Dissemination of Evidence-based Practice Center Reports

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The Evidence-based Practice Center (EPC) program within the Agency for Healthcare Research and Quality (AHRQ) provides detailed evidence reports for partner organizations that they can translate into activities that improve patient care. A review of these dissemination activities provides a rich opportunity to understand how to create more successful linkages between best evidence and best practice.

On the basis of interviews with EPC directors, AHRQ staff, and representatives of public and private users of EPC reports, we summarize the variety of efforts to disseminate the work of the EPCs. We also identify a case example of a successful dissemination of an EPC report. Experience to date reinforces the importance of creating close ties between researchers and the policymakers, clinicians, and other decision makers who use EPC evidence reports; developing a conceptual framework to guide the process; and establishing the resource foundation for the entire effort.

In 1997, the Agency for Healthcare Research and Quality (AHRQ) created 12 Evidence-based Practice Centers (EPCs). The objective of the EPC program was to provide a public service information resource for policymakers, clinicians, and other decision makers. According to AHRQ, the EPCs’ mission is to “develop evidence reports and technology assessments on topics relevant to clinical, social science/behavioral, economic, and other health care organization and delivery issues” (1).

The principal products of the EPCs are called “evidence reports” or “technology assessments”; for simplicity’s sake, we refer to them here as “evidence reports.” These evidence reports are detailed evaluations of the scientific literature on specific clinical, behavioral, organizational, and financing topics of interest to policymakers, clinicians, and other decision makers. The reports are requested by organizations representing these interested parties, and these organizations are called “partners” in the context of the EPC process.

The real benefits of an evidence report are achieved through dissemination—public distribution of the report and its incorporation into efforts aimed at some specific objective, such as practice improvement (sometimes termed “implementation”). The Agency for Healthcare Research and Quality plays an intermediary role between the EPCs and partners and other private and public users “in their efforts to improve the quality, effectiveness, and appropriateness of health care by synthesizing the evidence and facilitating the translation of evidence-based research findings” (1). From the outset, dissemination has been part of the EPC program, but not as a funded component. During the first 5 years of the program, each evidence report project included a “dissemination plan” and, later, an “implementation plan” as defined work products. In the current 5-year cycle, AHRQ expects that EPCs will “facilitate translation of the reports into quality improvement tools, educational programs, and reimbursement policies” (2). This underscores the general thrust of the EPC program as an information resource that generates products intended to serve the needs of users. Product dissemination, however, has usually been left in the hands of the defined partners and other users of evidence reports.

In this article, we briefly review dissemination activities since the EPC program’s inception and consider one case study in greater detail to identify factors that promote or inhibit the successful dissemination of EPC evidence reports. In the absence of a current census of dissemination activities linked to EPC products, we base our review of such activities on semistructured telephone interviews, conducted from April to October 2004, with 22 colleagues, including EPC directors, AHRQ representatives, and participants from partner organizations. We also support our observations with references to the literature on successful dissemination of evidence reports.

INTERVIEWS WITH COLLEAGUES

The EPCs have been involved in producing 107 evidence reports, of which 101 have been disseminated by AHRQ in printed form (both full report and executive summary, with or without codissemination by partners), and are on a publicly available Web site (2). On the basis of our interviews with colleagues in EPCs, AHRQ staff, and representatives of partner organizations, we identified several distinct categories of dissemination activities (Table 1).

Our interviews also yielded a list of factors that promote effective dissemination of evidence reports. Table 2 lists factors mentioned by at least one interviewee. Consistent with the interview script, we have organized these factors according to which party ultimately takes responsibility for ensuring their execution.

All interviewees agreed that the success of an evidence report is ultimately measured by the degree to which it influences or is directly used to induce action—that is, by the degree to which it is effectively disseminated. However, as noted above, dissemination activities are not built into each EPC project; specifically, these activities are not funded under the EPC program. This leaves dissemination
of the reports to the good graces of the participants. As Table 1 illustrates, the successes thus achieved can be impressive. It is important to recognize, however, that failing to integrate research and dissemination goals can detail efforts to translate an evidence report into meaningful action, while actively integrating research and dissemination goals can promote more effective dissemination. To illustrate the latter point, we briefly consider a series of projects conducted by the EPC at Duke University in Durham, North Carolina, that together serve as an example of the benefits of integration.

