during clinical rounds. Based on our clinical experience and previous literature, we felt it was important to include:

1. A laptop computer with projector and pop-out screen to share the results of the search with the team and potentially the patients and caregivers
2. Compact disks of *Best Evidence* (containing the cumulated contents of *ACP Journal Club* and *Evidence-based Medicine*, both journals of secondary publication); the *Cochrane Library* (Haynes et al., 1990),*Scientific American Medicine* (1997), *Radiological Anatomy* (1995) and MEDLINE (five-year clinical subset).
3. A physical examination textbook (*Scientific American*1997) and reprints from the *JAMA* series on the Rational Clinical Examination (Sackett and Rennie 1992). "…"

Ninety-eight searches were conducted during the one month period of the Cart's use. We found that a mean of 3.1 evidence resources were used by the team during each round. 81% of searches were for evidence that could affect diagnostic and or treatment decisions, and 90% of the searches for these were successful in finding useful evidence, as judged by the most junior member of the team posing the question. Of the successful searches, 48% led either to a new decision (23%) or to a change (25%) to an existing decision. After removing the Cart, we completed a survey to see how many questions arose over a two-day period and whether answers to these questions were identified. The perceived need for evidence

rose sharply, but a search for it was carried out for only 12% of the questions raised (five searches performed out of the 41 times evidence was needed). Ninety-two per cent of the respondents said the best thing about the Cart was the immediate access to relevant, up-to-date evidence, with instant print-outs. Eighty per cent of the respondents agreed that its worst feature was its bulk. The team suggested that the whole Cart could be brought to team rounds and student teaching rounds, but that the print-out version of the Redbook and Critically Appraised Topics (CATS) be used on post-take rounds. "…"

Unfinished business

Reflecting on this work from the late 1990s, huge strides have been made in providing high quality evidence resources at the point of decision making. For example, the efforts of leaders such as Brian Haynes and his colleagues at McMaster University have hugely impacted the way clinicians can seek and use evidence in practice. And, smartphones are now routinely used at the bedside by clinical teams wishing to access relevant evidence and data from electronic health records. However, we are continuing to struggle with the challenge of integrating relevant evidence with clinical data in the electronic health record in a way that promotes optimal patient care. To meet this challenge, we will need to continue to look to the needs of our patients and their caregivers and find feasible and cost-effective ways to promote evidence-based shared decision making across the care continuum.

Acknowledgements
Sir Muir Gray recruited DLS to Oxford, facilitating the creation of the Oxford Centre for Evidence-Based Medicine; and, the members of the 'original A-team': David Laloo, Alain Townsend, Eric Valezquez, Clair Thomas, Chris Turner, George Ioannou, James Bursell, Hsien Chew, Margaret Findley, Andreas Fox, Sarah Green, Hari Jayaram, Steven Kane-Toddhall, Clair Lloyd, and Ash Cloke.

Gordon Guyatt inducted into the Canadian Medical Hall of Fame

In April Gordon Guyatt – the current ISEHC President - was 1 of 6 new inductees into the Canadian Medical Hall of Fame: http://cdnmedhall.org/ To quote from the entry: "One of the great innovations in general medical practice over the last several decades has been the wide acceptance and application of methodologies collectively known as Evidence-Based Medicine (EBM). McMaster University Distinguished Professor of Clinical Epidemiology and Biostatistics Gordon Guyatt is among the earliest and most effective champions of this transformative advance in health care. Concerned with the intersection between the individual clinician and the expanding universe of medical knowledge, EBM has sought to integrate the complex structures of medical science and technology with the acquired experience of practicing clinicians to best serve the needs, desires and values of patients."

