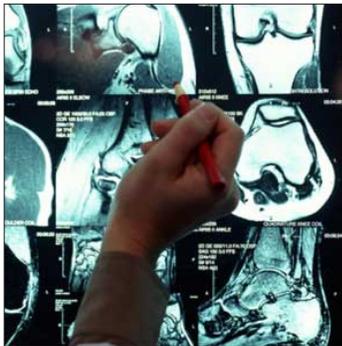


Published White Paper Series Provides Groundwork for Methods Guide To Compare Medical Tests

A SET OF WHITE PAPERS published in the September 22, 2009, issue of Medical Decision Making will serve as the groundwork for an Agency for Healthcare Research and Quality (AHRQ) Work Group charged with creating a new methods guide to focus on comparisons of diagnostic and prognostic tests for the Effective Health Care (EHC) Program. The new methods guide is scheduled to be released in draft form during the first part of 2010.

The white papers were originally commissioned by AHRQ and presented to researchers from the various Evidence-based Practice Centers by international leaders in the field of systematic reviews. The goal of the papers was to provide EHC Program researchers with state-of-the-art methods for conducting assessments of evidence surrounding medical test technologies and procedures. A planning committee of AHRQ staff and the directors of the 14 Evidence-based Practice Centers coordinated the conference, held in May 2008, to help the Work Group begin addressing the specific methodological needs for this type of comparative effectiveness research.

Originally planned as a single chapter in the current *Methods Guide for Effectiveness and Comparative Effectiveness Reviews*, the white papers clarified



the need for a separate guide with multiple chapters on the subject, stated Mark Helfand, Director of the Oregon Evidence-based Practice Center and leader of the project. Smaller groups of researchers are working on the various chapters of the upcoming guide.

The four white papers cover a broad range of issues related to comparing medical tests. The first, written by Jeroen G. Lijmer, M.D., Ph.D., Mariska Leeflang, Ph.D., and Patrick M.M. Bossuyt, Ph.D., explores proposals for a phased evaluation of medical tests. The second, *Additional Patient Outcomes and Pathways in Evaluations of Testing*, is written by Dr.

Bossuyt and Kirsten McCaffery, Ph.D. The third is titled *Using the Principles of Randomized Controlled Trial Design to Guide Test Evaluation*

and is written by Sarah J. Lord, M.B., B.S., M.S., Les Irwig, M.B., B.Ch., Ph.D., and Dr. Bossuyt. The fourth paper, by Thomas A. Trikalinos, M.D., Uwe Siebert, M.D., M.P.H., M.Sc., Sc.D., and Joseph Lau, M.D., examines

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decision-analytic modeling to evaluate benefits and harms of medical tests.

The last set of guidance documents for assessing the many issues related to diagnostic and prognostic tests — including the assessment of technical and diagnostic performance, the therapeutic and outcome impact, and the societal impact of any given medical test — was created in the 1980s. The planning committee believed that it was important to revisit the literature to identify aspects that have changed in this rapidly developing field.

“This is an essential service for patients and clinicians trying to decide between various diagnostic tests, each of which has its own benefits and harms.”

Mark Helfand, M.D.

“Assessing and comparing medical tests and testing technology is extremely challenging,” Dr. Helfand said. “But this is an essential service for patients and clinicians trying

to decide between various diagnostic tests, each of which has its own benefits and harms.”

The published articles can also be accessed on the EHC Program Web site. ◀



AHRQ Begins Process of Updating EHC Comparative Effectiveness Reviews

EVIDENCE-BASED PRACTICE CENTERS

across the Effective Health Care (EHC) Program have begun the process of updating the Comparative Effectiveness Reviews published in the past 4 years. Currently, 10 reviews are being updated to reflect the most recent and accurate information on the comparative benefits and harms of drug therapies that range from the use of angiotensin-converting enzyme (ACE) inhibitors and angiotensin II receptors (ARBs) for essential hypertension to nonopioid analgesics for inflammatory arthritis. AHRQ plans to release many of these updates during 2010.



The information that will be updated in each of the reviews depends upon the amount of new research that has transpired since the previous review, the addition or removal of treatments or therapies that were originally reviewed,

and the changes in clinical contexts that might affect decisions about the tests or treatments being compared. The Evidence-based Practice Centers assembled Technical Expert Groups to update the topics. In addition, the Southern

California Evidence-based Practice Center conducted an initial assessment of the conclusions from all the EHC Program reviews to determine whether new evidence has changed their validity. In consultation with the Technical Expert Groups, this guide

is used to determine what may or may not be needed to provide up-to-date findings for clinicians, consumers, and policymakers.

