

# Newsletter of the International Society for Evidence-Based Health Care

## Newsletter 16, July 2014

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### 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 EBHC
- 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*

To paraphrase Mark Twain: rumours of the death of EBM have been greatly exaggerated. In this month's Newsletter Jeremy Howick gives a little background and comment on the recent BMJ piece on the "crises in EBM". There is more evolution than revolution needed. And one of the evolutions is a much greater involvement of patients in their decisions.

The Research section has the abstract article by Hoffmann et al on Shared Decision Making and EBM, which is free to download from the MJA website. Shared Decision Making is also a feature at the ISEHC conference in Taiwan in November, and the 2015 ISEHC conference in Sydney will be a joint one with the International Shared Decision Making group. Both will be great events.

There are two calls worth noting in this newsletter. First, we have listed (page 9) the four country-wide EBM networks that we are aware of: Taiwan, Germany, Austria, and Indonesia. If you know of others, please contact us.

Second, we are looking at setting up an ISEHC discussion forum and using social media better, but need your help (page 11).

Finally, our apologies for the slower and shorter than usual newsletter, but we have been distracted by the need for submitting several grants to keep the (and newsletter!) CREBP going.

Paul Glasziou  
Twitter: @PaulGlasziou

## The Double-Edged Sword of the Evidence-Based Medicine Renaissance

**Jeremy Howick, CEBM, Oxford**

A meeting involving critics and proponents of Evidence-Based Medicine (EBM) took place in September 2013 to discuss how to overcome current problems with EBM. Led by Trish Greenhalgh, the meeting attendees wrote an editorial that was published last week in the BMJ. The article, "Evidence based medicine: a movement in crisis?" argues that the many benefits of EBM have too often been obscured by undesirable and often unintended consequences including:

1. Misappropriation of EBM by vested interests. These interests are often commercial but also include managers who use guidelines to control practitioners. Ironically while these guidelines are touted as 'evidence-based' they often lack a sound evidence-base.
2. An unmanageable volume of evidence being produced
3. Statistically significant but clinically irrelevant benefits being exaggerated in large trials and systematic reviews that report relative rather than absolute effects.
4. Evidence being produced that is unsuitable for clinical practice, where patients often present with a complex mix of psychological, physiological, and social problems as well as other comorbidities.

The BMJ editorial has been a real hit, with thousands of views and downloads, as well as over 30 rapid responses. There is clearly a thirst for a renewed and refreshed version of EBM that helps achieve EBM's stated aims.

The success of the editorial, however, is a double-edged sword. Complementary and alternative practitioners like the editorial because they can use it to point out that conventional medicine is not based on (good) evidence. Commercial interests will use it to undermine evidence suggesting their treatments don't work. And without Herculean efforts (that go far beyond writing a beautiful article) the tide of the growing number of publications will not be stemmed. Meanwhile, the central and simple message of EBM, namely that best research evidence needs to be combined with patient values and circumstances, along with practitioner expertise, threatens to get buried under a mass of nebulous and heterogeneous critique. This will take us further away, and not closer to our goal of using best evidence to improve patient care.

The success of the renaissance depends on setting up and acting on an agenda that reinstates the core values of EBM so that patients benefit. This is just one of the aims of the 2015 Evidence Live Conference. Our interests as clinicians, policy makers, researchers, and (potential) patients are at stake!

<http://www.cebm.net/double-edged-sword-evidence-based-medicine-renaissance/>

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*admitted to hospital with influenza A H1N1pdm09 virus infection: a meta-analysis of individual participant data*. The Lancet Respiratory Medicine. 2014;2(5):395-404.