**CASE STUDY: CHRONIC KIDNEY DISEASE EVIDENCE REPORT**

The following example shows how a report can be effectively disseminated when an EPC and partner share goals, plan sequential steps carefully, participate actively and equally, and plan each step with the ultimate objective of improving practice.

The Renal Physicians Association (RPA), a professional society, solicited proposals to improve care of individuals with advanced chronic kidney disease, based on best evidence. In partnership with the Duke EPC, RPA pursued 4 steps: 1) development of a comprehensive evidence report on the care of people who have advanced chronic kidney disease but are not yet receiving dialysis (“Appropriate Patient Preparation for Renal Replacement Therapy” [28], approved as an EPC report in 2001); 2) production of a clinical practice guideline and a set of clinical performance measures based on this evidence report (29); 3) creation of a set of tools for all individuals involved in care (ranging from calculators for estimating renal function for primary care providers, referral-letter templates and flow sheets for renal specialists, and diaries and educational materials for patients), called “The Advanced CKD [chronic kidney disease] Patient Management Tool Kit”; and 4) pilot testing of the tool kit in community settings. This will be followed by a national rollout of the toolkit in 2005.

This series of projects has several features that appear to have influenced the overall success of the effort. First, the EPC and RPA shared a common goal—developing an evidence report that would ultimately be used by clinicians to optimize the care of patients with advanced chronic kidney disease. Furthermore, each step in the process—from the evidence report to the national rollout of the tool—

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**Table 1. Dissemination Activities Related to Evidence-based Practice Center Evidence Reports**

| Dissemination Activity                          | Example Evidence Report (Reference)                  | Specific Dissemination Activity (Reference)                  |
|------------------------------------------------|-----------------------------------------------------|------------------------------------------------------------|
| Report in professional publications            | “Management of Chronic Hypertension During Pregnancy” (3) | Presented in an American College of Obstetrics and Gynecology Practice Bulletin (4, 5) |
| Report in the lay press                         | “Ephedra and Ephedrine for Weight Loss and Athletic Performance Enhancement” (6) | Newspaper, Internet (7), and television coverage, spurred by interest from the Secretary of the U.S. Department of Health and Human Services |
| Education program for clinicians               | “Treatment of Attention Deficit/Hyperactivity Disorder” (8) | Used by National Initiative for Children’s Healthcare Quality to develop a continuing medical education program (9) |
| Education program for policymakers             | “Making Health Care Safer: A Critical Analysis of Patient Safety Practices” (10) | Workshop at Henry Ford Hospital in Detroit, Michigan, designed for decision makers |
| Distribution of intermediate analytic products (evidence tables, comprehensive lists of articles) | “Evaluation of Cervical Cytology” (11) | Intermediate products of the evidence report were provided to another EPC (12), and a cost-effectiveness analysis from this report has been detailed in peer-reviewed publications (13, 14) |
| Evidence-based clinical practice guidelines     | “Diagnosis, Natural History, and Late Effects of Otitis Media with Effusion” (15) | Used to produce joint guidelines by the American Academy of Family Physicians, American Academy of Otolaryngology–Head and Neck Surgery, and American Academy of Pediatrics (16) |
| Consensus conferences                           | “Rehabilitation for Traumatic Brain Injury in Children and Adolescents” (17) | Used as background material for NIH Consensus Development Conference (18) |
| Policy development or evaluation               | “Evaluation of Cervical Cytology” (11) | Used by several organizations (e.g., Alliance for Cervical Cancer Prevention, American Cancer Society [19], American Social Health Association, Australian Centre for Health Economics Research and Evaluation [20], Centers for Disease Control and Prevention [21], Blue Cross/Blue Shield of Upstate New York, U.S. Food and Drug Administration, National Cancer Institute, U.S. Preventive Services Task Force [22], and World Health Organization) to develop or evaluate policies for cervical cancer screening |
| Production of tools or tool kits                | “Making Health Care Safer: A Critical Analysis of Patient Safety Practices” (10) | Used by the Florida Hospital Association to develop a patient safety tool kit (23) and by the California Institute for Health System Performance and the California Healthcare Association to help institutions meet the requirements of state law aimed at reducing medication-related errors as a condition of licensure; also used by other organizations (24, 25) |
| Setting research agendas and supporting further research projects | “Use of Positron Emission Tomography and Other Neuroimaging Techniques in the Diagnosis and Management of Alzheimer’s Disease and Dementia” (26) | Contributed to the development of a collaborative effort by Centers for Medicare & Medicaid Services and National Institute on Aging/National Institutes of Health to design and implement a research study in the use of neuroimaging for cognitively impaired individuals (27) |