The following reviews are currently being updated:

- Comparative Effectiveness of ACEIs and ARBs for Treating Essential Hypertension

- Effectiveness of Noninvasive Diagnostic Tests for Breast Abnormalities
- Comparative Effectiveness and Safety of Analgesics for Osteoarthritis
- Effectiveness of Epoetin and Darbepoetin for Managing Anemia in Patients Undergoing Cancer Treatment
- Comparative Effectiveness of Management Strategies for Gastroesophageal Reflux Disease
- Comparative Effectiveness of Treatments To Prevent Fractures in Men and Women With Low Bone Density or Osteoporosis
- Second-Generation Antidepressants in the Pharmacologic Treatment of Adult Depression
- Efficacy and Comparative Effectiveness of Off-Label Use of Atypical Antipsychotics
- Comparative Effectiveness and Safety of Oral Diabetes Medications for Adults With Type 2 Diabetes
- Comparative Effectiveness of Therapies for Clinically Localized Prostate Cancer ◀

Eisenberg Center Conference Series Explores New Tools for Decisionmaking

THE SECOND EISENBERG CENTER CONFERENCE SERIES,

held in September 2009, brought together a group of experts in health communication and decisionmaking from throughout the United States, Canada, and Europe to explore the role of Web-based tools in helping patients and clinicians make medical decisions. The theme of the meeting was “Translating Information Into Action: Improving Quality of Care Through Interactive Media.” Experts were commissioned to write white papers on various interactive media, and the papers were presented at the

Videos of the presentations are now posted on the EHC Program Web site.

conference. Formal responses and open conversation across attendees followed the presentations.

Paper topics ranged from the use of handheld devices for point-of-care decision support to Web-based cancer communication and decisionmaking systems. Transcripts and videos of the white paper presentations and audio recordings of the

discussions are now posted on the EHC Program Web site. The white papers themselves are being published in *Medical Decision Making* in the coming year, with links posted on the EHC Program Web site as well.



The first Eisenberg Center Conference Series was held in 2006. Papers and published articles from this conference, which focused on communicating the benefits and harms of prescription drugs to health-care consumers, are currently available on the EHC program Web site. ◀

Comparative Effectiveness Research and Decisionmaking: Part II of a Conversation With Dick Justman and Alan Rosenberg

COMPARATIVE EFFECTIVENESS RESEARCH provides evidence to support clinicians' decisionmaking with their patients who face multiple options for the testing or treatment of health conditions. But what role does it play among health policymakers? Michael Fordis, M.D. of the John M. Eisenberg Center for Clinical Decisions and Communications Science, David Hickam, M.D. of the Scientific Resource Center, and Stephanie Chang of the Agency for Healthcare Research and Quality sat down with two health-system administrators — Dick Justman, M.D., the National Medical Director of UnitedHealthcare, a national health service delivery company, and Alan B. Rosenberg, M.D., Vice President of Medical Policy, Technology Assessment and Credentialing Programs for WellPoint, Inc. We discussed the ways in which the results of Comparative Effectiveness Reviews are used in their work. This is the second part of their interview. The first part can be accessed on the EHC Program Web site.

STEPHANIE CHANG: Do you have any sort of parameters set around subpopulations when making decisions?

DICK JUSTMAN: To give you an example, the CMS (Centers for Medicare & Medicaid Services) National Coverage Decision with regard to artificial lumbar disc [replacement] singled out people over 60 years old and said this decision applies to those people. It gave no guidance whatever with regard to people under the age of 60. One could argue that the evidence with regard to artificial lumbar disc [replacement] is flawed and meager with regard to all populations. In other words, there might never be populations where the evidence is convincing enough that the particular technology would be safe and effective for that subset of the population.

ALAN ROSENBERG: Generally, we do look for information on subpopulations, or the population as a whole. And if there is evidence that something

works better for a subpopulation, you would say it's medically necessary for that subpopulation but not for the population in general. We would say it meets medical-necessity criteria for that subpopulation and is not medically necessary for general populations. So, yes, we do evaluate based on evidence and levels of evidence for subpopulations. Also regarding your point, Stephanie, there might be an individual who may do better with a treatment when a specific complicating factor may exist. That is part of why WellPoint provides both for an exception process and for an independent appeal process.

DICK JUSTMAN: Alan raises a great point. We all know that breast cancer screening is something that has a beneficial effect on health outcomes. We also need to acknowledge that while mammography is the general standard, it is not the most sensitive imaging study. In other words, you could actually have small tumors that would be

missed on a mammogram. MRI (magnetic resonance imaging) is certainly more sensitive, but it's also considerably less specific. So, should there be coverage for MRIs for breast cancer screening? And if so, would that be for the entire population, or would that be for a defined subset of the population? And if for a defined subset, what would that defined subset be? Those are the kinds of questions we have to look at.

