# Knowledge Transfer and Implementation of Evidence-Based Practices in Children's Mental Health

ANNOTATED BIBLIOGRAPHY

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# Annotated Bibliography

Aarons, G.A. (2004). Mental health provider attitudes toward adoption of evidence-based practice: The Evidence-Based Practice Attitude Scale (EBPAS). *Mental Health Services Research*, *6*(2): 61–74.

*Main Messages:*

- Most evidence-based models do not capture the richness and complexity of the provider-consumer relationship, yet providing services with evidence of effectiveness is an important priority.
- If the most efficacious and effective interventions are to be disseminated and implemented in community-based settings, a better understanding of the attitudes of providers is needed to effectively tailor dissemination and implementation efforts in relation to provider individual differences in the service context.
- Attitudes toward adoption of EBPs can be reliably measured and vary in relation to individual differences and service context.
- EBP implementation plans should include consideration of mental health service provider attitudes as a potential aid to improve the process and effectiveness of dissemination efforts.

*Summary:* The authors developed a brief measure of mental health provider attitudes toward adoption of EBPs and examined attitudes in relation to a set of provider individual differences and organizational characteristics. Participants were 322 public sector clinical service workers from 51 programs providing mental health services to children and adolescents and their families. Four dimensions of attitudes toward adoption of EBPs were identified: (i) intuitive appeal of EBP; (ii) likelihood of adopting EBP given requirements to do so; (iii) openness to new practices; and (iv) perceived divergence of usual practice with research-based/ academically developed interventions. Provider attitudes varied by education level, level of experience, and organizational context. No significant differences were found in attitudes toward adopting EBPs across discipline. In contrast to outpatient providers, behavioural health care providers working in wraparound programs were more open and those working in case management programs were less open to adopting EBPs, suggesting that it is important to consider the program context into which EBPs are to be disseminated. Providers working in low bureaucracy programs were more predisposed to adopt EBPs. The presence of written policies regarding treatment of mental disorders was part of internal program initiatives that appear to predispose providers to be more open to new practices. It is likely that top-down models of imposing practice policies may engender higher divergence, especially where high caseloads and administrative demands compete with the provision of services. Attitudes toward adoption of EBPs can be reliably measured and vary in relation to individual differences and service context. EBP implementation plans should include consideration of mental health service provider attitudes as a potential aid to improve the process and effectiveness of dissemination efforts.

Addis, M.E. (2002). Methods for disseminating research products and increasing evidence-based practice: Promises, obstacles, and future directions. *American Psychological Association*, *9*(4), 367–378.

*Main Messages:*

- The potential credibility gap between practitioners, patients, and empirically supported treatments (ESTs), where some practitioners have negative attitudes towards manual-based therapies, is an obstacle to dissemination.
- Findings demonstrating that ESTs can fare as well as clinical practice in controlled research do not guarantee that clinical practice outcomes will be improved by disseminating these treatments.

- Dissemination of ESTs needs to be grounded in an understanding of different clinical practice contexts, including different incentive systems operating.
- Practitioners are more likely to adopt research products when they find them useful and can contribute creatively to their development and evaluation, than if they are simply told they should adopt them because scientific knowledge is inherently better than clinical knowledge.

*Summary:* Although several different rationales for psychotherapy dissemination research have been well articulated, the most effective means for bringing research products to clinical practice have yet to be determined. Two commonly proposed methods are the dissemination of ESTs and the dissemination of general evidence-based stances to clinical decision making. Obstacles to either approach include: (i) practical constraints on practitioner's ability to use research products; (ii) lack of research on process and outcomes of both empirically-supported treatments and existing services in different practice contexts; (iii) lack of research on acceptability of research products to end users including practitioners, clients, and administrators; (iv) lack of research on training in the integration of science and practice at the undergraduate, graduate, and postgraduate levels; (v) systemic economic contingencies that favour or punish evidence-based decision making; and (vi) the tendency to construct dissemination as a hierarchical and unidirectional process of transmission from research to clinical practice. Each obstacle is considered in detail and followed by recommendations for ways to broaden the scope of dissemination efforts.

Addis, M.E., Wade, W.A., & Hatgis, C. (1999). Barriers to dissemination of evidence-based practices: Addressing practitioners' concerns about manual-based psychotherapies. *Clinical Psychology: Science & Practice*, *6*(4), 430–441.

*Main Messages:*

- The use of manual-based treatments is contentious.
- Action must be taken if manual-based treatments are to be effective.
- Scant attention has been paid to addressing the actual concerns of practitioners in clinical settings.
- Clinicians are concerned about the effects on the therapeutic relationship, unmet client needs, competence and job satisfaction, treatment credibility, restriction of clinical innovation, and feasibility of manual-based treatments.

*Summary:* The last several years have seen much debate over the appropriateness and viability of empirically supported manual-based therapies for clinical practice. While the majority of discussions have focused on the strengths or weaknesses of evidence-based treatments (EBTs) and the differences between research and clinical practice, scant attention has been paid to addressing the actual concerns of practitioners in clinical settings. Based on the available research and experiences with training and supervision in manual-based treatments, the authors discuss practitioners' most common concerns, including effects on the therapeutic relationship, unmet client needs, competence and job satisfaction, treatment credibility, restriction of clinical innovation, and feasibility of manual-based treatments. Rather than arguing that these concerns are unwarranted, the paper suggests future directions the field must take if EBTs are to be viable and effective in clinical practice. Starting with the assumption that these treatments have much (but not everything) to offer practitioners in clinical settings leads to qualitative and quantitative research questions involving all parties with an interest in EBP.

Ahearne, J.F. (2001). Scientists, policy makers, and the public: A needed dialogue. *Health Physics*, *80*, 384–387.

*Main Messages:*

- Effective dialogue must occur between researchers, decision-makers, and the public if scientific knowledge is to be incorporated.

*Summary:* Effective incorporation of scientific knowledge into public policy requires effective dialogue among scientists, policy makers, and the general public. How can this be accomplished so that all three groups have confidence in the processes leading to policies? What are the appropriate roles for scientists? What are the appropriate uses of science? The authors propose suggested answers.

AHRQ (2001). Translating research into practice (TRIP)–II. Fact sheet. Rockville, MD, Agency for Healthcare Research and Quality. AHRQ Pub. No. 01-P017. Web document: http://www.ahcpr.gov/research/trip2fac.pdf

*Main Messages:*

- It may take as long as one to two decades for original research to be put into routine clinical practice. As such, the translation of research into sustainable improvements in clinical practice and patient outcomes is a substantial obstacle to improving the quality of health care.
- What has been learned in the research setting is often not implemented into daily clinical practice.
- Many examples of success in translating research into practice have involved patient care or settings in which most providers practise in close proximity.
- Some strategies work best in certain contexts, but success may be influenced by the care setting, the patient, organizational factors, and the desired behaviour change.

*Summary:* AHRQ has funded 27 projects since 1999 as part of a major initiative to close the gap between knowledge and practice. There is research evidence that only about 3-5% of patients with chronic conditions receive recommended care. Translational hurdles exist despite a wide range of strategies for implementing research in practice. Research suggests that some strategies work best in certain situations but success may be influenced by the care setting, the patient, organizational factors, and the desired behaviour change.The TRIP-I initiative sought to generate new knowledge about approaches that promote the utilization of rigorously derived evidence to improve patient care. In TRIP-II, the focus is on applying and assessing strategies and methods that were developed in idealized practice settings or that are in current use but have not been previously or rigorously evaluated.

Allen, R.Y.W. (2002). Assessing the impediments to organizational change: A view of community policing. *Journal of Criminal Justice*, *30*, 511–517.

*Main Messages:*

- To mobilize and motivate employees, trust must be established before managers can transfer the necessary decision-making authority.
- To establish trust, employees must exhibit competence and prove they are knowledgeable.
- For change to take place, there must be clear understanding through honest and open communication.

*Summary:* This article identifies and assesses the impediments to implementing one aspect of community-oriented policing (COP): designated patrol assignments. While several factors that could potentially impede or facilitate change are examined, individual attitudes toward COP and pressure had the most significant effect on the process of change. Individual attitudes were impediments to implementing change, while pressure acted as a facilitator of change. Additionally, communication surfaced as a necessary factor when implementing change and was intertwined with all of the study variables.

Altman, D.G. (1995). Sustaining interventions in community systems on the relationship between researchers and communities. *Health Psychology*, *14*, 526–536.

*Main Messages:*

- Researchers in community work must face the challenging problem of planning for the time when the research and development phase of the program is completed. The resulting sustainability plan is defined as an infrastructure that remains in a community after a research project has ended.

*Summary:* This article reviews the challenges associated with transferring innovations to community systems, changing program delivery from an experimental context controlled by researchers to program delivery controlled by community organizations, and sustaining long-term effects of interventions. Researchers who develop and implement community interventions in diverse health areas need to confront several issues: (i) fostering effective long-term relationships between researchers

and the communities they study and in which they intervene; and (ii) designing and implementing interventions that are useful to community systems after the formal phase of research ends.

Amis, J., Slack, T., & Hinings, C. R. (2002). Values and organizational change. *The Journal of Applied Behavioral Science*, *38*(4), 436–465.

*Main Messages:*

- Organizations that contain members who hold values congruent with prescribed changes are more able to successfully engage in the transition process.

*Summary:* The role of values in determining how organizations are structured and operated has become an increasingly important area of study. This article investigates how values affect the process of large-scale change. The authors contend that organization members' reactions to change will depend on how closely the values held by individuals within an organization coincide with the changes being proposed. If they are similar, the change will be supported; if they are not, some form of resistance may be enacted. If the values held are broadly neutral, then the nature of the response will depend on the magnitude of the pressure being exerted. Values held by elite and non-elite members are important in determining whether change will be instigated. Elite members play a vital role in leading the change process, yet non-elite members can prevent change measures from being implemented.

Andreasson, S., Hjalmarsson, K., & Rehnman, C. (2000). Implementation and dissemination of methods for prevention of alcohol problems in primary healthcare: A feasibility study. *Alcohol and Alcoholism*, *35*, 525–530.

*Main Messages:*

- Dissemination of material without provision of extra resources is ineffective.
- Unattractive content of prevention material is assumed to be responsible.

*Summary:* Secondary prevention of alcohol problems in health care has been proven efficacious in many studies, yet its implementation remains scarce, and its effectiveness in regular health care remains unknown. This article reports results from a feasibility study of dissemination of alcohol prevention methods in primary health care in Stockholm. Initial interviews with general practitioners (GPs) and district health nurses indicated that few raised the issue of alcohol with patients, made notes about alcohol in patient charts, or found working with alcohol issues rewarding. The impact of a training session where a project nurse visited all willing GPs and nurses was limited. Although the uptake of the prevention package was high, follow-up at 3 months indicated that little use was made of the materials. Specifically, screening rates were low. In the future, secondary prevention of alcohol problems will require better adaptation to the realities of primary care.

Atherton, F., Mbekem, G., & Nyalusi, I. (1999). Improving service quality: Experience from the Tanzania Family Health Project. *International Journal for Quality in Health Care*, *11*(4), 353–356.

*Main Messages:*

- The quality of services can be improved through the implementation of a defined set of inputs as long as there is strong local leadership and commitment.
- Effective training is characterized by training based on observing the performance of health providers where they are working and providing feedback and additional didactic information. This mode of training/coaching is highly relevant and relatively cost effective.
- Community linkages are important to the quality and sustainability of services with the training of health change agents at the local level.
- Quality assurance standards are promulgated and monitored along with a formal evaluation of service needs.

*Summary:* Health service use rates, client perceptions of services, improved infrastructure, and increased community participation resulted from implementing a range of quality improvement

strategies related to reproductive health in rural Tanzania. Service quality interventions fell into three areas: staff factors, facility factors, and service factors that helped ensure implementation and sustainability of service delivery. Staff factors related to clinical skills, training, supervision systems, continuing education, and staff linkages with communities. Facility factors included upgraded facilities and equipment, drugs, and supplies. Service factors related to management, service integration (one-stop service), quality assurance systems, and improved local capacity.

Azocar, F., Cuffel, B., Goldman, W., & McCarter, L. (2003). The impact of evidence-based guideline dissemination for the assessment and treatment of major depression in a managed behavioral health care organization. *Journal of Behavioral Health Services & Research*, *30*(1), 109–118.

*Main Messages:*

- Guideline dissemination is a low-cost mechanism for promulgating EBPs, but is ineffective even when accompanied by clinical reviews.
- Clinician self-reports of adherence may not be good indicators of actual adherence based on more objective reports (claims data) and when compared to reports by patients.
- A more multi-faceted approach to foster adoption of quality practices may be required and should reflect effective principles including: (i) engaging expert-opinion leaders to influence peers; (ii) patient education to increase awareness, expectations, and compliance; (iii) feedback and reminder systems for clinicians; and (iv) review processes such as incentives for meeting standards and engaging in preferred practices.

*Summary:* This randomized controlled study provides evidence that the dissemination of EBT guidelines to Managed Behavioral Healthcare Organizations through general mailing of guidelines or through targeted mailings associated with a patient starting treatment are ineffective. More objective claims data and patient survey data did not match the clinicians' reports of higher adherence to the guidelines, and may indicate the under-treatment of depression. Given the overall ineffectiveness of providing guidelines, other strategies must be explored to improve the likelihood of clinician adherence to standard guideline treatment for major depression.

Azocar, F., Cuffel, B. D., Goldman, W., & McCulloch, J. (2001). Best practices: Dissemination of guidelines for the treatment of major depression in a managed behavioral health care network. *Psychiatric Services*, *52*, 1014–1016.

*Main Messages:*

- Guidelines are ineffective in changing practice.
- Less than two-thirds of clinicians recall receiving guidelines; only half of those receiving them actually read them.
- Previous studies examining methods for influencing clinicians' behaviour have shown that traditional continuing education tools, such as mailed materials, workshops, and conferences for physicians, have little impact. More intensive interventions, such as interactive continuing education sessions through which clinicians can practise the skills they have learned, seem more effective and may influence health care outcomes.
- Highly respected opinion leaders, academic detailing, and continuous quality improvement teams have also been shown to be more influential in changing physicians' behaviour than education alone.
- Opinion leaders are more influential in changing physician's behaviour than education alone.

*Summary:* Numerous treatment guidelines have been developed in the past decade to address the accumulating evidence of variation in clinical practice and quality of care for the treatment of major depression and other mental and medical disorders. The Agency for Healthcare Research and Quality recently reported that the National Guideline Clearinghouse, an Internet-based resource, now offers access to more than 700 evidence-based clinical practice guidelines on its website. As organizational

and individual accountability become a greater priority in today's service delivery systems, it is important to understand how to achieve adherence to guidelines and greater consistency in clinical practice. Few studies of effective dissemination of guidelines as a strategy for influencing psychiatrists' clinical practice have been published, and there have been no studies of non-physician mental health practitioners. Managed behavioural health organizations (MBHOs) provided coverage to 176 million people in 1999. They are thus in a unique position in the mental health services system to study clinicians' behaviour in real-world settings. Studying dissemination of guidelines in an MBHO provides access to a large population of patients throughout the United States who are treated by a representative sample of independent clinicians who have different backgrounds and clinical experience. The researchers sought to determine whether clinicians read guidelines disseminated by MBHOs and, if so, whether they find such guidelines helpful.

Backer, T.E. (1995). Assessing and enhancing readiness for change: Implications for technology transfer. *Reviewing Behavioral Science Knowledge Base on Technology Transfer.* N. R. Monograph: 21–41.

*Main Messages:*

- Readiness for change is a state of mind about the need for an innovation and the capacity to undertake technology transfer; it is the cognitive precursor to either resistance or support for the actual transfer effort.
- Management style in the organization has much to do with the impact of readiness for change and its assessment.
- Readiness assessment and enhancement must become a regular part of technology transfer interventions.
- Durability of innovations implemented through technology transfer interventions may be significantly affected by early inattention to readiness for change.
- A systems approach with strategic planning is generally needed considering the scope of change required for most significant technologies.

*Summary:* Successful technology transfer requires individuals and organizations to change. Readiness for change is one of the challenges that is often neglected in planning and implementing technology transfer. This chapter discusses the concepts and practices concerning readiness for change within the larger frame of technology transfer interventions. Methods for assessing and enhancing change readiness are presented, followed by an analysis of applications to drug abuse and AIDS treatment and prevention.

Backer, T.E. (2000). The failure of success: Challenges of disseminating effective substance abuse prevention programs. *Journal of Community Psychology*, *28*, 363–373.

*Main Messages:*

- We have failed to bridge the gap between useful knowledge and community practice, mostly because we repeatedly make the same mistakes.
- The focus should not be on which "term" is used to label dissemination activities, but rather that these activities include a focus on their "effectiveness."
- Information about the innovation and its relevance to potential adopters must be effectively communicated in user-friendly, easily-accessible formats.
- Evidence must be available that the innovation is effective, works better than available alternatives, and does not have significant side effects.
- Sufficient human and financial resources must be available to effectively implement the innovation in new settings.
- Potential adopters must be able to handle the human dynamics of change associated with innovation adoption, by: rewarding change activities; involving those who will have to live with

change in designing how the innovation will be implemented; and helping adopters overcome their fears, resistances, and anxieties.
- We need to put dissemination into the larger context of the overall cycle of innovation and change, a cycle that includes the stages of innovation, evaluation, communication, dissemination, capacity-building, and change.

*Summary:* The author addresses three inter-related factors that help explain why so little progress has been made in addressing the challenges of dissemination since the 1960s. A recommendation is made that dissemination needs to be viewed in the larger context of overall cycle of innovation and change. Recommendations are made for action.

Barlow, D., Levitt, J. T., Bufka, L. F. (1999). The dissemination of empirically supported treatments: A view to the future. *Behavior Research and Therapy*, *37*, S147–S162.

*Main Messages:*
- There are a number of barriers to successful implementation of empirically supported treatments.
- Community providers have widely varying academic backgrounds and may rely on their extensive clinical experience rather than research to guide them.
- Community clinicians seldom have access to the types of settings in which researchers conduct their work.
- New training initiatives are required.

*Summary:* Despite developments of psychological interventions for a variety of disorders and problems, evidence exists that these treatments are not readily available to the individuals who require them because they have not been effectively disseminated to the mental health professionals who deliver them. The paper outlines the variety of barriers to successful dissemination, and describes recent developments in clinical research and public health policy that may facilitate the advancement of evidence-based psychological practice.

Barnoski, R. (2002). *Washington State's Implementation of Functional Family Therapy for Juvenile Offenders: Preliminary Findings*. Olympia, WA, Washington State Institute for Public Policy. Web document: http://www.wsipp.wa.gov/rptfiles/FFTprelim.pdf

*Main Messages:*
- Competent delivery of the FFT model reduces felony recidivism by as much as 30% at a cost savings of $7.50 for every dollar spent.
- Measuring adherence is critical to operational analyses to ensure that "when the state pays for FFT, it actually gets FFT."
- Five therapists judged as not competent or borderline had low recidivism rates and conversely, families seen by two therapists judged as highly competent or competent had high recidivism rates. This may indicate that some therapists were misclassified and that a stronger measure of adherence may need to be developed.
- The juvenile court managers need a useful, timely assessment system for measuring and reporting therapist competence/adherence so that action plans can be developed to assist therapists in becoming more competent.

*Summary:* Washington State's juvenile courts received funding to implement Functional Family Therapy (FFT) as one of four evidence-based programs selected by the legislature's Community Juvenile Accountability Act. FFT is a structured, family-based intervention to reduce risk factors and enhance protective factors through a multi-step approach. Research results indicate that FFT can reduce recidivism rates about 27%. This study looked at the effect of FFT when it is taken to scale across 14 juvenile courts. Therapist adherence ratings, based on FFT Inc. phone consultations with the therapists, placed therapists in one of four competence groups (not competent, borderline, competent, and highly competent). When recidivism rates were analyzed by level of competence, the highly

competent/competent group had lower average felony recidivism than the control group or the not competent/borderline therapist groups. Eight of the 13 therapists in the not competent/borderline group had poorer outcomes than the mean for the control group.

Barratt, M. (2003). Organizational support for evidence-based practice within child and family social work: A collaborative study. *Child and Family Social Work*, *8*, 143–150.

*Main Messages:*

- Successful integration of evidence into practice requires sustained attention to the nature of the evidence, the organizational context, and the facilitation or implementation process.
- There is distrust among practitioners regarding the exact nature of the evidence base.
- Access to research and locally collected data is essential to inform and guide both practice and policy.
- Access to library systems is critical, but many facilities do not have such access.
- National direction is needed to guide the implementation process.
- EBP is significantly more than a focus on the dissemination of research findings. It is a process that requires clinical staff to ask searching questions about their practice and service outcomes. The answers to these questions must be informed by national research findings and locally collected data on need and effective outcomes, and must integrally involve the views and experiences of all stakeholders in the process.
- Organizations can learn, adapt, and develop only if the individuals within them also see the need to so and learn new skills. That said, it is important for management to "lead from the front door" and develop direction capable of sustaining EBP.

*Summary:* This paper reports on how the views of more than 100 professional staff involved with the provision of services to children and families have been gathered to offer insight into how EBP can be supported or frustrated in social care organizations. The findings suggest considerable uncertainty about the nature of evidence in social care and its validity in relation to decision-making, policy, and planning. Mechanisms essential for the dissemination, implementation, and adoption of research messages are underdeveloped, and tensions exist around the explicit use of research evidence within reports and reviews. Many practitioners and teams may be excluded from making decisions based on the best available research evidence through lack of access to Internet resources and adequate information dissemination mechanisms. The paper concludes that there remain considerable areas for further debate if EBP is to become a reality in work with children and families.

Bass, M.J. (1996). Dissemination research in primary care: Impacting the real world of the practitioner. *Canadian Journal of Public Health*, *87*(Supplement 2), S71–S74.

*Main Messages:*

- Any research whose objective is to make changes in primary care must be cognizant of the nature and context of family practice, as well as address the priorities of practitioners and the public.
- Providing opportunities to enhance both care and research skills among primary care providers is also important to helping change practice.

*Summary:* Dissemination research in primary care should focus on getting information out and changing practice. Within the framework of helping family physicians provide preventive care, this paper explores how research can contribute to this process of dissemination and change. Important research questions are raised within the areas of the system of care, office organization, the professional, the patient, and education. Enhancing the capacity for research in prevention and its dissemination are also addressed. The author suggests there is a need for multi-disciplinary teams, longitudinal community-based cohort studies, inter-provincial studies, funded multiple-partner research programs, practitioners organized with a regional focus, and support for fellowships and investigators.

Baulcomb, J.S. (2003). Management of change through force field analysis. *Journal of Nursing Management*, *11*, 275–280.

*Main Messages:*

- Achieving lasting and effective change requires the co-operation and involvement of the whole team, not isolated individuals.
- Staff resistance is often due to not perceiving the need for change.
- To achieve success, it is important to place emphasis on the benefits of change to decrease the negative aspects.

*Summary:* Managing change is seen as being skilled at creating, acquiring, and transferring knowledge to reflect new knowledge and insights. Defining core concepts is often difficult and requires drawing on models/theories of change for guidance. Guidance from Lewin's (1951) force field analysis demonstrates the complexities of the change process and how driving and resisting forces were incorporated within the planning and implementation phases. This theory emphasizes the driving and resisting forces associated with any change, and that to achieve success it is important to ensure driving forces outweigh resisting forces.

Benefield, L. (2003). Implementing evidence-based practice in home care. *Home Healthcare Nurse*, *21*(12), 804–811.

*Main Messages:*

- System level, agency-specific effects are necessary to implement EBP.
- To determine how to influence the use of best practices, agencies must assess organizational and agency factors, staff skills, values, and preferences.
- There are three stages of readiness which represent the development agencies must go through to integrate evidence-based reports into clinical decision-making.

*Summary:* This article reviews a model of quality improvement to guide system change that can be used to implement best evidence. It suggests there are three stages of readiness which represent the levels of development agencies must pass through to integrate evidence-based knowledge into clinical decision making. Specific steps to move toward successful implementation of best practice, based on the stage of readiness, are offered. In stage one, efforts should be directed toward building awareness of the value and benefits of using best evidence. In stage two, efforts should focus on building a system structure and work processes that use best evidence. In stage three, efforts should focus on further integration of structures and work processes to improve effectiveness and efficiency.

Berenholtz, S. & Pronovost, P. (2003). Barriers to translating evidence into practice. *Current Opinions in Critical Care*, *9*(4), 321–325.

*Main Messages:*

- Relatively little research has focused on identifying how to deliver therapies effectively and efficiently. As a result, the most cost-effective opportunity to improve patient outcomes will likely come not from discovering new therapies, but from discovering how to deliver therapies known to be effective.
- Because quality is a multidimensional construct, it is unlikely that a single approach will be effective.
- ICU physicians and hospital leaders must assume a leadership role, implementing a combination of different approaches and developing appropriate systems for patient care.

*Summary:* Although a variety of therapies have been shown to improve patient outcomes in critical care, little research has been devoted to identifying how to deliver those therapies effectively and efficiently. This review presents the available evidence regarding changing the behaviour of physicians and discusses important barriers to translating evidence into practice. Examples of successful efforts to

change physicians' behaviour and improve patient outcomes within the ICU are also presented. Since quality is a multidimensional construct, a multiple approach to improving quality is necessary. ICU physicians and hospital leaders need to assume a leadership role, implementing a combination of different approaches and developing appropriate systems for patient care, including mechanisms for monitoring and continuous improvement.

Bernfeld, G.A., Blase, K.A., & Fixsen, D. L. (1990). Towards a unified perspective on human service delivery systems: Application of the teaching-family model. *Behavior Disorders of Adolescence*. R. J. McMahon. New York, Plenum Press: 191–205.

*Main Messages:*

- Program success can only be achieved if implementation variables are identified and manipulated from a systems perspective, which entails a dynamic, multilevel, and unified perspective on human service delivery systems.

*Summary:* Using examples drawn from research and practice with behaviour-disordered adolescents and families, this chapter directs the way toward a "broader and deeper" perspective on the delivery of human services. The authors argue that only a broader and deeper systems perspective can help narrow the gap between what is desired from human services and what can actually be delivered. The rationale for adopting this kind of perspective is that competing variables in multilevel systems account for program failure. Thus, for a program to succeed, implementation variables must be identified and manipulated from a systems perspective. The first part of this chapter focuses on the behavioural system model itself, with a discussion of the model's implications for understanding clients, programs, and organizations, as well as the socio-political context of these subsystems. The remaining portion of the chapter examines the issues surrounding the development of the Teaching Family Model as a means of treating adolescent behaviour disorders, and the implications of this model for understanding human service programs, organizations, and service delivery systems.

Bero, L.A., Grilli, R., Grimshaw, J. M., Harvey, E., Oxman, A. D., & Thomson, M. A. (1998). Closing the gap between research and practice: An overview of systematic reviews of interventions to promote the implementation of research findings. *British Medical Journal*, *317*, 465–468.

*Main Messages:*

- Systematic reviews of rigorous studies provide the best evidence of the effectiveness of different strategies to promote implementation of research findings.
- Passive dissemination of information is generally ineffective.
- It is essential to use specific strategies to encourage implementation of research-based recommendations and to ensure change in practice.
- Interventions to promote behavioural change among health professionals believed to be consistently effective include: (i) educational outreach visits; (ii) reminders; (iii) multifaceted interventions; and (iv) interactive educational meetings (workshops that include discussion or practice).
- Interventions with variable effectiveness include: (i) audit and feedback (or any summary of clinical performance); (ii) the use of local opinion leaders; (iii) local consensus processes; and (iv) patient-mediated interventions.
- Interventions with little or no effect include: (i) educational materials (distribution of recommendations for clinical care, including clinical practice guidelines, audiovisual materials, and electronic publications); and (ii) didactic educational meetings (lectures).

*Summary:* There are many different types of intervention that can be used to promote behavioural change among health care professionals and the implementation of research findings. Systematic reviews of rigorous studies provide the best evidence of the effectiveness of different strategies for promoting behavioural change. Identified consistently effective interventions include: educational

outreach, reminders (manual or computerized), multifaceted interventions (combination of two or more of audit and feedback, reminders, local consensus processes, or marketing), and interactive educational messages (participation of health care providers in workshops that include discussion or practice). Interventions of variable effectiveness include: audit and feedback, use of local opinion leaders, local consensus process, and patient mediated intervention. Interventions with little or no effect include: educational materials (practice guidelines, audiovisual materials, electronic publications) and didactic educational meetings (such as lectures). The authors conclude it is vital that dissemination and implementation activities be rigorously evaluated wherever possible. Economic evaluations should be considered an integral component of research. The paper outlines the potential benefits of international collaboration in this area.

Berwick, D.M. (2003). Disseminating innovations in health care. *Journal of the American Medical Association*, *289*(15), 1969–1975.

*Main Messages:*

- Within health care, innovation is difficult but dissemination is even more difficult.
- Ensuring effective dissemination of valuable interventions within health care requires leaders who understand innovation and how it spreads, who respect the diversity in change itself, and who can draw guidance from the social science literature.

*Summary:* Diffusion of innovations is a major challenge in all industries, including health care. This article explores the wider literature and theory of the dissemination of innovations, and suggests applications of that theory to health care. Drawing from the literature, the authors describe three basic clusters of influence on the rate of diffusion of innovations within an organization. They include: (i) perceptions of the innovation; (ii) characteristics of the people who adopt the innovation or who fail to do so; and (iii) contextual factors, particularly involving communication, incentives, leadership, and management. Following this theory, seven rules for disseminating innovations in health care are offered: (i) find sound innovations; (ii) find and support innovators; (iii) invest in early adopters; (iv) make early adopter activity observable; (v) trust and enable reinvention; (vi) create slack for change; and (vii) lead by example.

Beutler, L.E., Williams, R.E., Wakefield, P. J., & Entwistle, S. R. (1995). Bridging scientist and practitioner perspectives in clinical psychology. *American Psychologist*, *50*(12), —984-994.

*Main Messages:*

- Clinicians believe research findings are important in modifying their practices.
- Clinician knowledge comes from popular books and workshops rather than from academic journals.

*Summary:* It is argued that the objectives of individual research reports are not consistent with the needs of practitioners and should be changed. A survey regarding how practitioners use psychological research revealed that clinicians believe that research findings are, and have been, important in refining their practices. They tend, however, to obtain this research information from more popular books, practice-oriented journals, and workshops than from research journals. Consequently, information is likely not coming from scientists and may not represent state-of-the-art research knowledge. The authors propose that scientists should market their findings through popular articles like books, workshops and other vehicles of communication preferred by practitioners.

Bierman, K.L., Coie, J.D., Dodge, K. A., Greenberg, M. T., Lochman, J. E., McMahon, R. J., Pinderhughes, E. (2002). The implementation of the Fast Track Program: An example of a large-scale prevention science efficacy trial. *Journal of Abnormal Child Psychology*, *30*(1), 1–17.

*Main Messages:*

- Engagement of new implementation sites may be facilitated when: there are tangible benefits to the site (e.g., access to resources for at-risk students); services are enhanced and there is minimal "burden" to the site; resource reallocation or new resources are not required; professionals have enough information to make an informed choice about participation and have the opportunity to sample the program through introductory engagement activities (e.g., short workshops).
- Relationship-building with the new site by the implementers is an important, protracted, and ongoing process that is facilitated by demonstrating a genuine concern for the context of the practitioner, the ability to listen to and respond to concerns, and the ability to demonstrate flexibility while preserving program integrity.
- Recruiting families requires patience and understanding that families may have encountered poor and/or disrespectful services in the past and therefore may be reluctant to engage. Building trust through low risk and low demand activities and providing pragmatic supports (e.g., transportation, child care) may be the way to start. Selecting staff with similar ethnic backgrounds and the ability to connect may be important to engagement, along with focusing on competency building rather than deficits.
- Adherence to effective strategies, while flexibly adapting the intervention to a range of participants, can be accomplished by staying focused on principles and letting the processes vary (e.g., providing a menu of activities that relate to the principle). In addition, classroom coaches and co-teaching helped reduce resistance to implementation. Coaches who can discriminate form from function and have the principle-based rationales are needed to persuade teachers and answer questions. Building a community of practice through cross-site meetings and conference calls helped keep a focus on fidelity of the implementation.
- Sustainability requires finding new funding sources, coordination, and collaboration for non-school-based services. Developers can help by providing technical support and assistance with developing funding proposals.

*Summary:* The Fast Track Project, initiated in 1990, created and evaluated a multi-component prevention program to be implemented in four schools in demographically diverse American communities. The program targeted children at risk for conduct disorders and focused the program components on addressing those risk factors. This implementation study reports on important dimensions related to effective fidelity, engagement, and sustainability. The report specifically addresses: (i) strategies for engaging stakeholders and community members; (ii) the extent to which the fidelity of the intervention can be maintained while responding to necessary adaptations related to community demographics, ethnic/cultural composition; and (iii) the importance of sustainability and engaging with communities to seek funding and support after the research or project period is over.