Research & Reviews

Does evidence-based practice improve patient outcomes? An analysis of a natural experiment in a Spanish hospital

Emparanza JI, Cabello JB, Burls AJ

J Eval Clin Pract doi: 10.1111/jep.12460

Abstract

RATIONALE, AIMS AND OBJECTIVES:
Evidence-based practice (EBP) is widely promoted, but does EBP produce better **patient outcomes**? We report a **natural experiment** when part of the internal medicine service in a **hospital** was reorganized in 2003 to form an EBP unit, the rest of the service remaining unchanged. The units attended similar patients until 2012 permitting comparisons of **outcomes** and activity.
METHODS:
We used routinely collected statistics (2004-11) to compare the two different methods of **practice** and test whether patients being seen by the EBP unit differed from standard **practice** (SP) patients. Data were available by doctor and year. To check for differences between the EBP and SP doctors prior to reorganization, we used statistics from 2000 to 2003. We looked for changes in **patient outcomes** or activity following reorganization and whether the EBP unit was achieving significantly different results from SP. Data across the periods were combined and tested using Mann-Whitney test.
RESULTS:
No statistically significant differences in **outcomes** were detected between the EBP and the SP doctors prior to reorganization. Following the unit's establishment, the mortality of patients being treated by EBP doctors compared with their previous performance dropped from 7.4% to 6.3% ($P < 0.02$) and length of stay from 9.15 to 6.01 days ($P = 0.002$). No statistically significant improvements were seen in SP physicians' performance. No differences in the proportion of patients admitted or their complexity between the services were detected. Despite this, EBP patients had a clinically significantly lower risk of death 6.27% versus 7.75% ($P < 0.001$) and a shorter length of stay 6.01 versus 8.46 days ($P < 0.001$) than SP patients. Readmission rates were similar: 14.4% (EBP); 14.5% (SP). EBP doctors attended twice as many patients/doctor as SP doctors.
CONCLUSION:
The EBP unit was associated with better **patient outcomes** and more efficient performance than achieved by the same physicians previously or by SP concurrently.

Article review by Rae Thomas
Thanks to José Emparanza and his colleagues we now have an answer to the question “What is the evidence for evidence-based practice?” and it’s a pretty good one. As José argues, we already have good evidence that providing evidence-based treatments are beneficial to patients, but we did not know how that translated into large hospital settings. In an observational study of organisational change, José and colleagues reported overall decreases in patient mortality and reductions in length of hospital stay in patients cared for by

EBP clinicians compared with those cared for in standard practice.

Background/Methods

Fortuitously for patients, the strategic plan for the hospital was to include a Clinical Epidemiology EBP Unit which then trained interested clinicians in EBP skills. A proposal was later put forward to change the organisational structure of an Internal Medicine department to create a separate Internal Medicine EBP Unit and a naturalistic pre- post study of doctor and patient outcomes in this new ward was conducted. Routine data for mortality and length of hospital stay, were retrospectively collected before the organisational change (between 2000 and 2003; Time 1) and again post change (between 2004 and 2011; Time 2). Re-admission rates and some process measures were also collected.

All staff working in the EBP Internal Medicine Unit were trained in EBP skills and the Internal Medicine EBP Unit worked closely with the hospital Clinical Epidemiology EBP Unit. Importantly all Internal Medicine EBP Unit staff sought and registered knowledge gaps they encountered in clinician-patient interactions and shared these with other staff. In addition, the Internal Medicine EBP Unit also conducted weekly meetings to discuss knowledge gaps and structure these as PICO questions, weekly meetings with primary care teams, multidisciplinary meetings to problem solve challenges (e.g., waiting time, transport etc), and weekly journal clubs to resolve PICO questions.

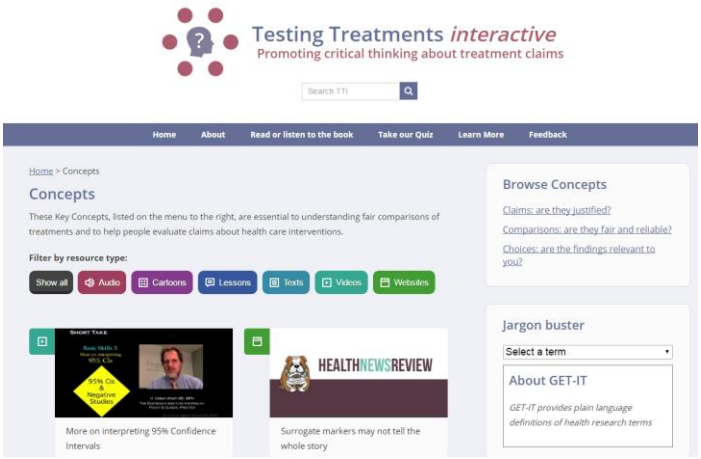
Results

Both within and between group analyses were conducted for mortality rate and length of hospital stay. Between Time 1 and Time 2, patients of EBP clinicians had significant reductions in both mortality rates (7.41% and 6.27%) and length of hospital stays (9.15 days and 6.01 days). In contrast, during the same time periods patients in standard care did not experience statistically significant reductions in either variable. When comparing EBP and standard care, there were no significant differences between the two groups prior to organisational change (Time 1), however, when the two groups were compared after the organisational change (Time 2), EBP patients had significantly reduced mortality rates and length of hospital stays. The article also reports yearly between group differences during 2004 and 2011.