* EPC = Evidence-based Practice Center; NIH = National Institutes of Health.
Factors Inhibiting Successful Dissemination of EPC Products

Evidence-based Practice Centers strive for meticulous care and methodologic excellence in evidence reports, and they share with AHRQ and partner organizations a fundamental desire to ensure that EPC products are used, rather than relegated to shelves to gather dust. Our interviews document that in the past 7 years, EPC products have been disseminated successfully many times. In addition, we gleaned important insights, which we share below.

Cultural Factors

Cultural factors influence dissemination efforts because producers of evidence reports (typically academic researchers) and partners and other users of the reports (usually policymakers, clinicians, or other decision makers) often have different values, goals, and perspectives that are shaped by their professional cultures (30). As exemplified in the case study of chronic kidney disease management, when producers and users communicate effectively, they can create a common vision of products, such as tool kits. However, academic researchers who do not have professional experience in providing medical care cannot always create effective clinical tools easily, and both parties must struggle to develop a common goal. Furthermore, producers of evidence reports are generally not trained to think about how different presentations of evidence will affect users’ behavior (30), and they may need to be educated to consider innovative ways to present evidence, including video and Internet formats (31, 32).

Researchers who produce evidence reports are intimately familiar with the principles of evidence-based medicine. Those who use evidence reports, however, do not necessarily understand evidence-based principles. Even

| Responsibility of EPC | 
|-----------------------|
| Ensure that rigorous scientific methods are used to create the evidence report |
| Ensure that evidence report includes all available evidence so that partner can weigh options; report should interpret evidence but not recommend specific actions or policies |
| Strive to understand the clinical or policy context of the research question in order to increase the likelihood that the report will help answer real-life problems |
| Enlist the help of a content expert who can straddle both research and political arenas and who understands goals of all players |
| Finish the report on time |

| Responsibility of partner | 
|---------------------------|
| Clearly define and articulate questions to be answered in the evidence report |
| Clearly define and articulate goals of any potential dissemination activity, if needed |
| Facilitate completion of the evidence report within original timeline by not requesting additional services beyond original scope |
| Actively involve the EPC in dissemination efforts such as presenting the evidence report results at a conference |
| Actively involve the EPC in educating partner and wider audience about the principles of evidence-based medicine |
| Facilitate publication of results |
| Separate its need for high-quality evidence from its political objectives, if any |
| Strive to understand the principles of evidence-based medicine |

| Responsibility of both EPC and partner | 
|---------------------------------------|
| Establish common research goals and dissemination goals early |
| As goals evolve, keep each other abreast of progress and any changes in goals |

| Responsibility of AHRQ | 
|-----------------------|
| Help establish and maintain a contractual relationship between EPC and partner |
| Clearly define budget and time frame |
| Ensure that resources are available if goals of partner change |
| Facilitate direct (including face-to-face) communication between EPC and partner |
| Respond in a timely manner to EPC inquiries about project goals, especially early in project development |

* AHRQ = Agency for Healthcare Research and Quality; EPC = Evidence-based Practice Center.

