



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

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Santé Mentale pour Enfants Ontario

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Dear Colleagues,

The emergent trend toward the use of evidence-based practices in children's mental health services has been steadily gaining recognition and importance in Ontario. Children's Mental Health Ontario has worked to promote the use of evidence-based practices and to bring relevant, up-to-date information to the field. However, making the right information available is only one piece of the puzzle. The process of transferring knowledge about evidence-based practices and implementing these in our day-to-day work with children, youth, and families is highly complex. We believe the study of this process is every bit as important as the study of the evidence-based practices themselves.

Children's Mental Health Ontario is very pleased to take this important first step toward understanding the barriers and facilitators that come into play in the implementation of evidence-based practices in children's mental health centres in Ontario. This collaborative effort with the Community Health Systems Resource Group at the Hospital for Sick Children and the National Implementation Research Network/Louis de la Parte Florida Mental Health Institute at the University of South Florida has allowed us to begin our journey.

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Sincerely,

Nada Martel  
President, Board of Directors



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*What if instead of seeing organizations as  
problems to be solved, we saw them as  
miracles to be appreciated?*



*David Cooperrider  
Case Western Reserve University*



## Glossary

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Adoption	Adoption of an evidence-based practice (EBP) or treatment innovation is seen as making full use of the EBP as the best course of action available (Rogers 2003), and it represents behavioural change—actually <i>using</i> the EBP.
Change readiness	Change readiness refers to the variability that individuals, organizations, and communities have in terms of their interest, willingness, and ability to acquire and adopt new knowledge.
Evidence-based practice	Evidence-based practice is “the conscientious, explicit and judicious use of current best evidence in making decisions about the care of [clients]” (Sackett, Richardson, Rosenberg, & Haynes, 1997, p. 2). We use the term evidence-based practice to describe practices (e.g., outcome management, intake screening, outcome measurement, program evaluation), whereas the term evidence-based treatment (EBT) refers specifically to empirically supported interventions. Placing the client’s benefits first, evidence-based practitioners adopt a process of lifelong learning that involves continually posing specific questions of direct practical importance to clients, searching objectively and efficiently for the current best evidence relative to each question, and taking appropriate action guided by evidence. In children’s mental health services, the term evidence-based practice (EBP) refers to a body of scientific knowledge about service practices, including referral, assessment, outcome management/assessment, quality improvement practices, and case management (Hoagwood, Burns, Kiser, Ringeisen, & Schoenwald, 2001). It also refers to scientific knowledge about the impact of clinical treatments or services on the mental health problems of infants, children, and adolescents. The knowledge base results from the application of scientific methods that examine the impact of specific practices on outcomes. EBP denotes the quality, robustness, or validity of scientific evidence as it applies to these issues.
Evidence-based criteria	According to operational criteria proposed by the division of Clinical Psychology of the American Psychological Association in 1998, evidence-based treatments require support by either group or single-subject experiments, and studies should clearly describe subject characteristics. For a treatment to be considered “well-established,” two or more studies must show that it is superior to medication, placebo, or an alternative treatment, or



that it is equivalent to an already established treatment, OR nine single-subject case studies must be conducted to establish its equivalence or superiority. For a treatment to be considered “probably efficacious,” two or more studies must show it to be superior to a wait-list control, or one experiment must meet the criteria for a well-established treatment, or three single-case studies must be conducted.

Implementation	The activities involved in putting research, innovations, or other knowledge into practice.
Implementation science	Implementation science is defined as the scientific study of methods to promote the uptake of research findings for the purpose of improving quality of care. It includes the study of factors that influence the behaviour of health care professionals and organizations, and the interventions that enable them to use research findings more effectively.
Innovation	Innovation is described as the act of introducing something new. We use this term in reference to EBPs and EBTs.
Knowledge transfer & exchange	Knowledge transfer is a process whereby relevant information is made available and accessible to decision-makers for application in practice, planning, and policy making. It occurs not only at the end of a process, project, or research study, but is also ongoing. Knowledge exchange refers to the two-way dialogue and exchange of information between those who generate and those who receive and use knowledge, and is also operational throughout the project or research study. Together, these two elements serve to facilitate the use of research in practice.



*No system trapped in the continuous throes of production, existing always at the margin of resources, innovates well, unless its survival is also imminently and vividly at stake.*



*Donald Berwick, 2003  
Institute for Health Care Improvement*



## Main Messages

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### In General

- ✎ Failure to use available science is costly and harmful. A sustained collaborative effort is required to bring evidence-based practice to children's mental health care.
- ✎ It is not sufficient to transfer evidence-based practices to the field in the absence of understanding what is needed to prepare organizations and practitioners to receive and implement this new knowledge.

### From the Literature

- ✎ The transfer of research-based information to practitioners requires attention to four critical elements: the source, the content, the method, and the audience.
- ✎ The transfer of new knowledge is more successful when there is active collaboration and partnership with all stakeholders from the beginning.
- ✎ Knowledge is transferred best when done face-to-face, allowing for the communication of tacit knowledge.
- ✎ Passive dissemination of information is not as effective in creating practice change or knowledge uptake as are active strategies.
- ✎ Transferring knowledge is part of a larger context of innovation and change.
- ✎ Leadership, power, and authority must be addressed in the knowledge transfer process.
- ✎ Organizations can foster environments that are conducive to change.
- ✎ Resistance to change—from the system, the leaders, and the practitioners—needs to be recognized and addressed.
- ✎ Change requires “buy-in” and engagement from a critical mass of people; the challenge is to create a “tipping point”—the dramatic moment when something unique becomes common.
- ✎ Change is complex and requires planning and strategizing.
- ✎ Assessing readiness for change is integral to the success of knowledge implementation and adoption of new knowledge or practices.
- ✎ Providing children's mental health services that are supported by research evidence is an important priority.
- ✎ Exactly how to implement evidence-based practice into a variety of contexts catering to multiple client groups is a burgeoning science that requires further study.
- ✎ Distilling research knowledge into practice guidelines and making these available is not sufficient for creating practice change.
- ✎ The implementation of evidence-based practices in any jurisdiction has to be a collaborative effort; it is the responsibility of organized systems of care (the province or state), the service provider organizations, the practitioners, and consumers.
- ✎ Successful implementation of evidence into practice requires strategizing at multiple levels—the practitioners, the organization, the system, the nature of the evidence, and the methods of transfer and implementation.
- ✎ A better understanding of practitioners' attitudes toward evidence-based practice is needed to address skepticism, distrust, and resistance.

- ☞ Practitioners need better access to the research base (library resources) as well as venues at which they can share their tacit knowledge with others, including scientists and decision-makers.
- ☞ The move toward the greater use of evidence-based practice in children's mental health system will require practitioners to develop the capacity for life-long learning and reflective practice.
- ☞ The implementation of evidence-based practices will require striking a balance between treatment fidelity and re-invention of the practice environment.

## From the Survey

### Respondent Characteristics

- ☞ 72.5% of the 85 executive directors surveyed responded. They predominantly had backgrounds in social work, had over 16 years of clinical and managerial experience, and represented organizations providing a wide range of clinical services.
- ☞ Among an estimated population of 3,951 clinical staff, 12.2% responded. The majority had backgrounds in social work, had over 16 years experience, and were affiliated with a range of clinical services located mainly in the Toronto (18.3%), South West (18.1%), and Central East regions (16.8%). 65.7% of respondents were clinical staff, 16% were clinical managers also providing service, and 18.3% were clinical managers not providing service.
- ☞ Survey participation of executive directors relative to the number of CMHO centres in each region indicated the highest participation among member centres in the Hamilton-Niagara (85.7%), Northern (83.3%), and Central East (71%) regions.
- ☞ 50% of responding centres had annual budgets in the \$1 to \$5 million range.

### Linking to the Internet

- ☞ Among both executive directors and clinical staff, over 65% thought it was "likely" their colleagues would turn to the Internet as a resource.

### Linking to Research Information via Academia

- ☞ 67% of clinical staff and 77% of executive directors link in some way with a college or university.
- ☞ Fewer than 40% of CMHCs have organizational access to a university or college library.

### Use of Research Information

- ☞ Both executive directors and clinical staff rate their organizations' ability to access, assess, adapt, and adopt research information as "somewhat well." This finding provides a useful benchmark for future comparison, and suggests there is possibility for improvement.

### Organizational Readiness for Change

- ☞ **Motivation for Change:** Unless motivation for change is "activated," individuals are unlikely to initiate change. In the three areas of importance for motivational readiness,
  - Executive directors perceive a significantly higher need for *program improvements* (i.e., tracking client improvement over time, obtaining evidence of program effectiveness, selecting new treatments, generating clinical and data outcome reports), while clinical staff perceive significantly greater *pressure for change* (from staff, supervisors, and ministry).
  - For clinical staff, pressure for change comes from supervisors/managers (62.5%), other staff (52.6%), ministry/other funders (39%), and board members (28.9%). Executive directors perceive pressure for change from supervisors/managers (51%), ministry and other funders (49%), and clinical staff (42.9%). Fewer than one-third of the respondents

from both groups perceive pressure for change from consumers, and fewer than one-quarter of executive directors perceive pressure for change from their board of directors.

- Groups do not differ with respect to the strength of their perceived need for *training support*, but they desire training in different areas. Clinical practitioners see a need for training to improve client engagement with treatment, while executive directors see a need for training in monitoring client progress.

☞ **Adequacy of Resources:** Facilities, staffing patterns and training, and equipment are also important considerations in organizational readiness for change.

- The majority of clinical staff and executive directors favourably view the adequacy of *office space* for individual and group treatment, although 44% of clinical staff view offices as inadequate for group treatment; this may have implications for future implementation of group-based EBTs.
- Both groups agree there are too few clinical staff to meet client needs.
- Staff turnover is not a worrisome issue for the most part, and there is little perceived need for additional support staff.
- The majority of executive directors and clinical staff agree their organizations value continuing education and provide opportunities for learning both in-house and at external venues.
- Both groups highly perceive the adequacy and use of *computers*.
- Both groups are split with respect to whether client assessments are conducted using a computer, an intriguing finding given the mandate for using computer-based intake and outcome assessment tools.
- More than 95% of executive directors and clinical staff report having a computer in their personal workspace. This is another intriguing finding, given the frequent anecdotal reports of low computer access as a barrier to using the mandated outcome tool. Further analysis indicated this was not a bias due to the web-based survey method.
- Both groups felt access to *e-communications*—Internet and email—is more than adequate.

☞ **Staff Attributes:** Several individual level characteristics are noted as key to ensuring readiness for organizational change.

- Generally, the extent to which both groups value and perceive opportunities for personal growth is relatively low. The majority of clinical staff do not read about new techniques each month, nor do they have enough opportunities to keep up their clinical skills (although half feel they are up on the published journal literature). Executive directors fair somewhat better.
- Upwards of 60% from both groups have confidence in their clinical efficacy and willingness and ability to influence their co-workers, two characteristics that bode well for change.
- Less encouraging is their perceived ability to adapt in a changing environment. More than 65% of both groups feel they try new ideas and adapt quickly, yet half acknowledged they were sometimes too slow or cautious to make changes—curiously contradictory.

☞ **Organizational Climate:** several organizational dimensions are identified as key to organizational change.

