

Newsletter of the International Society for Evidence-Based Health Care

Newsletter 6, May 2012

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



TABLE OF CONTENTS

EDITORIALS

Introducing evidence based medicine in a Pakastini Medical School	3
---	---

TEACHING & PRACTICE TIPS

EBM Teaching Tip: Teaching statistical adjustment through imagery	3
---	---

RESEARCH & REVIEWS

Which online medical texts have the best evidence-based pedigrees?	5
--	---

GRADE approach-based bibliographic assistance impact on physician's behavior: A randomized controlled trial (preliminary results)	6
--	---

Shared decision making initiatives at the state level: focusing on evidence translation and patient-centered care	7
--	---

American Psychological Association appoints treatment guideline panel for depression and calls for panelists for Obesity and PTSD Guidelines	8
---	---

RESOURCES & REVIEWS

New online resource about evidence-based behavioral treatments for clinicians and consumers	9
--	---

WORKSHOPS AND CONFERENCES

SOURCE evidence-based surgery program update	10
--	----

Introducing evidence based medicine in a Pakastini Medical School

Ayesha Junaid

During curricular reforms at the Shifa College of Medicine in 2005, the concept of evidence based medicine (EBM) was introduced. Here we share the experience of incorporating EBM into the undergraduate medical curriculum at our institute, where most of the faculty was unfamiliar with this concept.

EBM was formally introduced by arranging workshops on this topic and inviting a pioneer member of the EBM movement to provide a lecture at our institute. These efforts sowed the seed that was then taken up by the EBM taskforce continuing an in house process with the goal of recruiting all faculty, and creating the consequent change in medical practice. The goal was to provide the support for all those who wish to start EBM instruction at the undergraduate level.

We defined the short and long term objectives of incorporating EBM into our undergraduate medical curriculum. Short term objectives were to sensitize and teach students basic EBM terminology and methodology, while the long term goal was to develop a culture of incorporating patient's preferences & medical evidence in clinical decision making.

Faculty engagement was the first and most challenging phase of incorporating EBM into our medical curriculum. With our culture of general resistance to any change in existing practice combined with the challenges of learning how to interpret statistical information, our faculty, especially the more senior members, struggled to adopt EBM into their teaching. At our institute where the "professorial word" was used to resolve all academic discussions, some faculty members viewed the adoption of EBM as a threat to their authority. Furthermore, the idea of incorporating patient's preferences into clinical decision making was also seen by some as a threat to their clinical authority.

Following faculty training we endeavored to impart the concept of EBM to our medical students, which we implemented at four academic levels (first year,

3rd, 4th & final year MBBS). The basic concept of formulating a clinical question based on the 'PICO' format was introduced in the first teaching module. Each subsequent module included an assignment based on a clinical scenario that required students to develop a research question and conduct a search of the medical literature. We asked fourth & final year medical students to approach clinical case presentation in morning reports & in ward rounds using EBM principals, and instructors reviewed student's case write-ups for supporting evidence. Though students were very receptive to learning and applying EBM, the lack of readily available access to electronic databases of the medical literature was a serious problem. We addressed this issue by purchasing licenses to Up to date & Academic Medicine, and made these resources available to all medical students.

We evaluated student's familiarity with EBM terminology and their OSCE performance, reflecting application of EBM concepts, and found that more than 75% of students passed these assessments. The impact of introducing EBM into our medical curriculum on clinical practice is not yet known; however, the enthusiasm that student's have shown for EBM is encouraging.

SETTING; SHIFA COLLEGE OF MEDICINE, ISLAMABAD

EBM Teaching Tip: Teaching statistical adjustment through imagery

Zhen Wang, Osama Altayar, Hassan Murad

When clinicians read a journal article, they commonly encounter the term "statistical adjustment". In fact most, if not all, studies use or should use some sort of adjustment because biomedical/biological phenomena are usually influenced by factors that are not independent of each other. Clinicians interested in practicing evidence-based healthcare may be challenged to understand what is meant by a statistical adjustment because the formal definition and computations are somewhat complex. We present a teaching technique that uses visual simulation to

explain statistical adjustment through image rotation.¹ This technique can be demonstrated using a transparency or a thin sheet of paper.