Biglan, A., Mrazek, P.J., Carnine, D., & Flay, B. R. (2003). The integration of research and practice in the prevention of youth problem behaviors. *American Psychologist*, *58*(6/7), 433–440.

*Main Messages:*

- For program implementation to be effective, continuous training and implementation monitoring must become standard practice, with practitioners being trained in many of the skills currently found only among researchers.
- Science-based practices will not become commonplace in prevention unless scientific organizations promote their use.
- Organizations will use empirically-supported practices if such practices benefit the organization.

*Summary:* This article describes recent developments in the integration of research-based practices into the prevention of youth problem behaviours. The authors argue that the effective and successful use of science in practice settings will depend on the actions that scientific and funding organizations take to facilitate the process. Among the actions they suggest include increased media advocacy for the use of scientific methods and findings, achievement of consensus about the standards for identifying

disseminable interventions, and increased research on the factors that influence the effective implementation of science-based practices.

Birdsell, J.M., Atkinson-Grosjean, J., & Landry, R. (2002). Knowledge Translation in Two New Programs: Achieving 'The Pasteur Effect.' Ottawa, ON: Canadian Institutes of Health Research. Web document: http://www.cihr-irsc.gc.ca/e/pdf_24045.htm

*Main Messages:*

- The most prominent predictors of knowledge translation (KT) success included pre-existing relationships, adequate budgets and resources, early engagement with potential users, shared governance, partners already active in KT, role clarity, excellent in-team communication, patterns of knowledge co-creation, and a mechanism for peer connection and relational learning.
- Journal ratings should be changed to include those that cover KT and interdisciplinary work.
- Formal partnership agreements should be made to guide relations over the life of a project.
- Author arrangements should be made up front so people can gauge how much effort to put into a publication.

*Summary:* CIHR seeks to promote a "Pasteur Effect" [Pasteur laid out an entire new branch of science and put it into practice] and change the culture in Canadian health sciences. This study examines evolving KT strategies in two new programs: Community Alliances for Health Research (CAHRs; 19 projects) and Interdisciplinary Health Research Teams (IHRTs; 11 projects). The study seeks to reveal KT practices and problems in the two programs and to make this learning available across Canada. This process involved analysis of the funded proposals for these projects and participant observation at workshops held for CAHR and IHRT members.

Blount, R.L. (1987). The dissemination of cost-effective psychosocial programs for children in health care settings. *Child Health Care*, *15*, 206–213.

*Main Messages:*

- Dissemination of inefficacious psychological programs is not uncommon.
- Dissemination of efficacious programs is often not done.

*Summary:* Psychosocial programs for children must be both efficient and efficacious. Efficiency is dictated by cost, case of implementation, and likelihood of program compliance. Unfortunately, in attempting to promote efficient programs, inefficacious programs have been disseminated. Also, there are instances of failure to disseminate efficacious programs because they are not efficient. This paper presents a three-stage model as a guide for the dissemination of psychosocial programs. Further, specific suggestions are given as to how to move from the level of efficacious treatments currently used on a limited scale to widespread dissemination.

Bradley, E.H., Webster, T.R., Baker, D., Schlesinger, M., Inouye, S. K., Barth, M. C., Lapane, K. L., Lipson, D., Stone, R., & Koren, M. J. (2004). Translating research into practice: Speeding the adoption of innovative health care programs. Issue Brief, The Commonwealth Fund: 12.

*Main Messages:*

- Factors that may influence the successful adoption of innovations by organizations can be grouped in four broad domains: the adopting organization; the innovation; the dissemination infrastructure; and the external environment or context.
- Six "best practices" for diffusing new, evidence-based programs into clinical practice include: (i) target diffusion efforts toward organizations that have or can develop strong senior management support for adoption of the innovation; (ii) identify and support clinical champions in the adopter organization who can enhance buy-in from clinicians; (iii) develop simple methods of collecting and recording data to demonstrate the program is fulfilling the organization's strategic goals; (iv) expect the diffusion to take longer if it involves changes in the adopting organization's culture or

extensive interdepartmental collaboration; (v) plan for sustainability from inception, and invest adequately in the infrastructure needed to manage the dissemination and diffusion process; and (vi) anticipate changes in the external environment and demonstrate how the innovation can help the organization adapt to market and regulatory pressures.

*Summary:* The authors conducted a case study of four clinical programs to learn key factors influencing the diffusion and adoption of evidence-based innovations in health care. They found that the success and speed of adoption depend on: the roles of senior management and clinical leadership; the credibility of the data; an infrastructure dedicated to translating the innovation from research into practice; the extent to which changes in the organizational culture are required; and the amount of coordination needed among stakeholders. They also found that the translation process depends on the characteristics and resources of the adopting organization, and on the degree to which adopters believe the innovation responds to immediate and significant pressures in their environment.

Broner, N., Franczak, M., Dye, C., & McAllister, W. (2001). Knowledge transfer, policymaking, and community empowerment: A consensus model approach for providing mental health and substance abuse services. *Psychiatric Quarterly*, *72*(1), 79–102.

*Main Messages:*

- A consensus model of policymaking is presented.
- Four key structural elements for creating such a consensus infrastructure are: (i) leadership and a facilitating capacity for initiating and promoting such an endeavor; (ii) a network or consortium of key researchers, practitioners, consumers, and policymakers to empower community ownership; (iii) a process for consensus building and strategic problem solving for such a consortium; and (iv) the continued creation of a multi-directional dialogue through information dissemination.
- The key weakness of the traditional knowledge use model lies in its failure to incorporate an "epistemologically active" end-user.
- Knowledge is not simply possessed by experts, but is created by the engagement of both experts and end-users.
- The initial basis for a consensus building model—Habermas's notion of communicative action—provides a conceptual and philosophical basis for the role of processes that encourage consensus.
- The model builds on the empowerment and collaborative philosophy described by Freire and Denzin, the strategic planning process outlined by Bryson, as well as the best practices program components described by Donabedian.
- This model is a formalized method of group decision-making that brings together the knowledge of experts, providers, policymakers, individual consumers, family members, advocacy groups, researchers, and other key stakeholders.

*Summary*: The paper addresses an important problem in creating new programs and polices: how to encourage the transfer of knowledge in non-hierarchical ways so that new, relevant and specific knowledge is co-created by all interested parties. The authors suggest that a consensus model of policymaking is one response and identify four key structural elements thought necessary for creating such a consensus infrastructure. These are a) a leadership and facilitating capacity for initiating and promoting such an endeavor, b) a network or consortium of key researchers, practitioners, consumers, and policymakers to empower community ownership of the endeavor, c) a process for consensus building and strategic problem-solving for such a consortium, and d) the continued creation of a multi-directional dialogue through information dissemination. They examine these elements in action by describing a particular problem solving and consensus building model for developing and mplementing a program, resolving group differences, and evaluating the group's process and products.

Brown, B.S. (1987). Networking between research and service delivery. *International Journal of Addictions*, *22*(4), 301–317.

*Main Messages:*

- There is a need for a wide variety of dissemination strategies to be effective.

*Summary:* The paper reviews the impediments to the adoption of new models of service delivery in the field of drug abuse. Strategies for overcoming those obstacles with a view toward the translation of research materials to a language and format appropriate to the field of service delivery are explored. Issues in the study of competing strategies of knowledge transfer are also explored.

Bruhn, J.G. (2004). Leaders who create change and those who manage it. *The Health Care Manager*, *23*(2), 132–140.

*Main Messages:*

- The core idea of successful change leadership is to tie the value fulfillment of all members of the organization to desired goals.
- Success in organizations depends on the leader's philosophy regarding change, the organization's history of responses to change, and the members' willingness to invest in an organization that values change.

*Summary:* There is no formula for either leading or managing change. Every organization and leader is unique. Leading change is not simply a matter of a leader's style or personality: it is a leader's philosophy of how to generate and mobilize the total resources of an organization to enable it to be its best. Managing change, on the other hand, is focused on maintaining stability in an organization and containing the effects of unwanted and unexpected change. Leaders set the limits of success in their organizations by how they manage change. This paper identifies the characteristics that differentiate change leaders from change managers, and examines the evidence that leaders of change create more successful change than managers of change.

Bull, S.S., Gillette, C., Glasgow, R. E. & Estabrooks, P. (2003). Work site health promotion research: To what extent can we generalize the results and what is needed to translate research to practice? *Health Education & Behavior*, *30*(5): 537–549.

*Main Messages:*

- High external validity is needed to translate research to practice and facilitate implementation. That means that more research needs to follow the above cited RE-AIM variables.
- Practitioners and consumers need to press for the above data to assess the likelihood of successful adoption and survival of the program.
- Research publications' standards and constraints (e.g., not reporting negative outcomes; page limitations may favour efficacy trials reporting) should be examined with respect to reporting on these important variables and outcomes related to implementation.

*Summary:* The authors used the RE-AIM framework (http://www.re-aim.org) to analyze the study characteristics for 24 work site health intervention studies from 11 health journals. The RE-AIM framework examines the overall public health impact of an intervention by considering: Reach – percentage or representativeness of persons willing to participate in an intervention; Efficacy/Effectiveness – impact on important outcomes such as quality of life, economic impact, and unintended negative outcomes; Adoption – percent and representativeness of the settings willing to participate; Implementation – how consistently were program elements delivered; and Maintenance – extent to which the intervention becomes part of routine practice or policy. Quantitative data related to components associated with higher external validity found that rates of participation (reach) were reported in 87.5% of the studies, with characteristics of non-participants reported only 10% of the time. Rates of participation by settings (adoption) were reported in 25% of the studies, implementation data were found in 12.5% of the studies, and only 8% reported data related to maintenance.

Buston, K., Wight, D., Hart, G., & Scott, S. (2002). Implementation of a teacher-delivered sex education programme: Obstacles and facilitating factors. *Health Education Research*, *17*(1): 59–72.

*Main Messages:*

- Fidelity and adoption may be facilitated when the intervention fits well with the current organizational context.
- Even when an intervention appears to be a good fit organizationally, it may not be a good fit in terms of usual practice or typical practitioner skill sets.
- Cost factors need to be broadly considered in terms of resources such as time, lost opportunities in other areas, and legitimate competing demands, not just funding for the intervention itself.
- High quality training, full involvement in the decision to implement, and personal qualities such as values, confidence, and motivation all facilitate implementation.
- When teachers do not understand the underlying principles related to the intervention, they may adapt or otherwise modify the program in ways that impact the effectiveness of the intervention.

*Summary:* This process evaluation analyzed the factors that facilitated and hindered the implementation of a specially designed sex education program delivered in 13 randomly selected schools out of a pool of 25 schools in Scotland. The qualitative and quantitative data indicated the program was not fully implemented in all schools or by all teachers. Program fidelity was, however, facilitated by an initial 4-day experiential training program and a refresher after one year. Other facilitators included ongoing support by the researcher, fit with the existing curriculum requirements related to social and personal education, and support from school administrators. Competition for curriculum time, the relative low priority of social and personal education accorded by senior management, and teachers' discomfort and lack of experience with role-play inhibited implementation. Staff absences and turnover resulted in missed lessons and lessons delivered by untrained teachers. However, in some cases, trained teachers were re-assigned to deliver the program.

Cameron, R., Brown, S.K., & Best, A. J. (1996). The dissemination of chronic disease prevention programs: Linking science and practice. *Canadian Journal of Public Health*, *87*(Supplement 2): S50–S53.

*Main Messages:*

- Partnerships between researchers and providers could effectively support the dissemination of potentially effective interventions and research initiatives that have both scientific and practical value.

*Summary:* Strong partnerships between researchers and providers are essential for advancing the science and practice of dissemination. Through the experience of three studies, this paper reports on how research and provider communities could collaborate to facilitate dissemination of effective initiatives and undertake studies that have both scientific and practical value. Some of the positive effects that could arise from these partnerships are discussed, including: the identification of good interventions that are more likely to be effective and acceptable; the research process itself may be an intervention tool that could support the dissemination process; and conducting studies that yield both scientific and immediate practical payoffs since they are based on issues that are of high priority within the scientific and practical communities. The authors propose the establishment of a national working group including both researchers and providers to ensure research and program resources are used to their best advantage.

Canadian Health Service Research Foundation (2003). *The Theory and Practice of Knowledge Brokering in Canada's Health System*. Ottawa, ON: Canadian Health Services Research Foundation. Web document: http://www.chsrf.ca/brokering/pdf/Theory_and_Practice_e.pdf

*Main Messages:*

- Knowledge brokering occurs even without individuals dedicated solely to brokering, so it is important to focus on the activities and processes, not the individuals.
- Much of the brokering currently going on is an unrecognized, largely unplanned activity; if we are to highlight and evaluate its role in knowledge transfer, there needs to be a concerted effort to recognize and formalize the work.
- Brokering requires a supportive organization to thrive, including a collaborative environment, sufficient resources for the job, and a desire to build intellectual capital.
- We still have much to learn about knowledge brokering: whether it is effective, where it is most effective, and what the outcomes are.

*Summary:* Knowledge brokering focuses on identifying and bringing people interested in an issue together—people who can help each other develop evidence-based solutions. The review and consultation process agreed there is no single job description for a broker; it depends on the needs of the organization. But both identified the same essential role for brokers. By definition, they are go-betweens: their core function is connecting people to share and exchange knowledge. The ability to find relevant evidence is key. Participants in consultations felt that good brokers have a certain type of mind: flexible, curious, and well-informed on all aspects of a given sector. They also have leadership qualities and are able to make links among a range of ideas and bits of information.

Canadian Health Services Research Foundation. (2001). Self-Editing: Putting Your Readers First. *Communication Notes*. Ottawa, Ontario: Canadian Health Services Research Foundation. Web document: http://www.chsrf.ca/knowledge_transfer/pdf/cn-selfedit_e.pdf

*Main Message:*

- Write reports with the reader in mind.
- No final report should be considered ready until it has been reviewed by a member of the intended audience.
- Do not assume knowledge on the part of the reader.

*Summary:* Geared to researchers who are accustomed to writing mainly for academic journals, this short article provides suggestions on how to communicate ideas and findings in venues geared to wider audiences. Some of the pointers include stepping outside oneself and knowing the target audience—their knowledge background, etc. Other practical suggestions include cutting wordiness, banishing jargon, avoiding acronyms, and using active verbs.

Canadian Health Services Research Foundation. (2001). Reader-Friendly Writing: 1:3:25. *Communication Notes.* Ottawa, Ontario: Canadian Health Services Research Foundation. Web document: http://www.chsrf.ca/knowledge_transfer/pdf/cn-1325_e.pdf

*Main Messages:*

- Reports geared toward people within the health care system should consist of one page of main messages, followed with a three-page executive summary and findings in no more than 25 pages of writing.
- Main messages go beyond a summary of findings and should tell the audience what the findings mean for them.

*Summary:* A research summary for decision-makers is written differently than an article for an academic journal: it has a different objective and approach. This short article provides practical suggestions on how to write a report for decision-makers in the health field. In particular, it supports the 1:3:25 rule, which consists of one page of main messages, a three-page executive summary, and no more than 25 pages of findings.

Canadian Population Health Initiative of the Canadian Institute for Health Information (2001). *An Environmental Scan of Research Transfer Strategies*, 1–14. Web document: http://ecomm.cihi.ca/ec/product.asp?dep_id=16&sku=ENVIROSCANPDF

*Main Messages:*

- Early and ongoing engagement of relevant decision-makers at all levels of the research process from conception to dissemination of the findings should be maintained through the use of collaborative working groups.
- Dissemination of health research findings must be targeted to a wide variety of individuals and organizations using a variety of specific methods.

*Summary:* For health research to contribute to policies that improve the health and well-being of Canadians, research findings must be readily accessible and understood by policy makers and others who might use this knowledge. To identify a range of strategies for the transfer of research knowledge, the Canadian Population Health Initiative conducted an environmental scan of strategies used by government and non-government organizations. Strategies used by these organizations were analyzed according to three criteria: target audience (WHO was engaged?), timing (WHEN during the research process did this engagement occur?), and method (HOW was the target audience engaged?). The study concluded that the transfer of population health research findings must be targeted to a wide variety of individuals and organizations. Also, timing is an essential element of research transfer: decision-makers should be engaged early on and this relationship maintained through all phases of the research. As well, funders of research can incorporate policy relevance as a criterion for research funding (e.g., by having decision-makers and researchers jointly make funding choices). Evaluating the effectiveness of knowledge transfer strategies also allows researchers and funding bodies to enhance the policy relevance of research on a continuous basis. The authors highlighted a number of specific methods for encouraging the uptake of research findings by policy and decision-makers, including: effectively using websites; building a research transfer strategy into each project; establishing formal links and partnerships with policy- and decision-makers; employing specialists in research transfer; and sponsoring empirical investigations on the transfer of research findings.

Carpinello, S.E., Rosenberg, L., Stone, J., Schwager, M., & Felton, C. J. (2002). New York state's campaign to implement evidence-based practices for people with serious mental disorders. *Psychiatric Services, 53*: 153–155.

*Main Messages:*

- The challenge in implementing EBPs in routine mental health setting is largely to create a major shift in how the mental health industry defines a high-quality environment.
- Credibility on the part of mental health authorities is essential in obtaining ongoing support for a shared vision of change.
- The best outcomes are achieved when EBPs are made available to recipients in combination and when accountability for the coordination of delivery is fixed at the local government level.
- The consensus of experts plays an essential role in the promotion of EBPs.
- The system-wide use of EBPs calls for modifying the behaviour of many clinicians. Widespread dissemination of research findings that demonstrate the effectiveness of interventions is needed, as is the widespread availability of technical assistance.
- Organizational strategies for change include incorporating knowledge and training in EBPs into workforce performance standards and academic study programs.
- Multi-pronged approaches are most likely to lead to behavioural change.
- Having champions of EBPs implementation across all stakeholders is critical.

*Summary:* This paper shares the perspectives of several mental health experts regarding the systematic implementation of EBPs, and discusses emerging themes. A strategy for promoting evidence-based services includes consensus building, stakeholder education, clinician training, outcomes measurement,

and financial components. Clinical practices perceived to be useful but for which there is no research base must be studied, and the pace of development of new treatments must be increased.

Carr, A. (2001). Understanding emotion and emotionality in a process of change. *Journal of Organizational Change*, *14*(5): 421–434.

*Main Messages:*

- The behavioural response to organizational change is comparable to the response commonly associated with having one's identity dislodged, and is associated with grieving.
- Strategies to assist with grieving and the dislodgement of identity in the face of organization change may be helpful, such as social gatherings where employees affected by change can gain emotional support and confidence as to their organization identity.

*Summary:*

Aspects of the psychodynamics of organization change are explored, and in particular how emotion and emotionality should be conceived. The framework put forward and illustrated in this paper suggests the processes involved in the relationship between employee and organization are deep-seated, largely unconscious, intimately connected to the development of identity, and have emotional content. Depending upon the degree of identification with the organization, one encounters behaviours that reflect dislodgement of identity and those more commonly associated with the processes of grieving. The author advances some tentative strategies for managing these behaviours.

Charles, C., Schalm, C., & Semradek, J. (1994). Involving stakeholders in health services research: Developing Alberta's resident classification system for long-term care facilities. *International Journal of Health Services*, *24*, 749–761.

*Main Messages:*

- Stakeholder involvement in the knowledge production and dissemination process leads to great uptake of research findings

*Summary:* Little attention has been directed in Canada to identifying stakeholders at the administrative policy level to whom relevant health services research information can be targeted. This article describes a case study in which key stakeholders (long-term care facility owners, operators, and care providers) were explicitly defined not only as targets of original research information to inform administrative public policy, but also as collaborators in the research process and dissemination of results. The research involved developing a classification system to measure resident care requirements in the province's nursing homes and auxiliary hospitals. The classification system formed the basis of a new government administrative policy for allocating public funds to these facilities based on levels of care. The authors describe the rationale for involving stakeholders in the research process, the role of stakeholders as collaborators, and lessons learned from the Alberta experience. The authors present examples of how stakeholders can contribute to the health services research process and outcome by providing experiential knowledge related to the research outcome, anticipating and overcoming potential problems with policy implementation, facilitating policy-oriented learning across stakeholder groups, assisting in the transfer of research information to wider stakeholder audiences, and promoting acceptance for policy change.

Chilvers, R., Harrison, G., Sipos, A., & Barley, M.  (2002). Evidence into practice: Application of psychological models of change in evidence-based implementation. *The British Journal of Psychiatry*, *181*: 99–101.

*Main Messages:*

- The "stages of change" model describes change as a continuous process in which participants move through stages of pre-contemplation, contemplation, decision, active change and maintenance.
- This model enables the "change agent" to tailor information and support according to the individual's (or group's) stage of readiness, thereby producing a permanent behavioural change.

- Individual educational visits across all stages could be a powerful intervention tool.

*Summary:* To learn how to influence the behaviour of clinicians, the authors suggest examining models that have been developed to motivate change in the behaviour of patients. One such model they describe, the transtheoretical or stages of change model, describes change as a continuous process where participants move through stages of pre-contemplation, contemplation, decision, active change, and maintenance. This model enables the change agent to tailor information and support according to the individual's (or group's) stage of readiness, with the cumulative effect producing a permanent behavioural change. In looking to the pharmaceutical industry's success in shaping clinician behaviour, the authors propose the stages of change model that a clinician needs to move along: unawareness, awareness, interest, evaluation, trial, usage, and continued usage. Individual educational visits (academic detailing) across all stages could be a powerful intervention within this conceptual framework, owing to their potentially interactive, supportive, and reinforcing nature. This paper concludes with the challenges that advocates of a stages of change framework within clinical practice face, such as: the lack of outcome trials supporting the effectiveness of stage related interventions; the lack of a standardised measure to categorise a clinician's stage of readiness; and the failure to fully account for the impact of the organizational setting that is beyond the control of the individual clinician.

Chorpita, B.F. (2002). Treatment manuals for the real world: Where do we build them? *Clinical Psychology: Science & Practice*, *9*(4), 431–433.

*Main Messages:*

- Some manuals are not sufficiently explicit about the training and supervision required for therapists, the adherence necessary, the relationship to client diversity, or protocol flexibility under complex circumstances. But with adaptations of manuals in Hawaii, outcomes are improving.
- Piloting and testing treatments early on with the therapists and clients for whom the therapy is meant may improve the adequacy and effectiveness of such manuals.
- Current research funding contingencies and relationships favour efficacy trials and therefore university-based research. If community research were preferred, then partnerships between community settings and researchers might be more prevalent and the resulting manuals might be more effective in real world settings.

*Summary:* The author offers a commentary on an article in the same issue by Carrol and Nuno. Those authors note that the empirically tested manuals developed in the past 10 years remain largely unpopular with the clinical community, perhaps intersecting with the fact that these manuals were largely developed in careful university efficacy trials resulting in questionable generalization to typical clinical practice. They propose a manual development process that moves toward more complexity as treatment is proved to be efficacious and moves toward effectiveness trials. The author then elaborates on the challenges faced in Hawaii as attempts were made to introduce state practice guidelines based on collective efficacy trial results with ensuing difficulties in implementation and many with poor outcomes. He postulates that the stage model for the development of manuals proposed by Carrol and Nuno still may be too reliant on efficacy and university-based laboratory research, and that building manuals for the real world requires conducting the research in real world settings from the outset.

Chorpita, B.F., Daleiden, E.L., & Burns, J. A. (2004). Designs for instruction, designs for change: Distributing knowledge of evidence-based practice. *Clinical Psychology: Science & Practice*, *11*(3), 332–335.

*Main Messages:*

- Rather than translating linearly structured manual content to dynamic media, interventions could be designed with dynamic structure from the onset, which would require a fundamental shift in the manner of designing interventions.

- Clinicians may have more concerns with manuals than with the idea of treatments being supported by evidence, and might dislike evidence-based therapies only inasmuch as they are also manual-based therapies.
- To use EBTs, practitioners must do more than just learn specific therapeutic procedures. They must also have a positive attitude toward those procedures, organizational structures in place to support their use, and be embedded in a social influence process designed to support maintenance and fidelity of new practices.

*Summary:* This commentary on the article by Weingardt discusses recent advances in instructional design and technology (IDT) and their implications for dissemination of evidence-based practices. It extends Weingardt's arguments further to the topic of psychological intervention design and explores the possibilities for new intervention structures. The authors also offer comments on maintaining a careful balance between technological and social processes in the effort to promote the dissemination of innovative and evidence-based psychological procedures.

Ciliska, D., Hayward, S., Dobbins, M., Brunton, G., & Underwood, J. (1999). Transferring public health nursing research to health-system planning: Assessing the relevance and accessibility of systematic reviews. *Canadian Journal of Nursing Research, 31*(1), 23-36.

*Main Messages:*

- Systematic reviews are a good way to overcome barriers to the use of research.
- Decision-makers report an unmet need for research evidence.

*Summary:* A descriptive study was designed to gain an understanding of the research needs, perceptions of barriers to research use, and attitudes toward systematic reviews of decision-makers in public health at the level of systems planning. The authors surveyed public-health consultants and managers in Ontario about barriers to research use and awareness of and attitudes toward systematic reviews as a method of/vehicle for research transfer. Access to 5 completed reviews was provided in summary, abstract, and full form, and on diskette, hard copy, and Internet. A follow-up survey at 3 months assessed use, relevance, application, and further dissemination of the reviews. A total of 242 people in positions of public-health policy and decision-making participated. Respondents reported a great, largely unmet, need for research evidence. They viewed systematic reviews as likely to overcome the barriers to research use related to critical appraisal, time, timeliness, availability, cost, and credibility, but not the barriers related to policy climate, authority, or implementation resources. Three months after requesting a review, 93% said they would follow it up, 91% remembered receiving it and 71% of these had read it, while 23% stated it played a part in program planning or decision-making.

Cockburn, J. (2004). Adoption of evidence into practice: Can change be sustainable? *Medical Journal of Australia*, *180*(Supplement): S66–S67.

*Main Messages:*

- The target population's readiness to change is an important factor at both an individual and organizational level.
- In most cases, a combination of different interventions will be needed to achieve lasting change.
- Institutionalizing the change will mean including it in strategic plans, job descriptions, and budgets so that it becomes a routine part of organizational operations.

*Summary:* This article provides a concise summary of the major points derived from reviews and research on behavioural change. Few studies have monitored change in professional practice over time to determine the sustainability of change. Research from other behavioural change literature shows that initial change is difficult to maintain, with reported relapse rates as high as 80%. Interventions most likely to succeed are based on a clear understanding of target behaviours and the environmental context. Facilitators and barriers are usually multifaceted and occur at a number of interrelated levels. The issue targeted for intervention must be clearly defined at the outset, so that antecedents,

determinants, and supporting mechanisms can be defined, suggesting points for intervention and strategies for initial and sustainable change. The author also discusses strategies appropriate to the organization's level of readiness.

Cohen, D., McDaniel, R.R., Crabtree, B. F., Ruhe, M. C., Weyer, S. M., Tallia, A., Miller, W. L., Goodwin, M. A., Nutting, P., Solberg, L., Zyzanski, S. J.., Jaen, C. R., Gilchrist, V., & Strange, K. C(2004). A practice change model for quality improvement in primary care practice. *Journal of Healthcare Management*, *49*(3), 155–168.

*Main Messages:*

- Sustainable practice change in complex systems is dependent on the practice's good grasp of the interconnections between the domains of motivation and capacity, and the importance of understanding these connections over time.

*Summary:* Faced with a rapidly changing health care environment, primary care practices often have to change how they practise medicine. Yet change is difficult, and the process by which practice improvement can be understood and facilitated has not been well elucidated. This paper describes a model of practice change developed from data on a quality improvement intervention that was successful in creating a sustainable practice improvement. The model depicts the critical elements for understanding and guiding practice change and emphasizes the importance of these elements' evolving interrelationships. These elements are: (i) motivation of key stakeholders to achieve the target for change; (ii) instrumental, personal, and interactive resources for change; (iii) motivators outside the practice, including the larger health care environment and community; and (iv) opportunities for change—that is, how key stakeholders understand the change options. Change is influenced by the complex interaction of factors inside and outside the practice. Interventions based on understanding the four key elements and their interrelationships can yield sustainable quality improvements in primary care practice.

Corrigan, P.W., Steiner, L., McCracken, S. G., Blaser, B., & Barr, M (2001). Strategies for disseminating evidence-based practices to staff who treat people with serious mental illness. *Psychiatric Services*, *52*(12),1598–1606.

*Main Messages:*

- We need to adopt an evidence-based approach to evaluating the dissemination of EBTs.
- Individual service providers lack the necessary knowledge and skills to assimilate EBPs.
- Organizational dynamics undermine the treatment teams' ability to implement and maintain innovative approaches.

*Summary:* EBPs have not been widely implemented in real-world treatment settings for several reasons, including existing state laws, administrative policies, funding priorities, advocates' concerns, and program staffing. Dissemination strategies focus largely on program staffing and the question of why treatment teams responsible for assisting people with serious mental illness fail to use EBPs. In a review of the research literature, two barriers to staff dissemination emerge: individual service providers lack the necessary knowledge and skills to assimilate these practices, and certain organizational dynamics undermine the treatment teams' ability to implement and maintain innovative approaches. Three sets of strategies are useful for overcoming these barriers and fostering dissemination: packaging EBPs so that specific interventions are more accessible and user-friendly to service providers; educating providers about relevant knowledge and skills; and addressing the organizational dynamics of the team to facilitate the implementation of innovations. Research on dissemination is relatively new and is less well developed than the clinical and services research enterprise that has led to EBPs.

Cunningham, C.E., Woodward, C.A., Shannon, H. S., MacIntosh, J., Lendrum, B., Rosenbloom, D., & Brown, J. (2002). Readiness for organizational change: A longitudinal study of workplace, psychological and behavioural correlates. *Journal of Occupational and Organizational Psychology*, *75*, 377–392.

*Main Messages:*

- Active jobs that afford control over challenging tasks—conditions which optimize health and emotional well-being—prepare workers to initiate or contribute to organizational change.
- Building supportive relationships with co-workers and supervisors and limiting conflict between work and home life might modulate the stress of organizational change.

*Summary:* Research on individual differences in readiness for organizational change, workplace processes that facilitate change, and factors that influence the impact of organizational change on the health and emotional well-being of employees is important to the success of efforts to improve the health service delivery system. This paper reports on a study that examined factors influencing hospital staff's readiness for health care organizational change. The findings suggest that workers who are in active jobs which afford higher decision latitude and control over challenging tasks tend to be at a higher level of readiness for change. In addition, active involvement in organizational change, reducing barriers to participation, building problem-solving strategies, and enhancing workers' perceptions of their ability to cope with change (change self-efficacy) should both enhance commitment to redesign and reduce the stress of organizational change.

Dacin, T.M., Goodstein, J., & Scott, R. W. (2002). Institutional theory and institutional change: Introduction to the special research forum. *Academy of Management Journal*, *45*(1), 45–57.

*Main Messages:*

- Qualitative research strategies are a valuable complement to strong quantitative methods in the study of institutional change.
- There is a dialectical interplay between actions (practices and structures), meanings, and actors. In this interplay, pressures for deinstitutionalization are interpreted, given meaning, and responded to actors within organizations, leading to new norms and practices which take on a greater degree of legitimacy, and in turn become institutionalized.
- There is a need to legitimate change either through conformity, field-level cognitive interpretations, market feedback, or through developing constitutive rules that provide guidelines for change.

*Summary:* Institutional theory has become a popular and powerful explanation for both individual and organizational action. Although institutions serve to drive change and shape the nature of change across levels and contexts, they themselves also change in character and potency over time. Through a review of over 75 manuscripts on the study of institutional theory and institutional change, the authors seek to provide new understandings of the manner in which institutions are created, transformed, and extinguished, as well as the way in which institutional processes interact to affect institutional change. Currently a myriad of directions are being pursued as institutional theorists extend their ideas and arguments to encompass change processes. Some of the developing concepts identified in this paper include the idea that institutional change can: proceed from the most micro interpersonal and sub-organizational levels to the most macro societal and global levels; take place in relatively brief and concentrated periods or over time measured in decades or centuries; take place incrementally (observers and participants are hardly aware of any change) or abruptly in dramatic episodes.

Dal Santo, T., Goldberg, S., Choice, P., & Austin, M. J. (2002). Exploratory research in public social service agencies: As assessment of dissemination and utilization. *Journal of Sociology and Social Welfare*, *29*(i4), 59–83.

*Main Messages:*

- One of the most important factors that can influence the dissemination of research is the way that research is presented to practitioners.

- Three significant organizational factors that influence how social service agencies disseminate and use research findings are: (i) establishing clarity during the early stages of defining the scope of the work; (ii) strengthening communication in the agency-researcher partnership during the entire research process; and (iii) finding multiple methods for disseminating findings and increasing use.

*Summary:* To actively promote research dissemination and use, new forms of practitioner-researcher collaboration need to be developed. This study examines the dissemination and use of nine exploratory research projects conducted in four county social services agencies in the San Francisco Bay Area. The findings indicated that all of the research studies influenced agency thinking and in some instances specific agency decision-making processes. The key factors which influenced the use of research included characteristics of the findings and recommendations, specific project situations, practitioner and researcher characteristics, and communication. The authors stress that both researchers and agency stakeholders are responsible for maximizing the use of the results and recommendations of exploratory research.