- Upwards of 60% of clinical staff and executive directors are aware of the organization's *mission* and goals.
- Over 50% of both groups perceive management as receptive to suggestions from staff and feel the information networks and channels are conducive to the *communication* flow.
- *Staff cohesion*—trust and cooperativeness—is high among both groups, as is the impression of *autonomy* or the decision latitude clinical staff perceive in working with their clients.

- There is division within both groups as to whether job pressures impede effectiveness.
- High levels of *stress* and the negative impact of a heavy workload on program effectiveness is perceived by both groups, albeit more so by clinical staff.
- Interests in keeping up with the demands of change vary across groups: two-thirds of executive directors feel procedures change quickly to meet new conditions, while only 30% of clinical staff share this view.
- There appears to be a positive attitude toward and encouragement for trying new techniques among both groups, and this is encouraging.

### **Use of Evidence-Based Treatments**

- ☞ The 10 most commonly used EBTs are: Cognitive Behaviour Therapy (65%); COPE (42.7%); wraparound (42.5%); behavioural parent training (41.2%); brief strategic family therapy (39.2%); narrative therapy (38.8%); “The Incredible Years” (36.4%); Multisystemic Therapy (35.9%); “Stop Now and Plan” (32.4%); and “Right from the Start” (29.3%).
- ☞ A range of other treatment approaches are reportedly in use (e.g., Modified Interactional Guidance, brief solution focused therapy, “Watch, Wait & Wonder”). While not all have met rigorous evaluation criteria, many have undergone some level of empirical study to support their use.
- ☞ Among executive directors, half perceive their services and programs to be “somewhat” supported by research evidence, while the majority of clinical staff are more optimistic (40% said “pretty much”). This information provides a useful benchmark against which to measure improvement

### **From the Expert Interviews**

- ☞ Developing “buy-in” for the implementation of evidence-based practices is necessary at all levels in the system—practitioners, leaders, and policy makers. It primarily involves identifying the relative advantage of the practice (what are the benefits for me and my client, and how does it make my job easier?) and demonstrating the availability of the resources, training, and leadership required to effect the change.
- ☞ Skepticism among practitioners presents a significant barrier to the implementation of evidence-based practices. Continued professional education and specific training is integral to counteracting misconceptions, fear, and skepticism.
- ☞ Identifying “champions” for evidence-based practice is important at all levels in the system—the champion can be anybody, but it has to be somebody!
- ☞ Resistance to change occurs at the level of the individual practitioner and collectively within the organization. Leaders need to create organizational cultures that foster change by promoting professional growth, innovation, and decision latitude.
- ☞ Change takes time and requires a sustained effort and plan for long-term maintenance. Beginning with a vision and realistic plan, consideration must be given to facilitators and barriers at all levels of the system, as well as to the unique characteristics of the practice being implemented and the individuals adopting it.
- ☞ Implementation requires creating and maintaining a “culture of adherence” or a system of quality management and evaluation to ensure that outcomes are acceptable, and that contributes to an overall culture of evidence-based practice. Implementing new treatments is meaningless if they are not effective.

- ☞ A more equitable balance must be struck between contending with long wait lists for clinical service and the time and energy required for innovation and professional development. Both increased funding and a strategic shift are needed to help us get off the treadmill and develop a culture where this is accepted. That there are too few practitioners to provide service to too many children and their families is not the service providers' burden to bear alone—it is a systemic issue that requires increased funding and innovative solutions at all levels.
- ☞ Implementation of evidence-based practices will be slow if service providers are expected to go this route alone in a one-off fashion. We need to consider system-wide implementation initiatives similar to those used for screening and outcome management in Ontario (e.g., CAFAS and BCFPI).
- ☞ Consumers need to be informed of the evidence-based treatment options as they become more widely available so they might make the most informed choices regarding the care of their children, and so they may create pressure to ensure they are delivered. All children's mental health stakeholders have a duty in this regard.
- ☞ Partnership between funders, providers, and researchers can go a long way to creating opportunities for effectiveness and implementation research, and for the evaluation of field-based interventions that have promise. This, in turn, will contribute to our knowledge of what treatments work, for whom, in what contexts, and how best to support their implementation and adoption in the field. Such partnerships will also serve an educational purpose by demystifying research and improving practitioners' competencies in determining which treatments are worthwhile and to what extent they may be "reinvented" to serve distinct client populations.

## **Taking Action**

- ☞ CMHCs are by and large disconnected from the evidence base. Fewer than 40% of executive directors and clinical staff have access to a university or college library. CMHO can play an important role in brokering a connection between children's mental health centres and university library systems.
- ☞ Executive directors and clinical staff view opportunities for professional growth as relatively few. CMHO can play a part in encouraging the emergence of continuous professional development as a core activity in children's mental health centres. Opportunities for dialogue and knowledge sharing need to be viewed as an important investment.
- ☞ Innovation is often taxing on financial and human resources. When we upset the status quo we cause upset in operational procedures, practitioner time is taken away from direct service, and financial resources are reorganized. Change is a long process and it can be challenging to maintain morale over the long haul. There is a need for government and organizations such as CMHO to develop incentives for change, and to provide opportunities through which innovators and early adopters can showcase their accomplishments and through which others can learn first hand of their approaches, struggles, and solutions.
- ☞ Encourage the adoption of Berwick's seven rules for disseminating innovations in children's mental health care: find sound innovations, find and support innovators, invest in early adopters, make early adopter activity observable, trust and enable reinvention, create slack for change, and lead by example.
- ☞ The successful implementation of evidence-based practices requires a level of awareness and knowledge among clinical practitioners and their leadership. More work is needed to raise awareness and knowledge and to evaluate and document shifts in these areas. CMHO is

encouraged to commission research to explore the level of awareness, knowledge, and support of evidence-based practices among Ontario service providers.

- ☞ Acquisition of training for evidence-based practices and treatments requires support from both the provincial and organizational leadership. Leaders need to recognize the value of training—release time away from service delivery brings returns in the form of more knowledgeable and happier practitioners—and that resources need to be set aside for such activities. CMHO can play a role in facilitating EBT training for their members.
- ☞ Evidence that executive directors do not perceive pressure for change from their boards is intriguing and leads to questions about the efficacy of this governance system. CMHO could commission research to explore the dynamics of board governance among children's mental health centres.
- ☞ CMHO is ideally positioned to represent the interests of member organizations regarding the education of new graduates in children's services programs. As such, CMHO could develop linkages with educators and professional colleges in social work and psychology to ensure that new graduates entering the work force are armed with knowledge about evidence-based practices and outcome management.
- ☞ Lab-based treatment interventions are but one end of an important service spectrum. Many promising treatments are being developed on the front lines, often with the distinct advantage of being culturally and developmentally sensitive. Since the knowledge and resources needed to evaluate the effectiveness of these promising treatments often evade service providers, CMHO could develop an infrastructure that would help children's mental health centres in this regard.





## Executive Summary

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Evidence-based practice is an emerging concept that reflects a burgeoning effort to build quality and accountability in mental health service delivery. Though not yet formally recognized on the Canadian health care agenda, the concept conveys a fundamental belief that children with emotional and behavioural disorders should be able to count on receiving care that meets their needs and is based on the best scientific evidence available. Moreover, the fundamental concern is that for many of these children, the care that is delivered is not effective care (Huang, Hepburn, & Espiritu, 2003). Most children and youth who receive an empirically supported treatment get significantly better and do so more quickly than with other treatments or no treatment (Brestan & Eyberg, 1998; Chambliss & Ollendick, 2001; JCCP, 1998; Spirito, 1999). Bringing evidence-based treatment to Ontario requires a dual effort: provide the financial resources and public agenda that sees children receive services on the basis of need not availability, and ensure the services provided are of the highest quality and most scientifically sound. While the government must address the financial aspects of this course, the children's mental health sector is challenged to move forward on the accountability and quality front.

If Ontario's children's mental health system is going to tackle the implementation of evidence-based practices, then what do we need to know to get the job done? This question provides the main focus of the work undertaken here. Initially challenged by Children's Mental Health Ontario to review the literature in knowledge translation to determine what could be applied to the transfer of evidence-based practices in Ontario, we counter-challenged with the notion that even transferring knowledge well would be insufficient to achieve change. A mutual understanding was achieved, and we set out to review knowledge transfer, readiness for change, and implementation science—hoping to arrive at a more comprehensive approach that would guide Children's Mental Health Ontario in leading the sector on this important and inevitable journey.

In the area of knowledge transfer, we learned of the importance of active strategies, collaboration, leadership, and the power of sharing tacit knowledge face-to-face. The organizational change literature spoke of the importance of assessing readiness for change, planning, and strategizing at all levels in a participatory fashion that gives all stakeholders a voice and a hand in the change process. Give people a chance to observe the innovators, incentives, and slack time to try things out, and reward them for trying and when they do well. We learned that change is both complex and lengthy, and requires buy-in from all of the players. The science of implementation tells a similar story: plan well, include all stakeholders, address barriers unique to the situation, assess the important motivators, resources, and change factors, take a deep breath, and jump in. This is a messy process, in particular because it is only beginning to be studied and understood.

But this is the literature, not the real world. What do the experts have to say? Well, we asked them, and again, the same tune was sung: "buy-in" is built best with a carrot not a stick, and needs to happen at all levels of service provision; practitioners are skeptical so expect their resistance—train them and develop organizations that will reward their risk taking; pick the best people, give them the latitude to do their job, listen to them respectfully, and let them mingle with others—other practitioners, researchers, consumers; and let them get off the treadmill of service provision now and again. When you do start something new, have a vision and a plan for its sustainability. We know enough to

anticipate the barriers that will be encountered, so settle in for a long and rough ride and enjoy the sense of accomplishment and pride that will encompass your staff when you have done something scary and new and have succeeded! Don't be afraid to tinker, but be certain to evaluate your efforts: access to mental health service is nothing if it's not effective. Develop partnerships with researchers—let them test out how best to implement their lab-based treatments while they in turn help you to evaluate the promising approaches you are developing in the field. Have faith and know that, together, we can do this.

But what of the practitioners and their world? We asked them, too. They told us they were doing pretty well in their ability to use research knowledge, but there is room for improvement, and so we should come back and ask them again in a few years time when they have had more support for these kinds of changes. We learned that clinical staff and their executive directors share many attitudes and perceptions about their readiness to deal with organizational change. There were two exceptions: clinical staff perceive higher pressure for change and executive directors sense greater need for program improvements. Curiously, pressure for change is not perceived as coming from agency boards or consumers, and such pressures need to increase to a point where it will be sufficient to motivate change. As for the resources that often underlie change efforts, they told us their offices are adequate but perhaps less so for conducting group interventions. This will need to be addressed, since many evidence-based treatments are group based. Training opportunities, computer access, and electronic communications are all perceived as adequate—findings that do not fully hold their own against years of anecdotal evidence to the contrary. They told us there are not enough clinical staff to do the job that is required—a lament that does strike a familiar chord. Perceptions of opportunities for professional growth are not overly high, although both groups perceive a high sense of efficacy, influence, and ability to adapt to a changing environment. Ask again about clinicians' ability to change procedures in face of new conditions though, and fifty percent will tell you they don't do this well. So, we can conclude there is some discomfort with change. Lastly, we learned that while clinical staff feel connected, cohesive, and in touch with one another, they experience high levels of job related stress.