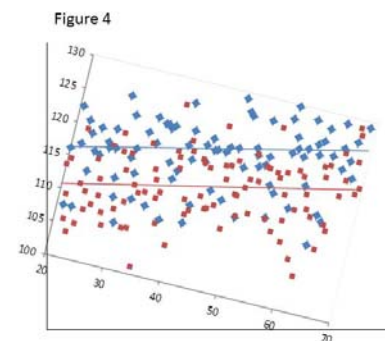
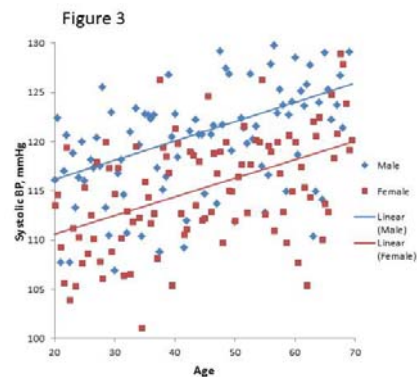
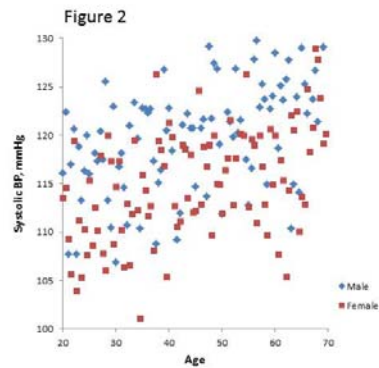
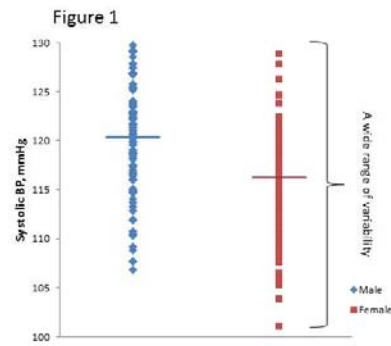
Let's assume that we are interested in knowing whether systolic blood pressure (SBP) differs between men and women. Figure 1 shows the direct comparison suggesting that men have, on average, higher SBP. However, we cannot be confident that this difference is true because 1) we know that blood pressure is affected by other factors, most importantly age, and 2) there is great spread of the SBP measurements, meaning that the associated measure of precision of the average is large. Indeed, if we look at figure 2, when we plot the age and SBP, we can see that older age is associated with higher SBP (in both sexes). Men still, however, seem to have higher SBP. In figure 3, we draw the regression lines that demonstrate how strongly SBP correlates with age in men and women. In figure 4, we rotate the graph clockwise to eliminate this correlation. In other words, we eliminated the effect of age on blood pressure by making the regression lines horizontal (the slope of the regression lines is zero, i.e., no correlation). Finally, in figure 5, we redraw the x and y axes on the rotated image and demonstrate that by eliminating the correlation with age, we have now more precision (the spread of the measurements is narrower) and more reliable estimation of the effect of sex on blood pressure that eliminated the correlation with the confounder.

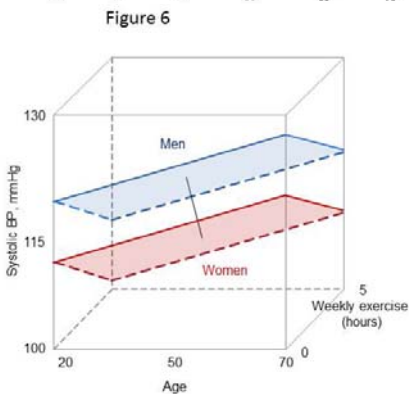
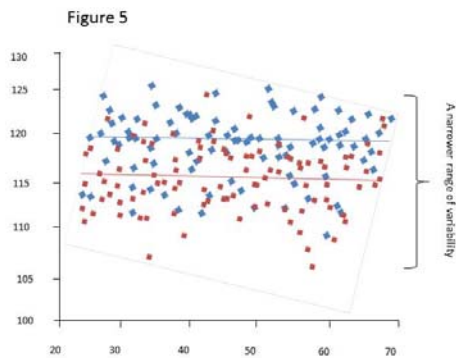
In reality, there are multiple variables affecting study outcomes. In figure 6, we demonstrate the association of three variables (age, sex and weekly exercise hours) with SBP in a three dimensional image where the line of regression has become a plane.