Table 2. Factors Influencing Successful Dissemination of Evidence Reports*
when they do, they often approach evidence differently. Walshe and Rundall (33) have addressed the problem of “overuse, underuse, and misuse” of reviews by the British National Health Service Centre for Reviews and Dissemination, and they assert that slow adoption of evidence-based principles is the main reason for dissemination failures. Several EPC colleagues we spoke with expressed dismay that they had to spend significant time educating partners about evidence-based principles. Similarly, some partners expressed regret that EPC staff often do not understand the clinical or political context in which decisions are made. The two parties must educate one another. The necessary education is best transmitted at an early face-to-face meeting, as determined by our interviews and the available literature (34, 35).

Cultural differences mold the types of key questions that EPC researchers and partners, who use the reports to make their decisions, tend to formulate. Partners reported that evidence reports could not be used for decision making when the key questions addressed did not correspond to their real questions. The Canadian Health Services Research Foundation has helped develop the theoretical basis for understanding the role of research in evidence-based decision making, and it has stressed the need for researchers and decision makers to cross cultural bridges in forming key questions (30, 36–38). The Foundation comments that decision makers sometimes do not understand that some questions are not researchable, while researchers sometimes answer questions other than the one posed by the decision makers. Academic researchers generally prefer to identify a “single information gap,” a simple researchable question, while decision makers are trained to address multiple complex issues together (37). Researchers may prioritize intellectually satisfying research questions, while their partners, the decision makers, prioritize questions that will solve real-life problems. Several researchers articulated this sentiment, and the literature supports it (37). This difference results partially from different types of analytic training, but also partially from distinct incentive structures. Researchers strive to push the envelope of knowledge and to publish in peer-reviewed journals; they may also be subject to institutional incentives that discourage them from conducting translational research (36, 39). Goering and colleagues have suggested using a “policy forum” to encourage dissemination and to create an arena for discussion that broadens key questions so that they answer the nuanced issues policymakers must face (40).

Strategic Factors

Early development of a shared conceptual framework appears key to a successful dissemination effort. Evidence-based Practice Center researchers need help understanding the framework within which the partner must work, the political forces that constrain or compel the partner, and the population the partner serves (34). Several authors have stressed the need for academic researchers to more thoroughly consider the social implications of their work (41, 42). While serendipity can lead to useful outcomes, practice improvement is less like basic science than like engineering. Like engineers, researchers must tailor their efforts to the needs of the population they serve.

Some research on dissemination of evidence has suggested that researchers may need to actively seek opportunities to participate in dissemination efforts (43). The EPC colleagues we spoke with expressed satisfaction when partners invited them to participate in dissemination efforts, such as conferences, but such involvement seemed to be the exception rather than the rule. Dissemination efforts are generally left to the partners. However, some authors suggest that certain types of collaborative research, such as “action research” and “participatory-action research,” are changing traditions in academia and are requiring researchers to be involved in dissemination (44).

Another strategic problem is the rapid turnover of staff in partner organizations (36, 45). Our EPC colleagues hesitated to spend the time required to foster relationships with decision makers who might disappear midway through the project. Incentives may need to be changed somewhat to ensure that both researchers and decision makers in partner organizations find collaboration a worthwhile investment.

Resource Factors

Resource factors can strongly influence the success of any dissemination effort. It has been a traditional practice for organizations seeking to develop various products (such as clinical practice guidelines) to rely on the goodwill of their academic grantees when it comes to providing expert input for dissemination efforts. Several EPC participants suggested that this unfortunate historical precedent caused partners to underestimate the true economic cost of an EPC evidence report and associated dissemination efforts. The EPC program itself attests that even a willing academic is not likely to be allowed to donate the hundreds of hours required to create a rigorous evidence report without being formally compensated for this cost. The same should be true for dissemination efforts. Creative financial incentive structures may need to be developed to encourage researchers and partners to participate in dissemination research (43).