The seemingly simple task of transferring a number of evidence-based practices to the field is anything but simple. It requires involvement from all stakeholders, good planning and resourcing, and a system that can develop a culture of evidence-based practice delivery and accountability. This will not be a quick and easy journey. Changing practice is a formidable task that occurs at a painstakingly slow pace, often requiring changes in practice behaviour, program restructuring, and reallocation of resources. This is especially difficult in an environment of tight budgets and competing priorities. It will require: engaging policy and decision-makers, leaders, and practitioners; educating and supporting the absorption of new knowledge and ways of doing things; planning and patience. There will be opportunities, and the challenge will be to find them and take them up. Who are the champions, what are the incentives for change, how can we balance the importance of professional development with the onslaught of service need?

In the face of this daunting task, take baby steps—each one moving us closer to our goal. The full range of possible actions is best explored in a participatory forum, but we suggest a few that came to mind as we undertook this work:

- connect children's mental health centres to the evidence base;
- reintroduce professional development as a core activity;
- develop incentives for the implementation of evidence-based practices
- bring practitioners and researchers together face-to-face to share their knowledge and do this often;

- implement Berwick's seven rules for disseminating innovations using Ontario-centric solutions;
- identify practitioners' knowledge and attitudes about evidence-based practices; and
- make it easier for practitioners to acquire training and skills.

In addition, search beyond our borders and seek out people who have undertaken similar challenges and have them share the lessons they learned. Lastly, recognize that Ontario's children's mental health sector is breaking new ground, and soon others will come asking how we got here.



*Failing to use available science is costly and harmful; it leads to overuse of unhelpful care, under-use of effective care, and errors in execution.*



*Donald Berwick, 2003  
Institute for Health Care Improvement*

Chapter 1



# Introduction

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This project represents Children's Mental Health Ontario's (CMHO) commitment to investigate the most effective means to transfer knowledge and implement evidence-based treatments and practices (EBTs/EBPs) in Ontario's children's mental health sector. The aim of the project is consistent with CMHO's vision to advocate for the well-being of children and families, to promote an environment that leads to mental health and well-being, and to promote quality in service delivery and effective programs and services for Ontario's children and families.

## Project Overview

With the introduction of standardized screening and outcome tools in the last four years, Ontario has key building blocks in place for improving the quality of service and promoting the use of evidence-based practices and treatments across the system. These efforts represent a beginning in helping us move toward evidence-based practice in mental health, yet we must consider the need for change in related areas to realize the potential of this investment. To this end, this work focuses on three related areas:

- (i) knowledge transfer
- (ii) implementation of evidence-based practices
- (iii) readiness for organizational and practice change

Essentially, we believe it is not sufficient to build the Cadillac of knowledge transfer and implementation models in the absence of understanding what is needed to prepare organizations and practitioners in the field to receive and implement this new knowledge. How best to do both requires investigation, care, and planning.

The investigative team from The Hospital for Sick Children and the Louis de la Parte Florida Mental Health Institute/National Implementation Research Network combined their expertise and working databases of published and grey literature<sup>1</sup> on knowledge transfer, implementation of EBP, and organizational and practice change. In addition, we surveyed the CMHO membership about their use of research evidence, their readiness for the organizational and practice changes inherent in adopting new EBPs, and their current use of evidence-based treatments (EBTs). We also consulted with key national and international experts on the subjects of implementation, knowledge transfer, and organizational change in the children's mental health field.

This report includes a review of published and grey literature on implementation of EBPs and the evidence base in knowledge transfer. Results of a survey of CMHO member organizations' executive

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<sup>1</sup> Grey literature is a term used to describe information products created and distributed to disseminate knowledge (ideas, facts, opinions) rather than sold for a profit. In practice, and for that reason, grey literature can also be defined as information which is not marketed and distributed by commercial publishing organisations. The term 'grey' stems from the fact that such information is not publicised and not available through the traditional channels of publishers and booksellers. Grey does not imply a specific qualification; it is merely a characterisation of the distribution mode.

directors and clinical staff highlight their research use practices, characteristics related to readiness for organizational change, and the extent to which specific EBTs are in use across the province. Lastly, we provide recommendations that can be acted upon and that address needs or issues highlighted in the data regarding future work CMHO may choose to pursue to promote the use of EBPs in children's mental health practice in Ontario.

Chapter 2  
Literature Review



# Knowledge Transfer, Implementation Science, and Readiness for Change

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## Highlights

### ***Knowledge Transfer and Exchange***

- ☞ *The transfer of research-based information to practitioners requires attention to four critical elements: the source, the content, the method, and the audience.*
- ☞ *The transfer of new knowledge is more successful when there is active collaboration and partnership with all stakeholders from the beginning.*
- ☞ *Knowledge is transferred best when done face-to-face, allowing for the communication of tacit knowledge.*
- ☞ *Passive dissemination of information is not as effective as active strategies in creating practice change or knowledge uptake.*
- ☞ *Transferring knowledge is part of a larger context of innovation and change.*
- ☞ *Leadership, power, and authority must be addressed in the knowledge transfer process.*

### ***Organizational and Practice Change***

- ☞ *Organizations can foster environments that are conducive to change.*
- ☞ *Resistance to change—from the system, leaders, and practitioners—needs to be recognized and addressed.*
- ☞ *Change requires “buy-in” and engagement from a critical mass of people; the challenge is to create a “tipping point”—the dramatic moment when something unique becomes common.*
- ☞ *Change is complex and requires planning and strategizing.*
- ☞ *Assessing readiness for change is integral to the success of knowledge implementation and adoption.*

### ***Implementation Science***

- ☞ *Providing children’s mental health services that are supported by research evidence is an important priority.*
- ☞ *Exactly how to implement evidence-based practice into a variety of contexts catering to multiple client groups is a burgeoning science that requires further study.*
- ☞ *Distilling research knowledge into practice guidelines and making these available is not sufficient for creating practice change.*
- ☞ *The implementation of evidence-based practices in any jurisdiction has to be a collaborative effort between organized systems of care (the province or state), the service provider organizations, and the practitioners.*
- ☞ *Successful implementation of evidence into practice requires strategizing at multiple levels: the practitioners, the organization, the system, the nature of the evidence, and the methods of transfer and implementation.*

- ☞ *A better understanding of practitioners' attitudes toward evidence-based practice is needed to address skepticism, distrust, and resistance.*
- ☞ *Practitioners need better access to the research base (library resources) as well as venues in which they can share their tacit knowledge with others, including scientists and decision-makers.*
- ☞ *The move toward the greater use of evidence-based practice in the children's mental health system will require practitioners to develop capacity for life-long learning and reflective practice.*
- ☞ *The implementation of evidence-based practices will require striking a balance between treatment fidelity and re-invention of the practice environment.*

## Introduction

The critical need to move research and information from those who generate it to the potential users, and to do so in a form that has direct and immediate application, has resulted in a burgeoning body of literature in knowledge transfer, the implementation of evidence-based practices, and organizational and practice change. All three areas are integral to the process of bridging the gap between the current state of scientific evidence and routine care in practice.

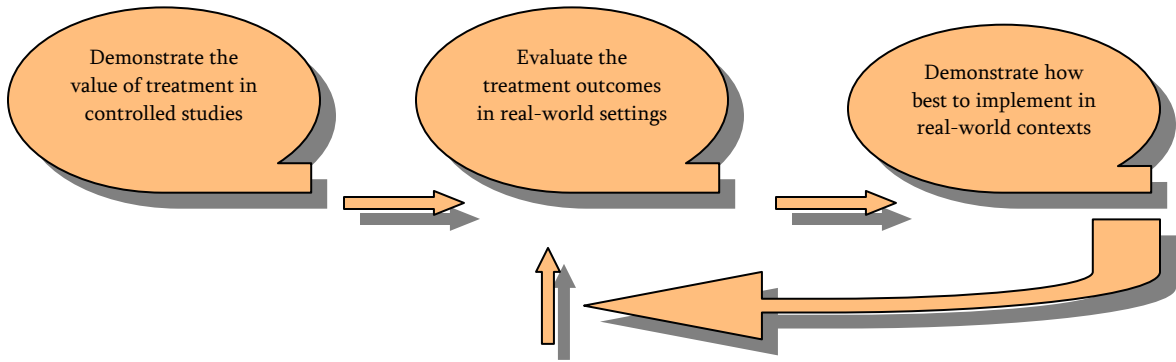
All three of the areas we review—knowledge transfer, implementation science, and readiness for change—are empirically in their relative infancy. Theories of change, both individual and organizational, can be viewed as the most mature relative to the other two areas. The last decade has demonstrated that we cannot expect the diffusion of EBPs will be automatic once there is accepted empirical evidence for particular treatments or services. The diffusion or implementation of empirically supported practices constitutes an area of research on its own, one that is just beginning to reach its stride. Implementing EBPs for child, youth, and adult health and mental health is only beginning to be systematically studied, and there is much work to be done to move beyond the descriptive nature of much of the existing literature. While the extant literature informs us of the individual and contextual factors that are potentially relevant to the success of implementation efforts, we know little about the “active ingredients”—those factors likely to predict the adoption of an intervention or service—and these will likely depend upon the nature of the practice, the environment, and the characteristics of the practitioners adopting the practice. More research in implementation or diffusion of innovations is needed to identify the important factors in this process. Similarly, more research is needed to identify the active ingredients for specific interventions so that we may attend to them as treatments are reinvented for new contexts, populations, and environments. Clearly, these two streams of research are related in an important way.

In this report, we examine what is currently known about the implementation of EBPs, while acknowledging that to a large extent, the evidence base needed to guide successful transfer of EBPs has yet to be fully developed. It is increasingly recognized that the process of evaluating new treatments is expanding (see Figure 3.1) into an iterative process that moves from efficacy research, effectiveness research, translational research, and implementation research (Rosenheck, 2001).

One of the project objectives was to conduct a literature review identifying best practices and the evidence base in knowledge transfer, the implementation and adoption of EBPs, and organizational/practice change in children's mental health and related fields. Much of the literature on these topics is from other disciplines, including management, rehabilitation, education, sociology, psychology, medicine, health administration, technology, and marketing. Within these disciplines, the review drew from a range of areas including child and adult mental health, health promotion, nursing, primary care, and business. The review also went beyond the published literature to include important and relevant work from the grey literature. In an attempt to be both comprehensive and concise,



Figure 3.1 – Treatment Evaluation Process



thematic findings from the literature review are presented below as main messages. An annotated bibliography of the relevant literature is provided in an appendix to this report.

### Search Methodology

One of the challenges in conducting a review of the literature in these related areas is the varied terminology that is used.

<b>The transfer of information...</b>	<b>Specific to EBPs...</b>	<b>The change process...</b>
knowledge transfer	deployment	change management
knowledge translation	implementation	knowledge management
dissemination		organizational change
knowledge utilization		practice change
research utilization		
diffusion of innovations		

At times these terms are used interchangeably, and in other instances they are carefully distinguished from one another. The ongoing review of work conducted by the investigative team at the Hospital for Sick Children included a search of key terms related to knowledge transfer and exchange, organizational change, and implementation of evidence-based practices within multiple databases located in the University of Toronto Library System. For published literature, the database search was limited to peer-reviewed articles published between 1980 and 2004. Relevant work in the grey literature was accessed through keyword searches on Google and Yahoo search engines.