Davis, D., Evans, M., Jadad, A., Perrier, L., Rath, D., Ryan, D., Sibbald, G., Straus, S., Rappolt, S., Wowk, M., & Zwarenstein, M. (2003). The case for knowledge translation: shortening the journey from evidence to effect. *British Medical Journal*, *327*, 33–35.

*Main Messages:*

- Compared to continuing medical education and professional development, knowledge translation offers a more action-oriented, holistic, multi-disciplinary construct for bridging the gap between evidence and practice.
- Knowledge translation operates within the practice of health care and focuses on changing health outcomes using evidence-based clinical knowledge.

*Summary:* This article compares the three constructs—continuing medical education (CME), continuing professional development (CPD), and knowledge translation (KT)—that have been used to reduce the gap between evidence and practice. Unlike knowledge translation, both CME and CPD are primarily teacher and learner driven and therefore limited in their capacity to foster professional development and change behaviour. KT is set in the site of practice and its social, organizational, and policy environment, and identifies best evidence and pathways through various aids to help targeted individuals and groups follow this evidence. All possible participants in health care practices, such as patients, consumers, and policy makers are potential targets within the knowledge translation construct. By reflecting the considerations of the practitioner-learner, providers, or health care system, KT also offers a more holistic view, thereby helping to reduce the gap between evidence and practice. In addition, knowledge translation is enriched by involving people from all relevant disciplines.

De Jager, P. (2001). Resistance to change: A new view of an old problem. *The Futurist*. May–June 2001, 24–27.

*Main Messages:*

- To overcome the fear of change, it is important to create an environment where learning is the norm such that the early failures of any learning endeavor are not frowned upon or punished, but rather are rewarded.

*Summary:* This article argues that resistance to change often serves the legitimate function of avoiding unnecessary change. Managers trying to improve processes in their organizations need to understand that people resist change because it is a very effective, very powerful, and very useful survival mechanism. This rational resistance to change can be subdued with reasonable explanations for any proposed change. Some of the tactics the author suggests include involving people in the change and overcoming their fear of change by creating an environment where learning is the norm, such that the early failures of any learning endeavor are not frowned upon or punished, but are rewarded. Failure in this kind of environment is honoured as evidence of effort.

Deegear, J. & Lawson, D.M. (2003). The utility of empirically supported treatments. *Professional Psychology: Research and Practice*, *34*(3), 271–277.

*Main Messages:*

- There is a current debate on what empirically supported treatments (ESTs) are and how they are determined.
- Until research has clearly settled the current EST debate, it may be prudent to expose trainees to the current evidence-based approaches.
- ESTs can provide greater reliability in training psychotherapists and thereby produce more effective therapists.
- Teaching trainees how to efficiently evaluate change processes would aid in the promotion of the scientist-practitioner model, as well as provide potential databases.
- An evidence-based approach that flexibly accounts for the individual characteristics of the client and therapist appears to be the most logical one to adopt.

*Summary:* The debate on what constitutes an EST and how they are determined has emerged in recent years. Although there is general consensus that evidence-based psychotherapies are critical for accountability and effectiveness, what is viewed as a strength by one group (e.g., adherence to the medical model) may be seen as a weakness by another group. This article explores the recent literature supporting both sides of this issue in an attempt to identify and understand the arguments in favour of and against the current EST movement. Recommendations pertaining to practice, research, and training are offered.

Dewan, N.A., Conley, D., Svendsen, D., Shon, S. P., Staup, J. R., Miller, A. L., Crismon, M. L., Rush, A. J., Trivedi, M., Skale, T., Keck, P. E., & Strawkowski, S. M. (2003). A quality improvement process for implementing the Texas algorithm for schizophrenia in Ohio. *Psychiatric Services* , *54*(12), 1646–1649.

*Main Messages:*

- A locally-driven process can be created that identifies barriers and creates action plans to address the barriers and minimize their impact on uptake of the new practice.
- This locally driven and systematic process in Ohio resulted in physicians affirming that barriers such as awareness, familiarity, and agreement about the use of the intervention were not a problem, and that they accepted the algorithm as good practice. Yet, they did not seem to alter their practice.
- The absence of regular feedback to physicians by case managers through measures of symptomatic outcomes via standardized scales and the lack of a manualized consumer education program may have been related to the reported behaviour by the physicians. Regular, valid feedback and knowledgeable consumers may be part of the implementation equation.

*Summary:* The state of Texas developed medication algorithms for guiding physicians in best practices for administering medication to patients with schizophrenia. The state of Ohio engaged in a quality improvement process adapted from the Texas project to implement the Ohio Medication Algorithm Project. Broad-based representative leadership from consumers, potential sites, and board authorities participated in a series of planning meetings to launch the initiative and specifically address potential barriers to implementation. Physicians were surveyed to assess their perceptions of barriers to implementation. The 38 physicians surveyed perceived the algorithm as current, applicable, and representing good clinical practice. Implementation barriers related to agreement, familiarity, and awareness were not perceived as problematic. However, they did not change their practices much in response to the algorithm.

Dickey, B. (2004). Are financial incentives and best practices compatible? *Psychiatric Services, 55*(2), 130–131.

*Main Messages:*

- The use of financial incentives can promote best practices that will benefit patients and health systems.
- Clinical leaders must demand that care meets best practices, develop up-to-date information systems to support quality improvement efforts, and create financial support for these activities.

*Summary:* Improving mental health care requires major changes. Among the actions that will improve care is making a business case for quality improvement. This article offers evidence that the use of financial incentives can promote best practices that will benefit patients and health systems. The authors argue that concerns about implementing financial incentives need to be balanced with an understanding of the difficulty in overcoming a lifetime of training that teaches clinicians particular methods of treatment and instills values of autonomous decision making. With responsible negotiations, opportunities exist for revenue enhancement to go hand-in-hand with improved care.

Duffy, M. (2000). The Internet as a research dissemination resource. *Health Promotion International*, *15*(4), 349–353.

*Main Messages:*

- The Internet is an obvious route for knowledge dissemination.
- Identification of problems related to underdeveloped skills, lack of user support, and credibility as a publishing route must be addressed.

*Summary:* The rapid growth of the Internet and the advantages of the medium over traditional communication formats in terms of flexibility, speed, and reach make it an obvious route for research dissemination. Given the emphasis on evidence-based decision-making as a way of improving the allocation of scarce resources to improve health, and given the focus on dissemination therein, the potential of the web to get digestible information to the right people at the right time is even more apparent. While the Internet is not panacea and issues around equity of public access are still to be resolved, its possibilities as a resource for professionals should not be underestimated, and its longer-term impact on the way we carry out and communicate research is likely to be far reaching. However, before its full potential can be realized, problems relating to underdeveloped skills and lack of support for users need to be addressed, as do issues around the Internet's credibility as a publishing route for professional researchers. Similarly, new types of expertise and creativity need to be nurtured in those charged with developing the unique features of the medium. This will ensure that health researchers, practitioners, and policy makers are at the forefront rather than bringing up the rear of the increasing number of professionals finding the Internet a key tool in their work.

Dusenbury, L., Brannigan, R., Falco, M., & Hansen, W. B. (2003). A review of research on fidelity of implementation: Implications for drug abuse prevention in school settings. *Health Education Research*, *18*(2), 237–256.

*Main Messages:*

- Fidelity is carefully monitored and maintained in programs implemented under research conditions. Implementation in usual practice settings also may require fidelity monitoring to bolster implementation and to discriminate effectiveness issues from implementation problems.
- Programs that are not implemented as intended are less likely to be effective.
- Complex interventions are less likely to be perceived as effective and maintained in typical settings. Programs that have specific implementation instructions are viewed as more likely to be effective and implemented.
- Organizational supports associated with high fidelity include: support from the principal; teachers' confidence in educating students; teachers' ability to communicate; leadership; school culture; accommodation and support by administrators; staff morale; and active mechanisms for problem-solving. These are all post hoc conclusions and do not necessarily predict high fidelity.

- The tension between fidelity and adaptation might best be resolved through mutual adaptation where program developers and users accommodate one another.

*Summary:* A literature review spanning 25 years looked at fidelity and implementation issues in relation to drug prevention programs in schools. Definitions and measures of fidelity are inconsistent. Research on fidelity in drug abuse prevention indicates that poor implementation results in diminished effectiveness. The five ways fidelity has been measured include adherence, dose, quality of program delivery, participant responsiveness, and the degree to which the program can be differentiated from other programs. Most interventions are not delivered by teachers with full fidelity (e.g., omitting parts of curriculum, not using recommended approaches such as role-playing). High fidelity is associated with teacher training and program, teacher, and organizational characteristics. The authors discuss the issues related to fidelity and adaptation and ways to deal with the adaptation issues. Consistent methods and definitions of fidelity are recommended.

Edwards, R., Jumper-Thurman, P., Plested, B.A., Oetting, E.R., & Swanson, L. (2002). Community readiness: Research to practice. *Journal of Community Psychology*, *28*(3), 291–307.

*Main Messages:*

- Community readiness must be distinguished from individual readiness.
- Development of the Community Readiness Theoretical Model is based on several underlying premises: (i) communities are at different stages of readiness for dealing with a specific problem; (ii) the stage of readiness can be accurately assessed; (iii) communities can be moved through a series of stages to develop, implement, maintain, and improve effective programs; and (iv) it is critical to identify the stage of readiness because interventions to move communities to the next stage differ with each stage of readiness.
- Stages of readiness in a community have to deal with group processes and group organization, characteristics that are not relevant to personal readiness.

*Summary: A major factor in determining whether a program can be successfully implemented and supported is the community's stage of readiness. This article describes the theoretical and practical development of the Community Readiness Model. The Community Readiness Model provides a practical tool to help communities mobilize for change. There are nine stages of community readiness ranging from "no awareness" of the problem to "professionalization" in the response to the problem within the community. Key informant interviews are utilized to assess the community's stage of readiness. Strategies to ensure successful implementation of the effort have been developed to address each stage of readiness. Community teams can then develop specific, culturally appropriate efforts that use local efforts to guide the community to more advanced levels of readiness, eventually leading to long-term sustainability of local community efforts.*

Eisenberg, J.M. (2001). Putting research to work: Reporting and enhancing the impact of health services research. *Health Services Research*, *36*, x-xvii.

*Main Messages:*

- There needs to be a system in place to track and report the impact of the research that is done.
- The Agency for Healthcare Research and Quality (AHRQ) in the United States has developed a model that shows different levels of the impact of research.

*Summary:* To address the need to demonstrate the impact of research on people's health, a model is proposed that shows different levels of the impact of research. Developed by AHRQ staff and consultants, the model represents a pyramid of outcomes that include four different levels of impact, beginning at the bottom with impact on knowledge and further research (level one), and ascending to impact on health outcomes (level four). In between are impact on policies (level two) and impact on clinical practice (level three). Health services researchers need to keep in mind that the ultimate purpose of our work is to improve health care, and, as a result, improve the health of the public.

Elliott, H. & Popay, J. (2000). How are policy makers using evidence? Models of research utilisation and local NHS policy making. *Journal of Epidemiol Community Health*, *54*, 461–468.

*Main Messages:*

- The direct influence of research evidence on decision-making is mediated by finances, time, and experience.
- Research is more likely to impact on policy in indirect ways, such as shaping policy debate and mediating policy maker/health service provider/user dialogue.
- Continued dialogue between researchers and users of research increases the use of research-based evidence in policy.
- A number of factors affect decision-maker uptake of research evidence, including financial constraints, shifting timescales, and the experiential knowledge of decision-makers. Fieldwork in this series of case studies indicates that research was felt to clarify and contribute to decision-making, but not provide answers.

*Summary*: This paper is based on a qualitative study that aimed to identify factors that facilitate or impede evidence-based policy making at a local level in the UK National Health Service (NHS). It considers how models of research utilization drawn from the social sciences map onto empirical evidence from this study. DESIGN: A literature review and case studies of social research projects that were initiated by NHS health authority managers or GP fund holders in one region of the NHS. In depth interviews and document analysis were used. SETTING: One NHS region in England. PARTICIPANTS: Policy makers, GPs and researchers working on each of the social research projects selected as case studies. MAIN RESULTS: The direct influence of research evidence on decision making was tempered by factors such as financial constraints, shifting time scales and decision makers' own experiential knowledge. Research was more likely to impact on policy in indirect ways, including shaping policy debate and mediating dialogue between service providers and users. CONCLUSIONS: The study highlights the role of sustained dialogue between researchers and the users of research in improving the utilization of research-based evidence in the policy process.

Engleman, R. & Van de Ven, A. (2002). Motivating and Enabling Conditions of Effective Organizational Change. Working paper. Web document: http://webpages.csom.umn.edu/smo/avandeven/mhoc/mhoc/Engleman&Vandeven%20Ind-Org02.pdf

*Main Messages:*

- Effective organizational change can be significantly enhanced when management develops an organizational culture that enables and motivates individuals to work in organizationally productive and personally fulfilling ways.

*Summary:* This longitudinal research examines the proposition that the effectiveness of organizational change is a function of the extent to which employees are motivated and enabled to implement organizational initiatives. Based on annual employee surveys within fifty health care clinics, the researchers found that not all employees respond alike to organizational changes they experience. These different responses are associated with different profiles on five individual motivating factors (rewards, recognition, fairness, trust, and value congruence) and five organizational enabling conditions (supportive leadership, openness to ideas, work discretion, work standardization, and resources). The authors emphasize the importance of examining different individual responses to organizational change efforts over time. How the organization interacts with its employees significantly influences whether employees will respond in positive, negative, or ambivalent directions to organizational change initiatives.

Ferlie, E.B. & Shortell, S.M. (2001). Improving the quality of health care in the United Kingdom and United States: A framework for change. *The Milbank Quarterly*, *79*(2): 281–315.

*Main Messages:*

- Change efforts to date have relied on relatively narrow, single-level programmatic change strategies that have been largely unsuccessful.
- There are four levels of change: (i) the individual; (ii) the group or team; (iii) the overall organization; and (iv) the larger system or environment.
- Whether changes to improve quality and outcomes of care are top-down or bottom-up, whether they occur incrementally or radically, they will have to consider all four levels of change to maximize the probability of success.
- The multilevel approach must recognize the importance of four essential core properties of successful quality-improvement work: (i) leadership at all levels; (ii) a pervasive culture that supports learning throughout the care process; (iii) an emphasis on the development of effective teams; and (iv) greater use of information technologies for both continuous improvement work and external accountability.
- The more successful organizations will implement continuous quality improvement or total quality management at multiple levels, and they will ensure that the effectiveness of the different approaches will be situationally determined by the problem being addressed within the context of specific organizations and environments.

*Summary:* The authors take an independent look at the quality strategies in the United Kingdom and the United States and argue that these well-intentioned efforts will fail to realize their potential unless both policy-makers and practitioners consider and implement a more comprehensive, multilevel approach to care. They outline the multilevel change approach (theory) and the core properties, and give examples from the UK and USA. They highlight some factors that will influence how each country might adapt this framework and associated properties to fit its own political system and culture. They conclude by offering suggestions for comparative research that might inform each country's efforts.

Fixsen, D., Blase, K., Friedman, R., & Hernandez, M. (2003, unpublished manuscript). Fundamentals of Program Implementation. Tampa FL: The Louis de la Parte Florida Mental Health Institute, University of South Florida.

*Main Messages:*

- The debate on how to define "evidence-based" has far-reaching implications for human services.
- Program implementation is positively affected by local leadership and support, organizations that are more collegial and less bureaucratic, and the availability of experts in the particular EBP who can provide on-site training and support.
- Leadership includes champions of change, champions of particular EBPs, and champions of community.
- Key local stakeholders need to be well-informed and agree to do their part to support implementation of the EBP.

*Summary:* The need to make science more useful to practitioners who provide services to children, families, and adults has resulted in a surge of attention to EBPs. Since 1999, several reports have revealed the gap between knowledge of effective treatments and treatments being received by persons with major mental illness. Factors involved in the successful replication and implementation of EBPs are not well understood or well grounded in evidence. This article describes some fundamental components of successful program replication and implementation based on the experiences of those who have been involved in this work. In addition, it provides a discussion of what constitutes EBPs, as well as a brief review of literature related to replication and implementation of EBPs. Seven common

stages identifiable across programs arise from the review: exploration, selection, installation, initial implementation, advanced implementation, innovation, and sustainability.

Fixsen, D., Wallace, F., & Naoom, S. (2005). Top Five Reasons Not to Use Evidence-Based Programs . In C. Newman, C. Liberton, K. Kutash, & R. M. Friedman (Eds.), *The 17th Annual Research Conference Proceedings, A System of Care for Children's Mental Health: Expanding the Research Base* (pp. 89-91). Tampa: University of South Florida, The Louis de la Parte Florida Mental Health Institute, Research and Training Center for Children's Mental Health.

*Main Messages:*

- Reasons for not using EBPs include: research base is not convincing; they are difficult to implement; they require too much change; they are incomplete given the problems we face; infrastructure for implementation does not exist or is not supported.

*Summary:* Although much is known about what works within human services, little has been done to make use of that knowledge to improve behavioural health outcomes for children, families, and adults. With the strong emphasis currently being placed on evidence-based programs and practices, it is important to find better ways to implement them with fidelity and good outcomes. This article reports on a survey conducted at a poster session where conference attendees were asked to identify the impediments to adopting EBPs and programs. The findings were categorized into the top five reasons for not using evidence-based programs.

Flaskerud, J.H. & Anderson, N. (1999). Disseminating the results of participant-focused research. *Journal of Transcultural Nursing*, *10*, 340–349.

*Main Messages:*

- Participant-focused research empowers participants and aids the dissemination process.

*Summary:* Participant-focused research (PFR) includes the subjects as full partners in the research process. As such, participants share in the products or outcomes of research. PFR goes beyond the traditional research approach of disseminating findings to other scientists and clinicians, and includes participants and community residents in sharing the skills, knowledge, and resources of the study with the objective of empowering the participants. This article demonstrates the use of PFR in disseminating the results or products of study to the participants through two examples of long-term research projects conducted in Los Angeles. The first example is a community-based study of HIV prevention with low-income Latina women. The second example is an ethnographic study of health concerns and risks among adolescents in juvenile detention. These examples provide two approaches to disseminating research findings and benefits to the participants and the community.

Fleuren, M., Wiefferink, K., & Paulussen, T. (2004). Determinants of innovation within health care organizations. *International Journal for Quality in Health Care*, *16*(2),107–123.

*Main Messages:*

- When designing a strategy for implementing an innovation, it is essential to identify determinants that can affect the successful implementation of the innovation and to accommodate these in the strategy.
- Many theories of change can provide a starting point for identifying the determinants shown to be relevant for successful implementation.

*Summary:* The authors conducted a literature review and Delphi study to obtain an overview of determinants of innovation in health care organizations. They identified 49 determinants (provided in a table that is very helpful as an overview) that affected (impeded or facilitated) the innovation process. The authors note that many of the innovation studies they reviewed were methodologically flawed. For instance, some studies did not adjust innovation strategies to relevant determinants of the

innovation process, or gathered data on determinants from non-users only. Furthermore, there are different ways of assessing the degree of implementation achieved, and this makes comparison difficult.

Fooks, C., Cooper, J., et al. (1997). *Making Research Transfer Work*. National Workshop on Research Transfer, Toronto, Ontario.

*Main Messages:*

- Involving stakeholders in the communication of results is a key part of research transfer communications.
- Evidence-based dissemination needs to be practised through more effort on evaluation.
- Each research project should have a separate research transfer strategy.
- Understand the receptor market before the research is undertaken and the decision environment in which the research will be interpreted.
- Get buy-in from academic researchers.

*Summary:* To address the lack of practical information available on effective methods and mechanisms of transferring research, a workshop involving staff from three Ontario-based research organizations was conducted. This paper reports on the important issues and themes that arose from the workshop, which included sessions on assessing impact, communicating/disseminating results, and tips on dealing with the media and working with researchers and decision-makers.

Fox, N.J. (2003). Practice-based evidence: Towards collaborative and transgressive research. *Sociology*, *37*(1), 81–104.

*Main Messages:*

- Research findings with practical implications need to engage with the practice they wish to inform.
- It is important that research is not disengaged from the politics of the setting which it explores.
- Research and practice are no longer to be seen in opposition, but rather they are both aspects of a continuum of human activity and are constituted in relation, one to the other.

*Summary:* Studies of the application of research in policy and service delivery suggest that the translation of research findings into practice is not straightforward. Practitioners are criticized for failing to base actions on research evidence, while academic research is sometimes condemned as irrelevant to practice. This paper argues that this conflict derives in part from an academic model of research constructed in opposition to practice. Reflections on scientific logo centrism (claims to possess unmediated knowledge of reality) and 'transgressive' action research provide a critique of traditional research and suggest an alternative, practice-based research model. The article identifies three propositions for generating practice-based evidence: (i) the pursuit of knowledge should be acknowledged as a local and contingent process; (ii) research activity should be constitutive of difference, questioning the legitimating and repression of particular aspects of the world; (iii) theory-building should be seen as an adjunct to practical activity. Together, these positions dissolve the researcher/researched and research/practice oppositions in traditional research, and supply an ethically and politically engaged research. The author explored practice-based research in terms of four moments in the research process.

Freeman, A.C. & Sweeney, K. (2001). Why general practitioners do not implement evidence: Qualitative study. *British Medical Journal*, *232*: 1–5.

*Main Messages:*

- The process of implementation of new knowledge is extremely complex.

*Summary:* The objective of this study was to explore the reasons why general practitioners do not always implement best evidence. Six main themes were identified that affect the implementation process: the general practitioner's personal and professional experiences; the patient-doctor

relationship; a perceived tension between primary and secondary care; general practitioners' feelings about their patients and the evidence; and logistical problems. Doctors are aware that their choice of words with patients can affect patients' decisions and whether evidence is implemented. General practitioner participants seem to act as a conduit within the consultation and regard clinical evidence as a square peg to fit in the round hole of the patient's life. The process of implementation is complex, fluid, and adaptive.

Freemantle, N. & Watt, I. (1994). Dissemination: Implementing the findings of research. *Health Library Review*, *11*, 133–137.

*Main Messages:*

- Effective dissemination depends on the use of multiple means of communicating key messages.

*Summary:* There is an increasing interest in dissemination among researchers, policy makers, and information scientists. Dissemination, in the context of health services, can be taken to mean the process of implementing research findings. Currently, there is a considerable delay in adopting evidence on the effectiveness of interventions by professionals in the NHS and other health systems. Developing research designs such as randomized control trials—which can provide the most reliable information on the efficacy of interventions—is a crucial but partial step in the quest to place clinical practice on a more scientific basis. Systematic overviews of interventions bring together the relevant evidence to provide overall estimates of the effectiveness of health service interventions. However, there remains the difficulty of bringing them to the attention of health professionals in a manner which will enable them to improve the effectiveness of their clinical practice. The research evidence suggests that effective dissemination will depend upon using multiple means to communicate key messages rather than a single measure or 'magic bullet.' Information professionals have a role in ensuring the key research evidence is promoted, and that it is as reliable as possible.

French, R. (2001). Negative capability: Managing the confusing uncertainties of change. *Journal of Organizational Change*, *14*(5), 480–492.

*Main Messages:*

- Successful change management requires the capacity to live with, tolerate, and learn from ambiguity, paradox, and uncertainty (negative capability), as well as the skills and competencies of positive managerial and leadership capabilities.
- Organizations need someone to perform the work of containment, which refers to facing up to, understanding, and managing the emotions inevitably aroused by change.

*Summary:* This paper explores how psychoanalytic thinking can contribute to the management of the conflicting emotions stimulated by change. Even when change is managed well through positive managerial and leadership capabilities, change always arouses anxiety and uncertainty. This results in a tendency to disperse energy from the task through a range of avoidance tactics, such as delay. However, by developing sufficient negative capabilities to tolerate ambiguity and uncertainty, one can stay with the moment, resisting the impulse to react to the pressures inherent in risk-taking, and thus learn something new.

Garland, A.F., Kruse, M., & Aarons, G. (2003). Clinicians and outcome measurement: What's the use? *The Journal of Behavioral Health Services and Research*, *30*(4), 393–405.

*Main Messages:*

- There is great variability in clinicians' attitudes about the extent to which it is possible to quantify the effectiveness of treatment (about 50/50). Many clinicians express ambivalence, stating general support for attempts to measure outcomes, but frustration or recognition of the challenges inherent in measuring these constructs: "It's like picking up Jell-O with a fork."

- The most commonly mentioned methods of evaluating effectiveness of treatment included subjective reports from the client, followed closely by reports from parents and teachers. A large majority of clinicians also reported using clinician observation and intuition as their evaluative method. Fewer than 10% mentioned using any standardized measures or scales, and no respondents spontaneously mentioned the specific state-mandated standardized outcome assessment measures.
- Motivation and/or incentives to evaluate the effectiveness of their work was largely from mandatory participation in interdisciplinary treatment team case review mechanisms built into the structure of their setting. Many also mentioned structural, funding-based requirements to outline treatment goals at the start of treatment and review progress toward those goals over the course of treatment.
- Regarding outcome domains for evaluating a client's progress in treatment, clinicians rated improved functioning as the most important, and client satisfaction as the least.
- Most clinicians do not feel increased pressure to demonstrate their effectiveness as a psychotherapist.
- The majority of respondents (92%) indicated they had never used the score from the mandated standardized measures in their clinical practice.
- Barriers to using outcome data included: (i) feasibility concerns; (ii) perceived invalidity; and (iii) interpretation difficulties.
- Respondents requested more training and information on how to use interpretation of the scores in practice.

*Summary:* this study examined the experiences with, and perceptions of, the utility, validity, and feasibility of standardized outcome measures in practice among 50 randomly selected clinicians from multiple disciplines and service agencies in a large children's public mental health service system. There was consensus regarding feasibility challenges of administering standardized measures, including time burden and literacy barriers. Clinicians reported they did not use the scored assessment profiles in treatment planning or monitoring.

Gerrish, K. & Clayton, J. (2004). Promoting evidence-based practice: An organizational approach. *Journal of Nursing Management*, *12*: 114–123.

*Main Messages:*

- Strategies to promote EBP need to take an account of the current constraints that practitioners are working under and ensure that evidence-based information is readily available in a form in which they can easily understand the implications for their practice.
- Establishing a culture responsive to change is essential in taking forward the EBP agenda.

*Summary:* This paper examines factors influencing the achievement of EBP through the approach taken by a large teaching hospital in England to promote EBP. Findings indicate that nurses relied most heavily on experiential knowledge gained through their interactions with nursing colleagues, medical staff, and patients to inform their practice. Organizational information in the form of policies and audit reports was drawn upon more frequently than research reports. Lack of time, resources, and perceived authority to change practice influenced the extent to which nurses used formal sources of evidence. Health care organizations need to consider multiple strategies to facilitate and promote EBP. Managerial support, facilitation, and a culture receptive to change are essential.

Gill, R. (2003). Change management—or change leadership? *Journal of Change Management*, *3*(4), 307–318.

*Main Messages:*

- Change requires good management, but above all it requires effective leadership.

- The leadership of successful change requires vision, strategy, the development of a culture of sustainable shared values that support the vision and strategy for change, and empowering, motivating, and inspiring those who are involved or affected.

*Summary:* This paper argues that, while change must be well managed, it also requires effective leadership to be successfully introduced and sustained. The author proposes an integrative model of leadership for change, reflecting its cognitive, spiritual, emotional, and behavioural dimensions and requirements. The model comprises vision, values, strategy, empowerment, and motivation and inspiration. The paper concludes with a brief account of the application of the model in varied strategic change situations.

Gill, S., Greenberg, M.T., & Vazquez, A. (2002). Changes in the service delivery model and home visitors' job satisfaction and turnover in an Early Head Start program. *Infant Mental Health Journal*, *23*(1–2), 182–196.

*Main Messages:*

- Process evaluations of intervention programs are as important as the study of the intervention outcomes themselves.
- Staff turnover during implementation of programs can be a critical issue.

*Summary:* This article describes the process of implementing an Early Head Start program and its effect on changes in the home visitors' job satisfaction and turnover. The biggest challenge for the implementing agency was maintaining undisrupted service delivery while the new administration worked on rejuvenating the program. The staff turnover rate was the highest in the program's history, highlighting the need for adequately trained personnel staff. However, as the program stabilized, the staff turnover rate decreased. The authors also discuss the importance of the role of the evaluator, and note that evaluators could also be program improvement consultants, thereby enhancing the quality of the collaboration between researchers and program administrators.

Golden-Biddle, K., Reay, T., & Thomson, D. (2005). Implementing Change: The Crucial Role of Middle Managers. Organizational Change in the Health Care Sector with Special Reference to Alberta, Canada, Health Organization Change Group. Web document: ttp://www.bus.ualberta.ca/hos/Resources/resources_webarts.htm

*Main Messages:*

- The vital role that middle managers can play in creating and sustaining change is often overlooked.

*Summary:* Based on the findings from a study investigating the introduction of the nurse practitioner role, this paper discusses the role middle managers play in creating and sustaining change, as well as how organizations can support its middle managers. Successful middle managers lead in quiet ways, performing crucial but often invisible work in the middle of organizations. The investigators found these managers are faced with three common challenges: (i) clarifying the reallocation of tasks; (ii) managing altered working relationships within the team; and (iii) continuing to manage the team in an evolving situation. Organizations can take actions to develop and tap the capability of middle managers, including: evaluating how the organization supports the important relationship that middle managers often have with front-line staff; drawing on the vital knowledge that middle managers bring to their work; finding ways to minimize the constraints of middle managers; and supporting and recognizing the efforts of effective middle managers.

Goldman, H.H., Ganju, V., Drake, R. E., Gorman, P., Hogan, M., Hyde, P.S., & Morgan, O. (2001). Policy implications for implementing evidence-based practices. *Psychiatric Services*, *52*(12), 1591–1597.

*Main Messages:*

- Mental health policies must create the organizational and financial incentives to implement EBPs.
- It is critical to have a dedicated individual and/or infrastructure to support systemic change.
- Implementing EBPs is a quality-improvement process that provides accountability through the monitoring of the fidelity of practices that have been demonstrated by research to be effective.

- No empirical base exists for the dissemination and implementation of EBPs. Researchers know that a program "works" at the clinical level because they have studied it, but they have not yet studied the implementation process itself.

*Summary:* The authors describe the policy and administrative practice implications of implementing evidence-based services, particularly in public-sector settings. They review the observations of the contributors to the EBPs series published throughout 2001 in *Psychiatric Services*. Quality and accountability have become the watchwords of health and mental health services; EBPs are a means to both ends. The authors propose eight courses of action to address the gap between science and practice: continue to build the science base; overcome stigma; improve public awareness of effective treatments; ensure the supply of mental health services and providers; ensure the delivery of state-of-the-art treatments; tailor treatment to age, sex, race, and culture; facilitate entry into treatment; and reduce financial barriers to treatment.

Goodman, R.M. (2000). Bridging the gap in effective program implementation: From concept to application. *Journal of Community Psychology*, *28*, 309–321.

*Main Messages:*

- How projects are implemented explains a relatively high proportion of the variance of outcomes; implementation typically dominates the outcomes.
- It is important to develop strategies to ensure effective implementation if program outcomes are to be assured.
- Where desired outcomes are not evident and the intervention mechanisms are unknown, the program is at risk of a Type III error: little result due to faulty implementation.

*Summary:* Although great expense and effort is often incurred for community initiatives, they often produce modest results that some have attributed to the inadequacies of community-based interventions. This article addresses the fundamental question of how funding and implementing organizations can bridge the gap that currently exists between the desire to use community strategies for improving health and the strategic implementation of programs to better assure outcomes.

Gordon, D. A. (2000). Parent training via CD–ROM: Using technology to disseminate effective prevention practices. *The Journal of Primary Prevention*, *21*(2), 227–251.

*Main Messages:*

- Technology can be effectively used to disseminate effective prevention practices.

*Summary:* Family-based prevention programs are effective in reducing risk factors for substance abuse. The lack of efficient methods for training staff and ensuring treatment integrity and the limited time program progenitors have for dissemination impede the spread of these programs. Additionally, there are barriers to families who use these programs, such as stigma associated with a parent education or mental health approach, transportation and access difficulties, and inability to commit to months of treatment sessions. New developments in technology can surmount most of these barriers. The author describes a video-based interactive CD–ROM for training parents and families in child management and relationship enhancement skills.

Gotham, H.J. (2004). Diffusion of mental health and substance abuse treatments: Development, dissemination, and implementation. *Clinical Psychology: Science & Practice*, *11*(2), 160–176.

*Main Messages:*

- Some models of implementation are beginning to be available, including *The Change Book: A Blueprint for Technology Transfer* (2000), published by the Addiction Technology Transfer Centre Network in the US. This document presents an overview of the organizational change process, including a ten-step model for assisting an organization in implementing a technology.