It is highly important to follow this demonstration by a disclaimer highlighting to learners that the actual computation of statistical adjustment has nothing to do with image rotation and that the purpose of this image manipulation is only to illustrate that “deducting” the age effect from the estimate of sex on SBP reduces variability.

References:

1. Trochim, WM. Covariance Designs. In: The Research Methods Knowledge Base, 2nd Edition 2006.
 URL:<<http://www.socialresearchmethods.net/kb/>





Which online medical texts have the best evidence-based pedigrees?

Emma Iserman, Brian Haynes,
Jeanette Prorok

To deliver evidence-based healthcare, clinicians must have access to current best evidence and One resource for clinicians is online textbooks. These summaries of clinical practice ideally combine the clinical expertise of their authors with current and reliable interpretation of high quality systematic reviews and pertinent original studies from the medical literature. Little research, however, has quantified the differences in evidence-based features among between online texts. .

Recently, we evaluated 10 online medical texts for three features: editorial quality for processing and presenting evidence, breadth of topic coverage, and timeliness of content updating. Quality was assessed by determining the presence or absence

of 11 key features, such as in-line referencing and editorial policies for processing evidence from research. Breadth of topic coverage was assessed using a random sample of 60 ICD-10 codes, and determining the % of those topics covered by each text. Timeliness was assessed by recording the date of last update for a random sample of text chapters.

The average editorial quality score was 6.7 out of 11 points. The highest score was 9 (Clinical Evidence); the lowest score was zero (PEPID™).

The average breadth of coverage across all texts was 57%. The percentage of topics covered ranged from highs of 83% (UpToDate) and 82% (DynaMed), to a low of 25% (Clinical Evidence). Five of the texts had 60% coverage or greater.

The average time since last update ranged from 3.5 months to 30 months across all texts, with six of nine texts having an average time since last update within the past 12 months (PEPID did not provide dates for updating for its topics).

We found considerable variability among the online medical texts we evaluated. None of the ten texts scored highest in all 3 categories, suggesting that all could be improved. Two texts - DynaMed and UpToDate - consistently ranked near the top of each category we explored and, with the exception of PEPID, each of the remaining texts scored well in at least one category.

No single online medical text appears to be ideal and our findings suggest that clinicians using these resources should consult more than one text, especially if the topic of interest in a particular text has not been updated recently. This approach could be facilitated by using a federated search engine that includes results from several texts to provide clinical information from multiple resources.

Reference:

1. Prorok JC, Iserman EC, Wilczynski NL, Haynes RB. The quality, breadth, and timeliness of content updating vary substantially for 10 online medical texts: an analytic survey. *Journal of Clinical Epidemiology*. Accepted for publication.

GRADE approach-based bibliographic assistance impact on physician's behavior: A randomized controlled trial (preliminary results)

Ariel Izcovich, J.I. Ruiz, J. Criniti, Gonzales Malla

Introduction

Many questions arise for physicians during patient care - approximately one for every 2 patients evaluated. Searching for information in books or consulting a specialist has been the most traditional way to acquire answers. The ability to search for information, along with the increasing accessibility of the medical literature, allows physicians who have the skills to perform critical appraisal to answer questions based on high-quality evidence. However, because of limited time, lack of training in critical appraisal of the information, and low expectations for finding a relevant and direct answer to questions, most physicians do not perform literature searches in their daily practice. Standardized evidence syntheses might be a useful tool for answering medical questions that arise during patient care. There is limited high-quality evidence regarding the usefulness of evidence syntheses in improving clinically important outcomes in hospitalised patients.