STEPHANIE CHANG: And I would say, you specifically are both policymakers in large organizations. Keep in mind our audiences may be smaller hospital administrators or people who really maybe don't have the resources or just haven't thought as clearly through the use of evidence in policy decisions.

DICK JUSTMAN: Let's use the example of robotic surgery, because this question comes up all of the time. If you are a hospital, should you purchase the DaVinci® system for use by your physicians? If you're a physician, should you use a DaVinci system? And if you should, are you going to be paid for using it? If you are paid for using it, are you going to be paid a differential for using it? If you are a consumer of health care and somebody tells you that you need a radical prostatectomy because you didn't follow the rules that Alan and I just laid out and you ended up going to a urologist rather than to a family physician or a general internist, should you have an open radical prostatectomy? Should you have a laparoscopic radical prostatectomy? And if you're going to have a laparoscopic [procedure], should you have it done with a robot, or does it even make any difference? Those are the kinds of questions that we would look at.

I think the answers to those questions would probably be somewhat different for a purchaser of health care, for a hospital, for a physician, or for a consumer. In other words, is there a reason for using a robot? Sometimes there is, and sometimes there isn't. I've talked to urol-

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A Conversation With Dick Justman and Alan Rosenberg

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ogists who tell me that doing a radical prostatectomy is a physically tiring procedure. And one of the advantages of a robot is that, in fact, there is less physical fatigue for the operating surgeon. From the standpoint of both the physician and the consumer, there is a shorter operating time. There is less bleeding. It is reported that there is less infection. There may be a shorter hospital stay. If that's the case, then these would all be advantages depending upon who you are. The question is, are there advantages from the standpoint of a payer? I believe that there are. Are there going to be more later complications? Are there going to be rehospitalizations? Are there going to be other surgical procedures? From the standpoint of a radical prostatectomy, there's also the question of nerve sparing. Is nerve sparing going to be easier to do with a robot or less easy to do with a robot? These are all questions that need to be addressed. We are not able, as a payer, to say there's insufficient evidence for us to make a decision. We have to make the decision based upon whatever evidence there is. As Alan pointed out, the vast majority of situations that I deal with have to do with technologies that are sufficiently recent. I'm not going to have access to a prospective large, statistically robust, randomized, controlled trial that goes out to 5 years. I'm going to have to make a decision based upon considerably less robust evidence.

MICHAEL FORDIS: And Dick, when you make decisions with limited evidence, what factors might cause you to revisit your decision? I mean, it would be obvious if a large trial comes out. But are there other things that you would follow internally that might not be related to what's coming out in the literature?

DICK JUSTMAN: Absolutely. Let me give you an example. You know the gold standard for a woman who wants permanent contraception is tubal ligation — a very safe procedure, but it's done in a hospital as an outpatient [procedure] and requires general anesthesia. There is a relatively new device called a fallopian tube occlusion device, which can be inserted in a physician's office with minimal sedation. It requires a hysterosalpingogram to confirm placement. But how does this compare with the gold standard, tubal ligation? The first time we looked at this, there was no evidence to review. If you're talking about permanent contraception, you'd like to know if there are going to be late failures or if there are going to be complications, such as tubal perforations. So, our initial answer was that there's insufficient evidence to say that it's safe and effective. We're not going to cover it.

We had lots of conversations with the device manufacturers, and they were very collaborative discussions. They said, "What do you want?" And I said, "What I want is a randomized controlled trial." And they said, "That will never happen because women are not going to randomize themselves into having a procedure

done in the office or having a procedure done in the hospital with regard to anesthesia. The trial itself would never be completed." I said, "I need to know that it's safe. I need to know that it's not going to cause infection, catastrophic bleeding, perforation, intractable pain, et cetera. And I also need to know that these women are not going to become pregnant."

They were able to accumulate sufficient data for us, though not randomized, over a reasonable period of time. These data showed that there was a certain percentage of women who had to have this device removed because of pain, but in relatively small numbers. There were no catastrophic bleeding episodes that required emergency hysterectomies. There was no overwhelming sepsis that required hospitalizations. There were no deaths. And more to the point, over the period that they looked at this, there were no pregnancies. So they said to me, "Well, Dick, there are no pregnancies and, based upon what you said, it appears to be safe. So, what do you think?" I also learned at that point that there are certain markets in which we have enrollees where the only way you can have permanent contraception for a woman is through this device — gynecologists simply don't do hospital-based tubal ligations any more. Based upon that, in the absence of randomized control trials, we made a decision to cover it. ◀

Dick Justman and Alan Rosenberg both serve as members of the AHRQ Effective Health Care Stakeholder Group.