- Fidelity research, an approach that determines how closely the implementation of a technology matches the original program, is greatly needed to evaluate the effects of reinvention.
- Consumer involvement is key to implementation success; a treatment must be acceptable to clients.
- Staff attitudes, training, and turnover are key to successful implementation, particularly since there are no empirically supported methods for training ESTs at the pre- and post-doctoral levels.
- New treatments are unlikely to be implemented successfully unless incentives are provided.
- While outside consultants can be helpful in training and implementation support, the agency must take responsibility for implementation, and manager and administrator/leadership support is necessary for success.
- State mental healthy systems also influence treatment implementation, and best do so by providing training and technical assistance.
- Conducting outcome evaluation is critical because implementation does not ensure effectiveness. Support for outcome measurement and research should occur at the program, state, and federal levels. State (provincial) mental health systems can provide local incentive grants for outcome studies, state-level integrated management information systems, and Internet-based outcomes tracking systems (as in Missouri and Ohio).

*Summary:* Theory and research regarding the diffusion of innovations and technology transfer have advanced our understanding of how new ideas and technologies are developed, disseminated, adopted, and implemented by individuals and organizations. Findings from diffusion-of-innovations research can assist in bridging research-practice gaps that lead to clients receiving treatments whose effectiveness has not been assessed, or clients not receiving the most effective treatments. This article reviews theory and research regarding the diffusion of innovations and highlights areas for application to mental health treatment, including the transportability of treatments into real-world settings, strategies to disseminate treatments, attributes of treatments that affect their adoption, and organizational change factors that affect implementation.

Green, L.W. & Johnson, J.L. (1996). Dissemination and utilization of health promotion and disease prevention knowledge: Theory research and experience. *Canadian Journal of Public Health*, *87*(Supplement 2), 1–17.

*Main Messages:*

- People who adopt the innovation first and stand at least two standard deviations ahead of the mean are "innovators," those between two and one standard deviation ahead of the mean are "early adopters," and those who adopt within one standard deviation of the mean are "middle majority." Those who adopt more than one standard deviation later than the population mean or the median person generally bear the label "late adopters."
- Subjectivity thesis: no matter how knowledge is objectively and scientifically grounded, both individuals and organizations consume it subjectively according to their own experience and circumstance.
- Corrigibility thesis: knowledge, whether directed toward understanding or action, always leaves room for refinement, improvement, and adaptation.
- Sociality thesis: the production, transfer, and use of knowledge are social processes.
- Complexity thesis: the processes used in knowledge development, dissemination, and use are interdependent in their causes and effects and thus complicated both to study and to accelerate or decelerate.
- Not all knowledge and innovations are of the same urgency, importance, perceived value, utility, comprehensibility, or manageability.
- Different kinds of knowledge may require different diffusion strategies.
- Knowledge can be misused if it runs too far ahead of the professional service providers and others on whom the public depends for knowledge translation.

*Summary:* The authors review the theoretical and research foundations of knowledge dissemination and use. They provide a table illustrating the selected disciplinary contributions to the field of innovation diffusion. They review a descriptive model of diffusion theory that allows for identification of categories of adopters according to the part of the curve under which they fall. The model refers to people who adopt the innovation first and stand at least two standard deviations ahead of the mean as innovators, those between two and one standard deviation ahead of the mean as early adopters, and those who adopt within one standard deviation of the mean as middle majority. The middle majority may divide for some descriptive analyses into the early majority and the late majority on either side of the mean (or the 50th percentile in a normal distribution). Those who adopt more than one standard deviation later than the population mean or the median person generally bear the label late adopters. The profiles of innovators, early adopters, middle majority, and late adopters share common characteristics across studies in various fields of innovation and knowledge diffusion. Innovators, for example, typically obtain their information from sources external to the community or membership of the population. Early adopters function as opinion leaders for the majority and, like innovators, have more education than the average person in the population. The early majority tend to be more influenced by interpersonal sources of information than media sources, and more by role modeling than by information processing. Late adopters depend more on economic or other enabling supports to achieve adoption. The theoretical assumptions common to the field of knowledge dissemination and utilization are identified: (i) subjectivity thesis – no matter how knowledge is objectively and scientifically grounded, both individuals and organizations consume it subjectively according to their own experience and circumstance; (ii) corrigibility thesis – knowledge, whether directed toward understanding or action, always leaves room for refinement, improvement, and adaptation; (iii) sociality thesis – the production, transfer, and use of knowledge are social processes; and (iv) complexity thesis – the processes used in knowledge development, dissemination, and use are interdependent in their causes and effects and thus complicated both to study and to accelerate or decelerate. Three developments in recent years promise to revive diffusion research: theoretical (ecological theories), methodological (participatory research), and technological (new communication technologies).

Grimshaw, J.M. & Eccles, M.P. (2004). Is evidence-based implementation of evidence-based care possible? *Medical Journal of Australia*, *180*(Supplement): S50–S51.

*Main Messages:*

- Traditional approaches to disseminating research findings have failed to achieve optimal health care.
- Studies in the United States and the Netherlands suggest that 30%–40% of patients do not receive care complying with current scientific evidence, and 20%–25% of the care provided is not needed or potentially harmful.
- It is possible to change health care provider behaviour: 86% of studies reviewed by the authors in a separate study observed improvements in process-of-care indicators (e.g., percentage compliant with guidelines).
- Future research is required to develop a better theoretical base and to further evaluate guideline dissemination and implementation of strategies.

*Summary:* This paper follows on an important paper by Grol (1997) in which he stated that many current approaches to implementation are based on participants' beliefs rather than evidence about the likely effectiveness of different approaches. Grol challenges health care systems to develop and use a robust evidence base to support the choice of implementation strategies, arguing that evidence-based medicine should be complemented by evidence-based implementation. The authors examine how far we have come in this challenge.

Grimshaw, J.M. & Russell, I.T. (1993). Effect of clinical guidelines on medical practice: A systematic review of rigorous evaluations. *The Lancet*, *342*: 1317–1322.

*Main Messages:*

- Explicit guidelines improve clinical practice when introduced in the context of rigorous evaluations.
- The size of improvements in performance as a result of clinical guidelines vary considerably.

*Summary:* This study involved identifying 59 published evaluations of clinical guidelines that met defined criteria for scientific rigor. All but 4 of these studies detected significant improvements in the process of care after the introduction of guidelines. The size of this improvement varied considerably. All but 2 of the 11 studies of patient outcome found some significant improvement.

Grol, R. (2001). Successes and failures in the implementation of evidence-based guidelines for clinical practice. *Medical Care*, *39*(8, Supplement 2): II46–II54.

*Main Messages:*

- A diagnostic analysis of the target group and target setting should occur before implementation begins.
- A program to implement a guideline should be well-designed, well-prepared, and pilot-tested before use.

*Summary:* Although evidence-based clinical practice guidelines is a promising and effective tool for improving quality of care, many guidelines are not used after dissemination. This article reports on the experiences with developing and implementing a program for national evidence-based guidelines for family medicine in the Netherlands. The author offers some of the lessons learned based on 10 years of guideline development and implementation. First, acceptability of the guidelines by the target group is enhanced when it is owned and operated by the profession itself. Second, a comprehensive strategy to disseminate the guidelines via various channels, both written and personal, is important. A diagnostic analysis of the target group and target setting should occur before implementation begins. Third, a program to implement a guideline should be well-designed, well-prepared, and pilot-tested before use.

Grol, R. & Grimshaw, J.M. (2003). From best evidence to best practice: Effective implementation of change in patients' care. *The Lancet*, *36*(i9391): 1225.

*Main Messages:*

- No one approach for transferring evidence to practice is superior to all changes in all situations.
- The prevailing professional and organizational culture toward quality determines the outcome of changing practices to a larger extent than the practitioner's own actions.

*Summary:* This article provides an overview of the current knowledge and thinking about approaches to changing medical practice. The evidence suggests that change requires comprehensive approaches at different levels tailored to specific settings and target groups, and that plans for change should be based on characteristics of the evidence or guideline itself and barriers and facilitators to change. No one approach for transferring evidence to practice is superior to all changes in all situations. Three basic issues in influencing the uptake of evidence include: attributes of evidence, barriers and facilitators to changing practice, and effectiveness of dissemination and implementation strategies. Tips for changing practice and implementing evidence are also offered and include: involving relevant people; developing a proposal for change that is evidence-based, feasible, and attractive; studying the main difficulties in achieving the change; selecting a set of strategies and measures at different levels linked to that problem; and defining indicators for measurements of success and monitoring progress continuously or at regular intervals.

Grol, R. & Wensing, M. (2004). What drives change? Barriers to and incentives for achieving evidence-based practice. *Medical Journal of Australia*, *180* (Supplement): S57–S60.

*Main Messages:*

- To bridge the gap between scientific evidence and patient care, an in-depth understanding of the barriers and incentives to achieving change in practice is needed.
- The evidence for the value of various theories and models for change that point to a multitude of factors that may affect the successful implementation of evidence is still limited.
- When planning complex changes in practice, potential barriers at various levels need to be addressed. Planning needs to take into account the nature of the innovation, characteristics of the professionals and patients involved, and the social, organizational, economic, and political context.

*Summary:* This article provides an overview of how barriers and incentives to change in practice can be identified, categorized, and used to tailor interventions to facilitate desired change. In attempting to categorize the determinants for change, two complementary approaches may be used: the first focuses on characteristics of individual professionals, and the second on interpersonal factors and system characteristics. Individual professionals need to be informed, motivated, and perhaps trained to incorporate the latest evidence into their daily work. Strategies that take into account factors at all three levels (predisposing, enabling, and reinforcing) are the most successful in effectively implementing evidence. However, there is still a lack of information on how to effectively tailor interventions to produce change.

Haines, A. & Donald, A. (1998). Making better use of research findings. *British Medical Journal*, *317*: 72–75.

*Main Messages:*

- Pressure for more effective and efficient implementation of research findings is likely to grow.
- Reasons for failing to get research into practice are many, and include lack of appropriate information at the point of decision making, and social, organizational, and institutional barriers to change.
- All people within an organization who will have to implement the change or who can influence change should be involved in developing strategies for change.
- Those who adopt new ideas early tend to differ in a number of ways: they tend to have more extensive social and professional networks (Rogers, E.M., *Diffusion of innovations*. New York, Free Press, 1983)

*Summary:* There is increasing interest in implementing research findings in practice, both because of a growing awareness of the gap between clinical practice and the findings of research, and also because of the need to show that public investment in research results in benefits for patients. Improved understanding of the reasons for the uptake of research findings requires insights from a range of disciplines. To promote the uptake of research findings, it is necessary to identify potential barriers to implementation and develop strategies to overcome them. Specific interventions that can be used to promote change in practice include using clinical guidelines and computerized decision support systems, developing educational programs, communicating research findings to patients, and developing strategies for organizational change.

Happel, B., Johnston, L., & Hill, C. (2003). Implementing research findings into mental health nursing practice: Exploring the clinical research fellowship approach. *International Journal of Mental Health Nursing*, *12*, 251–258.

*Main Messages:*

- Creating change within an existing culture takes considerable time and a strong persistent attitude.
- Managers' respect for participants' clinical and interpersonal skills is a significant variable affecting the successful implementation of change.

*Summary:* The lack of research use within nursing practice has been extensively discussed in the literature. The Clinical Research Fellowship program was developed to assist nurses to change practice on the basis of high-quality research evidence. This paper presents the results of a qualitative study

examining the experiences of completing the program and implementing changes within the clinical setting. The findings indicate a positive view of the program itself, although problems with the implementation stage were evident. The degrees of success of this program will be influenced by the level of supports and the barriers inherent within the organization.

Harvey, G., Loftus-Hills, A., Rycroft-Malone, J., Titchen, A., Kitson, A., McCormack, B., & Seers, K. (2002). Getting evidence into practice: The role and function of facilitation. *Journal of Advanced Nursing*, *37*(6), 577–588.

*Main Messages:*

- Elements of facilitation that are influential in the uptake of research into practice are the personal characteristics of the facilitator, a clearly defined role, and appropriate styles of working.
- The facilitator role is about supporting people to change their practice.
- To be effective, facilitators require a tool kit of skills and personal attributes that they can use depending on the context and purpose.

*Summary:* In addition to robust evidence and a context that is receptive to change with sympathetic cultures and a strong leadership, appropriate facilitation plays a strong interdependent role in the uptake of evidence into practice. Facilitators play a key part in helping individuals and teams understand what they need to change and how they should change it. Through a review of the literature and using a concept analysis approach as a framework, this article explores the purpose, role, skills, and attributes of facilitators compared to other change agent roles such as educational outreach workers, academic detailers, and opinion leaders. Some of the defining characteristics of facilitation that distinguish it from other change agent strategies include: it is an appointed role; the role may be internal or external; the role is about helping and enabling rather than telling or persuading; and the focus of facilitation may encompass a broad spectrum, from providing help to achieve a specific task to using methods which enable individuals and teams to review their attitudes, habits, skills, ways of thinking, and working. Overall, facilitation is an intervention with a holistic purpose which employs a range of enabling roles and skills.

Haynes, B. & Haines, A. (1998). Barriers and bridges to evidence-based clinical practice. *British Medical Journal*, *317*, 273–276.

*Main Messages:*

- Practitioners have difficulty finding, accessing, interpreting, and applying current best evidence.
- New evidence-based services (electronic databases, systematic reviews, and journals that summarize evidence) make accessing current best evidence feasible and easy in clinical settings.

*Summary:* There are several barriers to the successful application of research evidence to health care. They include factors beyond the control of the practitioner and patient, as well as factors that might be modified to advantage. The article suggests three steps needed to harness research evidence for health care practice: synthesizing the evidence, developing clinical policy from the evidence, and applying the policy at the right place, in the right way, at the right time. The authors also suggest models for doing so. For example, in the synthesizing the evidence stage, abstracting services can critically appraise studies and these appraisals can then be published. In addition, the authors discuss that advances in information technology can provide access to high quality research.

Hazel, K.L. & Onaga, E. (2003). Experimental social innovation and dissemination: The promise and its delivery. *American Journal of Community Psychology*, *32*(i3–4), 285–385.

*Main Messages:*

- Few innovative social change and prevention strategies are implemented beyond the initial demonstration site.

- There is a lack of training programs that provide adequate training in dissemination technologies or research.
- Model effectiveness can be increased by maintaining fidelity to the core of the original model while simultaneously adding to the model in ways that better meet the needs of the setting.
- Involving community stakeholders in the entire research process may enhance long-term use of the innovation.

*Summary:* This paper discusses the origin of the Experimental Social Innovation and Dissemination (ESID) model, as well as its contribution to the field of community psychology. ESID is an action-oriented, multi-step process for systematically introducing change in social systems that is based on scientific evidence of effectiveness. The ESID approach requires that the researcher be an advocate for the scientific method, work from a participatory model, and be a competent communicator to maintain effective collaborative relationships with the host setting during intervention and evaluation. Dissemination practice and research needs to become an integral component of ESID training programs and literature.

Henderson, J. (2001). Learning, changing and managing in mental health. *Journal of Interprofessional Care*, *15*(4).

*Main Messages:*
- Workers who undertake learning in mental health often feel disempowered and isolated when attempting to introduce new ideas for practice into the work place.
- Management culture is central in enabling or preventing individual practitioners to attempt implementing change.

*Summary:* This paper draws on research which considers the implications for practitioners and managers of implementing new ideas for practice gained from learning and education in mental health. It argues that much of the management literature on change within organizations does not take into account the complexities surrounding work within social care, particularly in mental health. Based on the results from a survey and semi-structured interviews, the authors report that workers who have undertaken learning in mental health often feel disempowered and isolated when attempting to introduce new ideas for practice into the workplace. They also report that first line managers who operate at the intersection of practice and learning play a key role in enabling and supporting staff through practice as well as service change and professional development.

Henggeler, S.W., Schoenwald, S.K., Liao, J. G., Letourneau, E. J., & Edwards, D. L. (2002). Transporting efficacious treatments to field settings: The link between supervisory practices and therapist fidelity in MST programs. *Journal of Clinical Child Psychology*, *31*(2), 155–167.

*Main Messages:*
- The effective transport of an evidence-based mental health model to community settings is an extremely complex process.
- To effectively transport evidence-based services to the field, quality assurance mechanisms that support program fidelity must be developed, and the capacity of providers to measure and attain favourable client outcomes needs to be instilled.
- Predictors of therapist fidelity to multi-faceted and flexible treatment protocols in real-world clinical settings include characteristics of individual clinicians (e.g., types of professional training), organizations housing clinical programs (e.g., organizational climate), and community variables (e.g., funding mechanism).

*Summary:* The transport of treatments that have been successful in university-based efficacy studies to community mental health contexts poses a major challenge in the field of mental health services for children. The lack of research in this area is largely due to the significant challenges in conducting these kinds of studies. This article reports on a study that sought to validate a measure of clinical

supervision, further validate a therapist adherence measure, and examine the role of clinical supervision practices in the effective transport of an evidence-based mental health treatment to field settings. The findings indicated that the associations between supervisory practices and therapist behaviour can be the opposite of those assumed. In this case, high supervisory fidelity might have been validly associated with low therapist adherence. It is likely that the predictors of therapist fidelity to multi-faceted and flexible treatment protocols in real-world clinical settings most likely extend beyond constructs pertaining to supervision only.

Heracleous, L. (2001). An ethnographic study of culture in the context of organizational change. *The Journal of Applied Behavioral Science*, *37*(4), 426–446.

*Main Messages:*

- For change to be successful, clinicians must identify the organization's governing assumptions and ensure that the new behaviours, values, and beliefs the organization pursues do not conflict with and are supported by these governing assumptions.

*Summary:* Employing an ethnographic research approach combined with a clinical element, the author explores the nature and the role of culture in the context of organizational change. The study takes place at the UK operations of a global human resources consulting firm. Using Schein's levels of culture model, the author identifies cultural assumptions and values and explores how these relate to behaviours, using the author's relationship with the organization as a rich data source. This study shows how organizational culture develops historically, is internally coherent, and has potent effects on behaviours that should be studied and understood by managers and clinicians undertaking organizational change programs.

Herschell, A.D., McNeil, C.B., & McNeil, D. W. (2004). Clinical child psychology's progress in disseminating empirically supported treatments. *Clinical Psychology: Science & Practice*, *11*(3), 267–288.

*Main Messages:*

- The gap between what clinical researchers know about what works and what clinicians in community settings know about what they do in practice is increasingly evident.
- There is a significant lag between the call that has gone out for more research on dissemination and the appearance of published dissemination research in the major journals in the field.
- Four dissemination methods that can be used to improve child empirically-supported treatment (EST) dissemination include treatment manuals, graduate education, continuing education, and empirically-supported training protocols.

*Summary:* Advances have been made over the past decade in identifying, evaluating, and disseminating ESTs. Progress with adult ESTs compared to child treatments, however, has differed. This article highlights areas of advancements, reviews literature related to specific training methods (i.e., treatment manuals, graduate education, continuing education, and EST protocols), discusses issues relevant to adult versus child treatment dissemination, and provides recommendations for enhancing the dissemination of ESTs.

Hoag, B.G., Ritschard, H.V., & Cooper, C. L. (2002). Obstacles to effective organizational change: The underlying reasons. *Leadership and Organization Development Journal*, *23*(1), 6–15.

*Main Messages:*

- Although staff often see the need for change and are anxious to do it, their managers are often unwilling or incapable of exercising the leadership required.
- Cultural entrenchment created by a dysfunctional management can prevent organizations from experiencing positive change.
- A culture resistant to change can occur when the executive level fails to lead and manage the organization up to the staff's expectations.

*Summary:* This article explores some of the popular reasons managers give for why organizations resist change and suggests some new underlying obstacles. An obstacle is defined as a factor which prevents the implementation of positive changes in organizations. While some staff do resist change, this article argues that the blame for unsuccessful organizational change must lie with those who are responsible for implementing it and not with other things or other people. An exploratory study was conducted with 146 human resources directors in the UK over a period of several months. Respondents described five characteristics of poor leaders, including: no vision; no support; obstructive senior team; a "not yet" mentality; and the view that there was no reason to change. Four characteristics of weak managers that were seen to be significant obstacles to effective organizational change include dealing with a pot-pourri of unrelated challenges, poor internal systems, a victim mindset, and a desire to keep the status quo.

Hoagwood, K., Burns, B.J., Kiser, L., Ringeisen, H., & Schoenwald, S. K. (2001). Evidence-based practice in child and adolescent mental health services. *Psychiatric Services*, *52*, 1179–1189.

*Main Messages:*

- From a scientific standpoint, applying the same criteria to studies of pharmacological, psychosocial, or prevention interventions is probably warranted as scientific justification rests on relatively well-accepted principles of control. However, pharmaceutical companies cannot distribute or advertise a pharmaceutical agent unless it has been approved by the FDA. The existence of a regulatory authority over the distribution of effective therapies does not exist for psychosocial treatments or services. Consequently, the incentive system for the growth of these therapies is vastly different and largely academic.
- Evidence for services must consider developmental issues in order to be meaningful.
- Family is central to the development of treatment or service and to understanding the diagnosis.
- Children receive mental health services in clinic and school settings, requiring that a wide range of providers be trained to provide EBPs. Because of service system fragmentation, a range of training curricula, materials, and approaches will need to be developed and specifically tailored for the providers of multiple systems (education, child welfare, corrections).

*Summary:* The authors review the status, strength, and quality of EBP in child and adolescent mental health services. They describe major dimensions that differentiate EBPs for children from those for adults, and summarize the status of the scientific literature on a range of service practices. The readiness of the child and adolescent evidence base for large-scale dissemination should be viewed with healthy skepticism until studies of the fit between empirically-based treatments and the context of service delivery have been undertaken. Accelerating the pace at which EBPs can be more readily disseminated will require new models of development of clinical services that consider the practice setting in which the service is ultimately to be delivered.

Howell, J.M. & Higgins, C. A. (1990). Champions of change: Identifying, understanding and supporting champions of technological innovations. *Organizational Dynamics*, *19*, 40–55.

*Main Messages:*

- Champions who can take creative ideas and bring them to life are needed for innovation to occur within organizations.
- It is possible for management to identify and effectively manage existing champions and to nurture potential champions within their organizations.

*Summary:* Champions are individuals who make a decisive contribution to the innovation process by promoting the innovation, building support, overcoming resistance, and ensuring the innovation is implemented. In an attempt to understand what makes champions successful, 150 key individuals associated with 28 successful information-technology innovations in 25 large Canadian organizations were interviewed. The personality characteristics of champions include extremely high self-

confidence, persistence, energy, and risk taking. Champions use three very different processes to introduce and sell innovations: the rational process, the participative process, and the renegade process. The article also discusses five key factors that top management can use to encourage and support championship behaviour, including: (i) top management's commitment to a vision-supporting innovation; (ii) top managers need to back up their words with actions; (iii) active sustained sponsorship of top management for the innovation; (iv) having someone to run interference for the champions; and (v) giving champions the freedom to pursue untried innovations.

Iles, V. & Sutherland, K. (2001). *Organizational Change: A Review for Health Care Managers, Professionals and Researchers*. Making Change in the NHS. London, UK, National Co-ordinating Centre for NHS Service Delivery and Organisation R&D.

*Main Messages:*

- Organization-level change is not fixed or linear in nature, but contains an important emergent element.

*Summary:* This review was developed in response to the National Health Services Plan for fundamental changes in thinking, practice, and delivery of health care over the next decade. Its aim is to provide a resource and reference tool to help readers find their way around the literature on change management and consider the evidence available about different approaches to change. The report contains an introduction to the literature on change management, a review of the main models, approaches, and tools which are likely to be of interest and use to practicing managers and professionals in the health service, and some reflections on the nature of evidence in this field.

Iowa Practice Improvement Collaborative. (2003). *Evidence-Based Practices: An Implementation Guide for Community-Based Substance Abuse Treatment Agencies*. Web document: http://www.uiowa.edu/~iowapic/files/EBP%20Guide%20-%20Revised%205-03.pdf

*Main Messages:*

- A practice can have excellent research qualities but still not meet practical considerations that determine its applicability to the field.
- The gap between research and practice can be attributed to a complexity of problems including the lack of communication among researchers, providers, and policy-makers.
- Organizational factors that influence adoption and implementation need to be considered.
- Evidence-based programs need to be evaluated to ensure that programs accurately implement evidence-based protocols.

*Summary:* This handbook suggests ways of bridging the gap between research findings and clinical practice by providing guidance on identifying, implementing, and maintaining evidence-based practices (EBP). It includes a set of criteria for evaluating existing and new treatment methods or approaches, as well as a brief review of the literature on EBPs or principles, including clinical practice guidelines. Adoptions strategies as well as evaluations of the efficacy and fidelity of practices are also discussed. Overall, this handbook provides a framework for selecting practices or approaches that have some degree of research evidence and that fit the needs of an agency.

Iskat, G.J. & Liebowitz, J. (2003). What to do when employees resist change. *SuperVision*, *64*(8), 12–14.

*Main Messages:*

- Managers need to be proactive in helping to implement changes within organizations.
- True commitment to change can be built but not forced.
- Prior to using principles for managing employees' resistance to change, managers need to ask what stage of the change their organization is in.

*Summary:* There are specific steps managers can take during a change that will make the change easier on the employees and give management the best chance of gaining the employees' commitment. This

article describes 13 simple principles for managing employees' resistance to change. These principles are subsumed within the three stages of implementing a major change: unfreezing, making the transition, and refreezing.

Jamtvedt, G., Young, J.M., Krisoffersen, D. T., Thomson, A. D., O'Brien, M. A., & Oxman, A. D. (2004). *Audit and Feedback: Effects on Professional Practice and Health Care Outcomes (Cochrane Review).* The Cochrane Library, Issue 1. Chichester, UK., John Wiley & Sons, Ltd.

*Main Messages:*

- Audit and feedback can be effective in improving professional practice. When effective, the effects are generally small to moderate. The absolute effects of audit and feedback are more likely to be larger when baseline adherence to recommended practice is low.
- The results of this review do not support the conclusion of previous reviews that multifaceted interventions are more likely to be effective than single interventions.

*Summary:* Two reviewers independently reviewed randomized trials of audit and feedback—using quantitative and qualitative analysis—that reportedly objectively measured professional practice in a health care setting or health care outcomes.

Jimmieson, N.L., Terry, D.J., & Callan, V. J. (2004). A longitudinal study of employee adaptation to organizational change: The role of change-related information and change-related self-efficacy. *Journal of Occupational Health Psychology*, *9*(1), 11–27.

*Main Messages:*

- If positive self-efficacy (belief in one's capability to execute a course of needed action) is to be attained during times of organizational change, employees need to have access to timely and accurate change-related information.

*Summary:* This paper reports on a study exploring the extent to which providing change-related information engenders a sense of change-related self-efficacy for employees experiencing organizational change. Overall, the results indicate a complex pattern of findings in which change-related self-efficacy appears to play a mediating role in the short term, but an interactive role in the long term. In particular, information is indirectly related to psychological well-being, client engagement, and job satisfaction, via its positive relationship to efficacy. There is also evidence to suggest that efficacy is related to reduced stress appraisals, thereby heightening client engagement. Self-efficacy was also found to be an important buffer of three change-related stressors in the prediction of employee adjustment, two years after the organizational change process was initiated.

Jumper-Thurman, P., Edwards, R.W., Plested, B., & Oetting, E. (2002). Honoring the differences: Using community readiness to create culturally valid community interventions, pp. 589-607. In G. Bernal, J. Trimble, K. Burlew and F. Leong (Eds.), *Handbook of Ethnic and Racial Minority Psychology.* Thousand Oaks, CA: Sage. Publications.

*Main Messages:*

- To be effective, intervention strategies must be based on the culture or cultures existing within that specific community as defined and acknowledged by the community.
- Community readiness is an important factor because differences in readiness indicate what can be done and what needs to be done.
- There must be community investment in the process for change to occur.

*Summary:* Successful local prevention and intervention efforts must be conceived from models that are community-specific, culturally relevant, and consistent with the level of readiness of the community to implement an intervention. Every community is different and every community has a culture. Intervention strategies must be based on the culture or cultures existing within that community to be effective. Interventions that are developed around local culture have a greater chance of being "owned"

by the community, and therefore a greater potential for success. Because attitudes toward a specific problem vary considerably across communities, generating a high level of community participation requires several tools. This paper describes tools developed at the Tri-Ethnic Centre for Prevention Research using the theory of community readiness. They include: methods to determine where a community stands on a particular issue; an ethical method for changing the community where it can develop strategies to solve the problem; methods to assure that what is done is consistent with the culture of the community; and a method that leads to effective development and maintenance of programs.

Kelly, J.A., Somlai, A.M., DiFranceisco, W. J., Otto-Salaj, L. L., McAuliffe, T. L., Hackl, K. L., Heckman, T. G., Holtgrave, D. R., & Rompa, D. (2000). Bridging the gap between the science and service of HIV prevention: Transferring effective research-based HIV prevention interventions to community AIDS service providers. *American Journal of Public Health*, *90*(7),1082–1088.

*Main Messages:*

- Manuals, a staff training workshop, and telephone consultation follow-up are more effective than either manuals alone or manuals and a workshop in the adoption of interventions.

*Summary:* AIDS service organizations (ASOs) rarely have access to the information needed to implement research-based HIV prevention interventions for their clients. The authors compared the effectiveness of three dissemination strategies for transferring HIV prevention models from the research arena to community providers of HIV prevention services. Interviews were conducted with the directors of 74 ASOs to assess current HIV prevention services. ASOs were randomized to programs that provided technical assistance manuals describing how to implement research-based HIV prevention interventions, manuals plus a staff training workshop on how to conduct the implementation, or manuals, the training workshop, and follow-up telephone consultation calls. Follow-up interviews determined whether the intervention model had been adopted. The dissemination package that provided ASOs with implementation manuals, staff training workshops, and follow-up consultation resulted in more frequent adoption and use of the research-based HIV prevention for gay men, women, and other client populations. Strategies are needed to quickly transfer research-based HIV prevention methods to community providers of HIV prevention services. Active collaboration between researchers and service agencies results in more successful program adoption than distribution of implementation packages alone.

Kettlewell, P.W. (2004). Development, dissemination, and implementation of evidence-based treatments: Commentary. *Clinical Psychology: Science & Practice*, *11*(2),190–195.

*Main Messages:*

- Implementation is the least researched component of diffusion.
- The case of EBTs and for their dissemination include: (i) EBTs provide guidance to better serve patients or clients; (ii) using the scientific approach to evaluate treatment is the best way to advance knowledge so that practitioners can provide even better care in the future; (iii) practitioners need to wisely use the limited resources for mental health services; (iv) treatments that work are available and most practitioners do not use them; and (v) although practitioners clearly realize that conducting psychotherapy requires elements of "art" and personal judgment, the use of scientific evidence to guide practice is an essential defining feature of clinical psychology.
- Resistance to EBTs includes: (i) practitioners' fear that managed care organizations will selectively use data in a self-serving manner to control costs by "cherry picking" data to serve their purposes and ignoring other data that do not serve their needs; (ii) fear that relationship factors account for more of the variance in psychotherapy outcome than do treatment techniques; (iii) the question of

whether there is enough evidence to warrant the implementation of EBTs; (iv) whether the dissemination and implementation of EBTs require someone to set standards for treatment.

*Summary:* To remain a highly regarded helping profession, clinical psychology needs to continue to successfully develop, disseminate, and implement EBTs. One of the challenges to implementing EBTs is the lack of scientific evidence to support many widely used treatments. The current gap between science and the practice of clinical psychology remains problematic. This paper presents clinicians' arguments for and resistance to using EBTs. Some of the changes that need to take place among researchers include conducting more effectiveness research and forming partnerships with practitioners. In turn, practitioners also need to stay in close connection with clinical psychology's scientific roots and collaborate with researchers. The paper also offers ideas on how the American Psychological Association can promote the dissemination and implementation of EBTs.

Khatri, G.R. & Frieden, T.R. (2002). Rapid DOTS expansion in India. *Bulletin of the World Health Organization*, *80*(6), 457–463.

*Main Messages:*

- A carefully designed and managed overall effort is needed to successfully implement a broad scale initiative.
- Implementation of an initiative requires: attention to policy; government support; knowledge and reliance on what works; and an ability to point to and build on success (e.g., effective pilot programs, assessment that communities met minimum standards before starting service); development of local infrastructures and adaptations to locales; careful preparation of materials; multiple and adequate mechanisms for ensuring adherence and excellence (e.g., training, supervision, feedback, technical support, monitoring); dogged determination; and clear focus.

*Summary:* This article details the components needed for a large-scale implementation of an effective strategy for tuberculosis treatment, DOTS (Directly Observed Treatment Systems), involving observing patients taking the full dose of medication. A well-designed and implemented system includes: (i) ensuring technical excellence and sound science in training and policy manuals; (ii) building government commitment and ensuring flexible and adequate funding; (iii) maintaining focus through monitoring of implementation; (iv) ensuring minimum standards of service are in place before beginning DOTS; (v) ensuring an uninterrupted drug supply; (vi) strengthening the established infrastructure and providing staff support (e.g. training, transportation, computers); (vii) providing additional staff in urban areas; (viii) ensuring full-time independent, well-trained, and well-supported consultants for supervision, particularly during the initial phases of implementation; (ix) intensive monitoring of many program components with timely feedback; and (x) frequent and consistent supervision.