Methods

All clinical questions about therapeutic or diagnostic strategies that arouse from inpatient care in the Internal Medicine ward of Hospital Aleman in Buenos Aires after December 2010 were considered eligible for our study. The chosen question were randomly assigned to one of two groups: intervention or control. We conducted a literature search to locate systematic reviews, randomized controlled trials or observational studies relevant to each clinical question and synthesized the resulting material using the GRADE approach. A GRADE evidence synthesis was used to formulate a recommendation to every included question, and recommendations were provided to physicians responsible for the care of the patients whose questions were assigned to the intervention arm. GRADE evidence syntheses were not provided to physician's responsible for the

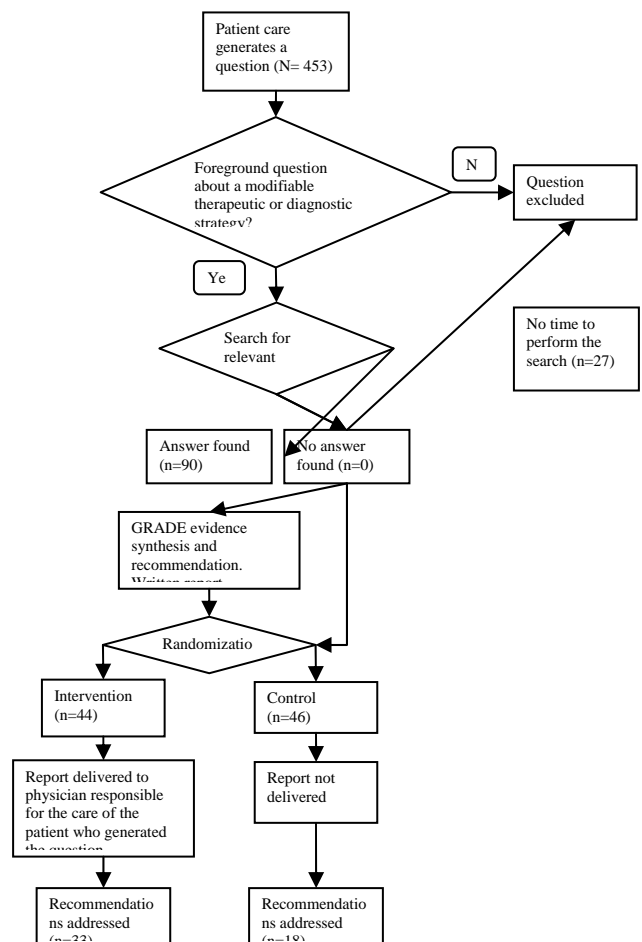
patients whose questions were assigned to the control arm.

Results

90 questions were included; 44 were assigned to the intervention arm and 46 to the control arm. 75% and 39% of the recommendations constructed in response to the questions assigned to the intervention and control arm respectively were addressed, RR 1.8 (CI95% 1.2 – 2.6), number of reports needed to deliver to change a physicians' behavior, 3 (CI 95% 2 - 9). No differences were found on inpatient mortality p=1, transference to an ICU p=0.7 or length of stay p=0.4.

Conclusions

The results of our preliminary analysis suggest that GRADE evidence syntheses can change physicians' behavior; however, there does not appear to be an effect on inpatient care outcomes.



Shared decision making initiatives at the state level: focusing on evidence translation and patient-centered care

Kasey Boehmer, Victor Montori,
Annie LeBlanc, and Kari Ruud

Shared decision making (SDM) has received national policy attention in the United States as a method to implement evidence-based medicine into practice. In previous newsletters, we have discussed: 1) innovations in shared decision making tools and techniques as a way to apply the principle of evidence-based health care that requires research evidence be considered in the context of patient values and preferences¹ and 2) the lessons we have learned while developing these methods in the context of SDM as a key component of healthcare reform.² Building upon the ideas of innovation and national policy, we discuss here the ways in which state policy makers have had an increasing interest in facilitating best practices, implementation, and research in SDM.