The Louis de la Parte Florida Mental Health Institute at the University of South Florida has been engaged in creating a reference database related to the science and craft of implementation, and in examining and synthesizing implementation data and frameworks. This effort has been supported by the W.T. Grant Foundation. The database of over 800 articles was searched for references related to children’s mental health, organizational change, and the implementation of guidelines and practices in other fields. Other domains (e.g., medicine, education) were included, based on the working hypothesis that much of what has been learned about implementation may well be generalizable across domains.

## Main Messages from the Literature—Knowledge Transfer and Exchange

The increased interest in innovative and effective strategies for transferring research-based knowledge is reflected in the growing amount of research being conducted on knowledge transfer and exchange. Knowledge transfer is a process whereby relevant information is made available and accessible to decision-makers for application in practice, planning, and policy making (Institute for Work and Health, 2001). It occurs not only at the end of a process, project, or research study, but is active throughout the life of a project, from start to finish. Knowledge exchange refers specifically to the two-way dialogue and exchange of information between those who generate and those who receive and use knowledge, and it is also operational throughout the life of project or research study. Together, these two elements serve to facilitate the use of research in practice. According to Scullion (2002), the current gap between research and practice can be linked to failings in this process, hence underlying the importance of understanding and employing the most effective strategies for knowledge transfer and exchange.

1. *Four elements are essential to any knowledge transfer strategy: source, content, medium, and user.*

The process of knowledge transfer and exchange is influenced by a myriad of variables whose effectiveness has admittedly not been thoroughly investigated. Typically, however, four critical elements are viewed as essential to the efficacy of any knowledge transfer effort. Factors of importance related to the *source* of the information include the perceived competence of the source, the credibility of their experience and motive for producing the information, their relationship with other sources, and whether they are trusted by the recipient or user of the information. With respect to the *content* of the message, key factors are the credibility of the research methodology and outcomes, cost effectiveness, and the link between outcomes and existing knowledge. A message that is oriented toward positive aspects and focused on practical applications also tends to be more readily accepted. To be effective, the knowledge transfer *medium* or delivery method must be reliable, consistent with what is known about the target audience, and have sufficient capacity to reach intended users. Research suggests that effective dissemination of key messages depends on using multiple transfer methods. Clarity and attractiveness of the information “package” and timeliness are also key considerations. The knowledge transfer strategies must be tailored to the *user or audience*, and specific strategies may be more effective with one group versus another.

Canadian Health Services Research Foundation, 2000

Gerrish & Clayton, 2004

Scullion, 2002

2. *There is increased recognition of the importance of disseminating research results to wider audiences, not simply to other researchers. Therefore, there is a need to educate the media, public, practitioners, and policy and decision-makers about the general importance of research-based information, and to provide training in dissemination technologies and research methods.*

If research is to be used in practice, then its importance must be communicated to potential users. Often times, potential users of research knowledge are unconnected to those who do the research, and consequently a huge gap ensues between research knowledge and practice behaviours. This gap is due, in part, to practitioners' skepticism about research generally, and evidence-based treatments more specifically. Negative attitudes among practitioners about evidence-based therapies can result from a lack of knowledge about the effectiveness of treatments in real world settings. Thus, it is important to examine the transportability of treatments before dissemination occurs to ensure future credibility. These gaps highlight the

need for ongoing linkages between researchers and other key system stakeholders who have the potential to ensure that decisions get made based on evidence and that practitioners are receptive to the use of evidence-based programs or treatments. By closing the practice-research collaboration and research gulf, we can capitalize upon the strengths of both entities.

Addis, 2002  
 Barlow, Levitt, et al., 1999  
 Charles, Shalm, & Semradek, 1994  
 Hazel & Onega, 2003  
 Schoenwald & Hoagwood, 2001  
 Sherrod, 1999  
 Weisz, Chu, & Polo, 2004

3. *Knowledge uptake is enhanced through participatory approaches that consider the needs and preferences of all stakeholders.*

Involving decision-makers in its formulation and conduct is the best predictor for the application of research knowledge. Early involvement overcomes the challenge of getting “everyone on the same page” by specifically defining what real-world problem needs to be addressed and requiring that participants do their homework to facilitate the creative collaboration process. In reality, partnerships are hard work and take time, but they are worth the effort. In addition, bringing research and researchers into the policy-making and decision-making process may resolve conflict more readily and may also increase the likelihood of achieving consensus in areas where research is available. Effective knowledge-transfer strategies draw upon existing resources, relationships, and networks to the maximum extent possible, while building new resources as needed by users. Participatory approaches offer a model in which researchers and consumers are involved directly in the process of knowledge creation, dissemination, adoption, and use. For example, providing community partners with the opportunity to review processes and materials (e.g., publications, manuscripts) and to provide feedback ensures useful and broad dissemination and increases the chance that uptake of information will occur. Research on community planning boards, community coalitions, and prevention planning initiatives has demonstrated that local ownership and a community's readiness, in terms of both attitudes and organizational capacity, must be in place for a comprehensive assessment, planning, and monitoring effort to succeed. Not only must communities receive training on how to use new tools and apply assessment data, they must also receive technical assistance that can help them develop and implement their comprehensive system and, just as importantly, sustain that system once the researchers and the initial funding are gone. Knowledge uptake is enhanced through participatory approaches that consider the needs and preferences of all stakeholders. There will be greater buy-in if stakeholders are asked, “what do you think you need to know, or with which issues are you struggling?” before being told, “here's the information you ought to know, and here is what you should be doing in practice.”

Arthur & Blitz, 2000  
 Babor & Higgins-Biddle, 2000  
 Beutler, Williams, et al., 1993  
 Butterfoss, Goodman, Wandersman, et al., 1996  
 Dal Santo, Goldberg, et al., 2002  
 Fox, 2003  
 Green & Johnson, 1996  
 Greenberg, Babinski, et al., 1999  
 Haynes & Donald, 1998  
 Hazel & Onega, 2003  
 Kelly, Somlai, DiFranceisco, et al., 2000  
 King, Hawe, & Wise, 1998

Landry, Lamari, et al., 2001  
 Lee & Garvin, 2003  
 Lomas, 2000  
 Reback, Cohen, et al., 2002  
 Sanstad, Stall, Goldstein, et al., 1999  
 Wandersman, Morrissy, Davino, et al., 1998  
 Westbrook & Boethel, 1997

4. *The one-on-one encounter consistently emerges as the most efficient way to transfer knowledge.*

Building face-to-face relationships that are maintained over time is critical to successful knowledge transfer. These one-on-one encounters are recommended not only for researchers and decision-makers, but also between researchers and practitioners, media and consumers. Face-to-face exchanges between these key stakeholders and researchers allow for nuance and dialogue, the building of trusting relationships, and the sharing of tacit knowledge—things we know from experience are difficult to explicitly relate. These face-to-face linkages provide a conduit to more than one individual's expertise, as the link becomes a gateway to the more extensive knowledge of the research, practice, or decision-maker community.

Landry, Lamari, et al., 2001  
 Lee & Garvin, 2003  
 Lomas, 2000  
 Waddell, 2001

5. *Passive dissemination of information is generally ineffective in changing practice.*

Systematic reviews have suggested that passive strategies for the dissemination of information (for example, journal publications, print materials, and didactic conferences or workshops) are generally ineffective for knowledge transfer and, at best, result in only small changes in practice. Nevertheless, these passive approaches represent the currency of academia, professional bodies, and health care organizations. The one-way flow of written information and mechanical traditional dissemination approaches have been largely ineffective in encouraging the adoption of new research knowledge and the implementation of new programs and strategies. Simply providing good quality evidence-based information is not enough to change behaviour. The use of more active, even interactive, strategies to implement research-based recommendations seems to be necessary to ensure that practices change, and studies suggest that more intensive efforts to alter practices are generally more successful. For example, interventions such as interactive continuing education sessions where clinicians can practise skills they have learned seem more effectual and may be more successful in influencing health care outcomes. Educational outreach visits, when combined with social marketing, also appear to be a promising approach to modifying health professional behaviour. Personal involvement between the research team and target users not only ensures active uptake, but can also aid in maintaining the integrity of the practice. When combined with other active strategies, the use of highly respected leaders of opinion have shown to be more effective in changing behaviour.

Azocar, Cuffel, Goldman, et al., 2001  
 Bero, Grilli, Grimshaw, et al., 1998  
 Lavis, Robertson, et al., 2003  
 Lerner, Fisher, et al., 2000  
 O'Brien, Oxman, et al., 2004  
 Scullion, 2002  
 Waddell, 2001  
 Westbrook & Boethel, 1997  
 Wilkes, 1997

6. *Effective knowledge transfer depends upon using multiple rather than single strategies to communicate key information in a manner that considers the needs and preferences of the target audiences. Consistently effective interventions to promote knowledge transfer include educational outreach visits, reminders, multifaceted interventions (in combination), and interactive educational meetings.*

Recognizing that no knowledge transfer method will be effective in all situations, there are a variety of means to engage various user audiences. The target audiences and the messages that need to be conveyed generally shape the methods used to interact with potential users. Information should be readily available in a form that practitioners can easily understand within the constraints of their practice. It has been suggested that to maximize the uptake of knowledge, a variety of strategies should be developed. These could include pamphlets for community groups and the public, technical reports and other publications, websites with interactive learning modules, or interactive seminars. The challenge lies in maintaining integrity while generating public interest.

Bero, Grilli, Grimshaw, et al., 1998  
Freemantle & Watt, 1994  
Gerrish & Clayton, 2004  
O'Brien, Oxman, et al., 2004  
Ollendick & Davis, 2004  
Robinson, 2002  
Scullion, 2002  
Weingardt, 2004

7. *Knowledge transfer belongs within the larger context of innovation and change.*

Knowledge transfer belongs within the larger context of innovation and organizational change. This cycle includes stages of innovation (invention and production of the innovative program), evaluation (determination of its impact, cost-effectiveness, lack of side effects), communication (getting the word out to potential users), dissemination (active strategies that focus on adoption and building potential adopter involvement), capacity-building (helping adopting organizations strengthen themselves in ways that will make them more fertile ground to implement innovations), and change (the actual end-result—use of the innovation to improve services and communities).

Backer, 2000  
Morrissey, Wandersman, Seybolt, et al., 1997

8. *The success of knowledge transfer in innovation and organizational change requires addressing issues of power or authority to implement new knowledge.*

The notion of power is beginning to be addressed in the knowledge transfer and organizational change literature. It has been suggested that power is critical to the uptake of knowledge. Work on knowledge transfer in the nursing field suggests we need to examine the power differentials between government bodies, scientific centres, and health care workers. Lack of authority to implement change within health organizations has been identified as a barrier related to leadership and management of quality improvement in health practice. Others have suggested that managers fail to use their position and organizational authority to influence the use of research in practice. This, in turn, likely relates to the attitudes held by managers and organizational leaders toward research.

Gordon, 2001

Marshall, 1999  
 Omery & Williams, 1999  
 Traynor, 1999

In summary, the literature suggests that all knowledge strategies work at least some of the time, but none of them work all of the time or in every context. 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 each context (Logan & Graham 1998).