Kim, C.W. & Mauborgne, R. (2003). Tipping point leadership. *Harvard Business Review*, *81*(4), 60–69.

*Main Messages:*

- The most difficult battle in change is getting people to agree on the causes of current problems and the need for change.
- Motivating the key influencers frees an organization from having to motivate everyone, yet everyone in the end is touched and changed.
- Making results and responsibilities clear to everyone helps introduce a culture of performance.
- Unless people believe results are attainable, change is unlikely to succeed.

*Summary:* Drawing from police commissioner William Bratton's experience of turning New York into one of the safest large cities in the United States in less than two years and without an increase in his budget, this article examines how Bratton's turnarounds are textbook examples of tipping point leadership. The theory of tipping points hinges on the insight that in any organization, once the beliefs and energies of a critical mass of people are engaged, conversion to a new idea will spread like an

epidemic, quickly bringing about fundamental change. This theory suggests that such a movement can only be unleashed by agents who make unforgettable and unarguable calls for change, who concentrate their resources on what really matters, who mobilize the commitment of the organization's key players, and who succeed in silencing the most vocal naysayers.

King, L., Hawe, P., & Wise, M. (1998). Making dissemination a two-way process. *Health Promotion International*, *13*(3), 237–244.

*Main Messages:*

- Linkage systems between researcher and implementer groups can foster more effective transfer of programs.
- Dissemination is more likely to be influential if it is based on a two-way process of exchange.
- Publishing results in journals is not a sufficient dissemination process.
- Dissemination agents contribute to successful program uptake.

*Summary:* There is concern that the full potential of health promotion programs is not being achieved because of insufficient transfer of new knowledge about effective programs from research into practice. The process extends beyond circulating information or relying on passive processes of diffusion. The authors identify a range of factors that influence dissemination, including attributes of the program, practitioner characteristics, researcher characteristics, linkages between researchers and practitioners, and the dissemination method.

Kitson, A., Harvey, G., & McCormack, B. (1998). Enabling the implementation of evidence-based practice: A conceptual framework. *Quality in Health Care*, *7*(3),149–158.

*Main Messages:*

- Successful implementation seems to occur when evidence is high, the context is ripe for change with cultures geared toward learning, clear leadership, feedback and monitoring systems are in place, and functional facilitation by both external and internal facilitators occurs.
- Appropriate facilitation may overcome poor contexts to ensure new practices are implemented, but this may take quite some time and may need to include adequate staff development and infrastructure.
- Least successful implementation occurs under conditions where both the context and the facilitation are low, even when evidence is high.

*Summary:* The authors propose a multidimensional framework for successful implementation of research to practice that calls for an analysis of the simultaneous interplay among three core elements. The elements and their conditions are: Evidence (E), defined as a combination of research rigor, clinical consensus, and patient choice; Context (C), defined as the setting or environment in which the change will be implemented and subdivided into core elements of prevailing culture, leadership, and measurement of processes and outcomes; Facilitation (F), defined as techniques by which one person makes things easier for others by consciously using interpersonal and group skills to achieve change. The core elements are personal characteristics of the facilitator, clarity of the facilitator's role, and style. The authors walk the reader through four studies exemplifying the permutations of high (H) and low levels (L) of each of the three elements (e.g., HE, LC, LF) and evaluating the effectiveness of implementation under each rubric. Because current research is inconclusive regarding which elements are most important, all should have equal standing. This is in contrast to current assumptions that give level and rigor of evidence primacy.

Kitson, A.L. (2001). Approaches used to implement research findings into nursing practice: Report of a study tour to Australia and New Zealand. *International Journal of Nursing Practice*, *7*, 392–405.

*Main Messages:*

- Nursing studies in the UK have reinforced findings from systematic reviews that view the multifaceted nature of effective research implementation and the importance of considering multiple strategies simultaneously as key.
- The literature is not yet clear regarding the weighting or importance of key variables, particularly the interplay between the evidence, the characteristics of the context or environment into which the evidence is being introduced, the mechanisms (knowledge transfer strategies) used to implement the new information, and the characteristics (skills, knowledge, attitude, position, and status) of the individuals involved. More research is needed to uncover the "active ingredients" in implementation science.
- The dominant driver of change regarding effective research implementation has been the clinical effectiveness agenda; however, this agenda has not permeated all health disciplines with equal emphasis.
- The general view among the sites visited was that nursing, like every other group in health care, is resistant to the EBP movement.

*Summary:* A study tour was conducted to several research and nursing units in Australia and New Zealand (NZ) to investigate what has influenced the way nurses implement research into practice. The key areas examined were strategic policy influences, activities within leading academic units, and responses in practice areas. The main themes to emerge were that the strategies developed by health policy makers in Australia and NZ have been profoundly influenced by the global clinical effectiveness and EBP movements. Nursing needs to position itself firmly in the centre of such developments, and leading nursing initiatives need to be mainstreamed into the wider evidence-based movement. While activity around clinical/practice guideline development moves on, more work needs to be done to understand how best to actually implement research in practice. Issues of organizational context, ownership, practice, culture, and identifying local champions are emerging as key challenges for the next stage of implementation.

Klein, S.M. (1996). A management communication strategy for change. *Journal of Organizational Change*, *9*, 32–46.

*Main Messages:*

- Most people do not fully comprehend the necessity for the change or how it ultimately might affect them.
- Several key communications principles taken together can constitute a communications strategy to support change: (i) message redundancy is related to message retention; (ii) use of several media is more effective than just one; (iii) face-to-face communication is a preferred medium; (iv) line hierarchy is the most effective organizationally sanctioned communication channel; (v) direct supervision is the expected and most effective source of organizationally sanctioned information; (vi) opinion leaders are effective changers of attitudes and opinions; and (vii) personally relevant information is better retained than abstract, unfamiliar, or general information.

*Summary:* Many organizational participants are only vaguely aware that changes are taking place and the ambiguity surrounding these changes provide fertile ground for rumours, anxiety, and ultimately, resistance. This is true even though management has communicated its intent. Organizational changes often flounder because not enough strategic thought is given to communicating the rationale, the progress, and the impact of the change. The process should be based on a good grasp of some principles of communication, together with an understanding of the change process. Seven key communications principles are discussed to combat this situation. Communications strategies are related to various stages of organizational change.

Klingner, J.K., Ahwee, S., Pilonieta, P., & Menendez, R. (2003). Barriers and facilitators in scaling up research-based practices. *Exceptional Children*, *69*(4), 411–429.

*Main Messages:*

- Implementation was facilitated by the perceived effectiveness of the procedures and the fact that the students liked it.
- Having the knowledge, skills, functional, and technical support to implement were also perceived as facilitators to implementation.
- Fidelity measures for the practices were highest for those implementing programs on a regular basis (HI). The moderate implementers (MI) exhibited the least fidelity. While low implementers (LI) had a lower rate of implementing, their fidelity approached that of the high implementers.
- More attention should be paid to moderate and low implementers who may require more skillful support and consultation.
- Implementation approaches which may have gotten better results in the past (e.g., university professors as coaches vs. graduate students) are not realistic if the practice is going to be able to go to scale. Challenges exist when considering how to re-create the conditions that facilitated fidelity in the research setting as the practice tries to go to scale in typical settings.

*Summary:* Researchers examined the degree of implementation of four research-based practices in six elementary schools by 29 teachers. In addition to measuring the number of practices adopted and the fidelity of adoption, they also collected qualitative data related to teacher perceptions of barriers and facilitators to implementation. Teachers were classified as high, medium, or low implementers depending upon their use of the four practices they learned in a 2-week professional development program. Throughout the school year, implementing teachers received extensive follow-up support from researchers. Across the board, teachers were concerned about lack of time to deliver the new instructional practice. How teachers dealt with barriers varied from group to group. In general, lack of implementation and sustainability were of concern, with more than one-third who attended the training failing to implement any practice or implementing very little.

Koroloff, N. & Schutte K. Assessing the necessary agency and system support. (Fall, 2003). *Focal Point: A National Bulletin on Family Support and Children's Mental Health: Quality and fidelity in Wraparound*, 17(2), 8–11. Portland, Oregon: Research & Training Center on Family Support and Children's Mental Health, Portland State University. Web document: http://www.rtc.pdx.edu/pgFPF03TOC.php

*Main Messages:*

- For "Wraparound" teams to be effective and sustainable, they require extensive support both from their agencies and from their system of care.

*Summary:* "Wraparound" teams—collaborative multidisciplinary teams that include family members and youth as equal partners—have become a popular mechanism for creating and implementing service plans for children with complex needs and their families. To be successful, these teams require extensive support both from their agencies and from the system of care. The goal of the research described in this article is to determine what supports are required from the organizations and from the systems of care they are embedded within. The conceptual framework developed to address these questions organizes the necessary conditions into three levels that must be met if high quality Wraparound is to be achieved and sustained: team, organization, and system. The framework does not attempt to specify exactly how a program or community should meet each condition, but rather discusses that there should be some structure, policy, mechanism, or process for doing so. The authors also discuss a series of assessments as a companion to the conceptual framework.

Laiken, M.E. (2003). Models of organizational learning: Paradoxes and best practices in the post industrial workplace. *Organization Development Journal*, *21*(1), 8–19.

*Main Messages:*

- Effective organizational learning processes can help workers do better than just cope with changes in their organization.

- Learning is most effective when reflective time is interspersed with direct action.
- Strong leadership needs to work toward eventual individual and team self-management.
- To bridge the gap between vision and reality, staff need to be encouraged to confront the discrepancies they are experiencing, as well as acquire the skills to directly confront conflict.

*Summary:* In light of the plethora of changes organizations are currently facing, some of these organizations are focusing on organizational learning to help their employees move beyond simply coping with stress to engaging in creative action for the benefit of both the individual members and the organization as a whole. This article presents the results of a three-year research project that examined four organizations who used organizational learning approaches to embed continuous learning within the actual work context. The findings reveal that organizational learning was an on-going process of managing paradoxes consisting of action versus reflection, structured leadership versus freedom and autonomy, espoused theory versus theory in use, and conflict/confrontation to enable collaboration.

Landry, R. & Amara, N. (2001). *The Uptake of Health Research Evidence by Canadian Physicians*. 4th International Conference on the Scientific Basis of Health Services, Sydney, Australia.

*Main Messages:*

- The face-to-face exchange of information between physicians as sources of information is important.
- Canadian physicians have adopted an evidence-based approach relying on the use of a large diversity of codified and tacit forms of evidence.
- Some specialties (physicians in laboratory medicine) have a lower propensity to base their practice on evidence.
- The young generation of physicians which has been exposed to the concept of evidence-based medicine during its training does not score higher on the index of the frequency of use of evidence than the older generation does.

*Summary:* With respect to the frequency of use of 24 sources of evidence by physicians, the results of this paper suggest that the five most frequently used sources represent a package of sources of information combining highly codified sources of information with less codified sources: original studies published in scientific journals, computerized literature search, and publications that focus on evidence-based medicine represent sources of highly codified information. The codification of information implies that information is transformed into codes that can be easily transmitted through information infrastructures such as books, articles, patents, and the Internet. By comparison, the other sources of information used by physicians in their day-to-day management of patients are specialists and colleagues, not representative of codified knowledge. These sources represent tacit information that is only transferred through social interaction and is very sensitive to the social context of interactions. Evidence-based medicine involves the use of a combination of sources of evidence.

Landry, R., Amara, N., & Lamari, N. (2001). Utilization of Social Science Research Knowledge in Canada. *Research Policy*, *30*, 333–349.

*Main Messages:*

- Knowledge use depends much more heavily on factors regarding the behaviour of the researchers' and users' context than the attributes of the research products.

*Summary:* This paper addresses three questions: What is the extent of the use of social science research in Canada? Are there differences between the social sciences disciplines in regard to extent of use? What are the determinants of use of social science research knowledge in Canada? The paper develops and tests an empirical model which derives its dependent and independent variables from prior studies in knowledge use. Instead of limiting use to instrumental use, the paper defines use as a six stage cumulative process. Based on a survey of 1229 Canadian social science scholars, the findings of this study show that nearly half of the research results lend to some use by practitioners, professionals, and

decision-makers. Furthermore, comparisons of means of use show that the professional social sciences (social work and industrial relations) lend to higher levels of use than the disciplinary social sciences (economics, political science, sociology, and anthropology). Multivariate regression analyses show that the most important determinants of use are the mechanisms linking the researchers to the users, the dissemination efforts, the adaptation of research outputs undertaken by the researchers, the users' context, and the publication assets of the researchers. The other explanatory factors exert a more mitigated influence on knowledge use. The last part of the paper derives policy implications from the regression results. Overall, the most important finding of this paper is that knowledge use depends much more heavily on factors regarding the behaviour of the researchers' and users' context than on the attributes of the research products.

Landry, R., Lamari, M., & Amara, N. (2001). Climbing the ladder of research utilization: Evidence from social sciences research. *Science Communication*, *22*, 396–422.

*Main Messages:*

- The critical stage of knowledge use is the stage of transmission.

*Summary:* Previous studies that used knowledge use scales as their dependent variable have aggregated the stages to construct overall indices of knowledge use and attempted to identify factors explaining the extent of use. In this paper, each stage of the knowledge use scale is considered separately and compared to the previous stage. The authors find factors explaining that researchers are able to climb up in the ladder of knowledge use from the echelon of no transmission to the echelon of transmission, then from the stage of transmission to that of cognition, from cognition to reference, from reference to effort, from effort to influence, and finally, from influence to application. To the researchers' knowledge, no prior empirical studies have examined the factors explaining why researchers succeed in climbing up the echelons of the ladder of knowledge use. The results suggest that the crucial stage of knowledge use is the stage of transmission. Likewise, scholars do not differ on most of the explanatory variables when they try to climb from transmission to the higher echelons of the ladder of knowledge use. These results suggest there are barriers to entry, and that these barriers are primarily located between the stage of no transmission and the stage of transmission. These results carry theoretical and policy implications that need to be carefully explored.

Landry, R., Lamari, M., & Amara, N. (2001). Extent and determinants of utilization of university research in public administration. Université Laval. Web document: http://kuuc.chair.ulaval.ca

*Main Messages:*

- Adaptation of research for users, efforts made to acquire research, and linkages between researchers and users are good predictors of uptake of research by government officials.

*Summary:* This paper addresses three questions: What is the extent of the use of university research in public administration? Are there differences between the policy domains in regard to the extent of use? What are the determinants of use of university research in public administration? The paper first reviews the major methodological problems of the field to indicate how they are dealt with in the present study. Then it applies conceptual models and methodological solutions likely to alleviate the problems identified in the field to data about how professionals and managers in Canadian and provincial public administrations use university research in their professional activities. Based on a survey of 833 government officials from Canadian and provincial public administrations, comparisons of the means of use compare the extent of use of university research in public administration across seven policy domains, ranging from 41.3 for the domains of municipal and regional affairs, public works, and public infrastructures, to 56.6 for the domains of education and information technology. The results of the multivariate regression analyses show that characteristics of research products and focus of research on the advancement of scholarly knowledge or on users' needs do not explain the uptake of research. Instead, adaptation of research for users, acquisition efforts made by users, linkages

between researchers and users, and the organizational context of the users are good predictors. The last part of the paper derives from the regression results' implications for theory building, public policy, and future research.

Lane, J.M. & Addis, M.E. (2004). Pros and cons of educational technologies as methods for disseminating evidence-based treatments. *Clinical Psychology: Science & Practice*, *11*(3), 336–338.

*Main Messages:*

- Although instructional design technology (IDT) principles have the potential for making strong contributions to the dissemination of empirical supported treatments, they could displace some of the more process-oriented components of treatment (e.g., the therapeutic alliance, therapeutic pacing, handling resistance, etc.).
- Increased computer supervision and training could take time away from face-to-face interactions and result in feelings of professional isolation.
- The instructional nature of IDT treatment dissemination may not be as well received as those approaches that emphasize collaboration between researchers and practitioners.

*Summary:* This commentary on Weingardt's article on the adoption of IDTs for disseminating empirically supported psychological therapies explores some of the broader implications of these approaches for clinical research and treatment. The authors suggest that reliance on educationally-based technologies could have important consequences for the way in which the scientist-practitioner relationship is framed. They also propose that the adoption of IDT principles raises some significant practical and conceptual concerns about the future directions of psychotherapy research and practice.

Larrabee, J. (2004). Advancing quality improvement through using the best evidence to change practice. *Journal of Nursing Care Quality*, *19*(1), 10–13.

*Main Messages:*

- Individuals are less resistant to change when they participate in the planning.
- The more empowered nurses feel, the more they perceive they have control of practice and the higher their job satisfaction.

*Summary:* This paper provides a quick summary of the emerging recognition of the value and importance of using research to change practice within the nursing profession. In response to the drive to achieve EBP, some of the earlier research use models have been updated to reframe research use (RU) within the broader construct of EBP and new models have been developed. Both RU and EBP models for changing practice involve sequential steps that require nurses to have research and quality improvement knowledge and skills. The steps of one EBP model are presented, as well as other practical information for direct-care nurses and quality improvement leaders about using the best available evidence to change practice.

Larson, E. (2003). Status of practice guidelines in the United States: CDC guidelines as an example. *Preventive Medicine*, *36*(5), 519–524.

*Main Messages:*

- Awareness does not result in implementation or adherence to the guideline.
- Barriers to adherence that appear in the literature include: lack of awareness; attitudes related to agreement, outcome expectancy, and physician motivation; and behavioural barriers such as patient factors. Research studies need to consider multiple barriers to adherence.
- Practice guidelines are more likely to be followed when there is motivation to improve patient care and when guidelines are flexible, scientifically rigorous, and not associated with punitive approaches for failure to adhere.
- Assessments of the impact on patient care are increasing and implementers, not guideline developers, must assess outcomes and costs.

- Cost studies are rare and, in general, actual costs of developing and implementing guidelines have not been conducted.
- New guidelines by the Healthcare Infection Control Practices Advisory Committee recognize the importance of assessing impact by including examples of outcome and process measures that can be adopted or adapted by implementers.
- Studies assessing the impact of clinical practice guidelines (CPGs) need to examine both the efficacy of the recommendations and the implementation process itself to provide useful information.

*Summary:* CPGs related to health care in the United States have been proliferating from a few in the 1980s to over 1,000 in 2002 that have been approved by The National Guideline Clearinghouse as meeting specific quality criteria. This article reviews the research related to the adoption and impact of guidelines on practice. Costs of guideline development and necessary implementation infrastructure costs have not been assessed through research. And in some cases, assessment of patient outcomes and costs and benefits of changes in practice have not been researched. Evaluation plans need to accompany guideline implementation.

Lavis, J.N., Robertson, D., Woodside, J. M., & McLeod, C. B. (2003). How can research organizations more effectively transfer research knowledge to decision makers? *The Milbank Quarterly*, *81*(2), 221–248.

*Main Messages:*

- Research organizations should transfer actionable messages from a body of research knowledge.
- A message's target audience must be clearly identified and the specifics of a knowledge-transfer strategy fine-tuned to the types of decisions they face and decision-making environments in which they work.
- The credibility of the messenger delivering the message is important.
- Interactive engagement is the most effective process of transferring research knowledge.

*Summary:* This paper provides an organizing framework for a knowledge-transfer strategy and an overview of the current knowledge for each of the five elements of the framework. These elements are derived from the following five questions: What should be transferred to decision makers (the message)? To whom should research knowledge be transferred (the target audience)? By whom should research knowledge be transferred (the messenger)? How should research knowledge be transferred (the knowledge-transfer processes and supporting communications infrastructure)? With what effect should research knowledge be transferred (evaluation)? To address these questions, the authors conducted a qualitative review of both systematic reviews and original studies, as well as a survey targeting directors of applied health and economic/social research organizations in Canada regarding how their organizations transfer research knowledge to decision-makers.

Lee, R.G. & Garvin, T. (2003). Moving from information transfer to information exchange in health and health care. *Social Science and Medicine*, *56*, 449–464.

*Main Messages:*

- Health communication practices and frameworks are largely based on the assumption that changes in individual knowledge, attitudes, and beliefs will translate into changes in behaviour.
- Commonly held views of health communication are inadequate because they imply a one-way transfer of information based on a one-sided relationship between communicator and receiver.
- These underlying problems of information transfer have at least two important implications: they ignore the social context of information receivers, and they deny the agency and adaptive powers of recipients.
- Traditional health communication, based on the monologue of information transfer, can and should be replaced by a more appropriate concept of information exchange, based on a two-way dialogue.

*Summary:* Health communication practices and frameworks are largely based on the assumption that changes in individual knowledge, attitudes, and beliefs will translate into changes in behaviour. They likewise assume that merely providing information is sufficient to produce improved health outcomes in individuals and populations, and that individuals, regardless of social context, have power and agency to implement change and to act on information as it is made available. These commonly held views of health communication are inadequate because they imply a one-way transfer of information based on a one-sided relationship between communicator and receiver. The authors outline three key problems inherent in health information transfer: (i) a focus on the individual; (ii) the privileging of expert over lay perspectives; and (iii) the assumption that a one-way flow of information, from provider to recipient, is appropriate. These underlying problems of information transfer have at least two important implications: they ignore the social context of information receivers, and they deny the agency and adaptive powers of recipients. Ignoring social context is seen at all levels as an isolation of health issues from the context of the real world. Traditional information practices also deny the agency of information users and position them as passive. The authors use case studies to demonstrate how communication flows in health and health care are related to issues of power. The structure and practices of information transfer give information providers—the experts—the power to define "truth." They propose that traditional health communication, based on the monologue of information transfer, can and should be replaced by a more appropriate concept of information exchange, based on a two-way dialogue. Information exchange can be a powerful tool for ensuring that health information is not simply received, but also acted upon. Increasingly, health research supports the idea that members of the public need to be active participants in knowledge, production, dissemination, and use. The rise of participatory research is one example that shows recognition of the importance of involving end users. Finally, at the level of health research and policy-making, research questions and the methods designed to test hypotheses have historically been generated by experts, with little consultation with end-users of the research findings. Until recently, this standard model has meant that interventions and health-promoting projects have been examined and designed in isolation of the social, cultural, and structural constraints experienced by most patients and users—not to mention the social constraints faced by policymakers in acting on medical evidence.

Lehman, W. E.K., Greener, J. M., & Simpson, D. (2002). Assessing organizational readiness for change. *Journal of Substance Abuse Treatment*, *22*(4), 197–209.

*Main Messages:*

- The organizational functioning and readiness for change (ORC) assessment tool offers a promising tool for studying organizational change, helping to diagnose situations when change does not occur, and identifying barriers.

*Summary:* This article describes a comprehensive assessment instrument for organizational functioning and readiness for change. It focuses on motivation and personality attributes of program leaders and staff, institutional resources, and organizational climate as an important first step in understanding organizational factors related to implementing new technologies into a program. Results of the pilot testing of this instrument indicate that it has acceptable psychometric properties and it can identify functional barriers involved in organizational change and technology transfer. Some of these findings include: the need for different versions of the ORC for program directors and clinical staff; programs in which staff had independence and flexibility to make critical treatment decisions appear to be more successful in engaging patients in treatment; climate factors such as group cohesion, autonomy, communication, and openness to change resulted in higher treatment satisfaction by clients; and readiness for change in an organization is dependent on having a stable environment and budget that adequately supports the program.

Lemieux-Charles, L., McGuire, W., & Blidner, I. (2002). Building interorganizational knowledge for evidence-based health system change. *Health Care Management Review*, *27*(3), 48–59.

*Main Messages:*

- To effect change at multiple levels, a major commitment is required on the part of both clinicians and managers.
- The ability to work at multiple levels (local and national) with individuals (clinicians, researchers, policy makers) who have different perspectives is critical to encourage the drive of evidence into change.
- New evidence that is introduced into a system must be transformed in a process that takes into account different types of knowledge, including individual experience and local conditions as well as different processes for the creation of new knowledge at the organizational and inter-organizational level.

*Summary:* This article reports on a study that examined how stroke evidence was disseminated by networks and used in the implementation of health system change. It revealed that to effect change at multiple levels, a major commitment was required from both clinicians and managers. To ensure that evidence will drive change, managers must be familiar with the evidence, identify and meet with clinical leaders to determine their links with researchers and policy makers both locally and nationally, and identify and use various mechanisms to share evidence. Working at multiple levels with individuals who have different perspectives is essential. New evidence introduced into a system must be transformed in a process that takes into account different types of knowledge, including individual experience and local conditions, as well as different processes for the creation of new knowledge at the organizational and inter-organizational level.

Liddle, H.A., Rowe, C.L., Quille, T. J., Dakof, G. A., Mills, D. S., Sakran, E., & Biaggi, H. (2002). Transporting a research-based adolescent drug treatment into practice. *Journal of Substance Abuse Treatment*, *22*, 231–253.

*Main Messages:*

- The process of "technology transfer" is an evolving, dynamic change process where principles and intervention methods used in previous settings are brought forward and adapted to fit the new context.

*Summary:* There has been little adaptation of efficacious interventions for at-risk and drug-involved patients into non-research clinical settings. This article describes the key components and processes in transporting an empirically supported, research-developed family therapy for adolescent drug users—Multidimensional Family Therapy—into an intensive day treatment program. The technology transfer process used in this intervention has been collaborative, multidimensional, and systemic, aimed at changing organizational structures and behavioural patterns with various staff members at multiple levels of the program. The authors offer a summary of "Do's" and "Don'ts" for effective technology transfer. Included among the "Do's" are: expect resistance; structure a staff and organizational team that includes regular contact and a feedback system on the project's progress; and keep a journal of the vignettes accompanying the system change efforts. Some of the "Don'ts" include : do not underestimate staffing needs or the amount of time to make progress; do not assume the technology to be transported will not need to change; do not assume you can always implement your own model; and, do not expect perfection.

Logan, J. & Graham, I.D. (1998). Toward a comprehensive interdisciplinary model of healthcare research use. *Science Communication*, *20*(2), 227-246.

*Main Messages:*

- Influences on the practice environment can include: structural factors (rules, regulations, policies, workload, available resources, system of incentives); social factors (politics, personalities, presence

of local champions or advocates of EBPs, culture, and belief systems); and patients (encouraging or discouraging of the adoption of specific EBPs, or unwillingness to comply with the EBP).
- Influences on potential adopters include the potential adopters' perspective, depending upon who they are (practitioner, policy maker).
- Influences on the evidence-based innovation or EBP include: the underlying research process and the EBP itself; attributes of an innovation interact with potential adopters. The key is to minimize potential adopters' negative perceptions of the innovation and maximize their positive ones; this will make the adoption occur more quickly.
- Attributes of the translation process (transfer strategies) thought to positively influence adoption are credible developers and involvement of potential adopters in the process.
- Evidence from systematic reviews to date suggest that all implementation strategies work at least some of the time, but none work all of the time. Multiple strategies appear more effective than single ones, and strategies that are nearer to the end users and integrated into the process of care delivery are more likely to be effective.
- The most efficient approach to implementing research evidence probably rests with tailoring the transfer strategies to the salient barriers and supports found within the particular setting. The more barriers addressed by the strategies, the greater the use of the EBP.

*Summary:* The authors present a practical theoretical framework for policymakers intent on promoting an evidence-based approach to the transfer and use of research findings in clinical practice. The Ottawa Model of Research Use has a comprehensive interdisciplinary focus and consists of six key elements: the practice environment, potential adopters of the evidence, the evidence-based innovation, research transfer strategies, the evidence adoption, and health-related and other outcomes.

Lomas, J. (1990). Finding audiences, changing beliefs: The structure of research use in Canadian health policy. *Journal of Health Policy*, *Policy Law 15*, 525–542.

*Main Messages:*
- There is a gradual increase in improved responsiveness by researchers and policy makers to increase the potential impact of research at administration and policy levels.

*Summary:* The impact of research information depends on its ability to change beliefs or policy assumptions within the relevant audiences. As a hybrid of American and British systems, Canada's chosen decision-making structure for policy-making and its legislative framework for health insurance make these audiences unclear and not readily accessible. This factor and historical characteristics of the research community which made them only partially responsive to the values of decision makers provide an explanation for the limited past use of research information in Canadian health policy. More recently, improved responsiveness by researchers and an emerging definition of the audiences by legislative policymakers are bringing about a gradual increase in the potential impact of research at the levels of administrative and clinical policy. Because of continuing decision-making constraints on legislative policy, however, impact at this level is predicted to remain diffuse, with only cautious acceptance of the changes in beliefs implied by research.

Lomas, J. (1997). *Improving Research Dissemination and Uptake in the Health Sector: Beyond the Sound of One Hand Clapping*, Centre for Health Economics and Policy Analysis, McMaster University.

*Main Messages:*
- There is a tendency for decision-makers to treat the research community as a retail store.
- Researchers tend to treat decision-making as an event rather than a process.
- Researchers underestimate the importance of values in decision-making and overestimate the role of "facts."
- Decision-makers are often treated as a homogenous community. Instead, there are four audiences consisting of different types of individuals, with different needs from research, different preferred

formats for dissemination, and different degrees of skill and motivation in extracting findings from research community: (i) legislative decision-makers; (ii) administrative decision-makers; (iii) clinical decision-makers; and (iv) industrial decision-makers.

*Summary:* Current concern with evidence-based decision-making is about improving the quantity, quality, and breadth of evidence used by all participants in the health care system: legislators, administrators, practitioners, industry, and increasingly, the public. Better dissemination and uptake of health research is integral to evidence-based decision-making. Current failings in this area are more to do with unavailability of research or an absent need for it in decision-making. Understanding the roots of unrealistic expectations on both sides helps point the way to improved dissemination and uptake of research.

Lomas, J. (2000). Using 'linkage and exchange' to move research into policy at a Canadian Foundation. *Health Affairs*, *19*(3), 236–240.

*Main Messages:*

- Bringing decision-makers who can use the results of a particular piece of research into its formulation and conduct is the best predictor for seeing the findings applied.
- It is more difficult to reject, discount, or ignore research results when one has contributed to them.
- The one-on-one encounter consistently emerges as the most efficient way to transfer research.

*Summary:* This paper describes the efforts of one foundation to link the processes of health services research and decision-making through all aspects of its research funding. This philosophy of linkage and exchange is a promising way to increase the relevance and use of health services research.

Mackert, M.J. (2001). *Conductivity for Schematic Conversion: A New Conceptualization for Resistance to Organizational Change*. Faculty of the Graduate School. Columbia, University of Missouri: 163.

*Main Messages:*

- Organizations contemplating change should pay special attention to creating interventions that create higher agreement on the tasks and goals of the change and a strong relationship with the person(s) in charge of the change.

*Summary:* As organizational change efforts continue to fail, the standard attributed reason is employee resistance. However, there is great disagreement and little research on how individuals experience change in their organization. This dissertation creates a new description of how individuals make sense of and engage in organizational change, and builds an inventory to measure the response of employees to organizational change. In addition to providing a strong initial support for the reliability and validity of the Conductivity Inventory, the results also indicate support for concepts already discussed in organizational development literature on resistance: loss, culture, and buy in. The ability of employees to engage in change might increase if organizations plan change initiatives around the concepts of alliance.

Maclean, D. (1996). Positioning dissemination in public health policy. *Canadian Journal of Public Health*, *87*(S2): 40–43.

*Main Messages:*

- Technology plays an important role in enabling dissemination.
- There is opportunity to learn from the business sector.

*Summary:* Research should play an important role in the implementation of health policy. The application of research methodologies to disseminate knowledge and practice is being recognized more and more as a legitimate and important component of the health policy agenda.

Madsen, S.R. (2003). Wellness in the workplace: Preparing employees for change. *Organization Development Journal*, *21*(1), 46–54.

*Main Messages:*

- Only when individuals within an organization are ready for change can interventions be effective in the long-term.
- To build and sustain change readiness capabilities, the organization's ability to enhance competitive agility and build a highly skilled, empowered, and energized workforce must be improved.

*Summary:* Identifying individual change readiness characteristics can help organization development professionals to prescribe and implement more effective change interventions. This paper presents improved overall employee wellness as one such characteristic. It also discusses readiness for change and individual reluctance to change theories and research. In addition, the author introduces the connection between wellness and the preparation of employees for change.

Marshall, M.N. (1999). Improving quality in general practice: Qualitative case study of barriers faced by health authorities. *British Medical Journal*, *319*, 164–167.

*Main Messages:*

- Barriers to the leadership and management of quality improvement in general medical practice include: absence of an explicit strategic plan, competing priorities, sensitivity of health professionals, lack of information, lack of authority to implement change, unclear roles, and isolation from other authorities.

*Summary:* This qualitative study of three UK health authorities identified several barriers to research use. These barriers serve to impede the ability of health authorities to fulfill their responsibilities and reduce their capacity to contribute to quality improvements in general practice.