Conclusion

The EPC program has successfully fostered relationships between researchers and partners and has produced many well-received evidence reports. Success of dissemination efforts has varied, but numerous examples show that evidence reports can be translated into clinical practice guidelines, clinical improvement tools, priority-setting tools for research agendas, and tools for establishing coverage and reimbursement policies. Imaginative collaborative efforts between EPCs and partners could maximize the impact of evidence reports, particularly if the specific changes
identified in this paper were applied to reduce cultural, strategic, and resource limitations on dissemination efforts.

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References

1. Evidence-based Practice Centers. Overview. Rockville, MD: Agency for Healthcare Research and Quality; March 2003. AHRQ publication no. 03-006. Accessed at www.ahrq.gov/clinc/ecpc/ on 22 April 2005.
2. Description/Specifications/Work Statement, Evidence-based Practice Centers (EPCs). In: Request for Proposals. Rockville, MD: Agency for Healthcare Research and Quality; 18 January 2002.
3. Mulrow CD, Chiiquette E, Ferrer RL, Sibai BM, Stevens KR, Harris M, et al. Management of chronic hypertension during pregnancy. Evidence Report/Technology Assessment No. 14 (Prepared by San Antonio Evidence-based Practice Center based at the University of Texas Health Science Center at San Antonio under contract 290-97-0012). Rockville, MD: Agency for Healthcare Research and Quality; August 2000. AHRQ publication no. 00-E011.
4. ACOG Practice Bulletin. Chronic hypertension in pregnancy. ACOG Committee on Practice Bulletins. Obstet Gynecol. 2001;98:Suppl 177-85. [PMID: 11508256]
5. ACOG Practice Bulletin. Diagnosis and management of preclampsia and eclampsia. Number 33, January 2002. American College of Obstetricians and Gynecologists. Int J Gynaecol Obstet.
6. Shekelle P, Hardy M, Morton SC, Maglione M, Suttorp M, Roth E, et al. Ephedra and ephedrine for weight loss and athletic performance enhancement: clinical efficacy and side effects. Evidence Report/Technology Assessment No. 76 (Prepared by Southern California-RAND Evidence-based Practice Center under contract 290-97-0001). Rockville, MD: Agency for Healthcare Research and Quality; March 2003. AHRQ publication no. 03-E022.
7. FDA plans warning labels for ephedra. 2 March 2003. Accessed at www.cnn.com/2003/HEALTH/diet.timestoesup/ephedra/fda/ on 16 February 2005.
8. Jadad AR, Boyle M, Cunningham C, Kim M, Schachar R. Treatment of attention-deficit/hyperactivity disorder. Evidence Report/Technology Assessment No. 11 (Prepared by McMaster University under contract 290-97-0017). Rockville, MD: Agency for Healthcare Research and Quality; November 1999. AHRQ publication no. 00-E005.
9. Attention deficit/hyperactivity disorder. National Initiative for Children’s Healthcare Quality. Accessed at http://64.233.161.104/search?q=cache:5Dbn3m_NIB_CMy:mni.org/initiatives/index.asp%3FInitiativeGUID%3D%2527BD15C46BA-85B8-4475-A7A3-290B959AD%2527D%26622ADHD%26Modular%26Distance%26Learning%26CM%26program%22%26Agency%26for%26healthcare%26research%26and%26quality%26eqs%26tariq=1 on 22 April 2005.
10. Shoajnia KG, Duncan BW, McDonald KM, Wachter RM. Making health care safer: a critical analysis of patient safety practices. Evidence Report/Technology Assessment No. 43. (Prepared by University of California at San Francisco (UCSF)-Stanford University Evidence-based Practice Center under contract 290-97-0013). Rockville, MD: Agency for Healthcare Research and Quality; July 2001. AHRQ publication no. 01-E058.
11. McCrory DC, Matchar DB, Bastian L, Datta S, Hasselblad V, Hickey J, et al. Evaluation of cervical cytology. Evidence Report/Technology Assessment No. 5. (Prepared by Duke University Evidence-based Practice Center under contract 290-97-0014). Rockville, MD: Agency for Healthcare Research and Quality; January 1999. AHRQ publication no. 99-E010.
12. Hartmann KE, Hall SA, Nanda K, Boggess JF, Zolnoun D. Screening for cervical cancer. Systematic Evidence Review No. 25. (Prepared by Research Triangle Institute/University of North Carolina under contract 290-97-0011). Rockville, MD: Agency for Healthcare Research and Quality; January 2002.
13. Myers ER, McCrory DC, Nanda K, Bastian L, Matchar DB. Mathematical model for the natural history of human papillomavirus infection and cervical carcinogenesis. Am J Epidemiol. 2000;151:1158-71. [PMID: 10905528]