The National Academy for State Health Policy released a report in March 2012 entitled, "Shared Decision Making: Advancing Patient-Centered Care through State and Federal Implementation."³ This report is based on information, recommendations, and conclusions arrived at through the organization's convening of state and federal officials, SDM experts, and consumer, purchaser and provider representatives in October of 2011. This meeting sought to gather information about the current state of SDM policy at the state level. It highlights what progress has been made at the state policy level to include SDM in healthcare delivery system improvement initiatives, state legislation, and public-private partnerships.

The report found that several state legislatures have been focused intently on crafting state policies to study and implement SDM. Policy makers are keen on developing measures that accurately pinpoint SDM's impact on cost and variation in clinical management.

For example, one of the SDM initiatives described in the report, the Group Health Cooperative in Washington State, placed its emphasis on improving quality, reducing variation in treatment, and reducing costs. They evaluated high variation areas in healthcare within Group Health and used

previously developed video decision aids prior to the clinical encounter in these areas of specialty care. The group measured patient satisfaction, how often the decision aid was distributed to patients, the number of interventions occurring without the decision aid, and the cost and utilization data for the conditions in which the group piloted the decision aids.

One key barrier to SDM implementation identified by the stakeholders at the October meeting was physician resistance. The report notes that physicians were less amenable to using SDM when the focus was placed on reduction of costs and treatment variation. Instead clinicians were more welcoming to SDM when it sought to improve patient care and better inform patients, and they were more interested in understanding how implementing SDM impacted visit length and clinical workflow.

The research being conducted at the Mayo Clinic's Knowledge and Evaluation Research Unit and Shared Decision Making National Resource Center to test decision aids within the clinical encounter has focused on assessing how our SDM tools impact patient satisfaction and knowledge, clinician engagement, the length added to clinical visits, and where SDM can be most effectively implemented within clinical workflows. These aspects remain of key importance to clinicians, whose buy-in is critical to implementing high quality SDM that will truly benefit patients.

We should not lose sight of these objectives in the policy-making arena where the focus might begin with patient-centeredness, but can easily be shifted to focus only on cost savings and reduction of treatment variation. Our work has taught us a lesson, reinforced by this new report: our focus should remain squarely on SDM interventions that translate the best evidence into practice, create quality conversations within the clinical encounter, and prioritize patient-important outcomes. The rest we think we will follow.

¹ Ruud K, LeBlanc A, Montori VM. Making Evidence-Based Medicine Happen: Innovations and Interventions in Shared Decision Making. Newsletter of the Society for Evidence-Based Health Care. 2011 April; 3

² Boehmer K, Ruud K, Montori VM, LeBlanc A. Implementing healthcare reform through developing evidence-based shared decision making tools. Newsletter of the Society for Evidence-Based Health Care. 2011 November; 5.

³ Shafir A, Rosenthal J. Shared Decision Making: Advancing Patient-Centered Care through State and Federal Implementation. National Academy for State Health Policy. March 2012.

American Psychological Association appoints treatment guideline panel for depression and calls for panelists for Obesity and PTSD Guidelines

Bonnie Spring

Getting together appropriate guideline panels is a tough problem – the right mix of backgrounds, skills, and sectors is needed. A particularly thorny problem is dealing with conflicts of interest – and best to do so before inviting members. So the following describes one process; we'd be interested to hear of others.

The American Psychological Association (APA) has appointed panelists for a guideline on the treatment of depression. The APA has also issued calls for nominations of scientists and clinicians to serve on two new panels for the treatment of obesity and post-traumatic stress disorder (PTSD).