Marshall, M.N., Mannion, R., Nelson, E., & Davies, H.T.O. (2003). Managing change in the culture of general practice: Qualitative case studies in primary care trusts. *British Medical Journal*, *327*, 599–602.

*Main Messages:*

- Managers are more likely to be effective if they appreciate the merits and drawbacks of their different styles and are willing to work in partnership.
- Real and sustained reform of the health system is more likely to be achieved if organizations are able to draw on a repertoire of management styles and skills.

*Summary:* The relationship between managers and clinicians has been a subject of considerable interest in recent years. This study explores the potential tension between the need for managers to produce measurable change and the skills required to produce cultural change, and to investigate how managers of primary care trusts are attempting to deal with this tension. Two distinct and polarized styles of management were found. One group of managers adopted a directive style and challenged the prevailing norms and values of clinicians, an approach characteristically seen in organizations with hierarchical cultures. This group was made up mostly of senior managers driven principally by the imperative to deliver a political agenda. Managers in the second group were more inclined to work with the prevailing cultures found in general practice, attempting to facilitate change from within rather than forcing change from outside. This management style is characteristically seen in organizations with a clan-type culture. The approach was manifest mostly by middle managers, who seem to act as buffers between the demands of senior managers and their own perception of the ability and willingness of health professionals to cope with change. The different management approaches can lead to tension and dysfunction between tiers of management.

Martin, G.W., Herie, M.A., Turner, B. J., & Cunningham, J. A. (1998). A social marketing model for disseminating research-based treatments to addictions treatment providers. *Addiction*, *93*(11), 1703–1715.

*Main Messages:*

- Effective dissemination requires a major commitment of time and resources to be successful.

- On-site training is an important component of dissemination.

*Summary:* This study evaluated the application of a dissemination model based on principles of social marketing and diffusion theory. A case study describes how the model was implemented, and a qualitative design was used to examine rates of adoption and adaptation of an early intervention program by a targeted system of addiction agencies. Authors conclude that the dissemination model appeared to be effective, although its application proved to be time-consuming and labour-intensive. The "market analysis," systems focus, and field-test components of the model appeared to contribute to its success.

Martland, N. & Rothbaum, F. (2002). A new frontier for research dissemination: The world wide web. *Applied Developmental Science*, *6*(3),110–113.

*Main Messages:*

- The primary challenge for researchers using the Internet to disseminate research is maintaining academic integrity while simultaneously generating public interest.

*Summary:* The web offers the potential for child development researchers to disseminate their findings to audiences who rarely access scholarly journals, such as parents, practitioners, students, and policymakers. However, to make the best use of this resource, researchers need to learn to adapt their reports so they are accessible to a lay audience. This editorial discusses how the Internet can help bridge the gap between research and the public. It also suggests ways researchers can use the Internet to contribute their work to public knowledge and discourse about child development.

McCall, R.B. (1988). Science and the press: Like oil and water? *American Psychologist*, *43*(2), 87–94.

*Main Messages:*

- Few scientists are prepared or trained to be interviewed by the press.
- Relations between sciences and the press need improvement.

*Summary:* Scientists and journalists have traditionally viewed each other warily. Recently, scientists from all disciplines have been urged to be more co-operative with reporters. Psychologists have more contact with the press than other scientists but, if relations are to improve, both scientists and journalists must understand the purposes, values, and procedures of the other.

McDermott, R. (1999). Learning across teams: How to build communities of practice in team organizations. *Knowledge Management Review*, *8*, 32–36.

*Main Messages:*

- Despite their benefits, cross-functional teams have key limitations, and can become silos.
- A double-knit organization overcomes this problem by linking teams with communities of practice.
- In a double-knit organization, teams focus on their strengths (outputs, processes, services) while communities of practice focus on learning within functions.
- Teams and communities of practice are different: teams are tightly integrated and driven by deliverables; communities of practice are more loose-knit and driven by value.

*Summary:* Teamwork is prolific in almost every aspect of business and is often encouraged as a way of communicating and sharing knowledge. But there are some key limitations to cross-functional teams. In this article, the author argues that a better model is the double-knit organization, which provides a far more meaningful exchange of learning by interweaving teams with communities of practice in one company-wide fabric.

McDonald, K.M., Graham, I.D., et al. (2004). Toward a theoretic basis for quality improvement interventions. *Closing the quality gap: A critical analysis of quality improvement strategies*. Volume 1 – Series overview and methodology. Rockville, MD, Agency for Healthcare Research and Quality: 27–40.

*Main Messages:*

- Most theories of QI are descriptive and do not predict the components required for effective design and implementation of QI strategies. Researchers should be asking: What are the important variables in the sequence of steps that will result in improved quality? How do these variables interact? Which variables are likely to matter, and under what circumstances?
- Development of theories of QI that have greater predictive value would help QI implementers zero in on appropriate target(s) for change, and craft the intervention to effect the change. Such theories would also help researchers design interventions to overcome barriers to behavioural change.

*Summary:* This chapter of a report on quality improvement introduces a general hierarchy that organizes various levels of quality improvement, from the macro to the micro. The authors selectively discuss various theories that some researchers in the field of QI have considered as they design interventions to modify interactions among individual patients, health care providers, and the organizations within which they function.

McGovern, M.P., Fox, T.S., Xie, H., & Drake, R. E. (2004). A survey of clinical practices and readiness to adopt evidence-based practices: Dissemination research in an addiction treatment system. *Journal of Substance Abuse Treatment*, *26*(4), 305–312.

*Main Messages:*

- EBP developers and researchers need to demonstrate the relevance of their intervention to frontline clinicians.
- Even if the effectiveness of a particular treatment has been established, community interest may be more determined by ease of implementation, fit with what clinicians believe and are currently doing, demonstrated cost-effectiveness, and in response to clinician-expressed need (i.e., market driven).

*Summary:* Addiction research is challenged to disseminate EBPs into routine clinical settings. The successful adoption of innovation must consider issues of fit, such as the characteristics, readiness, and attitudes of clinicians in the community. The authors of this paper construct and administer a survey assessing clinical practices and readiness to adopt certain EBPs in addiction treatment programs to directors and clinicians from 24 public addiction treatment programs in New Hampshire. Results of the survey indicate clinicians are more motivated to adopt some EBPs than others. The authors discuss translation strategies for treatment development and research dissemination.

McKee, W.T., Witt, J.C., Elliott, S. N., Pardue, M., & Judycki, A. (1987). Practice informing research: A survey of research dissemination and knowledge utilization. *School Psychology Review*, *16*(3), 338–347.

*Main Messages:*

- Research literature intended to inform the profession, reflect its needs, and provide a strong scholarly base for practice is not being read, and consequently has little chance of directly influencing practice through implementation.
- When general areas of functioning are compared (e.g., assessment, consultation, etc.), the greatest need for information is in the area of school-based intervention and, more specifically, around the development of effective interventions for both academic and behaviour problems. Practitioners perceive their training to be least adequate in these areas.
- Talking with colleagues was ranked as the foremost method used by psychologists for obtaining information impinging on their current practice; journal articles ranked second.
- Providing a mechanism whereby school psychologists can talk to each other may be as useful as hiring outside consultants, sending people to workshops, and filling libraries with professional development materials.

*Summary:* With a call for increased social validity in the school psychology research literature comes the suggestion that researchers listen to practitioners, both in terms of meeting important information needs as well as identifying significant research problems. This article reports the results of a survey of 210 NASP members' research and information needs across several areas of practice. In addition to providing a practitioner's view of research priorities, practitioners evaluated the usefulness of a number of journals and other resources. The authors conclude that several areas of research identified as crucial to practice have been neglected both in training and in the research literature. They provide a discussion of the implications of these data for researchers to increase social validity within the professional literature.

Meyers, M.J. & Miles, P. (Fall, 2003). Staying the course with wraparound practice: Tips for managers and implementers. *Focal Point: A National Bulletin on Family Support and Children's Mental Health: Quality and fidelity in Wraparound, 17*(2), pp. 17-20. Portland, Oregon: Research & Training Center on Family Support and Children's Mental Health, Portland State University. Web document: http://www.rtc.pdx.edu/pgFPF03TOC.php

*Main Messages:*

- Key approaches which have contributed to the success of Wraparound implementation consist of including family members at all levels of operation; sharing data that is meaningful to all stakeholders, including families; and consistent training to ensure the presence of core skills.

*Summary:* This paper examines some of the factors which have contributed to the success of implementing the Wraparound practice within organizations over the past ten years. These initial efforts include: creating a pool of nontraditional empathy agents; forming partnerships with policy makers and leaders (champions); developing, communicating, and implementing a set of practice patterns; building an ongoing monitoring capacity; and developing the capacity for ongoing leadership. It further examines what can be currently done to help promote the participation of family members through such strategies as building incentives for participation and engaging parents as partners to assist with team construction. The authors also address strategies that can help ensure that needs will be adequately defined and services will be employed to meet those needs.

Michie, S., Hendy, J., Smith, J., & Adshead, F. (2004). Evidence into practice: A theory based study of achieving national health targets in primary care. *Journal of Evaluation in Clinical Practice*, *10*(3): 447–456.

*Main Messages:*

- Despite training, extra staff, computer support, financial incentives, and specialists to help practitioners meet national health milestones, there was wide variation in the extent to which they had been achieved. Over a 3-year period, 25 had met more than four of the six milestones, and 10 had met only one or two.
- Three main areas differentiated high and low implementers: (i) beliefs about EBP; (ii) concerns about control over professional practice; and (iii) views on consequences of achieving milestones. Low implementers: expressed less belief in evidence-based guidelines as the basis of their practice; were more concerned about their lack of control over the development and implementation of the guidelines (lack of ownership) and their own practice (lack of autonomy); and perceived more negative consequences and fewer positive consequences, both for themselves and for patient care.
- The importance of professional control and perceptions of consequences require strategies that appeal to motivation (e.g., education and development) rather than those that try to control the services that are provided.
- Involving professionals in the change process, and ensuring they perceive this involvement, is likely to be key to increasing their implementation of new policies and guidelines. But achieving this requires more than giving information and developing skills. It requires understanding the

process of behaviour change, diagnosing areas of difficulty in the change process, and tailoring interventions to facilitate change accordingly.

*Summary:* In the UK, one method of implementing evidence in practice is the government's introduction of National Service Frameworks (NSFs) for defined services or particular groups of care. The NSFs set national standards, identify key interventions, and set milestones for each standard to ensure progress within an agreed time-scale. The milestones are an indicator of the extent to which new, evidence-base ways of working are implemented. The authors looked at reasons why general practices achieve nationally set milestones to different extents. They compared the beliefs, self-reported behaviours, and organizational context of general practitioners (GPs) who have been successful in achieving milestones set out in the UK's NSF for Coronary Heart Disease (CHD) with those who have been less successful. Sixteen London GPs were interviewed, eight high implementers (met five or more of six CHD NSF milestones) and eight low implementers (met one or two milestones). Practices were matched for size across the groups as far as possible. The interview consisted of open-ended questions, based on theoretical constructs identified as key to implementation in a previous project. There were three main areas that differentiated high and low implementers: beliefs about EBP, control over professional practice, and consequences of achieving the milestones. The results suggest areas that could be targeted in developing interventions to increase guideline implementation in primary care.

Miller, R.L. (2001). Innovation in HIV prevention: Organizational and intervention characteristics affecting program adoption. *American Journal of Community Psychology*, *29*(4), 621–647.

*Main Messages:*

- The degree of compatibility between the intervention program and organizational philosophy and local culture can significantly affect the program's adoptability.
- Feasibility of programs is an important criteria by which programs may be judged.
- Organizations most likely to adopt prevention programs are small, focused, and have few resources.

*Summary:* This paper examines the characteristics of innovations and organizations in terms of how they affect the technology transfer process. In particular, the author uses a multiple case study design to explore the organizational characteristics of community-based organizations that provide HIV prevention programs and the criteria these organizations employ when assessing the merits of externally-developed HIV prevention programs. Results indicate there were three main types of adopting organizations: those who had little experience adopting externally-developed programs, those that had adopted components of programs, and those that had adopted entire programs. The five characteristics that organizations identified as the criteria they used to judge an external prevention program included: (i) degree of compatibility with the organization's philosophy; (ii) its perceived relevance to local culture; (iii) evidence to support its use; (iv) its feasibility; and (v) its ability to fill a gap in the locally provided services.

Millman, J., Samet, S., Shaw, J., & Braden, M. (1990). The dissemination of psychological research. *American Psychologist*, *45*, 668–669.

*Main Messages:*

- Psychologists do not commonly venture to bring research findings believed relevant to the attention of policymakers.
- It is rare that a purportedly relevant study will reach the desks of policymakers.
- Both may reflect: (i) a lack of support for this activity by academic institutions; (ii) a lack of motivation; and/or (iii) a lack of skill in use of available venues.

*Summary:* This brief report describes a survey of psychologists who taught at the doctoral level in Manhattan universities in 1986–87. The survey examined the extent to which their research was

concerned with real-world issues, and to what extent and how they sought to make their findings known to those who could use them. Results show that those who carried out field studies and those whose departments rewarded applied research were more likely to have communicated research to potential users. The most frequently identified modalities for such communication were lectures to lay persons and consults to organizations. Least common were providing reports to contracting agencies, stakeholders, press releases, and communications with legislators or judiciary.

Mittman, B.S., Tonesk, X., & Jacobson, P. D. (1992). Implementing clinical practice guidelines: Social influence strategies and practitioner behavior change. *Quality Review Bulletin*, 18, 413–422.

*Main Messages:*

- The social influence perspective on health practitioner behaviour change provides a theoretical and conceptual basis for a broad range of promising strategies for implementing clinical practice guidelines. It is operationalized in strategies such as academic detailing, use of opinion leaders, and continuous quality improvement initiatives.
- Clinical guidelines are unlikely to produce significant change in clinical practices in the absence of carefully designed and executed programs to achieve their implementation.

*Summary:* Clinical practice guidelines are intended to serve as tools by which scientifically valid and reliable standards of clinical practice can be implemented. Yet, the success of clinical practice guidelines depends not only on their proper development, but also on their widespread application in routine medical practice. The lack of acceptance to guideline use may be due to factors such as physician resistance or incomplete information regarding the need for guidelines. Through the lens of a social influence perspective, this paper analyses specific guideline implementation strategies within a formal theoretical framework. The social influence perspective builds on traditional models of physician decision making and emphasizes influences such as shared beliefs and assumptions, group norms, organizational culture, and related behavioural factors. This perspective suggests that the mere availability of clinical practice guidelines, including research which supports their validity and potential value in improving care, will not likely lead to significant changes in clinical practice. Rather, guideline dissemination and implementation policies and intervention approaches must consider existing patterns of social interaction and influence. They must also be carefully designed to meet the characteristics of target clinicians and practice settings.

Muchinsky, P.M. (2004). When the psychometrics of test development meets organizational realities: A conceptual framework for organizational change, examples, and recommendations. *Personnel Psychology*, *57*(1),175–209.

*Main Messages:*

- Scientists and practitioners could both benefit from a greater understanding of the linkage between organizational change and implementation.
- Much of the conflict and resistance experienced in developing and implementing new psychological assessments revolve around differences of opinion regarding the role of each party in the relationship.
- Organizations need some sense of ownership of the problem resolution process as it affords them some measure of control over its implementation.

*Summary:* This paper describes a real-life organizational context in which the principles of test construction were directed toward the development of a job knowledge test. According to the author, the implementation of a testing program in an organization can be viewed as a case of organizational change. Thus, he draws from the organizational change literature as a resource to facilitate the practice of psychological assessment. Organizational change strategies can serve to implement in practice concepts and principles developed through scientific research. The author presents some of the useful

strategies, such as education, shared responsibility, serving as a negotiator/facilitator, and the overt manifestation of respect and recognition for the knowledge possessed by all parties.

Naranjo, C.A. & Bremner, K.E. (1996). Dissemination of research results regarding the pharmacotherapy substance abuse: Case examples and critical review. *Substance Abuse*, *17*(1), 39–50.

*Main Messages:*

- Few clinical trial results have significant impact on clinical practice due to inadequate dissemination.
- The facilitation of transfer of research studies requires the involvement of professionals trained in marketing and dissemination techniques.
- Vagaries and dilemmas are frequently involved in the dissemination of research findings by scientists who have no training in marketing.

*Summary:* The transfer of treatment research findings to clinical practice begins with influential dissemination. Other factors, such as availability of resources, acceptance by clinicians, and relevant company sponsorship can ultimately determine the clinical application of a new technology. The authors use two examples to indicate that scientists must collaborate with professionals trained in techniques of dissemination and marketing to facilitate the transfer of research results to clinical practice.

National Centre for the Dissemination of Disability Research (1996). *A Review of the Literature on Dissemination and Knowledge Utilization*.

*Main Messages:*

- Definitions of dissemination reflect differing assumptions and beliefs about the ways in which knowledge is used and the very nature of knowledge itself.
- No single theory or model of dissemination has gained ascendancy.
- Research use begins when research and development begins, and is not a sequential step that only follows the research and development.
- Dissemination requires ongoing support and personal intervention to achieve use.
- The goal of all dissemination should be use.
- One of the most effective ways to increase use is to involve potential users in planning and implementation of the research design.

*Summary:* This review of the literature includes a discussion of definitions and models, a review of the literature on knowledge use, a discussion of knowledge use as a learning process, and a review of the four dimensions of knowledge use (source, content, medium, user).

Program in Policy Decision-Making. (2002). *Derivable action messages from bodies of research knowledge*. Available at: http://www.researchtopolicy.ca/whatwehavelearned

*Main Messages:*

- Policy decision-makers are more likely to act on research evidence when it is packaged in an actionable message.
- A message can profile and place in context a specific study, but it should draw on a broader body of research knowledge than one specific study.

*Summary:* Building on the program's practical experience in knowledge transfer with policy decision-makers, four versions of a message are offered as examples. These are: the headline version, the one sentence version, the one paragraph version, and the full-text version.

Nemeth, L.S. (2003). Implementing change for effective outcomes. *Outcomes Management*, *7*(3), 134–139.

*Main Messages:*

- Change is a complex concept that must be approached with careful planning.

- Getting through the rocky times in a change process requires leadership with an active ear, problem-oriented troubleshooting of the issues, and attention to the details of the implementation.
- When leadership is actively attuned to the needs of the system, change will be implemented in a manner that will engage followers to embrace the change.

*Summary:* Change is rapidly becoming an integral component of health care improvement. To effectively implement change, it is necessary to provide clear vision, leadership, and adequate time to develop followers. Coordination of activities and integration of changes in practice to promote positive outcomes are needed for success. This article analyzes the concept of change illustrated through a quality improvement intervention-based research project.

Nock, M., Goldman, J., Wang, Y., & Albano, A. M. (2003). From science to practice: The flexible use of evidence-based treatments in clinical settings. *Journal of the American Academy of Child and Adolescent Psychiatry*, *43*(6), 777–780.

*Main Messages:*

- Many unfavourable notions about the usefulness of EBTs outside research settings stem from the misperception that such treatments must be administered rigidly without variation, creativity, or flexibility, and without consideration of the individual differences with which patients present. Treatment manuals describe the procedures used in EBTs and provide instructions and guidelines for the clinician, but by no means dictate the therapist's every word and action. In clinical practice, these manuals may be modified to best meet the needs of the patient. In the case of child and adolescent psychotherapy, modifications are often warranted based on child factors such as developmental level or presentation with multiple problems/disorders, parental factors such as psychopathology that may affect treatment, and family factors that may also need to be addressed. In other words, because all potential modifications are not listed in the manual, there is no need to discard the EBT in favour of using an unsupported approach.
- Making modifications will result in the implementation of a treatment that is different in content and structure than that supported by the research (e.g., in the case of pharmacological treatment, one is now prescribing "off label"). As a means of ensuring the treatment is effective as delivered, the authors strongly advocate the use of scientific method in each case. Decisions about the nature of the modifications should be rooted firmly in psychological science, and each case should be treated as a scientific experiment with systematic data collection and analysis performed to test the effectiveness of the modified treatment. The use of this method provides empirical support for the intervention as implemented as well as immediate feedback to the clinician and patient that may be useful in guiding future treatment planning.
- Many EBTs have been developed to improve the treatment of child and adolescent behavioural problems. Although best research practice requires limited variability in the patients and methods used in the studies evaluating these EBTs, best clinical practice does not demand the same constraints. Clinicians are encouraged to use these well-specified treatments but to incorporate modifications according to individual differences of the presenting patient. These modifications should be grounded in psychological science and supported by continuous assessment of therapeutic change, consistent with the scientific method.
- Clinicians interested in learning new EBT approaches should be encouraged by the fact that many are based on the same principles of learning and include similar treatment components (e.g., psycho-education and cognitive restructuring, gradual exposure, and somatic control exercises). Thus, as with learning most new clinical methods, once one learns the core set of principles and skills involved, implementation of each specific approach is greatly facilitated.

*Summary:* There is a growing list of EBTs for children and adolescents. The accumulated data for these treatments support their consideration as first-line intervention options. Despite the documentation of the efficacy of these EBTs, they have not been widely incorporated by training programs or practicing

clinicians. The arguments most often made against the clinical use of EBTs are that they are developed and tested in well-controlled research settings and therefore may not be effective with "real patients" treated by "real therapists" in "real clinical settings." Some aspects of these arguments are valid. There is much unknown about existing EBTs, such as which components are necessary and sufficient, how they work, and under what conditions they are most effective. Rather than waiting for the answers to these questions, however, the authors describe how clinicians can use EBTs currently, flexibly, and effectively in clinical settings.

O'Brien, T., Freemantle, N., Oxman, A. D., Wolf, D. A., Davis, D. A., & Herrin, J. (2004). Continuing education meetings and workshops: Effects on professional practice and health care outcomes (Cochrane Review). *The Cochrane Library*. Chichester, UK, John Wiley & Sons, Ltd.

*Main Messages:*

- Interactive workshops can result in moderately large changes in professional practice.
- Didactic sessions alone are unlikely to change professional practice.

*Summary:* Randomized trials or well-designed quasi-experimental studies examining the effect of continuing education meetings (lectures, workshops, and courses) were reviewed. Thirty-two studies were included with a total of 36 comparisons. There was substantial variation in the complexity of the targeted behaviours, baseline compliance, the characteristics of the interventions, and the results. The heterogeneity of the results was best explained by differences in the interventions. For 10 comparisons of interactive workshops, there were moderate to moderately large effects in six, and small effects in four. For interventions that combined workshops and didactic presentations, there were moderate or moderately large effects in twelve comparisons and small effects in seven comparisons. In comparisons of didactic presentations, there were no significant effects, with the exception of one out of four outcome measures in one study.

O'Brien, T., Oxman, A.D., Oxman, A. D., Wolf, F., Davis, D. A., & Herrin, J. (2004). Educational outreach visits: Effects on professional practice and health care outcomes (Cochrane Review). *The Cochrane Library*. Chichester, UK, John Wiley & Sons, Ltd.

*Main Messages:*

- Educational outreach visits, especially when combined with social marketing, appear to be a promising approach to modifying health professional behaviour, especially prescribing.

*Summary:* Eighteen studies were included in this review involving more than 1896 physicians. All outreach interventions consisted of several components, including written materials and conferences. Positive effects on practice were observed in all studies. The authors found that outreach visits are costly, however savings may outweigh costs if they are targeted at inappropriate prescribing and the effects are enduring.

O'Brien, T., Thomson, A. D., Oxman, R. B., Haynes, R. B., Davis, D. A., Freemantle, N., & Harvey, E. L. (2004). Local opinion leaders: Effects on professional practice and health care outcomes. *The Cochrane Library*. Chichester, UK, John Wiley & Sons, Ltd.

*Main Messages:*

- Using local opinion leaders results in mixed effects on professional practice.
- It is not always clear what local opinion leaders do and replicable descriptions are needed.
- Research is required to determine if opinion leaders can be identified and in which circumstances they are likely to influence the practice of their peers.

*Summary:* Two independent reviewers reviewed eight studies involving close to 300 professionals. Although there is a theoretical basis for using local opinion leaders in improving the performance of health care providers, the results of only two trials provide strong evidence of a clinically important

effect. Although most trials found some improvement in the experimental group, they may be subject to bias.

Ochocka, J., Nelson, G., & Lord, J. (1999). Organizational change towards the empowerment-community integration paradigm in community mental health. *Canadian Journal of Community Mental Health*, *18*(2), 59–72.

*Main Messages:*

- Leadership, organizational readiness and openness for change, government funding policies, and resource people and teaching tools are factors that facilitate organizational change.
- Stakeholder resistance and government funding policies are barriers to organizational change.

*Summary:* The authors examined changes in three mental health organizations as they strove to implement an empowerment-community integration paradigm. Using qualitative research methods, they focused on: (i) change pathways; (ii) organizational change outcomes; and (iii) the factors which helped or hindered change outcomes. They found that while each of the three organizations followed its own unique pathways toward change, there were common elements in their change stories. At the Canadian Mental Health Association, four main factors facilitated change. Strong and innovative leadership at the level of the executive director involved promoting change, sharing power, and encouraging organization members to participate in the change process. Effective leadership has been identified in previous research as an important factor of organizational change. Another factor was organizational readiness and openness to change. The use of resource people and teaching tools played an important role. Finally, growth of the consumer/survivor movement also contributed to changes. At Waterloo Regional Homes for Mental Health, the organizational readiness, leadership, and resource people also contributed to its success. Government funding policies were recognized as both helping and hindering the pace of change. Residents' fear of losing support was a factor that hindered change. There were several challenges encountered in the change process, including an identity change for staff, struggles of moving from values to implementation, and initial resistance among some staff, residents, and board members. Resistance of different stakeholders, both within and outside of the setting, was a factor which inhibited change. At Waterloo Region Self Help, the same barriers were identified, but two additional factors were identified that helped facilitate change: an increased profile in the community and a comfortableness of consumers/survivors regarding their mental health struggles.

O'Donnell, C. (2004). Attitudes and knowledge of primary care professionals towards evidence-based practice: A postal survey. *Journal of Evaluation in Clinical Practice*, *10*(2), 197–205.

*Main Messages:*

- For implementation of EBPs to be successful, all relevant stakeholders need to be involved.
- Barriers to the implementation of EBPs in primary care include: lack of time, lack of skills, access to IT facilities and information, and the applicability of evidence to primary care.
- Facilitators included: protected time, training, and multidisciplinary learning and working environments.

*Summary:* This study used a questionnaire methodology to systematically elicit the views of six different key professional groups working within primary care about EBP. While all professional groups welcome and support EBP, there are clear differences in the starting point and perspectives across the groups. These differences need to be recognized and addressed to ensure that learning the skills of EBP and implementing evidence are effective. This will also enhance the ability of primary care organizations to develop robust mechanisms for supporting key aspects of clinical governance.

Oetting, E.R., Donnermeyer, J.F., Plested, B. A., & Edwards, R. W. (1995). Assessing community readiness for prevention. *The International Journal of the Addictions*, *30*(6), 659–683.

*Main Messages:*
- Communities vary greatly in their interest and willingness to try new prevention strategies.
- The community readiness scale is a tool that can measure a community's level of readiness to adopt new programs and projects.

*Summary:* This article describes the development and usage of the community readiness model, a tool to measure community readiness through the use of key informants in the community. Although this model was developed specifically to apply to alcohol and drug use prevention, it was created with the broader aim of suggesting ways in which the concept of readiness can be applied to many kinds of community-based prevention efforts. The authors provide descriptions of each stage of community readiness and how to use the scale. The functions of this scale are versatile, including providing baseline information in communities with no programs, redirecting ongoing programs by indicating readiness levels for new problem areas, as an evaluation tool to measure community support for funded projects, and as a useful construct for case studies and ethnographic research.

Oetting, E.R., Jumper-Thurman, P., Plested, B. A., & Edwards, R. W. (2001). Community readiness and health services. *Substance Use and Misuse*, *36*(6 & 7), 825–843.

*Main Messages:*
- Starting and implementing a program is only appropriate when a community is ready.
- There are multiple dimensions of readiness, and a community can be at different stages on different dimensions.
- Community readiness can be assessed, diagnosed, and altered.

*Summary:* A failure to implement a community-based media program aimed at drug use prevention led the authors to develop the community readiness model. The community readiness theory is a practical tool for implementing changes in community health services. It provides methods for assessment, diagnosis, and community change. The model is based on the premise that there is a hierarchy of stages of community readiness. In addition to describing those stages, this article also provides a description of the empirical development of the Community Readiness Scale and what the authors learned about changing community readiness.

Ollendick, T. & Davis, T.E. (2004). Empirically supported treatments for children and adolescents: Where to from here? *Clinical Psychology: Science & Practice*, *11*(3), 289–294.

*Main Messages:*
- A web-based strategy to "get the message" out about empirically supported treatments could help make them more readily available to practicing clinicians.
- The ongoing use of invalidated treatments is not only bad practice, but also unethical.

*Summary:* This commentary on Herschell, McNeil, and McNeil's article on disseminating empirically supported child and adolescent treatments provides additional detail about the movement to identify, evaluate, and disseminate ESTs. The authors suggest a web-based strategy that might prove useful in disseminating ESTs, and comment on professional and ethical issues associated with the use and failure to use ESTs. They assert that the ongoing use of invalidated treatments is not only bad practice, but may be unethical. It is the responsibility of practicing professionals to keep abreast of developments about which treatments work and which ones do not. If professionals do what they can to ensure these interventions are actually implemented and adopted, they will become "treatment as usual" over time.

Omery, A. & Williams, R.P. (1999). An appraisal of research utilization across the United States. *Journal of Nursing Administration*, *29*, 50–56.

*Main Messages:*
- The change process involves two functions: research evaluation and environmental readiness for change.

- Environmental readiness includes identifying the nature and identity of the change agents, readiness of individuals, and evaluation of available resources (financial, time, expertise).
- Attitude toward research is key to research use.
- Work environment is also key; clinical managers' behaviour can inhibit the development of research use activities in practice. Managers exhibit failure to use their position and organizational authority to influence the use of research in practice.
- Themes emerging from expressed barriers included resources, prevalent culture, change process, and nursing education.
- Themes emerging from expressed facilitators included leadership commitment, available resources, and culture.

*Summary:* The success of research use is a function of how well it has been incorporated into the cultural norm of the organization. This article describes current and future nursing research use activities in various clinical agencies across the United States, and identifies barriers and facilitators to those activities.

Osterloh, M. & Frey, B. (2000). Motivation, knowledge transfer, and organizational forms. *Organization Science*, *11*(5), 538–550.

*Main Messages:*

- Different types of motivation underlie the spread of tacit versus explicit knowledge.

*Summary:* The authors determined the kinds of motivation needed to generate and transfer tacit knowledge, as opposed to explicit knowledge. Employees are motivated intrinsically when activities are undertaken for their own immediate satisfaction, and extrinsically when they are able to satisfy their needs indirectly, especially through monetary compensation. A crowding effect exists where tangible rewards undermine intrinsic motivation for interesting tasks. Intrinsic motivation is crucial when tacit knowledge in and between teams must be transferred and organizational forms must enable different kinds of motivation. The authors conclude that: (i) crowding effects make intrinsic and extrinsic motivation endogenous variables; (ii) market elements such as profit centers are beneficial; and (iii) firms are better able to manage motivating than the market.

Oxman, A.D., Thomson, M., Davis, D.A., & Haynes, R. B. (1995). No magic bullets—A systematic review of 102 trials of interventions to improve professional practice. *Canadian Medical Association Journal*, *153* (10), 1423–1431.

*Main Messages:*

- Information dissemination (e.g., mailings, conferences) had no effect on practice.
- More complex and multi-faceted implementation strategies were effective in reducing inappropriate performance of health care providers by 20–50%.
- Implementation strategies need to take into account the context surrounding the desired practice and directly address the barriers to suboptimal performance.
- There is no single proven way to improve quality of service, but there are a number of effective processes that can contribute to improvements in the availability of practice based on best evidence.

*Summary:* The authors reviewed the effectiveness of a variety of interventions aimed at improving the performance of health care professionals and health outcomes. In total, they reviewed 102 published trials. The trials focused on health care providers in any setting with methods that involved random assignment or quasi-random allocation. Implementation strategies and the number of studies associated with each included: reminder systems (52), audit and feedback (31), conferences (17), multifaceted (15), educational material (12), outreach visits (8), local consensus process (8), use of opinion leader (5), and marketing (3).

Perry, R.D. & Hanig, D. (1994). Dissemination and utilization of the mental health evaluation. *Evaluation and Program Planning*, *17*(1), 93–96.

*Main Messages:*

- The final evaluation report on Washington state's mental health system received wide distribution and has had an immediate impact.

*Summary:* The paper reviews the short-term impacts of the mental health evaluation: mental health funding increased, and many of the changes recommended in the report are in the process of being made. Although it is too soon to assess long-term impacts, follow-up on the report's recommendations will provide important new information on how the goals of the reforms are being met.