14. Myers ER, McCrory DC, Subramanian S, McCall N, Nanda K, Datta S, et al. Setting the target for a better cervical screening test: characteristics of a cost-effective test for cervical neoplasia screening. Obstet Gynecol. 2000;96:645-52. [PMID: 11042294]
15. Shekelle P, Takata G, Chan LS, Mangione-Smith R, Corley PM, Morphew T, et al. Diagnosis, natural history, and late effects of otitis media with effusion. Evidence Report/Technology Assessment No. 55 (Prepared by Southern California Evidence-based Practice Center under contract 290-97-0001, Task Order 4). Rockville, MD: Agency for Healthcare Research and Quality; 2003. AHRQ publication no. 03-E023.
16. Diagnosis and management of acute otitis media. American Academy of Pediatrics Subcommittee on Management of Acute Otitis Media. Pediatrics. 2004;113:1451-65. [PMID: 15121972]
17. Carney N, du Coudray H, Davis-O’Reilly C, Zimmer-Gembeck M, Mann NC, Kreiger J, et al. Rehabilitation for traumatic brain injury in children and adolescents. Evidence Report/Technology Assessment No. 2, Supplement. Prepared by Oregon Health & Science University Evidence-based Practice Center under contract 290-97-0018). Rockville, MD: Agency for Health Care Policy and Research; September 1999. AHCPR publication no. 00-E001.
18. Rehabilitation of persons with traumatic brain injury. NIH Consensus Statement. 1998;16:1-41. [PMID: 10874909]
19. AHRQ Focus on Research. Rockville, MD: Agency for Healthcare Policy and Research; March 2002. AHRQ publication no. 02-M018.
20. Deville S, Anderson R. The cost-effectiveness of screening programs using single and multiple birth cohort simulations: a comparison using a model of cervical cancer. Med Decis Making. 2004;24:486-92. [PMID: 15358997]
21. Sawaya GF, McConnell KJ, Kulasingam SL, Lawson HW, Kreilickoske K, Melenkow J, et al. Risk of cervical cancer associated with extending the interval between cervical-cancer screenings. N Engl J Med. 2003;349:1501-9. [PMID: 14561792]
22. U.S. Preventive Services Task Force. Screening for Cervical Cancer. Accessed at www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=hst3.chapter.27134 on 16 February 2005.
23. Florida Hospital Association Patient Safety Tool Kit. Accessed at www.fha.org/patientsafety/safetytoolkit.html on 22 April 2005.
24. Spurlock B, Nelson M, Paterno J, Tandl S. Convergence Health Consulting, Legislative Medication Safety: The California Experience, October 2003. Accessed at www.chf.org/documents/hospitals/MedicationSafetyLegislation.pdf on 16 February 2005.
25. SSMHC enhances its patient safety effort. SSM Health Care. Accessed at https://www.ssmhc.com/internet/home/ssmcorp.nsf/0/4D08C8E94A3B775A86256C5E003EE6D9?opendocument on 16 February 2005.
26. Matchar DB, Kulasingam SL, McCrory DC, Patwardhan MD, Rutschmann OT, Sansa GP, et al. Use of positron emission tomography and other neuroimaging techniques in the diagnosis and management of Alzheimer’s disease and dementia. Technology Assessment Task Order No. 7 (Prepared by Duke University Evidence-based Practice Center under contract 290-97-0014). Rockville, MD: Agency for Healthcare Research and Quality; December 2001.
27. Keiser R, Medicare proposes to cover PET scans. Washington Post. 17 2004: A13. Accessed at www.washingtonpost.com/wp-dyn/articles/A47870-2004Jun16.html on 16 February 2005.
28. Renal Physicians Association’s Appropriate Preparation of the Patient for Renal Replacement Therapy. Clinical Practical Guideline Number 3. Rockville MD: Renal Physicians Association; 2002.
29. McCrory D, Klassen P, Rutschmann O, Coladonato J, Yancy W, Redan D, et al. Evidence Report: Appropriate Patient Preparation for Renal Replacement Therapy. Rockville MD: Renal Physicians Association; October 2002.
30. Knowledge Transfer: Looking Beyond Health. Proceedings of the Conference on Knowledge Transfer. 26-27 October 2000, Toronto, Ontario. Canada.
31. Golden-Biddle K, Reay T, Petz S, Witt C, Casebeer A, Pablo A, et al. Toward a communicative perspective of collaborating in research: the case of the researcher-decision-maker partnership. J Health Serv Res Policy. 2003;8 Suppl 220-5. [PMID: 14596744]
32. Bartunek J, Trullen J, Bonet E, Sauquet A. Sharing and expanding academic and practitioner knowledge in health care. J Health Serv Res Policy. 2003;8 Suppl 2:62-8. [PMID: 14596750]