Members of the depression panel were chosen to contribute a broad range of expertise, experience, and perspectives from psychology as well as from other professions that address depression. All candidates submitted information regarding potential conflicts of interest (including financial, organizational, and personal conflicts, as well as intellectual commitments and biases) and were vetted to determine that no panelists had conflicts that would preclude their service on the panel. Conflicts of interest will be reviewed again regularly as panelists proceed with their work. The 11 panelists for the depression guideline are: Jacques Barber, PhD, Adelphi University; Alfiee Breland-Noble, PhD, Georgetown University; Pim Cuijpers, PhD, VU University Amsterdam; Leslie Samuel Greenberg, PhD, York University; Elizabeth Lin, MD, MPH, University of Washington; John McQuaid, PhD (Chair), University of California, San Francisco; Laura Mufson, PhD, Columbia University; Arthur Nezu, PhD Drexel University; Charles F. Reynolds III, MD,

University of Pittsburgh; Rhonda Robinson-Beale, MD, United Behavioral Health; Forrest Scogin, PhD, University of Alabama.

The guideline development panel, along with the steering committee, will determine the scope of the guideline and formulate the questions that will guide a systematic review of the literature. The systematic review will be conducted by an outside organization to be selected by the steering committee and senior APA management. The committee is considering a range of organizations that could carry out this work, including the evidence-based practice centers (EPCs) that perform systematic reviews for the U.S. federal government. The panel will begin its work by becoming fully acquainted with current standards and procedures for guideline development, such as those presented in the recent Institute of Medicine reports (*Finding What Works in Health Care: Standards for Systematic Reviews; Clinical Practice Guidelines We Can Trust*) and by organizations such as Guidelines International Network (of which APA is a member).

One early task for the panel will be to design a mechanism for drawing upon the perspectives of patients and consumers. The steering committee decided that appointing one or two members to the panel to represent the broad range of patients/consumers (including families) would be insufficient. Options that the panel is considering include creating a board of patient/consumer consultants or putting out periodic calls for input from patient/consumer communities.

The development panels for the obesity and PTSD guidelines will be composed of at least seven members: three content experts, one full-time generalist practitioner, one biostatistician or methodologist. For the obesity panel, we will seek panelists with expertise in areas related to eating behavior, diet, physical activity, health behavior change, weight loss, and medical management of obesity. Development panel members should have knowledge of treatment issues related to age (including children and older adults) and other dimensions of diversity (such as race/ethnicity, socioeconomic status, culture, gender, sexuality, physical and mental abilities). Background or expertise in one or more of the following areas will be desirable: clinical treatment guidelines development, comparative effectiveness research, systematic reviews, experience with clinical trials, evaluation of interventions,

dissemination/implementation research, research design and statistical analysis, experience applying clinical treatment guidelines in practice settings, experience applying evidence-based practices in clinical settings, direct provision of care in diverse practice settings or with diverse populations, patient/ consumer perspective, federal agency policies and programs related to guidelines, health care systems finance or administration, public health research and applications, public and community health delivery systems.

Each of the three treatment guidelines is expected to require two years to complete. Nominations and supporting materials for the obesity and PTSD panels are due by June 18, 2012 and should be sent via email to the APA Clinical Treatment Guidelines mailbox (ctg@apa.org). Membership in APA and residence in the U.S.A. are not requirements to serve on the panel. Nomination materials should include a brief statement of the nominee's qualifications, a current curriculum vitae, and a letter from the nominee indicating willingness to serve for at least two years (including expected travel to Washington, DC, for at least two face-to-face meetings yearly and additional time and effort in between these meetings).