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## Report from Vadodara

### Regina Kunz

Report from a meeting in Vadodara at the Sumandeep University

The 2nd International Conference on Evidence Based Education System was held from 19 – 22 June 2014 at Sumandeep Vidyapeeth, Vadodara. Sumandeep University / Medical School has changed their educational approach in the under- and postgraduate training to an evidence-based format, and recently held this second conference with the theme: "Evidence Based Practice: Today and Tomorrow". For more information, please go to <http://www.ebescon.in>

The conference which was attended by about 600 people highlighted the Vadodara's innovative health sciences (medicine, dentistry, nursery, pharmacy etc.) efforts in evidence-based education and evidence-based clinical practice. Workshops included systematic reviews and practice guidelines and plenary talks included descriptions of the university's program and issues in evidence-based practice and interpretation of the literature. Bilateral discussions with the teaching staff and attendees to the conference and workshops gave deeper in the implementation of the innovative approach and the enthusiasm of students, teachers and senior administration that drive the program. At the closing

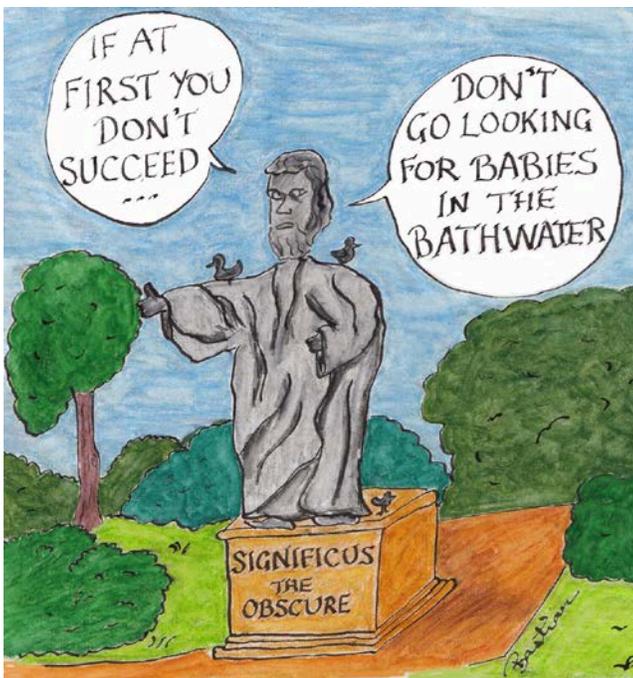
plenary Gordon Guyatt suggested possible links between the institution and ISEHC.

I presented on how to make ebm successful, and built on the EU ebm e-learning program\* – where it started (the BMJ systematic review by Aari Coomarasamy and Khalid Khan); the concept for the e-learning program and what we did; integrating ebm into postgraduate teaching in the clinical setting; the large RCT (done by Regina Kulier and published in JAMA) using this program in the context of a WHO training program in low and middle income countries, demonstrating that it worked in that environment.

\* The EU program will be described and launched in the next ISEHC newsletter.

## If at first you don't succeed

Hilda Bastian



AN EARLY STATISTICAL PHILOSOPHER, SIGNIFICUS THE OBSCURE WAS KNOWN FOR MANGLED APHORISMS AND AN INTENSE HATRED OF POST HOC ANALYSES

*If only post hoc analyses always brought out the inner skeptic in us all! Or came with red flashing lights instead of just a little token "caution" sentence buried somewhere.*

*Post hoc analysis is when researchers go looking for patterns in data. (Post hoc is Latin for "after this.") Testing for statistically significant associations is not by itself a way to sort out the true from the false. (More about that [here](#).) Still, many treat it as though it is - especially when they haven't been able to find a "significant" association, and turn to the bathwater to look for unexpected babies.*

*Even when researchers know the scientific rules and limitations, funny things happen along the way to a final research report. It's the problem of researchers' degrees of freedom: there's a lot of opportunity for picking and choosing, and changing horses mid-race. Researchers can succumb to the temptation of over-interpreting the value of what they're analyzing, with "convincing self-justification." (See [the moving goalposts over time here](#), for example, as trialists are faced with results that didn't quite match their original expectations.)*

.... continued at [http://statistically-funny.blogspot.com.au/2014\\_03\\_01\\_archive.html](http://statistically-funny.blogspot.com.au/2014_03_01_archive.html)

## Welcome to Susanne Bernhardsson



We would like to welcome Susanne Bernhardsson to the team. Susanne is working on the International Society for Evidence-Based Health Care website. If there are suggestions you would like to make on the design or layout of the website please feel free to

contact Susanne with suggestions. Email [susanne.bernhardsson@vgregion.se](mailto:susanne.bernhardsson@vgregion.se).