## Main Messages from the Literature—Organizational and Practice Change

In the drive to bridge the gap between scientific evidence and practice, we require an in-depth understanding of the process of change and the barriers and incentives to achieving change in practice. Despite increasing recognition of the importance of exploring this issue, there is little evidence for the value of various theories and models of change. Reviews of the effectiveness of different strategies for modifying practice have revealed there are no “magic bullets” for ensuring change. It is a process influenced by a complex interaction of internal and external factors. Although bringing about change is difficult in any organization or practice, it is particularly so for professional bureaucracies such as health centres, hospitals, and universities, where highly trained and autonomous professionals are largely in control of the core processes. Often, their deeply ingrained patterns of beliefs and behaviours can impede their willingness to change. This is why, within the organizational change literature, the concept of “readiness for change” is also gaining increasing attention. Change readiness refers to the variability that individuals, organizations, and communities have in terms of their interest, willingness, and ability to acquire and adopt new knowledge.

### 1. *Organizations can foster environments that encourage receptivity to change.*

Effective organizational change can be significantly enhanced when an organizational culture is developed that enables and motivates individuals to work in ways that are productive and personally fulfilling. This may consist of providing employees with opportunities to develop skills in leadership and management, as well as giving them freedom to think, organize, and plan for themselves. Active jobs where workers are afforded high decisional latitude and control over challenging tasks help to prepare them for initiating or contributing to change. An environment where individuals can voice their opinions and where learning is encouraged and early failures are rewarded instead of punished is conducive to overcoming the fear of change. Involving the active participation of individuals in the organizational change process by reducing the barriers to participation, building problem-solving strategies, and enhancing workers’ perceptions of their ability to cope with change (self-efficacy) should improve commitment to redesign and reduce the stress of organizational change.

Allen, 2002  
 Baulcomb, 2003  
 Cunningham, Woodward, et al., 2002  
 De Jager, 2001

### 2. *Effective leadership which entails open and honest communication can significantly influence the process of change.*

All levels of leaders—including top and middle management, front line managers, and designated “champions”—can have a significant influence on the process of change. To be

effective, all require vision, strategy, the ability to develop a culture with sustainable shared values that support the change, as well as the ability to empower, motivate, and inspire those who are involved or affected by the change. When leadership is actively attuned to the needs of the organization, change is more likely to be implemented in a manner that will engage followers to embrace it. Key people and policy makers must be interested in the change and committed to making it happen. Motivating the key influencers frees an organization from having to motivate everyone, since the effect will eventually trickle down and, in the end, all are affected. Middle managers in particular can play a vital role in creating and sustaining change. Organizations need to develop and tap into their capabilities, minimize their constraints, and support and recognize their efforts. Leaders also need to identify and nurture potential champions who can help to initiate and sustain the change process at all levels of the organization. To mobilize and motivate employees, trust must be established through honest and open communication. People are more receptive to change when the rationale for change is well explained, timely, accessible, and clearly communicated.

Allen, 2002  
Gill, 2003  
Howell & Higgins, 1990  
Jimmieson, Terry, et al., 2004  
Kim & Mauborgne, 2003  
Nemeth, 2003  
Stewart & Kringas, 2003  
White, 2004

3. *Resistance to change is a significant barrier that needs to be understood and addressed.*

The process of change can greatly affect people on an emotional level. It has been compared to the process of death and dying, in that there may be a dislodgement of identity, followed by grief. Working through resistance to change is essential for change to occur, particularly among autonomous professionals and practitioners. Resistance usually stems from the perception that there is no need for change and also from fear of the unknown. Because resistance to change often serves the legitimate function of avoiding unnecessary change, it can be addressed with reasonable explanations and by involving people in decision-making and implementation processes. When there is no involvement in these processes, individuals perceive that change is being forced upon them. Coercive pressure in the face of resistance may initiate change but will not likely sustain it. Feelings of anxiety and arousal caused by change can result in a range of avoidance tactics, such as obstruction and avoidance. Organizations need to find ways to manage the emotions inevitably aroused by change, and this may include engaging group leaders to act and speak out on behalf of the group, and convening meetings or social gatherings where employees have the opportunity to voice their feelings and gain emotional support.

Amis, Slack, & Hinings, 2002  
Baulcomb, 2003  
Carr, 2001  
De Jager, 2001  
French, 2001  
Zell, 2003

4. *Lasting and effective change requires congruent values and beliefs, and the co-operation and involvement of the whole team.*

Values within an organization are defined as the beliefs held by an individual or group regarding the identified “means and ends” that an organization should identify in its operation.

Reactions to change largely depend on how closely the values held by individuals within an organization coincide with the changes being proposed. For successful change, leaders need to tie members' value fulfillment with the organization's desired goals. In addition to shared values and beliefs, the full participation of the whole team in the process of change is necessary for sustained change. To help foster this coherence, change initiatives should be planned around the concepts of alliance. Other strategies include education, shared responsibility, serving as a negotiator/facilitator, as well as demonstrating respect and recognition for the knowledge possessed by all parties. Once the beliefs and energies of a critical mass of people are engaged to a new idea, the incentive to change can spread throughout the organization.

Amis, Slack, & Hinings, 2002  
 Baulcomb, 2003  
 Bruhn, 2004  
 Gill, 2003  
 Heracleous, 2001  
 Kim & Mauborgne, 2003  
 Mackert, 2001  
 Muchinsky, 2004

5. *Change is a complex process that must be approached with careful planning and strategizing.*

Planning for organizational and practice change needs to take into account the nature of the innovation or new knowledge, the characteristics of the people involved, as well as the social, organizational, economic, and political context. Potential barriers at various levels need to be addressed. Unless adequate strategic thought is given to communicating the rationale, the progress, and the impact of the change, organizational changes may falter. The focus of the strategy should entail considering the target group's and organization's readiness for change. Institutionalizing change, such that it becomes a routine part of practice or organizational operations, means including it in strategic plans, job descriptions, and budgets. Strategies that involve addressing resistance variables should also be part of the execution of the implementation plan.

Cockburn, 2004  
 Klein, 1996  
 Nemeth, 2003  
 Trader-Leigh, 2002

6. *Assessing readiness for change is integral to developing strategies for instigating and sustaining organizational and practice change.*

Readiness for change refers to the interest, willingness, and ability of an individual, organization, or community to receive, implement, and adopt new knowledge. It is conceptualized within the literature as a process of stages that individuals move through: pre-contemplation, contemplation, decision, active change, and maintenance. Identifying and understanding an individual or group's level of readiness for change is important because it enables the "change agent" to customize information and support according to the targeted participants' stage of readiness. Movement through these stages can also be seen as a process of decisional balance, where the anticipated risks of change are weighed with the potential benefits of change. Thus, staff perceptions regarding the elements of risk need to be addressed when influencing members' level of readiness. Only when individuals within an organization are ready for change can interventions be effective in the long term. Building and sustaining change readiness capabilities requires the cultivation of a highly skilled, empowered, and energized workforce.



Chilvers, Harrison, et al., 2002  
 Cockburn, 2004  
 Cunningham, Woodward, et al., 2002  
 Iskat & Liebowitz, 2003  
 Jumper-Thurman, Edwards, et al., (In press)  
 Madsen, 2003  
 Oetting, Donnermeyer, et al., 1995

## Theories of Change and Implementation Science

Implementation science is defined as the scientific study of methods to promote the uptake of research findings for the purpose of improving quality of care (Foy, Eccles, & Grimshaw, 2001). It includes the study of factors that influence the behaviour of health care professionals and organizations, and the interventions that enable them to use research findings more effectively. Those involved in implementation science view the creation of effective quality improvement interventions as the mechanism through which we can close the gap between research and practice.

Several psychological theories and frameworks further our understanding of implementation (Ferlie & Shortell, 2001; McDonald, Graham, & Grimshaw, 2004). These theories of change have been developed from a variety of perspectives—psychology, sociology, marketing, education, and organizational behaviour, among others—and address ways to change the behaviour of patients, organizations, and practitioners. The key elements of several of these theories and the main messages from the implementation literature are briefly summarized below.

### 1. *Diffusion of Innovation Theory* (Rogers, 2003)

Rogers' theory describes the innovation–decision process and how the perceptions of potential adopters regarding the attributes or characteristics of an innovation influence diffusion of the innovation. The innovation–decision process consists of five stages that potential adopters pass through as they decide to adopt an innovation:

- (i) knowledge – becoming aware of the innovation
- (ii) persuasion – developing positive attitudes about the innovation
- (iii) decision – making a decision to adopt the innovation
- (iv) implementation –using the innovation
- (v) confirmation – continuing to use the intervention, adapting the innovation, or abandoning it

In Rogers' view, innovations are more quickly adopted when they are: compatible with current values, beliefs, and ways of doing things; are seen to be more advantageous than the current practice (relative advantage); are easy to use (low complexity); are used by others (observability); and can be tested before a decision is made to adopt (trialability).

According to Rogers, potential adopters can be categorized into five types, defined on a statistical basis by the number or standard deviations (SDs) from mean adoption time. The classification is somewhat artificial, yet the labels have entered conventional use and have proven helpful as a model of variation in adoption behaviours.

*Innovators* – (by definition,  $\geq 2$  SDs faster than the mean rate of adoption, or about 2.5% of those involved) The fastest adopting group, they stand apart from others because of their venturesomeness, tolerance of risk, and fascination with novelty. Socially, they tend to be a little disconnected. They are not opinion leaders, and are viewed as rather incautious.

*Early Adopters* – (1 to 2 SDs quicker to adopt than the mean, or 13.5%) They are the opinion leaders, locally well-connected and respected. Early adopters are watched by others, and this is critical in the dynamics of implementation and transfer.

*Early Majority* – (0–1 SDs quicker than the mean, or 34%) They are deliberate, local observers who have watched early adopters. They learn mainly from people they know well, and they rely more on personal familiarity than on science and theory before they decide to test a change. In health care, they are typically practitioners who are ready to try innovations that meet their immediate needs rather than those that are simply interesting.

*Late majority* – (0–1 SDs above the mean rate of adoption) Representing another third of the population, the late majority are more skeptical and conservative. They look to the early majority as they try the innovation, and will adopt it only when it appears to be the new status quo or standard of practice.

*Laggards* – (1 SD or more above the mean rate of change) This group are the slowest to change, socially isolated, and traditionalist. They are practitioners who swear by the tried and true and persist in a traditional approach to care.

## 2. *Precede-Proceed Model* (Green, Kreuter, et al., 1980, 1991)

This model captures the steps that precede an intervention and suggests ways to proceed with its implementation and subsequent evaluation of its impact. In the precede stages, the implementer specifies the problem and then identifies the factors that contribute to it. These factors are categorized theoretically as predisposing, enabling, or reinforcing, and they are then rated in terms of importance and amenability to change. Predisposing factors include attitudes, beliefs, and perceptions, all of which provide the impetus for change. Enabling factors include the resources, facilities, and skills that must be present for change to actually occur. Reinforcing factors include rewards or incentives, such as positive feedback, that encourage change. The key proceed stages are implementation and evaluation of the intervention. The evaluation stage examines the degree to which the practice was implemented, and the effect the intervention had on behaviour change, and on predisposing, enabling, and reinforcing factors.