New online resource about evidence-based behavioral treatments for clinicians and consumers

Bonnie Spring and Joanna Buscemi

A new online resource has been launched as the outgrowth of a collaboration between the Association of Behavioral and Cognitive Therapies (ABCT) and the Evidence-based Behavioral Practice project (EBBP.org), sponsored by the U.S. National Institutes of Health. The purpose of the tool is twofold: (1) to increase consumers' understanding of which psychological treatments are evidence-based, and (2) to improve practitioners' access to learning resources about the skills needed to perform evidence-based behavioral interventions. EBBP.org and ABCT share a commitment to disseminating and enhancing the uptake of research-supported psychological and behavioral treatments. Both

groups recognize two significant barriers to accomplishing that outcome. One barrier is the public's difficulty in discriminating valid treatments that are supported by an evidence base from untested practices based solely on clinician opinion. The second barrier is the difficulty that practicing clinicians face in learning which new therapeutic skills they need to acquire or improve to offer evidence-based behavioral treatments. To address both barriers, EBBP.org and ABCT partnered to create the skills-based learning web pages that can be found here: <http://www.ebbp.org/skillsBasedResources.html>.

The project's underlying premise is that a well-informed public that demands legitimate treatments and a well-trained practitioner base that is equipped to provide them creates the pull-push dynamic needed to drive the delivery of evidence-based behavioral practices.

To create the online resource, EBBP.org collaborated with ABCT's leading expert clinician researchers in the areas of depression, anxiety, and obesity – three of the most prevalent conditions treated by psychologists. The teams compiled systematic evidence reviews, training resources, and video demonstrations about the main evidence-based treatments for each condition: cognitive behavioral therapy (CBT) and Behavioral Activation for depression, CBT and exposure treatment for anxiety, and intensive lifestyle intervention for obesity. For clinicians, the skills-based resource page for each condition includes PDFs detailing the evidence for the effectiveness of treatment(s), self-assessments of competence, skill demonstration videos, downloadable assessment tools, and links to individuals and organizations with expertise in evidence-based behavioral treatment who are available to provide consultation and/or supervision. For clients, the pages include frequently asked questions about treatments and relevant self-help manuals. A final tab provides training resources for "cross-cutting" techniques and principles, which have been found to be useful in treating many psychological and behavioral conditions, including and beyond those featured. Cross-cutting techniques include relaxation and motivational interviewing; cross-cutting principles address developmental issues and cultural competency. Although directly supervised clinical work is the gold standard for mastering behavioral treatment skills, the new resource page provides a helpful starting point for novice clinicians and skilled

providers wishing to determine which skills to acquire or upgrade and how to go about it. In sum, <http://www.ebbp.org/skillsBasedResources.html> provides a digestible snapshot of key research and tools needed to help practitioners implement the best evidence-based psychological and behavioral treatments for prevalent clinical conditions.

SOURCE evidence-based surgery program update

Achilleas Thoma, Teegan Ignacy

The Surgical Outcomes Research Centre (SOURCE, McMaster University) Evidence-based Surgery (EBS) Working Group continues to develop its "Users' Guides to the Surgical Literature" article series that is being published in the Canadian Journal of Surgery (CJS). Each article is prefaced with a surgical scenario, and the series is intended to educate surgeons and residents on how to find, assess and incorporate evidence from the surgical literature into their practices. Currently 14 articles in this series have been published (visit www.cma.ca/cjs to obtain free copies of articles).

Recent series articles published:

1. Thoma A, Cornacchi S, Farrokhyar F, Bhandari M, Goldsmith CH. Users' guide to the surgical literature: how to assess a survey in surgery. *Can J Surg* 2011; 54(6): 394-402.

Series articles currently in press:

1. Cadeddu M, Farrokhyar F, Levis C, Thoma A. Users' guide to the surgical literature: how to assess confidence intervals.

Watch for future articles addressing practice guidelines and continuing education for surgeon.

EBS Workshops for McMaster Faculty *Hamilton, ON, Canada*

SOURCE has also developed an interactive EBS workshop based on the CJS series. The workshop consists of small group tutorials led by trained surgeon tutors addressing topics covered in the EBS articles. Recent tutors have included Dr. Achilles Thoma, Dr. Forough Farrokhyar, Dr. Luis Braga and Dr. Michelle Ghert. Our group holds annual EBS workshops for the Faculty in the Department of Surgery at McMaster University, and recent topics have included health-related quality of life (Jan 2008), systematic reviews & meta-analyses (Feb 2009), power & sample size (Feb 2010), decision analysis (Feb 2011), and randomized controlled trials in surgery (Feb 2012).