Resources & Reviews

Testing Treatments Interactive Resources

The Testing Treatments website is undergoing a major restructure, with the new organisation being built around "Key Concepts" (see next article) in the evaluation of treatments. The launch is scheduled for June 20th. Learning materials, such as videos, texts, cartoons, etc will be grouped and accessible around these (see screenshot below).



You can find out details on the webpage: www.testingtreatments.org/about/fair-comparisons-network/
As an example, the bottom left hand corner shows a video on 95% confidence intervals from a good series from Dartmouth – the 3rd one is "More on Interpreting 95% Confidence Intervals" www.testingtreatments.org/more-on-interpreting-95-confidence-intervals/?nabe=4876413604724736:2 which includes great visual explanations and some short quizzes in a 9 minute video.

The Key Concepts are from an article last year:

Key concepts that people need to understand to assess claims about treatment effects

Austvoll-Dahlgren A, Oxman AD, Chalmers I, Nsangi A, Glenton C, Lewin S, Morelli A, Rosenbaum S, Semakula D, Sewankambo N.

J Evid Based Med. 2015 Aug;8(3):112-25.

The article provides details of how these were arrived at, and details them, but in brief they are:

1. Recognising the need for fair comparisons of treatments

1.1 Treatments may be harmful
1.2 Personal experiences or anecdotes (stories) are an unreliable basis for assessing the effects of most treatments
1.3 An 'outcome' may be associated with a treatment, but not caused by the treatment
1.4 Widely used treatments or treatments that have been used for a long time are not necessarily beneficial or safe
1.5 New, brand-named, or more expensive treatments may not be better than available alternatives
1.6 Opinions of experts or authorities do not alone provide a reliable basis for deciding on the benefits and harms of treatments
1.7 Conflicting interests may result in misleading claims about the effects of treatments
1.8 Increasing the amount of a treatment does not necessarily increase the benefits of a treatment and may cause harm
1.9 Earlier detection of disease is not necessarily better

1.10 Hope or fear can lead to unrealistic expectations about the effects of treatments
1.11 Beliefs about how treatments work are not reliable predictors of the actual effects of treatments
1.12 Large, dramatic effects of treatments are rare

2. Judging whether a comparison of treatments is a fair comparison
2.1 Evaluating the effects of treatments requires appropriate comparisons
2.2 Apart from the treatments being compared, the comparison groups need to be similar (i.e. 'like needs to be compared with like')
2.3 People's experiences should be counted in the group to which they were allocated
2.4 People in the groups being compared need to be cared for similarly (apart from the treatments being compared)
2.5 If possible, people should not know which of the treatments being compared they are receiving
2.6 Outcomes should be measured in the same way (fairly) in the treatment groups being compared
2.7 It is important to measure outcomes in everyone who was included in the treatment comparison groups

3. Understanding the role of chance
3.1 Small studies in which few outcome events occur are usually not informative and the results may be misleading
3.2 The use of p-values to indicate the probability of something having occurred by chance may be misleading; confidence intervals are more informative
3.3 Saying that a difference is statistically significant or that it is not statistically significant can be misleading

4. Considering all of the relevant fair comparisons
4.1 The results of single comparisons of treatments can be misleading
4.2 Reviews of treatment comparisons that do not use systematic methods can be misleading
4.3 Well done systematic reviews often reveal a lack of relevant evidence, but they provide the best basis for making judgements about the certainty of the evidence

5. Understanding the results of fair comparisons of treatments
5.1 Treatments usually have beneficial and harmful effects
5.2 Relative effects of treatments alone can be misleading
5.3 Average differences between treatments can be misleading