### **Susanne Bernhardsson, Gothenburg, Sweden.**

Physiotherapist. MSc in Physiotherapy 2010. Project manager rehabilitation guideline development at Närhälsan Rehabilitation, Region Västra Götaland, since 2010, involving conducting rapid systematic reviews, study appraisals, evidence syntheses, and formulating evidence-based recommendations.

PhD student at Linköping University since 2012 with thesis on Implementation of clinical practice guidelines in physiotherapy. Research focuses on measuring evidence-based practice and use of guidelines, implementation of guidelines, and patients' treatment preferences.

## Teaching & Practice Tips

### **Development and validation of the ACE tool: assessing medical trainees' competency in evidence based medicine**

**Ilic D, Nordin RB, Glasziou P, Tilson JK, Villanueva E**

BMC Med Educ. 2014 Jun 9;14:114  
[www.ncbi.nlm.nih.gov/pubmed/24909434](http://www.ncbi.nlm.nih.gov/pubmed/24909434)

#### **Abstract**

**BACKGROUND:** While a variety of instruments have been developed to assess knowledge and skills in evidence based medicine (EBM), few assess all aspects of EBM - including knowledge, skills attitudes and behaviour - or have been psychometrically evaluated. The aim of this study was to develop and validate an instrument that evaluates medical trainees' competency in EBM across knowledge, skills and attitude.

**METHODS:** The 'Assessing Competency in EBM' (ACE) tool was developed by the authors, with content and face validity assessed by expert opinion. A cross-sectional sample of 342 medical trainees representing 'novice', 'intermediate' and 'advanced' EBM trainees were recruited to complete the ACE tool. Construct validity, item difficulty, internal reliability and item discrimination were analysed.

**RESULTS:** We recruited 98 EBM-novice, 108 EBM-intermediate and 136 EBM-advanced participants. A statistically significant difference in the total ACE score was observed and corresponded to the level of training: on a 0-15-point test, the mean ACE scores were 8.6 for EBM-novice; 9.5 for EBM-intermediate; and 10.4 for EBM-advanced ( $p < 0.0001$ ). Individual item discrimination was excellent (Item Discrimination Index ranging from

0.37 to 0.84), with internal reliability consistent across all but three items (Item Total Correlations were all positive ranging from 0.14 to 0.20).

**CONCLUSION:** The 15-item ACE tool is a reliable and valid instrument to assess medical trainees' competency in EBM. The ACE tool provides a novel assessment that measures user performance across the four main steps of EBM. To provide a complete suite of instruments to assess EBM competency across various patient scenarios, future refinement of the ACE instrument should include further scenarios across harm, diagnosis and prognosis.

<http://www.ncbi.nlm.nih.gov/pubmed/24909434>

The full ACE tool and an example is downloadable at:

<http://www.biomedcentral.com/content/supplementary/1472-6920-14-114-s1.pdf>

## **Shared decision making: what do clinicians need to know and why should they bother?**

**Hoffmann TC, Légaré F, Simmons MB, McNamara K, McCaffery K, Trevena LJ, Hudson B, Glasziou PP, Del Mar CB**

Med J Aust. 2014 Jul 7;201(1):35-9.

### **Abstract**

Shared decision making enables a clinician and patient to participate jointly in making a health decision, having discussed the options and their benefits and harms, and having considered the patient's values, preferences and circumstances. It is not a single step to be added into a consultation, but a process that can be used to guide decisions about screening, investigations and treatments. The benefits of shared decision making include