## 3. *Social Marketing* (Andreasen, 1995)

Social marketing has mainly focused on bringing about health behaviour change at the community level, but has also been used as the basis for some other quality management techniques. It is a planning model that consists of several stages: planning and strategy (dialoguing with key stakeholders and assessing the resources available); selecting the relevant channels and materials for interventions (tailoring messages and distribution methods according to specific target audiences); and finally, implementation, evaluation, and feedback, after which the intervention may be refined (McDonald, Graham, & Grimshaw, 2004). Academic detailing is a form of social marketing (Soumerai & Avorn, 1990) where implementers: conduct interviews to assess baseline knowledge and motivations for the current practice; programs focus on specific categories of physicians as well as opinion leaders; educational and behavioural objectives are clearly defined; credibility is established through a respected organizational identity; both sides of controversial issues are presented; active practitioner participation in educational interactions is stimulated; main essential messages are highlighted and repeated; and incentives and positive reinforcement for improved practices are provided over time.

#### 4. *Berwick's Clusters of Influence and Rules for Dissemination* (Berwick, 2003)

Berwick's theory explores three clusters of influence on the rate of diffusion of innovations within an organization: the perceptions of the innovation, the characteristics of the individuals who may adopt the change, and contextual and managerial factors within the organization.

*Perceptions of an innovation* predict between 49% and 87% of the variance in the rate of spread (Rogers, 2003). Berwick posits that changes spread faster when they have five specific attributes:

- (i) the perceived benefit of the change – individuals are more likely to adopt an innovation if they think it can help them;
- (ii) to diffuse rapidly, an innovation must be compatible with the values, beliefs, past history, and current needs of individuals;
- (iii) simple innovations spread faster than complicated ones – innovations are more robust to modification than inventors perceive, and local adaptation or “reinvention” is nearly a universal property of successful dissemination;
- (iv) trialability – whether or not a potential adopter can test the innovation on a small scale without implementing everywhere at first; and
- (v) observability – the ease with which potential adopters can watch others try the change first.

*Characteristics of potential adopters* also influence the spread of innovations. These are those identified by Rogers (2003) and are described above.

A third cluster of influences on the rate of transfer of innovations relates to the *contextual or managerial factors within an organization or social system* that encourage and support, or discourage and impede, the process of transmission. For instance, because the early majority tend to learn about innovations best from local and social interactions with early adopters, organizations that foster such social exchanges may see faster dissemination of changes than organizations that are more isolated. In Ontario, this has been actualized through the development of communities of practice in each of the province's nine regions, where local practitioners can meet to discuss the use of the mandated intake and outcome assessment tools (Barwick, Boydell, & Omlin, 2002).

Although Berwick's rules do not constitute a real “model,” he has proposed a series of seven “rules” for translating research into practice. These rules are reviewed in the Taking Action Section on page 106.

#### 5. *Ottawa Model of Health Care Research Use* (Logan & Graham, 1998)

The Ottawa Model of Health Care Research Use (OMRU) consists of six key elements that are connected to each other through the process of evaluation. The elements address what are believed to be the central components of the research use process, including:

- (i) the practice environment
- (ii) potential adopters
- (iii) the evidence-based innovation
- (iv) strategies for transferring the evidence into practice
- (v) the use of the evidence
- (vi) health-related and other outcomes of the process

An integral part of the OMRU is the systematic assessment, monitoring, and evaluation of the research transfer efforts.

#### 6. *Community Readiness Model* (Oetting et al., 2001)

The community readiness model 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 that are measurable using the Community Readiness Scale. The authors highlight that change is difficult for a variety of reasons: resources vary, political climates change, people are insufficiently trained or get bored waiting to results, money runs out, frustration rises, interest fades, etc. They astutely point out that communities are fluid—always changing, adapting, growing—and they are ready for different things at wholly different times.

To address how a community's level of readiness for change can be measured, The Tri-Ethnic Centre for Prevention Research at Colorado State University developed the community readiness theoretical model. The model was originally created for use with alcohol and drug abuse prevention programs, and has since been applied to a broad and varied arena of prevention programs. The theory provides methods for assessment, diagnosis, and community change. First, community key informants are asked semi-structured questions that provide information about what is occurring in the community in relation to a specific problem. The results evaluate readiness to deal with that problem on six dimensions: existing efforts, knowledge about the problem, knowledge about alternative methods or policies, leadership, resources, and community climate.

The eventual result is a diagnosis of the overall stage of community readiness. There are nine stages:

- (i) *tolerance or no awareness* – community or leaders do not recognize the issue
- (ii) *denial* – little recognition and belief that it does not apply to them
- (iii) *vague awareness* – recognition of need but no motivation to do anything; no identifiable leadership exists, or leadership lack energy or motivation
- (iv) *preplanning* – recognition of the issue and need to do something about it; identifiable leaders but efforts are not focused or detailed; discussion but no real planning
- (v) *preparation* – planning is on-going and focuses on practical details; leadership is active and energetic; decisions are being made about what will be done and who will do it; resources are being actively sought or committed
- (vi) *initiation* – activity or action has been started and is underway but is still viewed as a new effort; staff is in training or has just finished training; usually no active resistance
- (vii) *institutionalization or stabilization* – innovation is running and is viewed as stable
- (viii) *confirmation/expansion* – staff appear comfortable with innovation; original efforts have been evaluated and modified; data are regularly obtained
- (ix) *professionalization* – innovations is being applied by highly trained staff; leaders are supportive.

Each stage requires different forms of interventions in order to move the community to the next stage until, eventually, initiation and maintenance of health services programs and policies can be achieved.

7. *Organizational Readiness for Change* (Lehman et al., 2002)

This model includes a comprehensive assessment instrument for organizational functioning and readiness for change (ORC). 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. The model is described in detail in chapter 4.

8. *Ferlie and Shortell Model* (Ferlie & Shortell, 2001)

This model suggests levels at which interventions might operate to improve the quality of health care: the individual health professional and health care groups or teams; organizations providing health care; and the large health care system or environment. The model posits that the level at which you are trying to intervene will dictate the level at which considerations for implementation must be made. This multilevel approach recognizes the importance of four essential core properties of change:

- (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
- (iv) greater use of information technologies for both continuous improvement work and external accountability

Ferlie and Shortell relate these four important levels to specific change or knowledge transfer strategies (2001). Individual level change can be effected through such strategies as education, academic detailing, data feedback, benchmarking, guideline/protocol/pathway implementation, and leadership and development. At the group or team level, useful strategies include team development, task redesign, clinical audits, breakthrough collaboratives, and guideline/protocol/pathway implementation. Strategies to effect change at the organizational level include quality assurance activities, continuous quality improvement/total quality management, organization development/culture/and learning, and knowledge transfer/management. Change at the large, system level is brought about through national bodies (e.g., Canadian Mental Health Association, professional colleges), accrediting or licensing centres (e.g., CMHO, professional associations, and regulatory colleges), public disclosure (as in "report cards" or benchmark reports), and legal systems (policies, regulations, laws).

## Main Messages in Implementation Science

1. *Providing services with evidence of effectiveness is an important priority.*

The demand for mental health interventions that can produce great outcomes is increasing. While to some extent the best outcomes will be driven by the discovery of new interventions for particular disorders, a greater impact may be produced by focusing our efforts on discovering how best to deliver those interventions that have already proven themselves. The prevalence of untested, ineffective, or harmful treatments for mental health constitutes a public health crisis, rendering increasing the availability of scientifically proven treatments a major public health priority. Indeed, four of the eight goals on the agenda of the Surgeon General's Conference on Children's Mental Health (U.S. Public Health Service, 2000) pertain to increased implementation of scientifically proven prevention and treatment services. In an example of how this direction can be operationalized, the report of the National Advisory Mental Health Council's Workgroup on Child and Adolescent Mental Health Intervention, Development and Deployment (2001) encouraged the development of Treatments and

Services Practice Networks to examine the transfer and quality improvement strategies for implementing EBPs.

Aarons, 2004  
Berenholtz & Pronovost, 2003  
Kettlewell, 2004  
Schoenwald & Henggler, 2004  
Schoenwald & Hoagwood, 2001

The National Advisory Mental Health Council Workgroup on Child and Adolescent Mental Health Intervention Development and Deployment, 2001

2. 2. *Implementation is a high priority research topic.*

Future research is required to develop a better theoretical base and to evaluate new effective implementation strategies. Research is needed to identify the predictors of implementation success. Researchers should be asking, "what are the important variables and what are the important steps that will result in successful implementation?" Such research would help implementers to zero in on appropriate targets for change and craft interventions to effect the change. Knowing which factors predict successful implementation will assist implementers in overcoming barriers to behaviour change.

Alavi & Joachimsthaler, 1992  
Greenberg & Eccles, 2004  
McDonald et al., 2004  
Rosenheck, 2001

3. *Dissemination of clinical practice guidelines alone is not sufficient to change practice.*

Simply disseminating evidence-based treatment guidelines is ineffective for influencing the behaviour of mental health practitioners. Simultaneous strategies are needed to: "sell" the guidelines; exert peer pressure to accept the guidelines (opinion leaders); promote patient education, reminder, and feedback systems and review processes; and provide incentives for clinicians to perform and adhere to standards of desired practice.

Azocar et al., 2003  
Mittman & Tonesk, 1992

4. *The implementation of EBPs is the responsibility of organized systems of care (province or state), professional and consumer organizations, and individual practitioners.*

Systems of care must work in concert with professional and consumer organizations and with each other to implement EBPs and to improve mental health outcomes. National and provincial direction is needed to guide the implementation process. Large-scale implementation efforts require political courage by elected and appointed leaders in government and practice. The most ambitious attempts to transport EBPs to the field have come from state and provincial entities (e.g., Michigan, Ohio, Ontario) and from the efforts of specific treatment specialists (e.g., Multisystemic Therapy group). However, mandates do not guarantee implementation success. Sufficient resources and the consensus of key stakeholders are also needed. Organizations can learn, adapt, and develop only if the individuals within them also see the need to do so and learn new skills. Provincial-level mental health policies must create the organizational and financial incentives to implement EBPs. Consumer involvement is also key for successful implementation; not only must EBPs be acceptable to clients, they must be educated about these practices so they can better advocate for the most effective services.

Azocar et al., 2003  
Barratt, 2003  
Goldman et al., 2001

5. *Successful implementation of evidence into practice requires attention to multiple levels and processes: the practitioners, the organizational context, the system of care context, the nature of the evidence for the EBP, and the method(s) of implementation.*

To determine how best to implement EBPs, centres must assess factors at all of the important levels. This means analyzing elements of the target group and context before implementation begins. Working at different levels with individuals who have different perspectives is essential. There needs to be clarity about the nature of the evidence being used, the quality of the context, and the type of facilitation or implementation support needed to ensure a successful change process. The most successful implementation occurs when the evidence is scientifically robust and matches professional consensus and client needs; when the context is receptive to change (ready for change) with sympathetic cultures, strong leadership, and appropriate monitoring and feedback systems; and when there are appropriate resources and support from external and internal facilitators.