6. Judging whether fair comparisons of treatments are relevant
6.1 Fair comparisons of treatments should measure outcomes that are important
6.2 A systematic review of fair comparisons of treatments in animals or highly selected groups of people may not be relevant
6.3 The treatments evaluated in fair comparisons may not be relevant or applicable
6.4 Results for a selected group of people within a systematic review of fair comparisons of treatments can be misleading

Workshops & Conferences

EvidenceLive 16
University of Oxford June 22 - 24 2016

Improving the Quality of Research Evidence
Disentangling the Problems of Too Much and Too Little Medicine
Transforming the Communication of Evidence for Better Health
Training the Next Generation of Leaders in Applied Evidence
Translating Evidence into Better-Quality Health Services

Registration is now open. For more information, please go to **http://evidencelive.org/**

PREVENTING OVERDIAGNOSIS
BARCELONA, 20-22 September 2016

Following successful conferences in Dartmouth in 2013, the University of Oxford in 2014 and the NIH in 2015, we are pleased to announce the dates for the 2016 international Preventing Overdiagnosis conference, to be held in Barcelona.

PREVENTING OVERDIAGNOSIS
Winding back the harms of too much medicine

Registration and Call for Abstracts are closed.

Sign up to the mailing list and receive notifications or visit their website for more information.

http://www.preventingoverdiagnosis.net/

Cochrane Colloquium Seoul

Oct 23 – 27 2016

Grand Hilton Seoul, Korea

After nearly 25 years, the Cochrane Colloquium comes to East Asia for the first time. We are delighted to host this year's Colloquium in Seoul and extend a very warm welcome to all who share Cochrane's vision of a world in which health decision-making is informed by high quality, timely research evidence.

Online registration will open on 1 April

Please read these guidelines carefully and check the visa information page before registering.

Information about fees can be found on the registration fees page.

Registration dates

- 10 August: early registration closes
- 10 October regular regisration closes;
- 11 October: late and on-site registration

Website: https://colloquium.cochrane.org/

SAVE THE DATE! December 7-9th 2016

http://isehc2016.com/en/

Welcome

On behalf of the organizing committee, we are delighted to welcome you to the International Society for Evidence-Based Healthcare Congress (ISEHC-2016), the fifth of annual Conferences representing one of the largest gatherings of clinicians, researchers and policy makers in the field of evidence based health care and policy making. The organizing committee is endeavoring to bring together top experts and academics in the constantly evolving field of EBHC from around the world to exchange ideas, discover novel opportunities to **Connecting the dots** between research evidences and health policy.

As in the past, the conference includes a diversity of topics which we hope to bring a plurality of interests and perspectives to a single location. We invite all scientists, clinicians, health professional, health management and policy makers to participate in the enrichment of the scientific program of ISEHC 2016. The scientific program will feature plenary and invited talks as well as oral and poster sessions and pre congress workshops.

The conference will be held in the beautiful Kish Island- Iran on December 2016. Kish Island was ranked among the world's 10 most beautiful islands in 2010 and is the fourth most visited vacation destination in Southwest Asia. It is pleasant and relaxing during the December and requires **no visa** for staying up to 14 days.

We look forward to welcoming you in the beautiful Kish Island in 2016.

Registration & Abstract Submission

Sing In

Calendar

Call for Abstracts Opens	15 Apr 2016
Registration Opens	8 Jul 2016
Abstract Submission Deadline	30 Jul 2016
Notification of Acceptance of Abstract	24 Sep 2016
Early Bird Registration Closes	10 Oct 2016
Conference Dates	7-9 Dec 2016

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We would like to keep our mailing list as up to date as possible. If you are planning to move, have moved, or know someone who once received the newsletter who has moved, please e-mail maddock@mcmaster.ca or write your new address here and send to Deborah Maddock, CE&B, HSC 2C12, McMaster University Health Sciences Centre, 1280 Main Street West, Hamilton, ON L8S 4K1, Canada. Thank you!

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FAX: _____

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SIGN UP A COLLEAGUE!

If you would like to encourage a colleague to attend the workshop next year, please e-mail maddock@mcmaster.ca or write the address here and send to Deborah Maddock, CE&B, HSC 2C12, McMaster University Health Sciences Centre, 1280 Main Street West, Hamilton, ON L8S 4K1, Canada. Thank you!

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