enabling evidence and patients' preferences to be incorporated into a consultation; improving patient knowledge, risk perception accuracy and patient-clinician communication; and reducing decisional conflict, feeling uninformed and inappropriate use of tests and treatments. Various approaches can be used to guide clinicians through the process. We elaborate on five simple questions that can be used: What will happen if the patient waits and watches? What are the test or treatment options? What are the benefits and harms of each option? How do the benefits and harms weigh up for the patient? Does the patient have enough information to make a choice? Although shared decision making can occur without tools, various types of decision support tools now exist to facilitate it. Misconceptions about shared decision making are hampering its implementation. We address the barriers, as perceived by clinicians. Despite numerous international initiatives to advance shared decision making, very little has occurred in Australia. Consequently, we are lagging behind many other countries and should act urgently. The full text is free to download at <https://www.mja.com.au/journal/2014/201/1/shared-decision-making-what-do-clinicians-need-know-and-why-should-they-bother>

A comprehensive set of shared decision making tools is available at the Ottawa Hospital Research Institute:

<http://decisionaid.ohri.ca/AZinvent.php>

# Research & Reviews

## Methods of teaching medical trainees evidence-based medicine: a systematic review

Ilic D, Maloney S

### Abstract

**CONTEXT:** The principles of evidence-based medicine (EBM) provide clinicians with the ability to identify, source, appraise and integrate research evidence into medical decision making. Despite the mantra of EBM encouraging the use of evidence to inform practice, there appears little evidence available on how best to teach EBM to medical trainees. A systematic review was performed to identify what type of educational method is most effective at increasing medical trainees' competency in EBM.

**METHODS:** A systematic review of randomised controlled trials (RCTs) was performed. Electronic searches were performed across three databases. Two reviewers independently searched, extracted and reviewed the articles. The quality of each study was assessed using the Cochrane Collaboration's risk of bias assessment tool.

**RESULTS:** In total, 177 citations were returned, from which 14 studies were RCTs and examined for full text. Nine of the studies met the inclusion criteria and were included in this review. Learner competency in EBM increased post-intervention across all studies. However, no difference in learner outcomes was identified across a variety of educational modes, including lecture versus online, direct versus self-directed, multidisciplinary versus discipline-specific groups, lecture versus active small group facilitated learning.

**CONCLUSIONS:** The body of evidence available to guide educators on how to teach EBM to medical trainees is small, albeit of a good quality. The major limitation in assessing risk of bias was the inability to blind participants to an educational intervention and lack of clarity regarding certain aspects within studies. Further evidence, and transparency in design, is required to guide the development and implementation of educational strategies in EBM, including modes of teaching and the timing of delivering EBM content within the broader medical curriculum. Further research is required to determine the effects of timing, content and length of EBM courses and teaching methods.

Med Educ. 2014 Feb;48(2):124-35.

doi: 10.1111/medu.12288

## Comparison of treatment effect sizes associated with surrogate and final patient relevant outcomes in randomised controlled trials: meta-epidemiological study

Ciani O, Buyse M, Garside R, Pavey T, Stein K, Sterne JA, Taylor RS

### Abstract

**OBJECTIVE:** To quantify and compare the treatment effect and risk of bias of trials reporting biomarkers or intermediate outcomes (surrogate outcomes) versus trials using final patient relevant primary outcomes.

**DESIGN:** Meta-epidemiological study.

**DATA SOURCES:** All randomised clinical trials published in 2005 and 2006 in six high impact medical journals: Annals of Internal Medicine, BMJ, Journal of the American Medical Association,

Lancet, New England Journal of Medicine, and PLoS Medicine.

**STUDY SELECTION:** Two independent reviewers selected trials.

**DATA EXTRACTION:** Trial characteristics, risk of bias, and outcomes were recorded according to a predefined form. Two reviewers independently checked data extraction. The ratio of odds ratios was used to quantify the degree of difference in treatment effects between the trials using surrogate outcomes and those using patient relevant outcomes, also adjusted for trial characteristics. A ratio of odds ratios >1.0 implies that trials with surrogate outcomes report larger intervention effects than trials with patient relevant outcomes.