Barrat, 2003  
Benefied, 2003  
Grol, 2001  
Grol & Grimshaw, 2003  
Lemieux-Charles & McGuire, 2002  
Logan & Graham, 1998  
Ringeisen et al., 2003  
Rycroft-Malone et al., 2002  
Schoenwald & Henggler, in press

6. *A better understanding of the attitudes of service providers/practitioners is needed to effectively tailor implementation efforts.*

Even when service providers are aware of best practice, they may fail to implement because of skepticism about the appropriateness for their treatment environment and client population, the support available to assist the implementation, the organizational culture needed to implement the practice, or the additional costs incurred through implementation. There is great variability in practitioners' attitudes about the extent to which it is possible to quantify the effectiveness of treatment. Further resistance is characterized by skepticism about whether practitioners have enough evidence to warrant the implementation of EBPs and whether EBPs are too prescriptive, not taking into account the judgment and "art" required in psychotherapy. Practitioner beliefs about EBPs, their concerns about how EBP might control their (autonomous) professional practice, and their views on consequences for achieving implementation are factors that predict whether they will be "high" or "low" implementers. It is important to recognize that provider attitudes toward EBPs can be reliably measured, and they should be considered because they vary in relation to individual differences and service contexts. Emerging evidence from research on nurses' use of research information suggests that characteristics of the individual practitioner are more predictive of the use of research-based knowledge than are factors related to the nursing team or the hospital/organization (Estabrooks, 2004, personal communication). Moreover, the most predictive factor of research use was leadership within the nursing team or unit. This research points to the importance of the individual practitioner and clinical supervisor in research use and the eventual implementation of evidence-based practices and treatments.

Aarons, 2004

Barratt, 2003  
 Garland et al., 2003  
 Kettlewell, 2004  
 Kitson, 2001  
 Michie et al., 2004  
 Rosen, 2003  
 Wachter & Owens, 2004

7. *Practitioner access to the emerging research knowledge base is important (though not sufficient) for the success of EBP knowledge and subsequent implementation.*

Although access to research is a critical factor for using research and ultimately implementing EBPs, many facilities and practitioners do not have such access. Without access to the evidence base, practitioners are uninformed and at a disadvantage relative to providing the most effective care. This issue links with the need for continuous professional development, in that access to research needs to be augmented by the practitioners' capacity to evaluate it. Access to the research base is not sufficient, however, in light of recent evidence that clinical practitioners learn best from others in social situations where tacit knowledge can be exchanged (C. Estabrooks, personal communication, 2004).

Barratt, 2003  
 Barwick, Boydell, & Omin, 2002

8. *The implementation of EBPs requires practitioners to ask searching questions about their practice and service outcomes (continuous professional development and reflective practice).*

It is argued that the absence of skills in the mental health workforce is one reason for the slow implementation and uptake of EBPs. Training is needed that addresses the needs and knowledge of the whole team and that targets EBPs the team perceives as relevant to their clinical goals. For evidence to play a greater role in clinical decision-making, the attitudes and knowledge of managers and practitioners toward research evidence and the research process must change. There is a need to provide practitioners and managers with: training in research methods; critical appraisal and accessing the research literature; resources and supports to enable research participation; and opportunities for further academic study. At the pre-practice level, there is a need for training in empirically-supported treatments and the utility of outcome management and measurement for producing quality services and client outcomes. Such training is needed for psychiatrists, psychologists, social workers, and child and youth workers.

Ager & O'May, 2001  
 Barratt, 2003  
 Tarrier et al., 1999  
 Wade et al., 1998  
 Walshe & Rundall, 2001  
 Wilson, 1997

9. *Leadership at the organizational and system levels is needed to guide implementation.*

It is important for management to "lead from the front door" and develop direction that is capable of sustaining evidence-based practice. The strong support of senior management increases the success of adoption of new practices. Effective clinical leadership also speeds adoption.

Barratt, 2003  
 Bereenholtz & Pronovost, 2003  
 Bradley et al., 2004



10. *There is a need to reconcile the importance of treatment fidelity with the reality of reinvention.*

Fidelity research suggests that poor implementation (i.e., low fidelity) is likely to result in a loss of program effectiveness. It is thought that developing strategies to transfer EBPs to community settings with fidelity is critical to ensuring the intended clinical and service level outcomes will be achieved. Yet, research in organizational change suggests that implementation does not happen in the absence of reinvention. There is a need to reconcile these seemingly opposing views. Fidelity may be more relevant to evidence-based treatments than to evidence-based practices (e.g., outcome management). However, there is a need for continued research to uncover the active ingredients of effective treatments so that we might know the extent to which EBPs can be adapted to suit particular environments or client populations. Fidelity research, an approach that determines how closely the implementation of a program matches the original program, is greatly needed to evaluate the effects of reinvention. We must re-examine the perception that treatments must be administered rigidly without variation, creativity, or flexibility, and without consideration of the individual differences with which clients present.

Dusenbury. et al., 2003  
Gotham, 2004  
Nock. et al., 2003  
Schoenwald & Henggeler, 2003

11. *Implementation requires that the factors that can affect success of the innovation be identified at the planning and design stage.*

Previous studies of implementation were methodologically flawed because many did not consider the relevant determinants of the implementation process. All implementation efforts need to consider barriers and facilitators to change at all levels (i.e., system, organization, practitioner, consumer) to be successful, and this needs to be done in the planning stage (to the extent that this is possible). Specific system-wide implementation projects may have much to offer in their lessons learned and can identify barriers, facilitators, and issues that will need to be addressed (e.g., Ohio, Ontario system-wide initiatives).

Fleuren et al., 2004  
Dusenbury et al., 2003



*Knowing is not enough; we must apply.*



*Goethe*

## Chapter 3

### Research Use and Readiness for Change Survey



# Use of Research Evidence and Readiness for Change among CMHO Member Centres

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## Highlights

### ***Respondent Characteristics***

- ☞ 72.5% of the 85 surveyed executive directors responded. They predominantly had backgrounds in social work, had over 16 years of clinical and managerial experience, and represented organizations providing a wide range of clinical services.
- ☞ Among an estimated population of 3,951 clinical staff, 12.2% responded. The majority had backgrounds in social work, had over 16 years experience, and were affiliated with a range of clinical services located mainly in the Toronto (18.3%), South West (18.1%), and Central East regions (16.8%). 65.7% of respondents were clinical staff, 16% were clinical managers also providing service, and 18.3% were clinical managers not providing service.
- ☞ Survey participation of executive directors relative to the number of CMHO centres in each region indicated the highest participation among centres in Hamilton-Niagara (85.7%), Northern (83.3%), and Central East (71%) regions.
- ☞ 50% of responding centres had annual budgets in the \$1 to \$5 million range.

### ***Linking to the Internet***

- ☞ Among both executive directors and clinical staff, over 65% thought it was “likely” their colleagues would turn to the Internet as a resource.

### ***Linking to Research Information via Academia***

- ☞ 67% of clinical staff and 77% of executive directors link with a college or university.
- ☞ Fewer than 40% of CMHCs have organizational access to a university or college library.

### ***Use of Research Information***

- ☞ Both executive directors and clinical staff regard their organizations’ ability to access, assess, adapt, and adopt research information as “somewhat well”—this provides a useful benchmark for future comparison, and suggests there is possibility for improvement.

### ***Organizational Readiness for Change***

- ☞ Motivation for Change: Unless motivation for change is “activated,” individuals are unlikely to initiate change. In the three areas of importance for motivational readiness, executive directors perceived significantly higher need for program improvements (i.e., tracking client improvement over time, obtaining evidence of program effectiveness, selecting new treatments, generating clinical and data outcome reports) than did clinical staff, while clinical staff perceived significantly higher pressure for change (from staff, supervisors, and ministry) than did executive directors. For clinical staff, pressure for change comes from supervisors/managers (62.5%), other staff (52.6%), ministry/other funders (39%), and lastly, board members (28.9%). Executive directors perceive

- pressure for change from supervisors/managers (51%), ministry and other funders (49%), and clinical staff (42.9%). Fewer than one-third of respondents from both groups perceives pressure for change from consumers/clients, and fewer than one-quarter of executive directors perceive pressure for change for their board of directors. Groups did not differ with respect to the strength of their perceived need for training support, but they desire training in different areas. Clinical staff see a need for training to improve client participation/engagement with treatment, while executive directors see a need for training in monitoring client progress.*
- ☞ *Adequacy of Resources: Facilities, staffing patterns, training, and equipment are also important considerations in organizational readiness of change. The majority of clinical staff and executive directors favourably view the adequacy of office space for individual and group treatment, although 44% of clinical staff held low opinions (disagree strongly, disagree) of the adequacy of offices for group treatment, and this may have implications for future implementation of group-based EBTs. Both groups see “eye-to-eye” on the adequacy of staffing, agreeing there are too few clinical staff to meet client needs. Staff turnover is not a worrisome issue for the most part, and there is little perceived need for additional support staff. The majority of executive directors and clinical staff agree their organizations value continuing education and provide opportunities for learning, both in-house and at external venues. There was high perceived adequacy and use of computers among both groups. The groups were split with respect to whether client assessments are conducted using a computer—an intriguing finding given the mandate for use of computer-based intake and outcome assessment tools. More than 95% of executive directors and clinical staff reported having a computer in their personal workspace, another intriguing finding given the frequent anecdotal reports of low computer access as a barrier to use of the mandated outcome tool. Further analysis indicated this was not a bias due to the web-based survey method. Both groups felt access to e-communications—Internet and email—was more than adequate.*
  - ☞ *Staff Attributes: Several individual level characteristics have been noted as key in determining readiness for organizational change. Generally, the extent to which both groups value and perceive opportunities for personal growth was relatively low. The majority of clinical staff do not read about new techniques each month or have enough opportunities to keep up their clinical skills, although half feel they are up on the published journal literature. Executive directors fared somewhat better. Upwards of 60% from both groups have confidence in their clinical efficacy and willingness and ability to influence their co-workers, two characteristics that bode well for change. Less encouraging is their perceived ability to adapt in a changing environment. More than 65% of both groups feel they try new ideas and adapt quickly, while half acknowledged they were sometimes too slow or cautious to make changes—curiously contradictory.*
  - ☞ *Organizational Climate: Several organizational dimensions are identified as key to organizational change. Among them, upwards of 60% of clinical staff and executive directors were aware of the organization's mission and goals, and over 50% of both groups perceive management as being receptive to suggestions from staff and feel the information networks and channels are conducive to the communication flow. Staff cohesion—trust and cooperativeness—is high among both groups, as is the impression of autonomy or the decision latitude clinical staff perceive in working with their clients. There was division within both groups as to whether job pressures impede effectiveness, yet high levels of stress and the negative impact of a heavy workload on program effectiveness is perceived by both groups, albeit more so by clinical staff. Interests in keeping up with the demands of change vary across groups, where two-thirds of executive directors feel procedures change quickly to meet new conditions and only 30% of clinical staff share this view. There appears to be a positive attitude about and encouragement to try new techniques among both groups, and this is promising.*

### ***Use of Evidence-Based Treatments***

- ☞ *The 10 most commonly used EBTs are cognitive behaviour therapy (65%), COPE (42.7%), wraparound (42.5%), behavioural parent training (41.2%), brief strategic family therapy (39.2%), narrative therapy (38.8%), "The Incredible Years" (36.4%), multisystemic therapy (35.9%), "Stop Now and Plan" (32.4%), and "Right from the Start" (29.3%).*
- ☞ *A range of other treatment approaches are reportedly in use (e.g., Modified Interactional Guidance, brief solution focused therapy, "Watch, Wait & Wonder"). While not all have met rigorous criteria, many have undergone some level of empirical study to support their use.*
- ☞ *Among executive directors, half perceived their services/programs to be "somewhat" supported by research evidence, while the majority of clinical staff were more optimistic (40% said "pretty much"). This information provides a useful benchmark against which to measure improvement.*

## **Overview**

Implementation of evidence-based practices in Ontario's children's mental health system will require attention to many factors on a number of levels (practitioner, organization, system). A survey of CMHO member executive directors and clinical staff was conducted to better understand the barriers and facilitators to their use of research knowledge, their capacity to link with the evidence-based literature, their use of evidence-based treatments, and their characteristics relative to organizational readiness for change.