Persons, J.B. (1997). Dissemination of effective methods: Behavior therapy's next challenge. *Behavior Therapy*, *28*, 465–471.

*Main Messages:*

- Large numbers of patients do not receive effective treatment because practitioners have been slow to adopt effective new treatments.
- One of behaviour therapy's most important tasks in the coming years is to disseminate innovations.

*Summary:* Dissemination of effective interventions developed by behaviour therapists is one of behaviour therapy's most important tasks now and in the coming years. Dissemination should occur when a treatment is supported by efficacy data from randomized controlled trials or from a large series of single case studies. The author discusses several examples of diffusion failure and when dissemination is appropriate, and provides recommendations for improving dissemination of empirically supported behavioural interventions and methods.

Plested, B., Smitham, D.M., Jumper-Thurman, P., Oetting, E.R., & Edwards, R.W. (1999). Readiness for drug use prevention in rural minority communities. *Substance Use and Misuse*, *34*(4&5): 521–544.

*Main Messages:*

- Rural communities at different levels of readiness require different types of programs to increase readiness.
- Building and maintaining effective programs requires continued evolution of readiness through the stages of initiation, stabilization, confirmation and expansion, and professionalization.

*Summary:* Community readiness for drug use prevention was assessed in rural communities, showing that most rural communities are at relatively low stages of readiness. Minority communities were particularly low in readiness. The authors also provide updated scales and methods for assessing community readiness.

President's Advisory Commission on Consumer Protection and Quality in the Health Care Industry. (1998). Chapter Eleven: Fostering Evidence-Based Practice and Innovation. *Quality First: Better Health for All Americans.* Washington DC. Web document: http://www.hcqualitycommission.gov/final/

*Main Messages:*

- The diffusion of effective health care practices takes a long time.
- Important tools for supporting the adoption of effective health care practices include decision support systems and provider profiling and feedback.

*Summary:* This chapter reports on the President's Advisory Commission's recommendations for fostering EBP and innovation. These include strengthening the scientific base for health care practices through further collaboration in technology assessment and research targeted to filling gaps in existing knowledge, as well as encouraging dissemination of innovations demonstrated to be effective.

Prochaska, J.M., Prochaska, J.O., & Levesque, D.A. (2001). A transtheoretical approach to changing organizations. *Administration and Policy in Mental Health*, *28*(4), 247–261.

*Main Messages:*

- Predictable resistance is often due to an unplanned conflict between leaders prepared to take action and employees who have not been prepared.
- Planned interventions and interactions matched to the employee's stage of change results in greater participation, less resistance, and more progress or change toward the desired goal.

*Summary:* In an effort to address the underdeveloped state of organizational change theory, research, and practice, the authors propose the Transtheoretical Model as an integrative framework that can synthesize major approaches to change traditionally seen as in conflict and incompatible. This article outlines the conceptual principles of change posited by the model and how it has been tested in controlled experiments with entire populations. The main principle behind the theory is that stage-matched interventions are more effective than action-oriented, one-size-fits-all programs by increasing participation and increasing the likelihood that individuals will progress to action. The authors also discuss the process of how stage-matched principles can be generalized to organizational change implementation.

Reback, C.J., Cohen, A.J., Freese, T. E., & Shoptaw, S. (2002). Making collaboration work: Key components of practice/research partnerships. *Journal of Drug Issues*, *32*(3), 837–848.

*Main Messages:*

- Failure to provide the community with the research findings, even when results are "no difference," breeds distrust toward the investigators and their motives, which can generalize to all researchers.
- Community partners should be given the opportunity to review all publication manuscripts in draft form and offer input and suggestions.

*Summary:* Drawing on their experiences as researchers and community-based providers, the authors outline several key components of successful practice/research collaboration: forming equal partnerships, bilateral communication, ensuring nonhierarchical collaborations, and appropriate dissemination of outcomes. Many concrete benefits can result from collaborative research projects, including additional services, program development, and training for service agency staff. Building partnerships takes time and a good amount of planning and negotiation prior to writing proposals. However, these collaborations can result in more effective efforts to solve common problems and reach common goals.

Redfern, S. & Christian, S. (2003). Achieving change in health care practice. *Journal of Evaluation in Clinical Practice*, *9*(2), 225–238.

*Main Messages:*

- Organizational factors such as having enough staff of the right skill-mix, strong leadership, supportive managers and colleagues, as well as organizational stability are important to successful change.
- Project leaders are crucial to success of the change process.

*Summary:* This paper reports on a study evaluating a practice development program (STEP) whose aim was to establish and assess EBP in nursing and other health care practice areas. The findings revealed dissemination of information to staff and adherence by staff to new practice guidelines to be important intermediate outcomes in the process of change. The need emerged for a supportive organizational culture and commitment, recognition of the importance of change, and a credible change agent. Linear models of change can work in settings with high levels of certainty, but complexity theory is more likely to underpin the process of change in organizations characterized by uncertainty. The authors also provide a brief review of change in health care practices.

Reichers, A.E., Wanous, J.P., & Austin, J. T. (1997). Understanding and managing cynicism about organizational change. *Academy of Management Executive*, *11*(1), 48–59.

*Main Messages:*

- Cynicism is detrimental to the change process and therefore warrants considerable attention.
- Factors that contribute to the development of cynicism include a history of change programs that are not consistently successful, a lack of adequate information about change, and a predisposition to cynicism.
- Strategies for managing cynicism should address its defensive function by giving people opportunities to voice their feelings publicly, receive validation about their feelings, and receive assurances that steps will be taken to alleviate their concerns.

*Summary:* Cynicism is an important barrier to change. It involves a loss of faith in the leaders of change, and is a response to a history of change attempts that are not entirely or clearly successful. Drawing from a study involving interviews with 120 managers and employees in a large Midwestern plant, this paper examines factors that contribute to the development of such cynicism, as well as strategies for minimizing cynicism. Some of these strategies include: providing timely, appropriate, and credible information; admitting mistakes when they occur, apologizing, and promptly taking appropriate corrective action; encouraging an exchange of communication where managers can become aware of employee perceptions and feelings about change; and addressing people's fears.

Richmond, R.L., & Anderson, P. (1994). Research in general practice for smokers and excessive drinkers in Australia and the UK. III. Dissemination of interventions. *Addiction*, *89*, 49–62.

*Main Messages:*

- The barriers to implementation of available interventions include: (i) poor preparation for the general practitioner role; (ii) resistance to changes in the nature of general practice; and (iii) low expectations about their own intervention skills.
- A multi-pronged approach is required to deliver brief interventions.
- The most effective methods of delivery are those based on personal contact with follow-up support.

*Summary:* This paper reviews the methods of dissemination of interventions for smokers and excessive drinkers to general practitioners. The authors discuss modes of intervention delivery, such as postal delivery and various face-to-face strategies. The paper also explores barriers to implementing interventions, including poor preparation for the general practitioner role, resistance to changes in the nature of the general practice, and low expectations about their own intervention. Some strategies for overcoming these barriers include raising the feelings of self-efficacy by the use of positive role models, skills training, feedback mechanisms, and promoting more realistic outcome expectations and definitions of success.

Ringeisen, H., Henderson, K., & Hoagwood, K. (2003). Context matters: Schools and the 'research to practice gap' in children's mental health. *School Psychology Review*, *32*(2), 153–168.

*Main Messages:*

- When moving evidence-based interventions to the school context, three levels of characteristics are important: the individual level (child and teacher), the organizational level (school), and the state or federal level.
- At the provider level, limited time availability means that opportunities for staff training, support, and communication are vitally important for efficacy and program implementation. Traditional in-service training opportunities are even more helpful when supplemented with increased access to informal or formal professional networks.

*Summary:* Although several reviews have identified mental health interventions relevant to schools, this research pays insufficient attention to the school context. Several aspects of school context likely

influence the ability of schools to change current practices or adopt new ones. Relying on an organizational framework, the authors propose a three-level model of school context particularly relevant to the delivery of mental health interventions in which individual, organizational, and state or national-level factors are described. The authors argue that effective school-based mental health care will result if we attend to system reform efforts, capacity building, and the delivery of empirically driven intervention strategies

Robinson, J.S. & Turnbull, D.A. (2004). Changing healthcare organisations to change clinical performance. *Medical Journal of Australia*, *180*(Supplement): S61–S62.

*Main Messages:*

- The timely uptake of evidence, which requires translation of knowledge and promotion, could be assisted by the formation of EBP support units within hospitals and clinical research implementation networks for clinical services in a wider context.
- A review of clinicians' behaviour is an essential prerequisite to implementing change.
- Time must be included for clinicians to work within EBP support units to determine their priorities for changing the way care is provided, protected, and funded.

*Summary:* In response to the question of how health care organizations or systems can change to increase uptake of the beneficial forms of care as EBP and remove harmful or ineffective practices, the authors propose the formulation of evidence-based clinical practice support units in hospitals and clinical research implementation networks. The purpose of such units would be to help care providers review evidence to determine which practices need to change, assist providers in preparing clinical protocols, and provide audit and feedback. Part of this would be a review of clinicians' behaviour—an essential prerequisite to implementing change. These units would also need to help clinicians and patients adjust to new forms of service delivery or treatment options. Continued support may require education programs, prompts, and reminders for all.

Robinson, L. (2002). *Making Reader Friendly Publications*. Social Change Media & Pluto Press Australia.

*Main Messages:*

- An effective strategy is to create visual interest in publications through the use of illustrations and cartoons, breakouts, or 'pull-quotes'.

*Summary:* This booklet describes how to make publications such as leaflets, booklets, manuals, and newsletters interesting to read and hence effective in transmitting information to readers.

Rogers, S., Humphrey, C., Nazareth, I., Lister, S., Tomlin, Z., & Haines, A. (2000). Designing trials of interventions to change professional practice in primary care: Lessons from an exploratory study of two change strategies. *British Medical Journal*, *320* (7249), 1580–1583.

*Main Messages:*

- When developing interventions that can be executed successfully and its findings applicable to a service setting, the best design options should be able to reconcile the interests of research, development, and practice.
- Interventions requiring the participation of health professionals in organizational change require a high degree of motivation.
- Interventions must be adapted as far as possible to the needs of participants without compromising theoretical assumptions.

*Summary:* The disappointing results from randomized controlled trials to evaluate interventions to change professional practice in primary care may be due to the methodological and practical difficulties of evaluating such interventions, rather than lack of efficacy of the interventions. This article reports on the findings of an exploratory trial to examine the effects of teaching evidence-based medicine and facilitated change management on the implementation of cardiovascular disease

guidelines in primary care. When designing such trials of intervention to change professional practice, careful choices must be made about the selection of appropriate practices, development and adaptation of interventions, and experimental design. These choices should take into consideration the different priorities of researchers, those who are developing the interventions, and those who are participating. Interventions must be adapted to closely meet the needs of participants without compromising theoretical assumptions, and likewise experimental designs must enable active staff participation without distorting the interventions delivery.

Rosen, A. (2003). Evidence-based social work practice: Challenges and promise. *Social Work Research*, *27*(4), 197–208.

*Main Messages:*

- Factors inherent in practitioners and the practice situation render much of EBP incompatible with its routine application in practice.
- Appropriate implementation of EBPs can be enhanced by helping social workers curb the uncritical transfer of lay knowledge and cognitive habits to professional tasks.
- Practitioners' acceptance and implementation of EBP may be hindered by the delegitimization of the scientific paradigm as appropriate for researching and deriving knowledge for practice, as well as the sanctioning of lay judgment and decision strategies for use in practice.
- The inherent dilemma in applying empirical generalizations to individuals and situations that practitioners know may not be similar to the circumstances from where these generalizations originated from is a potential obstacle to implementing EBPs.

*Summary:* Much of the incompatibility of EBP and its routine application in practice can be linked to factors inherent in practitioners and the practice situation. This incompatibility has not been adequately addressed, but rather researchers have tended to place the burden of use mainly on practitioners, thus contributing to the alienation between researchers and practitioners. If EBP is to be implemented more generally, then practitioners must be provided with tools to facilitate such implementation. In this article, the basic premises of social work that underlie EBP are highlighted. The implications of these premises are that social work practice must be: responsive to client needs; ethical; goal-directed and outcome-oriented; subject to scrutiny and accountability; guided by scientifically tested knowledge; and evaluated for its effectiveness. These characteristics also encompass the essence of EBP. The author also describes three specific obstacles to implementing EBPs and the procedures that could help attenuate their undesired influence and enhance implementation: (i) the similarity of social work professional concerns to lay experiences and problems; (ii) orientations to knowledge; and (iii) the inherent dilemma in applying empirical generalizations to individuals and situations that practitioners know may not be similar to the circumstances from where these generalizations originated from. Four specific elements necessary for effective implementation are offered. In addition, the author argues that a new paradigm for professional education must be developed if EBP is to become the predominate mode in social work practice.

Rosenheck, R.A. (2001). Organizational process: A missing link between research and practice. *Psychiatric Services*, *52*(12), 1607–1612.

*Main Messages:*

- Efficacy studies are time-limited and may be shielded from much of the organizational upheaval and ambiguity that are present on a day-to-day basis.
- The author suggests that in addition to efficacy, effectiveness, and translational research paths, there is a need for dissemination process research which, at this stage, is descriptive and focuses on organizational processes.
- The four strategies identified that shape the dissemination process are: (i) create a coalition of like-minded leaders who will champion the initiative; (ii) link the effort to current larger

organizational goals and values to increase legitimacy; (iii) monitor fidelity and outcomes; and (iv) develop a community of practice that is self-reinforcing and program specific, and eventually generative in terms of using new findings to modify or create new programs.

*Summary:* In this discussion article, the author describes organizational processes and strategies that have been used to support the implementation of innovative programs in the United States' Veterans Affairs health care system. Given that mental health care is increasingly delivered in complex settings with competing goals, uneven outcomes, and changing leadership and roles, interventions that are effective in controlled studies may not be able to be easily embedded in these systems. The author reviews key strategies that focus on effective organizational processes that may be helpful in this translation process.

Rudd, R.E., Colton, T.C., Das, J.K., DeJong, W., & Hyde, J. (2003). Mutual exchanges support academic and community collaboration. *Public Health Reports*, *118*(i1), 80–83.

*Main Messages:*

- Collaboration between academic and public health institutions begins with small informal projects that can set the foundation for more significant work later.

*Summary:* Professionals and researchers need to maintain regular ongoing discussions so they are ready when an opportunity to engage in both informal and major collaborative efforts arises. The importance of small collaborative projects is highlighted through the description of a continuing relationship between professionals at a major drinking water utility and faculty and students from academic programs with a health communication and health literacy focus. The benefits of this collaboration extended to the public agency, those in academia, and to the public. With the help of the academic group, the burden of translating scientific and legal information was shifted to the agency from the consumer, thereby enabling health information to be more accessible to the average reader.

Rutledge, D.N. & Donaldson, N.E. (1995). Building organizational capacity to engage in research utilization. *Journal of Nursing Administration*, *25*(10), 12–16.

*Main Messages:*

- Role assignments that integrate accountability for use of research processes can be powerful determinants of key professional use of research processes behaviours.
- Regional networking combined with tiered continuing education in research can enhance organizational innovation adoption potential by changing organizational communication mechanisms and individual nurse communication behaviour, leading to research use activities.

*Summary:* This paper describes a three-year project which sought to build organizational capacity to engage in research use among 20 nursing service and 6 academic institutions. By strengthening the role-specific research use knowledge and skills of nurse employees, the innovation adoption potential of a nursing service may be enhanced. Also, by developing organizational infrastructure that supports strategic research use processes and activities, nurses within an organization become accountable for actively promoting clinical quality and effectiveness through scientifically based practice. The authors describe the specific strategies used to provide research use networking and continuing education to RNs in this project, and also offer recommendations stemming from the research.

Rycroft-Malone, J., Harvey, G., et al. (2002). Getting evidence into practice: Ingredients for change. *Nursing Standard*, *16*(37), 38–43.

*Main Messages:*

- Most successful implementation occurs when: evidence is robust and matches professional consensus and patient needs/experience; when the context is receptive to change with sympathetic cultures, strong leadership, appropriate evaluative systems; and when there is appropriate facilitation.

*Summary:* Among practitioners, the challenge of ensuring that the delivery of care is evidence-based and clinically effective is complex. To help address this issue, the authors propose a framework that represents the influencing factors they believe are key to successful implementation, including the nature of the evidence, the context in which the change is to take place, and the way the process is managed. These factors are supported by real examples from practice and research, as well as by the emerging findings from focus group data.

Rycroft-Malone, J., Kitson, A., Harvey, G., McCormak, B., Seers, K., Titchen, A., * Estabrooks, C. (2002). Ingredients for change: Revisiting a conceptual framework. *Quality and Safety in Health Care*, *11*, 174–180.

*Main Messages:*

- For implementation of evidence to be successful, there needs to be clarity about the nature of the evidence being used, the quality of the context, and the type of facilitation needed to ensure a successful change process.
- The most successful implementation occurs when: (i) the evidence is scientifically robust and matches professional consensus and patient needs (high evidence); (ii) the context is receptive to change with sympathetic cultures, strong leadership, and appropriate monitoring and feedback systems (high context); and (iii) there is appropriate facilitation of change with input from skilled external and internal facilitators (high facilitation).
- A good practice model has a strong emphasis on continuing professional development and individual learning rather than formal evidence-based principles. Reflective practitioners need to examine their own practice and identify local patterns for several reasons: much of science is seen in practice as inconclusive or contested; professionals retain substantial autonomy over their work practices and tend to resist external interventions from research and development functions; and much of clinical knowledge is tacit and experiential so that the findings of evidence-based medicine are not accepted as valid to practice.
- It is important to understand the political and cultural context for achieving change.
- The concept of learning organizations is key to the context that facilitates change. Organizations that value the contributions of individuals are open, have decentralized decision making, have a shared vision, and tend to build innovative facilitative cultures.

*Summary:* The authors present theoretical developments of a conceptual framework which influence the uptake of evidence into practice. They conducted a concept analysis on the key elements of the framework—evidence, context, and facilitation—leading to refinement of the framework. While these three essential elements remain key to the process of implementation, changes have been made to their constituent sub-elements, enabling the detail of the framework to be revised. The concept analysis shows that the relationship between the elements and sub-elements and their relative importance need to be better understood when implementing EBP. Increased understanding of these relationships would help staff to plan more effective change strategies. Anecdotal reports suggest that the framework has a good level of validity. The authors plan to develop it into a practical tool to aid those involved in planning, implementing, and evaluating the impact of changes in health care.

Sanson-Fisher, R.W. (2004). Diffusion of innovation theory for clinical change. *Medical Journal of Australia*, *180*(Supplement), S55–S56.

*Main Messages:*

- According to Roger's diffusion model, there are five elements of a new or substitute clinical behaviour that will partly determine whether adoption or diffusion of a new activity will occur: relative advantage, compatibility, complexity, trial ability, and observability.
- The clinician's perception of whether the innovation will be advantageous is more important than objective data.

- To increase the probability of adoption, the innovation must address an issue that clinicians or others perceive to be a problem.
- A clinical procedure is more likely to be adopted if it is simple and well defined.

*Summary:* Maximizing the adoption of EBP has been argued to be a major factor in determining health care outcomes. However, there are gaps between evidence-based recommendations and current care. Bridging the evidence gap will not be achieved simply by informing clinicians about the evidence. One theoretical approach to understanding how change may be achieved is Rogers' diffusion model. He argues that certain characteristics of the innovation itself may facilitate its adoption. Other factors influencing acceptance include promotion by influential role models, the degree of complexity of the change, compatibility with existing values and needs, and the ability to test and modify the new procedure before adopting it. The diffusion model may provide valuable insights into why some practices change and others do not, as well as guide those trying to effect adoption of best-evidence practice.

Schoenwald, S.K. & Henggeler, S.W. (2003). Special series: Current strategies for moving evidence-based interventions into clinical practice. *Cognitive and Behavioral Practice*, *10*, 275–277.

*Main Messages:*

- Developing strategies to successfully transport evidence-based intervention models to community settings with fidelity is critical to ensuring that intended clinical and service-level outcomes are achieved.
- One important strategy necessary for successful implementation is to consider and attend to the variations of the community context into which the intervention is being implemented, such as the organization's staff, consumer issues, referral and funding sources, etc.
- There are two essential challenges to ensuring fidelity: (i) measuring fidelity quickly and cost-effectively, and (ii) promoting fidelity. Program implementation checklists of key ingredients of the intervention model completed by the service provider and daily telephone reports of behaviour are two low cost methods that have been used.
- Ensuring fidelity is more challenging. The task is to train implementers of the intervention and provide enough ongoing support and monitoring to ensure they apply the intervention as intended, case after case. Training procedures and materials have been used to support program adopters.
- In the medical and mental health professions, training and quality assurance consists mainly of graduate education, regulatory mechanisms (licensing, certification), and continuing education workshops. Aside from having no evidence of effectiveness, these approaches may not cultivate the competencies required to implement a particular EBP, much less needed to accommodate a changing marketplace of EBPs. As such, dedicated staff are needed whose sole mission is to facilitate the quality-controlled dissemination of the intervention.

*Summary:* Recognizing that transporting complex intervention models to distal community-based settings is quite different than conducting community-based research on the model, developers are paying increasing attention to strategies that will increase the likelihood that interventions will be implemented into the community with fidelity. The authors in this introductory paper discuss some of the challenges to dissemination and the strategies used to address these challenges posed by the experiences of four EBPs. The challenge of ensuring fidelity involves measuring fidelity quickly and cost-effectively as well as promoting fidelity. Strategies for measuring fidelity include using program implementation checklists of the key ingredients of the intervention model. Ensuring quality assurance involves training implementers of the intervention and providing ongoing support and monitoring. To address the particular impediments to intervention implementation presented by service systems in different communities, the authors suggest a formalized site assessment process and informal introductory meetings between innovators and service system representatives.

Schoenwald, S.K. & Henggeler, S.W. (2004). A public health perspective on the transport of evidence-based practices. *Clinical Psychology: Science & Practice*, *11*, 360–363.

*Main Messages:*

- Implementation strategies need to target multiple levels of the practice context, including payers and policy makers, to cultivate and sustain the demand for EBTs and support the implementation of such treatments with fidelity.
- The prevalence of untested, ineffective, and iatrogenic treatments for mental health constitutes a public health crisis, and increasing the availability of scientifically tested treatments is a major public health priority.
- We cannot rely on treatment developers or service researchers to disseminate these interventions; large scale gains in the treatment of mental health problems will require a public health perspective and strategies that go beyond trying to convince practitioners and administrators of provider agencies of the myriad benefits of EBPs.
- Large-scale dissemination efforts require political courage by elected and appointed leaders, as well as collaboration among individuals and entities at multiple levels of government and practice. Widespread transport of evidence-based mental health interventions will require legal mandates. The most ambitious and courageous attempts to transport EBPs to the field have come from state entities (e.g., Department of Children and Families in Connecticut; Ohio Department of Mental Health; Hawaii Department of Health, Child and Adolescent Mental health Division) that are responsible for meeting the mental health treatment needs of the public.
- Legal mandates do not guarantee implementation success and require sufficient resources and the consensus of stakeholders.
- Two broad resources are critical: (i) funding for providing the EBT must be competitive—if delivering treatment of no or unknown effectiveness is more profitable to treatment providers, the EBT will have little penetration into the provider community; (ii) significant funding must be provided for training in the EBT and for continued support of treatment fidelity.
- Since funding and training do not guarantee clinical outcomes, a continuous quality improvement system is recommended to document and improve the implementation and outcomes of EBTs delivered in the community. When clinicians and programs can be rewarded for their success in achieving desired outcomes, the adoption and effective implementation of EBTs is likely to become widespread.

*Summary:* This paper describes a public health perspective on the dissemination of empirically supported treatments in the community.

Schoenwald, S.K. & Hoagwood, K. (2001). Effectiveness and dissemination research: Their mutual roles in improving mental health services for children and adolescents. *Report on Emotional and Behavioral Disorders in Youth*, *2*(1): 3.

*Main Messages:*

- To deliver effective treatments in real world settings, some aspects of validated treatment protocols and community practice contexts (may include practitioner, service delivery, and service system variables) may have to be modified.
- Examining the transportability of treatments before undertaking dissemination may be prudent, as premature dissemination of treatments that are not suitable for a particular target group or setting could "poison the waters" for future implementations of empirically validated treatments.

*Summary:* Few studies in mental health have examined the diffusion of treatments or services with empirical support. Efficacy studies of treatments are not enough, but also require studies of effectiveness, transportability, and ultimately dissemination. This paper illustrates some of the issues investigators will face on the journey from the early evidence of treatment effects, to its "street ready" status (i.e., the

intervention can be implemented in representative service settings and systems), to its dissemination among children and families.

Schoenwald, S.K. & Hoagwood, K. (2001). Effectiveness, transportability and dissemination of interventions: What matters when? *Psychiatric Services*, *52*,1190–1197.

*Main Messages:*

- Four of the eight goals on the agenda of the Surgeon General's Conference on Children's Mental Health pertain to increased deployment of "scientifically proven" prevention and treatment services.
- Most of the literature on diffusion of innovation focuses on the naturalistic spread of innovations rather than proactive dissemination efforts; thus few studies are experimental or prospective, two design features required to build an evidence base on how to embed effective treatments in services systems.
- Prominent examples of mental health studies that have examined the diffusion of empirically validated MH treatments or services include: (i) assertive community treatment for adults with persistent mental illness; and (ii) the Teaching Family group home model for youths with behaviour problems. In the children's mental health sector, widespread diffusion of the Homebuilders model of family preservation services as an alternative to foster care placement, and the Child and Adolescent Service System Program system of care model for children and families have also occurred.
- Given likely differences in the conditions surrounding efficacy trials and community practice, transportability issues should probably be examined before undertaking dissemination efforts. Transportability research examines the movement of efficacious interventions to usual care settings. Essentially, there is a need to "test" whether an intervention can be transported to a different context and retain effectiveness before large scale efforts are made to transfer (deploy) to the field.

*Summary:* The process of moving efficacious treatments to usual-care settings is complex and may require adaptations of treatments, settings, and service systems. Three broad questions can help organize the progression of research on this complex process: What is the intervention? Who can conduct the intervention, under what conditions, and to what ends? Who will conduct the intervention, under what conditions, and to what ends? The "who" is pertinent at the level of the client, the clinician, the organization, and the service system. Moreover, the capacity to train clinicians in a new technology must exist before dissemination can be undertaken. If such training cannot readily be incorporated into traditional academic programs, such as graduate programs, internships, and residencies, then funding for its development is difficult to obtain. Capacity building thus becomes an unpaid and often undone task.

Schoenwald, S.K., Sheidow, A.J., & Letourneau, E.J,. (2004). Toward effective quality assurance in evidence-based practice: Links between expert consultation, therapist fidelity and child outcomes. *Journal of Clinical Child and Adolescent Psychology*, *33*(1), 94 –104.

*Main Messages:*

- Weekly consultation with a treatment expert can support fidelity of implementation among front-line clinicians in community-based sites.

*Summary:* This study validates a measure of expert clinical consultation and examines the association between consultation, therapist adherence, and youth outcomes with respect to implementing MST in community-based settings. In addition to supporting the reliability and validity of the MST Consultant Adherence Measure, the findings suggest that the availability to clinicians of expert consultation can impact clinician fidelity to a treatment model and child outcomes.

Schoenwald, S.K., Sheidow, A.J., Letourneau, E.J., & Liao, J.G, . (2003). Transportability of multisystemic therapy: Evidence for multilevel influences. *Mental Health Services Research*, *5*(4): 223–239.

*Main Messages:*

- Organizational factors were unrelated to therapist adherence. Therefore, therapist adherence may moderate, rather than mediate, the effects of organizational context on youth outcomes.
- A supportive and satisfying work environment (e.g., high job satisfaction) may compensate in some way for the effects of low adherence on child outcomes.
- When therapist adherence is high, youth outcomes seem to be positive regardless of the organization's climate with respect to factors associated with advancement and reward. But when adherence is low in an organization where advancement and reward opportunities abound, outcomes for children are poorer.
- Procedural specification and a hierarchical authority structure can interfere with positive youth outcomes when therapist adherence is high, but does not impact outcomes when adherence is low. This may suggest that the complex tasks required by MST therapists do not fit well with a highly procedural organizational structure.

*Summary:* Multisystemic Therapy (MST) is a family and community-based treatment model developed to address the determinants of serious antisocial behaviour in adolescents. MST has been validated in several studies combining features of both efficacy and effectiveness research, and the approach has been widely implemented. This study of MST examined associations between organizational structure and climate, therapist adherence to MST, and immediate post-treatment outcomes for youth in 39 sites for 666 children and families served by 217 therapists. Pre-post youth outcomes were similar to previous MST research findings in randomized trials. Therapist adherence to MST was associated with lower levels of immediate post-treatment problem behaviours. Organizational effects differed by level of therapist adherence during service to the family.

Scott, T., Mannion, R., Davies, H., & Marshall, M. (2003). The quantitative measurement of organizational culture in health care: A review of the available instruments. *Health Services Research*, *38*(3), 923–945.

*Main Messages:*

- There is an increasing acknowledgement of the importance of assessing the receptiveness to, and impact of, organizational change.
- A plurality of conceptualizations, tools, and methods—including both qualitative and quantitative methods—are required to evoke robust, subtle, and useful insights in the definition and measurement of organizational culture.

*Summary:* To successfully engender change in organizational behaviour, it is important to understand the collective thought processes informing that behaviour at both conscious and unconscious levels. Thus, a deeper analysis and understanding of organizational culture may be productive. The authors of this paper offer a review of thirteen quantitative instruments available to health service researchers who want to measure culture and culture change. While a range of instruments with differing characteristics are available to researchers interested in organizational culture, they all have limitations in terms of their scope, ease of use, or scientific properties. The authors suggest using quantitative and qualitative approaches in a complementary way to help develop a more detailed understanding of all the layers of culture within an organization.

Scott, T., Mannion, R., Davies, H. T. O., & Marshall, M. N. (2003). Implementing culture change in health care: Theory and practice. *International Journal for Quality in Health Care*, *15*(2), 111–118.

*Main Messages:*

- Lack of ownership can be a barrier to change. Change often evokes a sense of loss, and reactions to change by individuals and professional groups can be negative and unpredictable. Unless a critical mass of employees buy into the change program, such initiatives are likely to fail.

- Change is complex, and this complexity can act as a barrier. It is unrealistic to expect culture change strategies to be immediately effective. Successful strategies require realistic timeframes to implement the types of complex and multi-level changes often required.
- Leadership can also act as a barrier.
- A key challenge to change is to consider the impact of change on specific groups (e.g., doctors, nurses, other health professionals, and managers).

*Summary:* The authors conducted a literature review of theoretical and published studies of the processes and outcomes of culture change programs across a range of health and non-health care settings. They found a number of underlying factors that commonly attenuate culture change across a range of sectors, including: inadequate or inappropriate leadership; constraints imposed by external stakeholders and professional allegiances; perceived lack of ownership; and sub-cultural diversity within health care organizations and systems.

Scullion, P.A. (2002). Effective dissemination strategies. *Nurse Researcher*, *10*(1), 65–77.

*Main Messages:*

- Current failings in dissemination is the main factor contributing to the gap between research and practice.
- Dissemination is a process which is inter-sectoral, interdisciplinary, and interlinking, requiring resources and a commitment that needs active encouragement.
- Dissemination strategies, such as promoting the source and its credibility, must be considered at a very early stage in the design process involving the engagement of multi-disciplinary research teams.
- A message geared toward positive aspects and focused on relevant applications will be more readily accepted.
- The medium used to present the message should involve multiple methods and be consistent with what is known about the target audience.
- To ensure active uptake and maintain integrity in the research being disseminated, there should be some personal involvement between the research team and target users.

*Summary:* The importance and complexity of disseminating research findings or other key messages by researchers and policy makers is gaining increasing attention. In this paper, the author explores some of these complexities, looks at examples of effective dissemination strategies, and gives suggestions for researchers, research students, and others who might be involved in dissemination. Dissemination is viewed as a process comprised of elements identified as the source, the message, the medium, and target users, all of which require careful attention. Until a strong commitment to dissemination occurs at both corporate and individual levels, the current commitment to research and EBP will have a limited impact on practice.

Shanley, C. (2004). Extending the role of nurses in staff development by combining an organizational change perspective with an individual learner perspective. *Journal for Nurses in Staff Development*, *20*(2), 83–89.

*Main Messages:*

- Creating systems that support desired clinical behaviour is more productive than focusing on the behaviour of individuals.
- Change should be considered in terms of not only processes, but also the historical, cultural, and political features of the organization.

*Summary:* Nurses in staff development have a strong focus on developing programs that support the needs of individual learners. They are much less focused on ways their programs may support ongoing practice change in the workplace. This article outlines a number of characteristics of staff development programs trying to incorporate an organizational change perspective.

Shanley, C., Lodge, M., Mattick, R.P. (1996). Dissemination of research findings to alcohol and other drug practitioners. *Drug and Alcohol Review*, *15*, 89–94.