**RESULTS:** 84 trials using surrogate outcomes and 101 using patient relevant outcomes were considered for analyses. Study characteristics of trials using surrogate outcomes and those using patient relevant outcomes were well balanced, except for median sample size (371 v 741) and single centre status (23% v 9%). Their risk of bias did not differ. Primary analysis showed trials reporting surrogate endpoints to have larger treatment effects (odds ratio 0.51, 95% confidence interval 0.42 to 0.60) than trials reporting patient relevant outcomes (0.76, 0.70 to 0.82), with an unadjusted ratio of odds ratios of 1.47 (1.07 to 2.01) and adjusted ratio of odds ratios of 1.46 (1.05 to 2.04). This result was consistent across sensitivity and secondary analyses.

**CONCLUSIONS:** Trials reporting surrogate primary outcomes are more likely to report larger treatment effects than trials reporting final patient relevant primary outcomes. This finding was not explained by differences in the risk of bias or characteristics of the two groups of trials.

BMJ. 2013 Jan 29;346:f457. doi: 10.1136/bmj.f457  
PMID: 23360719

## Resources & Reviews

### EBM Country-wide Networks

There are currently several country-wide EBM networks which aim to foster and develop EBM teaching and practice. ISEHC is interested to know of these, so that other countries might learn of the value and methods of such networks.

**Taiwan Evidence-Based Medicine Association:**  
[www.tebma.org.tw/](http://www.tebma.org.tw/)

The Taiwan Evidence-Based Medicine Association (TEBMA) was founded by multidisciplinary health professionals since 15th August 2007. The mission of TEBMA is to develop, teach and promote evidence-based health care through conferences, workshops, EBM contests, and curriculum designing. As the first EBM association with more than 400 individual and organizational members, TEBMA plays an important role to promote evidence-based knowledge synthesis and application (knowledge translation), as well as enhance experience sharing and cooperation among hospitals, schools, libraries and government organizations in Taiwan. We hope that all these efforts can help health care professionals improve the highest quality of care.

**German Network for Evidence-based Medicine:**  
[www.ebm-netzwerk.de/english](http://www.ebm-netzwerk.de/english)

The German Network for Evidence-based Medicine (DNEbM) was founded to spread and develop the concepts and methods of EbM in practice, teaching and research. The Network is the German-language competence and reference center for all aspects of evidence-based medicine.

Evidence-based medicine (EBM) promotes the conscious, explicit and deliberative use of the best empirical evidence available when making decisions about the care of individual patients, groups of patients and whole populations. The clinical practice of EBM involves the integration of clinical expertise, patient preferences and external evidence from systematic patient-oriented research. Evidence-based health care involves the additional consideration of epidemiological, economic and social aspects.

The DNEbM was founded on 6 October 2000 in Berlin and now records approximately 850 individual and institutional members. The network sees itself as an interdisciplinary platform for the fundamental principles of EBM, namely to improve the connection between medical research and medical care. The DNEbM is both generally and professionally neutral. It is a member of the Association of the Scientific Medical Societies in Germany (AWMF) e.V.

#### **Austrian EbM-Network:**

<http://www.ebm-netzwerk.de/wer-wir-sind/ebm-netzwerk.at>

The Austrian EbM network was created as a department of the German Network for Evidence-based Medicine (DNEbM) on May 21, 2010 and thus became an Austrian unit of the already existing German Network for Evidence-based Medicine.

The ebm-netzwerk.at network was basically established via the merger of Austrian EbM experts and organizations. The aim of the network is to provide information and a platform for the exchange of information and expertise among Austrian parties that are interested in EbM, as well as to promote the adoption of EbM principles in clinical practice. To achieve this, the Austrian EbM network can fall back on the know-how of the DNEbM and count on the structural support of the umbrella organization.

At the same time the DNEbM can profit from the active involvement of Austrian experts in its own activities.