33. Walshe K, Rundall TG. Evidence-based management: from theory to practice in health care. Milbank Q. 2001;79:429-57, IV-V. [PMID: 11565163]

34. Knowledge Transfer in Health. Proceedings of the 2nd Annual Canadian Research Transfer Network Conference. 24-25 October 2002, Calgary, Alberta, Canada. Accessed at www.chsrf.ca/knowledge_transfer/pdf/ktransfer2002_e.pdf on 16 February 2005.

35. Innvaer S, Vist G, Trommald M, Oxman A. Health policy-makers’ perceptions of their use of evidence: a systematic review. J Health Serv Res Policy. 2002;7:239-44. [PMID: 12425783]

36. Productive Partnerships: Report on the 2002 Canadian Health Services Research Foundation Annual Invitational Workshop. March 2002. Accessed at www.chsrf.ca/knowledge_transfer/pdf/2002_workshop_report_e.pdf on 16 February 2005.

37. If research is the answer, what is the question? Key steps to turn decision-maker issues into research questions. Proceedings of the Canadian Health Services Research Foundation Annual Workshop. 2001. Accessed at www.chsrf.ca/keys/production_starting_e.php on 22 April 2005.

38. Health services research and evidence-based decision-making. 2000. Accessed at www.chsrf.ca/knowledge_transfer/pdf/EBDM_e.pdf on 14 July 2004.

39. Frenk J. Balancing relevance and excellence: organizational responses to link research with decision making. Soc Sci Med. 1992;35:1397-404. [PMID: 1462179]

40. Goering P, Butterill D, Jacobson N, Sturtevant D. Linkage and exchange at the organizational level: a model of collaboration between research and policy. J Health Serv Res Policy. 2003;8 Suppl 2:14-9. [PMID: 14596743]

41. Banta HD, Andreasen PB. The political dimension in health care technology assessment programs. Int J Technol Assess Health Care. 1990;6:115-23. [PMID: 2361816]

42. Stern PC, Fineberg HV, eds. Understanding Risk: Informing Decisions in a Democratic Society. Washington, DC: National Academy Pr; 1996.

43. Ferlie E, Wood M. Novel mode of knowledge production? Producers and consumers in health services research. J Health Serv Res Policy. 2003;8 Suppl 2:51-7. [PMID: 14596748]

44. Denis JL, Lomas J. Convergent evolution: the academic and policy roots of collaborative research [Editorial]. J Health Serv Res Policy. 2003;8 Suppl 2:1-6. [PMID: 14596741]

45. Walter I, Davies H, Nutley S. Increasing research impact through partnerships: evidence from outside health care. J Health Serv Res Policy. 2003;8 Suppl 2:58-61. [PMID: 14596749]