*Main Messages:*

- Intensive workshops were found to be a useful dissemination strategy when combined with other strategies.

*Summary:* This article provides an overview of the literature in the area of research dissemination, and suggests ways of increasing communication between researchers and clinicians. It describes a dissemination project based at the Centre for Education and Information on Drugs and Alcohol, designed to convey the results of a major research project about alcohol and other drugs to practitioners in the New South Wales. The article includes the development, implementation, and evaluation of the project. The format employed—an intensive workshop conducted in different locations—was found to be a useful strategy, particularly when used to promote a large research project of clinical significance and when used in conjunction with other dissemination strategies.

Sherrod, L.R. (1999). Giving child development knowledge away: Using university-community partnerships to disseminate research on children, youth and families. *Applied Developmental Science*, *4*, 228–234.

*Main Messages:*

- A bi-directional flow increases both the chances someone will listen to academics and the usefulness of the communication to them.
- University-community partnerships ensure the dissemination of research to audiences other than academics.
- There is a need to educate the media, the public, and legislators about the general importance for research-based information.

*Summary:* Researchers are increasingly recognizing the importance of disseminating research results to a wider audience than other researchers. Dissemination is important to maintaining a national commitment to the support of research, and is essential for developing policies and procedures that effectively promote the development of children and youth. There is a clear role for partnerships in furthering dissemination efforts.

Shirk, S.R. (2004). Dissemination of youth ESTs: Ready for prime time? *Clinical Psychology: Science & Practice*, *11*(3), 308–312.

*Main Messages:*

- Broad dissemination of empirically supported treatments should follow systematic effectiveness trials.
- Research on engagement strategies that promote treatment collaboration and continuation in ESTs for clinic-referred youth is likely to improve outcomes of EST's in service settings.
- It is essential that researchers understand service providers' perspectives on the effectiveness of their current treatments. If providers do not perceive a need for change, then the psychological barrier may be as formidable as any structural one.

*Summary:* Despite the compelling case for disseminating empirically supported child and adolescent treatments to clinical service settings, substantial differences between service clinics and research clinics justify the need for systematic effectiveness trials as part of the dissemination process. The authors propose that evidence from effectiveness trials will reveal features of treatments, such as engagement strategies, that require development or modification to optimize outcomes. Clear evidence for the superiority of empirically supported treatments (ESTs) over treatment as usual in service clinics will promote acceptance and implementation of ESTs in clinic practice.

Showers, B. & Joyce, B. (1996). The evolution of peer coaching. *Educational Leadership*, *53*(6).

*Main Messages:*

- All teachers in a school must: agree to be active members of peer coaching teams; collectively agree to practise the selected intervention or use the curriculum; share in developing materials and plans; and collect data about the implementation process and the impact on students.
- Verbal feedback is omitted from the coaching relationship because learning to provide technical feedback requires too much time and training and appears to be unnecessary after the skill is mastered. Instead, the coach is the person teaching and the person observing is the person who is being coached through modeling.
- Teachers learn through a broad array of activities, not just from feedback. They learn from co-planning instruction, creating materials, watching one another at work with students, and thinking together about the impact of implementation on students.

*Summary:* The authors summarize a series of studies beginning in the 1980s related to on-site, peer coaching for teachers and the impact of coaching on the implementation of teaching strategies and curriculum changes. Data collected in the 1970s indicated that as few as 10 percent of participants implemented what they learned in training. A series of studies demonstrated that weekly coaching sessions focused on classroom implementation and analysis of teaching dramatically increased implementation, whether experts or peers conducted the sessions. Their research led the authors to move from a coaching design that relied heavily on theory, modeling, practice, feedback and in-class assistance with transfer, to the formation of peer coaching teams and whole school interventions that require thoughtful reorganization of school activities and a shift in school culture. They offer a number of suggestions related to implementing peer coaching teams.

Sigouin, C. & Jadad, A.R. (2002). Awareness of sources of peer-reviewed research evidence on the internet. *Journal of the American Medical Association*, *287*(21), 2867–2869.

*Main Messages:*

- Research evidence available on the Internet remains unknown to many people who are involved in health-related decisions, regardless of their background.

*Summary:* Although many organizations promoting evidence-based decision making within the health field have used the Internet to disseminate and promote their findings, little is known about decision makers' awareness of this resource. This paper reports on a study comparing the levels of awareness of important sources of research evidence that can be found on the Internet by patients with cancer, their family physicians, oncologists, and oncology nurses. The findings indicate that the level of awareness varies between clinicians and groups of clinicians, even within the same institution. The gap in Internet use between patients and health care professionals is particularly wide.

Silverman, W.K., Kurtines, W.M., & Hoagwood, Kl. (2004). Research progress on effectiveness, transportability, and dissemination of empirically supported treatments: Integrating theory and research. *Clinical Psychology: Science & Practice*, *11*(3), 295–299.

*Main Messages:*

- The process of building an evidence base on how to embed effective treatments in service systems will profit greatly from the availability of frameworks, approaches, models, and the like (i.e., basic theory) about efficacy, effectiveness, transportability, and dissemination.

*Summary:* Herschell, McNeil, and McNeil's documentation of the lag in the dissemination of child ESTs relative to adult ESTs highlights an important issue that needs to be addressed if progress is to be made in helping children who suffer from debilitating behavioural and emotional disorders. The Herschell article brings to the foreground a myriad of other issues, however, that need to be addressed so that the profession may achieve the long-term goal of widespread deployment of ESTs. In this commentary, the authors highlight the importance of balancing Herschell's current call for more basic research on dissemination with a call for more basic theory on effectiveness, transportability, and dissemination, and more significantly, the integration of theory and research.

Simpson, D.D. (2002). A conceptual framework for transferring research to practice. *Journal of Substance Abuse Treatment*, *22*,171–182.

*Main Messages:*

- Problems in transferring research to practice are more likely due to organizational factors such as leadership attitudes, staff resources, organizational stress, etc. than to how materials are disseminated.
- The successful transfer of evidence-based innovations to real-world applications requires careful planning, implementation, and on-going evaluations of progress.
- Personal attributes of program leadership and counselors need to be considered, along with organizational climate and institutional resources in studies of innovation use.

*Summary:* To effectively transfer research into practice, a better conceptual understanding of the process of program change and the barriers that may be encountered is needed. In addition to a review of the related literature on technology and research transfer, this paper also provides a brief summary of a process model of the core therapeutic components related to patient-level change. Four stages of activity typically involved in program change include exposure, adoption, implementation, and practice of new interventions. These appear to be considerably influenced by several organizational considerations, such as institutional readiness for change, resources, climate, and staff attributes. The paper also introduces assessment instruments for measuring organizational functioning.

Sobell, L.C. (1996). Bridging the gap between scientists and practitioners: The challenge before us. *Behavior Therapy*, *27*, 297–320.

*Main Messages:*

- Lessons from the business community have direct applicability to disseminating science-based clinical procedures.
- Successful dissemination results when practitioners are true partners in the research, development, and dissemination process.
- Several strategies were successful in promoting open communication, including: (i) involving practitioners in the planning, development, and implementation of clinical trials; (ii) allowing for the intervention to be tailored to fit the needs of different community agencies and practitioners; (iii) providing ongoing clinical support by the research team; (iv) conducting infield training workshops; and (v) making relevant clinical materials readily available to practitioners and community agencies.

*Summary:* This paper focuses on bridging the gap between science and practice in behaviour therapy. To have a significant impact on clinical practice, scientists need to learn more effective and efficient strategies for disseminating evidence-based health care. The business community and the field of dissemination research offer some important lessons for disseminating science-based clinical procedures. To illustrate that a bridge can be built between science and practice, this paper presents two examples of the successful integration of science and clinical practice within the addictions field. The first example involves the creation of a clinical protocol for almost 300 clients which necessitated a working relationship between scientists and practitioners, and the second example describes the successful dissemination of a clinical research intervention into community settings. Successful dissemination involved making practitioners true partners in the research, development, and dissemination process. For the wide scale adoption of clinical science and practice, dissemination must be adopted as a value and become a major objective of health care organizations.

Spouse, J. (2001). Bridging theory and practice in the supervisory relationship: A sociocultural perspective. *Journal of Advanced Nursing*, *33*(4), 512–522.

*Main Messages:*

- Preparation of mentors and their role definition are important to a sound supervisory process.
- The most important overarching factor in students' professional development was the guidance and support they received from an approachable mentor.
- The factors associated with an effective mentoring role were: (i) quality of sponsorship in the clinical setting characterized by 'admission' to the clinical settings and sponsorship by an influential staff member willing to develop a relationship and take responsibility for guiding the student; (ii) early assessments of capabilities based on direct observation with a subsequent action plan; (iii) opportunities to work in context with a mentor; and (iv) working with a mentor who is able to coach while delivering care.

*Summary:* This qualitative, longitudinal study followed eight nursing students from their first year of study through graduation, and examined how they acquired their knowledge in clinical settings through their supervisory experiences. In addition to proposing theoretical frameworks for supervisory relationships based on the qualitative data and extensive analyses, the author also cites factors in supervisory practice that impacted professional development. The paper articulates a mentorship model of supervision, noting that the four main activities of mentors are supervision, teaching in the context of being engaged in practice activities, providing assessment feedback, and providing emotional support.

Stetler, C.B. (2003). Role of the organization in translating research into evidence-based practice. *Outcomes Management*, *7*(3), 97–103.

*Main Messages:*

- The process of implementing and using research findings must be institutionalized so that EBPs and related implementation efforts become part of the organization's as well as the clinician's daily practice.
- Organizations should provide members with the capabilities to implement credible and relevant evidence.
- Basic organizational components pertinent to EBPs that would routinely enable, guide, reinforce, and sustain expected behaviours include an information system that provides feedback in a timely and user-friendly format that encourages and tracks best practice improvements and related outcomes.

*Summary:* This article highlights the evidence related to enhancing the desired outcome of EBP and the integral role the organization plays in the long-term sustained success of evidence-based efforts. It also presents a conceptual framework to assist those attempting to bring about widespread EBP. The role of culture, capacity, and infrastructure is emphasized as being integral to the success of implementation. Implementation efforts should be systematically planned and evaluated to gain additional evidence about the experience of creating a relevant culture, developing needed capabilities, and instituting a viable infrastructure supportive of widespread and sustained EBPs.

Stewart, J. & Kringas, P. (2003). Change management—Strategy and values in six agencies from the Australian public service. *Public Administration Review*, *63*(6), 675–688.

*Main Messages:*

- Effective well-planned communication is integral to receptivity to change; employees are more receptive when the rationale for change is well explained and clearly communicated, and when the pace is not too fast.
- To be sustainable, change must be consistently supported with sufficient resources and good leadership.

*Summary:* Distinct from the implementation of externally-mandated change, the process of change through management-driven initiatives specific to agencies was examined by investigating patterns of change management in six Australian federal agencies. All six agencies had been subjected to a number

of interventions chosen by management to improve performance. This article describes some of the common themes and factors that contribute to successful change, such as having an appropriate change model, effective leadership, some room for negotiation and compromise, sufficient resources, and well-planned communication. Rather than attempting to change everything about an organization to change the way it behaves, selecting a model of change appropriate to the agency's specific circumstances is more important. Good leadership encompasses the leader having good support at senior levels, knowing which strategies to employ, and demonstrating continuous commitment to the change process. Clear communication from management is also an important factor.

Stolte, J.J., Ash, J., & Chin, H. (1999). *The dissemination of clinical practice guidelines over an intranet: An evaluation*. Proceedings of the American Medical Informatics Association Symposium. Web document: http://www.amia.org/pubs/symposia/D005854.PDF

*Main Messages:*

- Computerized guidelines do not guarantee that information is easier to retrieve; it must be fully integrated in the clinical decision-making process.

*Summary:* This study compares two clinical practice guideline dissemination systems. The authors hypothesized that placing guidelines on an intranet would make this information easier to retrieve. Retrieval time, retrieval accuracy, and ease of use were empirically evaluated. Sixteen clinicians from Kaiser Permanent volunteered to complete tasks measuring these variables. Time values were significantly longer for tasks completed with intranet guidelines (intranet = 6.7 minutes; paper = 5.7 minutes). Tasks completed with paper guidelines had a significantly higher percentage of perfect scores than those completed with the Intranet (paper = 85%, intranet = 59%). There was no significant difference in reported ease of use. Simply placing clinical information on an electronic system does not guarantee the information will be easier to retrieve. Such information needs to be fully integrated into the clinical decision-making process. Computerizing guidelines may provide a necessary initial step toward this goal, but it does not represent the final solution.

Sweet, M. (2004). Development of strategies to encourage adoption of best evidence into practice in Australia: Workshop overview. *Medical Journal of Australia*, *180*(Supplement): S45–S47.

*Main Messages:*

- Strategies may be more effective at encouraging evidence uptake if they target communities rather than individuals.
- An effective approach to promoting evidence uptake is the establishment of clinical evidence uptake networks that use a variety of approaches.
- Evidence provided at point-of-care can influence practice.

*Summary:* This article provides a summary of draft strategies developed by two working groups—one focusing on general practice/community care and the other on hospital care—on how to encourage the adoption of best evidence into practice in Australia. Currently, because the evaluation of guideline dissemination and implementation strategies is flawed, the evidence base to guide decision-makers is flawed. In addition, guideline developers traditionally have not embarked on the crucial extra step of clearly explaining the implications of the guidelines for practice. Overall, the strategic approaches that workshop participants worked on included: the establishment of clinical networks which would entail using a variety of approaches in a variety of settings; the establishment of a media "watchdog"; and the development and implementation of point-of-care interventions to promote evidence uptake. Networks are useful because they can work in most situations and settings. These types of networks should be patient-, discipline-, or problem-based, rather than organizationally-based.

Szulanski, G. (2000). The process of knowledge transfer: A diachronic analysis of stickiness. *Organizational Behavior and Human Decision Processes*, *82*(1), 9–27.

*Main Messages:*

- Knowledge transfer is a process with different stages.

*Summary:* When acknowledged, difficulty is an anomaly in the way transfers are modeled rather than a characteristic feature of the transfer itself. One first step toward incorporating difficulty in the analysis of knowledge transfer is to recognize that a transfer is not an act, as typically modeled, but a process. This article offers a process model of knowledge transfer. The model identifies stages of transfer and factors expected to correlate with difficulty at different stages of the transfer. The general expectation is that factors affecting the opportunity to transfer are more likely to predict difficulty during the initiation phase, whereas factors affecting the execution of the transfer are more likely to predict difficulty during subsequent implementation phases. Measures of stickiness are developed for each stage of the transfer to explore the predictive power of different factors at different stages of the process. A cross-sectional analysis of primary data collected from 271 questionnaires through a two-step survey of 122 transfers of organizational practices within eight firms illustrates the applicability of the model.

Tarrier, N., Barrowclough, C., Haddock, G., & McGovern, J. (1999). The dissemination of innovative cognitive-behavioural psychological treatments for schizophrenia. *Journal of Mental Health*, *8*, 569–582.

*Main Messages:*

- The absence of skills in the mental health workforce is one reason for the slow implementation of treatment innovations.
- Change to a clinical team's practice is best assured by conducting training with the whole team. This training will succeed if it targets methods the team members perceive as relevant to their clinical goals, and there is good social support between members.
- In one project training social workers in family intervention, a number of conditions were requested before trainees enrolled in the course, including: (i) that each participant had a co-worker from the same workplace so that all interventions were carried out in pairs; (ii) that there be agreement from the managers of each trainee-pair that the course casework would be given high priority so that adequate time could be given to carry out the family intervention; and (iii) that each trainee pair informed their professional colleagues so as to facilitate support for their work.

*Summary:* There has been considerable research in recent years suggesting that non-drug psychosocial interventions have considerable benefits to patients suffering from psychoses. These interventions include family interventions, individual cognitive-behaviour therapy, and early signs monitoring. In spite of these research findings, the dissemination of these interventions into routine practice has been slow and patchy. This paper briefly reviews these research studies and investigates reasons why dissemination of such EBP has not progressed. The absence of skills in the mental health workforce is one reason for the slow implementation of treatment innovations. The paper describes attempts made to teach skills to sections of the workforce, and the relative success of the various training projects. The authors also discuss the difficulties and limitations of these attempts.

Tenove, S.C. (1999). Dissemination: Current conversations and practices. *Canadian Journal of Nursing Research*, *31*(1), 95–99.

*Main Messages:*

- Relationships are crucial to successful dissemination.
- Successful dissemination requires a complex system of two-way linkages among researchers, practitioners, and their organizations.
- "Conversations" in dissemination must take place.

*Summary:* This article outlines a workshop, Conversations in Dissemination, hosted by the Alberta Consortium for Health Promotion. This workshop focused on how researchers, practitioners,

policymakers, and others can help one another to access, interpret, apply, and participate in a more broadly conceived dissemination process. Acknowledgement was made of the fact that knowledge is developed on both sides of the practitioner/researcher divide, and that this is often ignored. The article gives an outline of the move from a unidirectional approach to a systems approach, which leads to new linkages and to two-way communication.

The National Institute of Mental Health Council's Clinical Treatment and Services Research Workgroup (1999). *Bridging Science and Service*. Web document: http://www.nimh.nih.gov/publicat/nimhbridge.pdf

*Main Messages:*

- Researchers, policymakers, health care providers, and most critically, individuals with mental illnesses and their families today recognize that translating the remarkable breakthroughs into procedures and policies of everyday clinical practice is an urgent, essential, and achievable task. It is a challenge that has profound implications for the quality of the lives of Americans with mental illnesses and for the health of the nation.
- The workgroup shared an action plan with 49 recommendations for fulfilling the nation's commitment to individuals with mental illnesses. This action plan is structured by the goals of informed priority setting, using a dynamic and rapidly growing knowledge base, as well as methodological innovation, and administrative and infrastructure enhancements: (i) increase the usefulness of NIMH research for individuals with mental illnesses, clinicians, purchasers, and policymakers through informed priority setting; (ii) selectively expand the NIMH portfolio in the domains of efficacy, effectiveness, practice, and service systems research to foster integration across these fields and to expedite the implementation of research-based practices and policies; (iii) identify research innovations in design, methods, and measurement to facilitate the translation of new information from bench to trial to practice; (iv) strengthen NIMH's leadership and administrative activities to provide the infrastructure to achieve the goals stated above in a timely manner.

*Summary:* "Researchers, policymakers, health care providers, and most critically, individuals with mental illnesses and their families today recognize that translating the remarkable breakthroughs into procedures and policies of everyday clinical practice is an urgent, essential, and achievable task. It is a challenge that has profound implications for the quality of the lives of Americans with mental illnesses and for the health of the Nation". The report commissioned by the Director of NIMH discusses strategies for increasing the relevance, speeding the development, and facilitating the utilization of research-based treatment and service interventions for mental illnesses into both routine clinical practice and policies guiding our local and national mental health service systems. The Workgroup reviewed the NIMH research portfolio that extends from academic research settings to large, State-wide service systems, to the moving target of "front-line" clinical care. The review made vividly clear the need for mutually enriching interaction between research and both practice and service systems. In addition, the Workgroup consulted with representatives from advocacy groups, insurers, public and private purchasers, researchers, and State and Federal policymakers. Although these perspectives were not all concordant, they did highlight the fields' capacity to enhance the delivery of treatment and services available to individuals with mental illnesses.

Tilley, S. & Chambers, M. (2004). The process of implementing evidence-based practice—The curate's egg. *Journal of Psychiatric and Mental Health Nursing*, *11*, 117–119.

*Main Messages:*

- Creating transitions within health systems is complex.
- The application of evidence into practice occurs within the interrelationship of context, facilitation, and the nature of the evidence.

*Summary:* This paper reports on a 3-year longitudinal project of introducing EBP into a mental health organization. The authors describe the process of changing the culture of working practice, and report on the factors which impede or facilitate EBP. Some of the factors which impeded EBP were personal (i.e., poor motivation, lack of confidence, lack of knowledge of the EBP process) and others were

organizational (i.e., limited access to learning resources, poor teamwork, insufficient time, staff transfers, and disruptive rostering).

Trader-Leigh, K.E. (2002). Case study: Identifying resistance in managing change. *Journal of Organizational Change Management*, *15*(2), 138–155.

*Main Messages:*

- Initiating change is a competitive, often hostile activity which requires overcoming massive inertia and engaging in a kind of warfare.
- No important changes will occur without engagement in a political struggle.
- Strategies to address resistance variables should be part of the execution of the implementation plan.

*Summary:* Resistance to change may be an obstacle to successful implementation of reinvention initiatives based on how individuals and organizations perceive their goals are affected by the change. Many change initiatives fail because cultures do not readily accept change and do not effectively anticipate the impact on human systems. This is where bitter implementation battles and strident resistance can occur. This study suggests that improved identification and understanding of the underlying factors of resistance may improve implementation outcomes.

Traynor, M. (1999). The problem of dissemination: Evidence and ideology. *Nursing Inquiry*, *6*, 187–197.

*Main Messages:*

- Any investigation of research evidence and occupational practice and identity, if it is to be critical, has to abandon as an overriding aim the increased implementation of research findings, and take on an exploration of power differentials between government bodies, scientific centres, and health care workers.

*Summary:* This paper re-contextualizes research evidence as an example of textually-based social control. It does this by drawing on two areas of theoretical literature: feminist literary theory and the sociology of scientific knowledge. Accounts of literary works as ideological instruments of social control suggest that (at least some kinds of) research literature may fulfill a similar role among a clinical readership. There have also been compelling accounts of scientific writing as expressions of desire on the part of one group to 'act at a distance' upon others. In the light of this literature, it becomes less tenable to see research dissemination as the simple transfer of information, supplemented by organizational work. Research is implicated in the attempt by one group to enroll others in its own project and in the (self-)construction of the identities of the health care worker. The accounts that literary theory can provide do not remain focused upon the text, but draw links between the reading process and the experience and place in society—for example the gender—of the writer and reader. As such, their explanations create a space for the resisting reader.

Waddell, C. (2001). So much research evidence, so little dissemination and uptake: Mixing the useful with the pleasing. *Evidence Based Mental Health*, *4*(1), 3–5.

*Main Messages:*

- Despite the volumes of research evidence available, relatively little is disseminated and taken up or applied in practice.
- Simply providing good quality information (even if it is evidence-based) is not enough to change practice.
- Little is known overall about which dissemination approaches work best with which decision-makers in which kinds of settings.
- Researchers need to explore more collaborative models that explicitly involve practitioners and policy makers, as well as with patients, families, and community leaders, as meaningful partners in all stages of research.

- More initiatives coordinated at a national level are needed to simplify and streamline information exchanges between all concerned groups including researchers, practitioners, decision-makers, patients, families, and community leaders.

*Summary:* With the widespread adoption of evidence-based approaches within the health disciplines, the gap between the volumes of research evidence available and its dissemination and uptake is gaining increasing attention. This article explores the factors contributing to this problem from a broad health policy perspective. Some of these factors include: the overwhelming quantities (as well as the issue of uncertain quality) of health research evidence available; and the lack of intersection or overlap between the context-specific needs and the types of evidence and communications formats preferred or used by each of the different groups. The author offers some practical strategies to address these issues. These strategies require a commitment to the importance of both scientific rigor and policy relevance, as well as a shift in the use of resources to explicitly acknowledge that communications structures and processes need to be established in a more organized and cross-contextual way than they presently are.

Wade, W.A., Treat, T.A., & Stuart, G. L. (1998). Transporting an empirically supported treatment for panic disorder to a service clinic setting: A benchmarking strategy. *Journal of Consulting and Clinical Psychology*, *66*(2), 231–239.

*Main Messages:*

- Collecting outcome data in the context of a well-defined evaluation strategy is important for understanding and assessing which treatments work and for whom.
- The transportability of ESTs may hinge in part on selecting and training competent treatment providers.

*Summary:* The question of how well do the results of ESTs hold up in natural settings is an important one and can help answer the question of for whom such treatments work. This article reports on a study examining the transportability of cognitive-behavioural therapy for panic disorder to a community mental health centre (CMHC). The findings suggest that panic control treatment can be transported to a CMHC. The authors also discuss challenges facing the transportability of research-based treatments to CMHC clients, settings, and treatment providers.

Walshe, K. & Rundall, T.G. (2001). Evidence-based management: From theory to practice in health care. *The Milbank Quarterly*, *79*(3), 429–457.

*Main Messages:*

- Leaders and managers of health care organizations do not make proper use of evidence in their decision making.
- For evidence to play a greater role in managers' decision making, the attitudes of managers toward research evidence and the research process must be changed.
- Strategies for promoting awareness and interest in research include providing training for managers in research methods, critical appraisal, and accessing the research literature, providing resources and support to enable research participation, and offering opportunities for further academic study.

*Summary:* While the leaders and managers of health care organizations have encouraged clinicians to adopt an evidence-based approach to clinical practice, they have been slow to apply the ideas to their own managerial practice. This article describes the main principles of evidence-based health care, its increasing acceptance, and reasons for its popularity. The authors discuss the applicability of the ideas of EBP to health care management, and outline an agenda for action to promote the development of evidence-based management in health care.

Weber, J.R. (2001). *The communication process as evaluative context: what do nonscientists hear when scientists speak?* Available at http://www.FindArticles.com.

*Main Messages:*

- Scientists and nonscientists alike would benefit by seeing science communication as a process as well as a product.
- Knowledge may be generalizable or universal in its implications, but it is framed through specific contexts that can include regulatory guidelines, media coverage, individual motivation, training, education, and personal experience.
- Scientists must acknowledge and work with the often implicit assumptions that block understanding of science by those less informed and become more cognizant of the interpenetration of public and scientific understandings.

*Summary:* This paper addresses whether it is possible for scientific information to make sense in similar ways for nonscientists and for scientists, in the context of the creation and co-creation of meaning in public discourse. Three examples of science communication are offered that involve interactions with nonscientists. These examples show how the same words—apparently common and innocuous—can come to make sense to different groups in quite different ways, and how assumptions about what other people must be saying or thinking frame our understanding of the apparent issues being discussed. The lay public may guide its interpretation of scientific information through the social context rather than the underlying science itself.

Weingardt, K.R. (2004). The role of instructional design and technology in the dissemination of empirically supported, manual-based therapies. *Clinical Psychology: Science & Practice*, *11*(3), 313–335.

*Main Messages:*

- Instructional design and technology (IDT) has great potential for effective dissemination of Manual-Based Therapy (MBT) by making treatment manuals better and more effective for use in clinical practice.

*Summary:* This article proposes the adoption of IDTs for the dissemination of empirically supported psychological therapies. The author argues that the principles, processes, and tools of IDT can facilitate the translation of paper-based, text-intensive MBTs into media-rich, interactive, web-based training applications. The article outlines available technology-based mechanisms for delivering instructional content, provides examples of how each can be used for effective dissemination of MBTs, and outlines the advantages that may accrue from this approach. Clinical researchers and IDT professionals can collaborate to increase adoption of treatment manuals by employing user-friendly, instructionally sound web applications that incorporate video role-plays, audio narration, graphics, animation, and dynamic, interactive content.

Weisz, J.R., Chu, B.C., & Polo, A. J. (2004). Treatment dissemination and evidence-based practice: Strengthening intervention through clinician-researcher collaboration. *Clinical Psychology: Science & Practice*, *11*(3), 300–307.

*Main Messages:*

- There is a great deal to learn about the process of practice-research collaboration and research to bridge the research-practice gulf that has developed over the past century.

*Summary:* This commentary on the review on disseminating empirically supported child treatments by Herschell, McNeil, and McNeil, further expands on some of the themes presented by the researchers. In particular, the authors address ways to link the two traditions of youth clinical practice and research that will capitalize on their complementary strengths. Several aims will require attention: (i) building consensus on how to identify empirically supported treatments; (ii) matching these treatments with empirically sound assessment and diagnosis in practice; (iii) expanding the concept of EBP to encompass an assessment-intervention dialectic; (iv) ongoing testing of the impact of evidence-based care on practice outcomes; and (v) rethinking the model that guides intervention development by focusing on what is needed for eventual deployment.

Westbrook, J.D. & Boethel, M. (1997). *The Dissemination and Utilization of Disability Research: The National Center for the Dissemination of Disability Research Approach*. Web document: http://www.ncddr.org/du/products/ncddrapproach.html.

*Main Messages:*

- There is a critical distinction between availability and accessibility. Research results are generally available to those who seek them, but are not widely accessible to several critical audiences, namely persons with disabilities, their families, advocates, or direct service providers.
- The goal of dissemination is not only to get the word out, but also to get the word used.

*Summary:* This document describes the resources available through the NCDDR to assist disability researchers in their dissemination/use challenges. This includes a comprehensive set of materials, strategies, and services that offer new resources to develop researchers' capacity to disseminate their research results in ways that assure use by a wide range of audiences.

White, A. (2004). Change strategies make for smooth transitions. *Nursing Management*, *35*(2), 49–52.

*Main Messages:*

- Use strategies that are based on theory concepts and research-supported methods of implementation can help make the job of initiating, completing, and sustaining change easier.
- For successful implementation of change, key people and policy makers must be interested in the innovation and committed to making it happen.

*Summary:* This article describes how nurse managers can successfully usher in change by focusing on evidence-based change concepts, such as selecting the right leadership skill, anticipating how people will respond to change, and choosing the correct implementation strategies.

Wilkes, M.S. (1997). The public dissemination of medical research: Problems and solutions. *Journal of Health Communication*, *2*, 3–15.

*Main Messages:*

- Media coverage of research is valued and strategically necessary.
- There are numerous obstacles to the timely flow of accurate scientific information reaching the public.
- Once peer review is complete, publicly-funded research should be available to any interested member of the public.

*Summary:* Visibility in the media is strategically necessary to ensure a favourable public image. There is increasing pressure for researchers to seek out members of the press. This paper reviews three barriers that obscure the timely public dissemination of medical information: (i) journal editorial policy concerning the dissemination of research findings (sometimes called the Ingelfinger rule); (ii) the news embargo; and (iii) the peer review process. Authors suggest a fast track for peer review to aid in timely dissemination.

Wilson, G.T. (1997). Dissemination of cognitive behavioral treatments—Commentary on "Dissemination of effective methods: Behavior therapy's next challenge." *Behavior Therapy*, *28* , 473–475.

*Main Messages:*

- Rigorously evaluated in over 20 randomized control trials, cognitive behaviour therapy (CBT) is currently the treatment of choice for bulimia nervosa. Yet, in the United States, CBT is rarely used in the treatment of bulimia nervosa.
- Dissemination failures is attributed to: (i) the lack of training in empirically-supported treatments in pre-doctoral training programs and internships in clinical psychology; (ii) practitioners who are dismissive of the practical relevance of randomized control trials despite the fact they provide the

data for empirically established treatments; and (iii) perceived limitations to the autonomy of the therapist and hence, reduce effectiveness resulting from manual-based therapies.
- The best hope for advancing the use of empirically supported treatments is improved training of mental health professionals.
- We can better promote the adoption of empirically established, manual-based treatments by making protocols more "therapist-friendly."

*Summary:* Demonstrably effective cognitive behavioural treatments for a number of clinical disorders are underused in clinical practice. Improving dissemination presents a challenge, as Persons (1997) argues. In this commentary, reasons for dissemination failures and suggestions for promoting empirically supported treatments are discussed.

Zell, D. (2003). Organizational change as a process of death, dying and rebirth. *The Journal of Applied Behavioral Science*, *39*(1): 73–96.

*Main Messages:*
- As a result of their autonomy and deeply ingrained patterns of beliefs and behaviours, unless professionals agree with proposed or necessary changes in an organization's core processes, such changes do not occur.
- Viewing the process of change in a professional bureaucracy as a process of death and dying may broaden understanding of resistance to change and assist academicians and practitioners as they work with professionals undergoing the process of working through resistance to change.

*Summary:* Bringing about change is difficult in any organization, but especially so in professional bureaucracies such as hospitals and universities in which highly trained and autonomous professionals, rather than administrators, largely control the core processes. Most models used to bring about change in organizations lack understanding of how individuals and groups actually work through their resistance to change, which is key to whether change in a professional bureaucracy actually occurs. Interview data from professors in the physics department of a large, public university revealed that the department's change process closely resembled that of death and dying identified by Kubler-Ross in her study of terminally ill patients. Theories from psychoanalysis and group dynamics are used to explain both individual and group-level change. The article concludes by discussing implications for helping professionals and their organizations undergo change and by suggesting areas for future research.

Zytowski, D.G. (1992). Let's make knowledge dissemination as good as knowledge production. *Journal Vocational Behaviour*, *40*, 207–209.

*Main Messages:*
- There are shortcoming in the widespread practice of conducting research in isolation and disseminating it via piecemeal journal publication.
- This article suggests prepublication exchange of information.
- We can advance the progress of our knowledge by sharing new methods and findings through a clearinghouse for research-in-progress and prepublication abstracts.

*Summary:* The author discusses the merits of prepublication communication between researchers presenting research papers in the same journal issue. A proposal is made for an electronic data base consisting of research-in-progress and prepublication dissemination that will accelerate and integrate the progress of independent, non-collaborative research