Grant Programs Expand Effective Health Care Program

FOUR NEW GRANTS from the Agency for Healthcare Research and Quality (AHRQ) will allow the Effective Health Care (EHC) Program to expand its efforts to generate comparative evidence and to develop innovative approaches to translate and disseminate information products. The grant programs are funded through the American Recovery and Reinvestment Act of 2009, and the total

amount of funding for the combined programs is \$177.5 million. The grants will be awarded throughout 2010.

The first two programs, which closed applications in December 2009, are the Innovative Adaptation and Dissemination of AHRQ Comparative Effectiveness Research Products, or iADAPT, grants, and the AHRQ Clinical and Health Outcomes in Comparative Effectiveness, or CHOICE, grants.

In the iADAPT grant program, AHRQ will award funds to approximately 20 to 25 researchers to develop innovative ways to adapt and disseminate summary guides for health consumers. Applicants are invited to propose innovative customizations to the content presentation and/or delivery mechanism(s) of one or more

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EHC PROGRAM SPOTLIGHT:

Vanderbilt Evidence-based Practice Center

The Vanderbilt EPC received its contract with the Agency for Healthcare Research and Quality (AHRQ) in 2007.

Katherine E. Hartmann, M.D., Ph.D., who has served as the Director of the Vanderbilt EPC since its founding, is also the Deputy Director of the Institute for Medicine and Public Health, the Director of Women's Health Research, and the Lucius M. Burch Vice Chair of Research in Obstetrics and Gynecology at Van-

derbilt University Medical Center in Nashville, Tennessee.

Melissa McPheeters, M.P.H., Ph.D., who is the Associate Director for Methods at the Vanderbilt EPC, is also the Deputy Director of Women's Health Research at Vanderbilt.

The Vanderbilt EPC was charged with the task of conducting systematic reviews of currently available evidence concerning various topics, including women's health, child health, trauma, surgery, and cardiology. Most recently, the Vanderbilt EPC researchers published a report titled Treatment for Overactive Bladder in Women. Faculty and re-

searchers at Vanderbilt have significant expertise in developing systematic reviews and meta-analyses. A list of recent publications is available on their Web site.

Currently, the Vanderbilt EPC is working on three upcoming systematic reviews and a technical report. The first project, due in summer 2010, is a review of evidence related

to traumatic brain injury and depression. A second review, due in fall 2010,

compares the use of progestogens for the prevention of preterm birth. The third review, on therapies for children with autism spectrum disorders, is also due in fall 2010.

The Vanderbilt EPC is also completing a Technical Brief on maternal-fetal surgery to be published in 2010. Technical Briefs are rapid reviews of the current evidence on an emerging medical technology or procedure. The Vanderbilt EPC recently received funding from AHRQ through the American Recovery and Reinvestment Act to review research related to pregnancy and preterm birth over the next 3 years. ◀

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Grant Programs Expand Effective Health Care Program

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Comparative Effectiveness Research Review Products, such as Comparative Effectiveness Reviews, Comparative Effectiveness Review Executive Summaries, and Comparative Effectiveness Research Summary Guides, to increase their use, implementation, and impact among difficult-to-reach populations.

The CHOICE grants will award funds for up to 10 independent research teams to generate new evidence to help inform decisionmaking in priority areas of clinical care. The impact of these studies should have a high likelihood of creating major advancements in clinical care.

Two additional grant programs are accepting applications through January 20, 2010. These are titled the PROSPECT Studies: Building New Clinical Infrastructure for Comparative Effec-

tiveness Research and the Electronic Data Methods (EDM) Forum for Comparative Effectiveness Research.

PROSPECT stands for "PROspective Outcome Systems using Patient-specific Electronic data to Compare Tests and therapies."

Proposals sought under this program should develop the infrastructure and improve the methodology for prospective collection of data from electronic databases

containing clinical information in order to increase the Nation's capacity to collect data for comparative effectiveness research, especially for underrepresented populations.

The EDM Forum will convene investigators who are conducting PROSPECT studies and other experts

in a series of meetings and workshops to identify the challenges to conducting comparative effectiveness research using electronic data.

All four grant programs promise to extend the EHC Program's abilities to

support evidence-based decisionmaking across a wide array of medical choices and priority conditions. The grants also promise to expand the number of researchers and translation

specialists involved in Program activities. The John M. Eisenberg Center for Clinical Decisions and Communications Science is working to create a searchable database of AHRQ-awarded grants to track the funding and the various projects and products that emerge from the awards. ◀