#### **Indonesia Clinical Epidemiology & Evidence Based Medicine (ICE-EBM)**

<http://ice-ebm.org/>

The ICE-EBM Network was established on 28 November 2010 in Denpasar, Bali. The one day joint meeting between 19 institutions and research centers in Indonesia was held during AsiaLink conference on Clinical Epidemiology and Evidence-Based Medicine in Global Perspective and brought together all aspects of business, government and academicians to provide opportunity to build a network of excellence. The next meeting was held on 5-6 February 2011 in Yogyakarta and had chosen board of advisors, board of directors, and network coordination center as the council for ICE-EBM Network. More importantly, seven clusters had also been formed to facilitate the collaborative activities in the future. The ICE-EBM Network comprises of clinical epidemiologists, researchers and policy makers from universities, government and industries in Indonesia who are concerned with research on clinical epidemiology and evidence based medicine.

Over the years, the Faculty of Medicine together with their teaching hospitals, while separately serving faculty, students, learners, researchers, patients, and communities, have been committed to aligning their efforts in order to achieve the mission of advancing the health and well-being of Indonesian communities. To support this mission, clinical epidemiology and evidence based medicine become an important science to be strengthened.

The initiation to form The Indonesia Clinical Epidemiology & Evidence Based Medicine (ICE-EBM) Network was emerged from the awareness of the importance of continuous researches in this field which has become an important instrument to

provide the best quality of health services. The ICE-EBM Network provides opportunities for academic, business and government collaboration (ABG partnership) by creating a platform to perform a mutual cooperation and coordination between members in the field of clinical epidemiology and evidence-based medicine. One example is the multi-sites clinical and translational research among collaborating institutions throughout the nation.

## **ISEHC Forums and Social Media – Volunteers please!**

Are you a social media whiz and interested in EBHC?

We are looking for volunteers to join a small group to work out how best to use social media to help ISEHC and ISEHC members.

We have an underused Facebook page, and the #EBHC hashtag feeds to the ISEHC homepage. We would like to improve those, but also consider other means such as forums for discussions of EBHC topics, slideshare uploads for teaching materials, etc.

If you are interested please contact Victor Montori [Montori.Victor@mayo.edu](mailto:Montori.Victor@mayo.edu) or Paul Glasziou [paul\\_glasziou@bond.edu.au](mailto:paul_glasziou@bond.edu.au)

# Workshops & Conferences



## **GIN 2014 Conference, Melbourne, Australia, 20-23 August 2014**

Therapeutic Guidelines Ltd is delighted to extend a warm invitation on behalf of the Board of Trustees of the Guidelines International Network (G-I-N) and the Scientific Committee to attend the GIN 2014 Conference that will be held in Melbourne, Australia on 20-23 August 2014.

**Online Registration Closes: 15 August 2014**

[www.gin2014.com.au](http://www.gin2014.com.au)



**3<sup>rd</sup> International Society for Evidence-Based Health Care Conference 2014**  
Knowledge Translation and Decision Making for Better Health: Challenge of Globalization  
November 6-9, 2014 | NTUH International Convention Center | Taipei, Taiwan



Hosted by the Taiwan Evidence-Based Medicine Association (TEBMA) in cooperation with Center for Evidence-Based Medicine, Taipei Medical University

ISEHC is on a success path and is growing rapidly. After two successful conferences the society is becoming an increasingly established player in the EBHC field. It is soon time to turn our focus on the 3rd ISEHC conference in Taipei November 6-9, 2014. For further details see the conference website: [www.isehc2014.tw/](http://www.isehc2014.tw/)

## **SAVE THE DATES!**



On behalf of the International Society for Evidence Based Health Care (ISEHC) and the International Shared Decision-Making (ISDM) group we warmly invite you to attend the joint ISDM/ISEHC Conference in Sydney, 2015.

This will be a landmark event in the evolution of both evidence-based health care and shared decision making, which have much to contribute to each other and to better care for patients. This is an important opportunity for you to enjoy the fellowship of like-minded colleagues as well as enjoying the many pleasures of Sydney.

<http://www.isdm-isehc2015.org/>

## **7th EBHC International Conference, Sicily, 28th – 31st October 2015**

<http://www.ebhc.org/>



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## MAILING LIST

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](mailto: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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## SIGN UP A COLLEAGUE!

If you would like to encourage a colleague to attend the workshop next year, please e-mail [maddock@mcmaster.ca](mailto: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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