EBS Workshop for Practicing Surgeons *Jeddah, Saudi Arabia*

This year SOURCE is holding its first EBS workshop for surgeons and surgical trainees at King Faisal Hospital & Research Centre in Jeddah, Saudi Arabia. Expert tutors will include:

- Dr. Achilleas Thoma (Division of Plastic Surgery, McMaster University)
- Dr. Luis Braga (Division of Urology, McMaster University)
- Dr. Forough Farrokhyar (Department of Surgery/Department of Clinical Epidemiology & Biostatistics, McMaster University)
- Dr. Charles Goldsmith (Faculty of Health Sciences, Simon Fraser University).

The workshop will be an extended 3-day event where the tutors will cover 6 CJS articles, each tackling a particular topic in research methodology. Participants will include surgical consultants, interns and residents interested in learning how to incorporate evidence-based principles into their clinical practice.

For more information about SOURCE and the EBS program, visit our website at www.fhs.mcmaster.ca/source/ or contact Teegan Ignacy, EBS Program Manager at ignacyta@mcmaster.ca, 905-522-1155 x 35874.

GUEST CONTRIBUTORS

Osama Altayar
Altayar.osama@mayo.edu

Kasey Boehmer
boehmer.kasey@mayo.edu

Joanna Buscemi
cmccsInd@memphis.edu

Carlos Gonzalez Malla
acordatedemimail@gmail.com

Brian Haynes
bhaynes@mcmaster.ca

Teegan Ignacy
ignacyta@mcmaster.ca

Emma Iserman
iserman@mcmaster.ca

Ariel Izcovich
hambp2008@gmail.com

Ayesha Junaid
ayesha_junaid497@hotmail.com

Annie LeBlanc
leblanc.annie@mayo.edu

Victor Montori
Montori.victor@mayo.edu

M. Hassan Murad
Murad.Mohammad@mayo.edu

Jeanette Prorok
jeanette.c.prorok@learnlink.mcmaster.ca

J Criniti
jmcriniti@msn.com

J L Ruiz
jiruiz2000@yahoo.com.ar

Kari Ruud
Ruud.kari@mayo.edu

Bonnie Spring
bspring@northwestern.edu

Achilleas Thoma
athoma@mcmaster.ca

Zhen Wang
Wang.zhen@mayo.edu

EDITORS

Jason Busse

Assistant Professor, Clinical Epidemiology & Biostatistics
McMaster University, Faculty of Health Sciences
Clinical Epidemiology & Biostatistics
1280 Main Street West, HSC-2C12
Hamilton, ON L8S 4K1
j.busse@rogers.com

Paul Glasziou

Professor of Evidence-Based Medicine
Director of the Centre for Research in Evidence-Based Health Care,
Bond University
Qld, Australia 4229
paul_glasziou@bond.edu.au

Gordon Guyatt

Professor, Clinical Epidemiology & Biostatistics
McMaster University, Faculty of Health Sciences
Clinical Epidemiology & Biostatistics
1280 Main Street West, HSC-2C12
Hamilton, ON L8S 4K1
guyatt@mcmaster.ca

EDITORIAL ASSISTANT

Deborah Maddock

McMaster University, Faculty of Health Sciences
Clinical Epidemiology & Biostatistics
1280 Main Street West, HSC-2C9
Hamilton, ON L8S 4K1
maddock@mcmaster.ca

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 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!

NAME: _____

ADDRESS: _____

CITY: _____

PROVINCE OR STATE: _____

POSTAL CODE: _____

COUNTRY: _____

TELEPHONE: _____

FAX: _____

E-MAIL: _____

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!

NAME: _____

ADDRESS: _____

CITY: _____

PROVINCE OR STATE: _____

POSTAL CODE: _____

COUNTRY: _____

TELEPHONE: _____

FAX: _____

E-MAIL: _____

RECOMMENDED BY: _____