## **Methodology**

### **Procedure and instrumentation package**

Two data collection forms were used to survey clinical staff and executive directors from the 80 CMHO member centres. Clinical staff and executive director survey forms were developed using a web-based survey application. A letter describing the purpose of the project and providing the URL links to the two surveys was sent by electronic mail from the CMHO office to the executive directors of member centres, with a request that they complete the executive director survey and circulate the clinical staff survey to practitioners within their centre. In addition, a Word version of the clinical staff survey was included in the email communication to be circulated to clinical staff for whom the web version presented a barrier. To increase the response rate, the letter and its attachments were re-circulated to executive directors on a weekly basis, beginning at the onset of the survey (June 21, 2004) until the last week (July 19, 2004).

## **Results**

### **Response Rate**

The response rate for executive directors was 72.5% (58 out of 80). The exact number of clinical staff in the 80 centres could only be estimated based on reports from 51 executive directors who responded to a question about the number of full-time and part-time clinical staff in their organization. A total of 483 clinical staff out of an estimated population of 3951 staff in 51 CMHCs (12.2%) responded to the survey. According to CMHO, these numbers appear plausible based on survey data from two to three years ago which indicated 4,923 FTEs (clinical and non-clinical staff) for their member organizations. The weak response rate limits the extent to which the findings are representative of the population of all clinical staff working in the 80 centres.

What accounts for the low response rate among clinical staff? Did executive directors act as gatekeepers for already over-burdened staff, choosing not to circulate the survey? In anticipation of a poor response rate, we queried executive directors about their distribution of the clinical staff survey. At the time they completed the survey, executive directors described their survey distribution as follows: 58.5% indicated they had distributed the survey to their clinical staff, 7.5% indicated they had not distributed to their staff, and 34% indicated they had not yet distributed but planned to do so. Thus, it is possible that up to 41.5% of executive directors may not have distributed the survey to their clinical staff, even though they received weekly reminders. It is also possible that clinical staff were simply too over-burdened with clinical duties to participate, and/or that there was significant skepticism related to EBPs, as we have noted in the literature. We also note that the survey was distributed over the summer months and participation may have been hampered by summer vacations.

**Respondent Characteristics**

Clinical staff from 80 CMHO organizations were invited by their executive directors to complete the clinical staff version of the survey. A total of 405 clinical staff completed the web version of the clinical staff survey, and a further 78 completed the Word version and returned the survey by fax or mail, for a total clinical staff sample of N=483.

Respondent characteristics, such as discipline and years of clinical and management experience, are reported in Table 4.1. Both executive directors (48.3%) and clinical staff (41.6%) have backgrounds predominately in social work. The second largest clinical staff group was comprised of those from child and youth care (22.2%). Those reporting 16 or more years of clinical experience in children’s mental health field made up the largest groups within the executive director (77.8%) and clinical staff (36.3%). The majority of executive directors reported over 16 years of management experience (70.7%).

The majority of executive directors reported their centres were providing a wide range of services. As depicted in Table 3.1, a range of affiliations was reported among clinical staff and executive directors . Two-thirds (65.7%) of the clinical staff respondents were frontline clinical staff, with 18.3% identifying as “clinical managers not providing service” and 16% as “clinical managers also providing service.” Executive directors were predominantly located in the Toronto (20%), South West, (18.2%), and South East regions (14.5%). The majority of clinical staff respondents hailed from the Toronto (18.3%), South West, (18.1%) and Central East (16.8%) regions.

**Table 3.1 – Respondent Characteristics**

	Executive Director (N=58)		Clinical Staff (N=483)	
	Frequency	%	Frequency	%
<b>Discipline</b>				
Psychology	11	19.0	47	9.8
Social Work	28	48.3	200	41.6
Social Services	2	3.4	14	2.9
Child and Youth Care	3	5.2	107	22.2
Medicine/Psychiatry	–	–	1	0.2
Public Health Administration	3	5.2	1	0.2

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Other	4	6.9	37	7.7
Multiple disciplines*	7	12.1	74	15.4
<b>Years of Clinical Experience</b>				
0–2 years	2	3.4	57	11.8
3–5 years	2	3.4	82	17.0
6–10 years	2	3.4	79	16.5
11–15 years	7	12.1	88	18.3
16 + years	45	77.8	174	36.3
<b>Years of Management Experience</b>				
0–2 years	3	5.2		
3–5 years	–	–		
6–10 years	5	8.6		
11–15 years	8	13.8		
16 + years	41	70.7		
<b>Program Affiliation</b>				
Residential	34	58.6	177	36.6
Day Treatment	42	72.4	182	37.7
Crisis	34	58.6	160	33.1
Intensive Family Services	44	77.6	207	42.9
Mental Health for 0–6	41	70.7	172	35.6
Intake	47	81.0	131	27.1
Community-Based	50	86.2	236	48.9
Prevention & Early Intervention	8	69.0	118	24.4
Other	27	46.6	109	22.6
<b>Role Responsibility</b>				
Front line clinical staff			312	65.7
Manager doing clinical service			76	16.0
Manager with no clinical service			87	18.3
<b>Ontario Region where respondent located</b>				
Toronto	11	20.0	86	18.3
Central West	6	10.9	54	11.5
South West	10	18.2	85	18.1
Hamilton-Niagara	6	10.9	11	2.3
Northern	5	9.1	58	12.3

North East	3	5.5	29	6.2
Central East	5	9.1	79	16.8
South East	8	14.5	22	4.7
Eastern	1	1.8	46	9.8

\* Disciplines listed in the "multiple" category include: education, nursing, business, family therapy, family studies, addiction services, early childhood education, marriage/family therapy, play therapy, recreation

### Agency characteristics

When the response rate is assessed as a function of the number of CMHO member centres (proxy was executive director's responses) in each region, we see that over 50% of CMHO member centres responded within each region, with an excellent response rate from the Hamilton-Niagara and Northern regions (see Table 3.2). Responding centres represented urban, rural, and suburban service areas. Fewer than 10% had annual budget's of under \$1 million or over \$11 million, with the majority reporting in the \$1–5 million range.

**Table 3.2 – Agency Characteristics as Reported by Executive Directors**

	Number of Centres Responding	Percent of CMHO Member Centres
<b>CMHO Centres by Ontario Region</b>		
Toronto (N=17)	11	64.7
Central West (N=9)	6	66.7
South West (N=16)	10	62.5
Hamilton-Niagara (N=7)	6	85.7
Northern (N=6)	5	83.3
North East (N=5)	3	60.0
Central East (N=7)	5	71.4
South East (N=5)	8	*
Eastern (N=8)	1	12.5
<b>Primary Service Area</b>		
Rural	33	56.9
Urban	42	72.4
Suburban	18	31.0
<b>Annual Budget (N=54)</b>		
Less than \$1 million	4	7.4
\$1–5 million	27	50.0
\$6–10 million	19	35.2
\$11 million or greater	4	7.4

\* 8 centres reported being situated in this region, yet there are only 5 CMHO member centres in this region.

### Internet Access

In this day and age, access to the evidence base is highly dependent upon access to the Internet and electronic databases. Both executive directors and clinical staff perceive it is "likely" their organization will go to the Internet as a resource (see Table 3.3). When asked if their organization is connected to



the web, only 2 clinical staff (0.4%) report they are not. All executive directors are personally connected to the web, compared to 92% of clinical staff who are connected at their desk and 7.6% who are connected from another location in their building.

**Table 3.3 – Internet Use**

<i>How likely is your organization to use resources on the Internet?</i>					
(%)	unable to use / no access	very unlikely	unlikely	likely	very likely
Executive Director (n=52)	–	3.8	7.7	65.4	23.1
Clinical Staff (n=444)	0.5	7.0	9.2	65.1	18.2

**Academic Access**

For many organizations, access to the evidence base is realized because individual staff are connected or affiliated with colleges and/or universities. Such connections occur both through interpersonal interactions with others in these environments, and as a function of access to college or university library systems. We learned that 67% of clinical staff and 77% of executive directors are affiliated with a college or university, either through student supervision, faculty appointment, or continuing education. However, fewer than 40% of CMHCs have membership access to a university or college library, and this is very likely an important access barrier that could be addressed (see Recommendations).

**Organizational Capacity for Research Utilization: Access, Assess, Adapt, Adopt**

One section of the survey involved members’ capacity for using research. The “four A’s” concept—Acquire, Assess, Apply, and Adapt—was proposed by the Canadian Health Services Research Foundation (CHSRF, 2001) to capture the essential elements of an organization’s capacity for knowledge/research use. According to the CHSRF, “many organizations would like to make better use of research but aren’t sure where to start. Others feel they are doing well, but would also like to know if there are areas in which they could improve” (CHSRF, 2004).

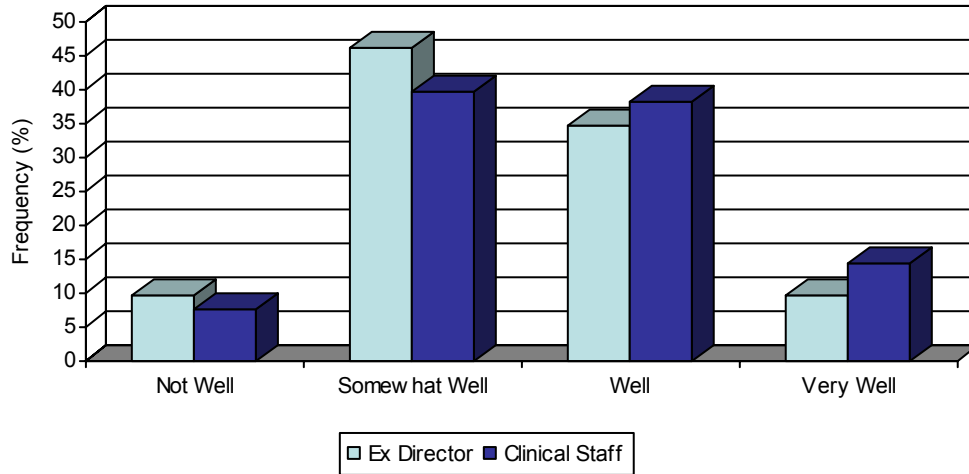
Survey questions on this topic explored whether organizations can: find the research evidence they need (Acquire); assess whether the research is reliable, of high quality, relevant, and applicable (Assess); adapt the information to suit its needs, client population, and environment (Adapt); and implement and adopt the research information in their context (Apply). This framework was also used in an earlier research study with multiple stakeholders and sectors involved in Ontario’s children’s mental health system (Barwick, Boydell, & Omrin, 2002). The CHSRF concept of “adapt” is defined somewhat differently than our application in this report. In the CHSRF self-assessment, “adapt” refers to the organization’s ability to present its own generated research evidence to decision-makers in a useful format which synthesizes recommendations, conclusions, and key issues. Since most CMHCs do not produce their own research, our use of the “adapt” concept pertains to the organization’s ability to use research knowledge to suit its context.

**Capacity to Access Research Knowledge**

An organization’s ability to find and obtain research knowledge is central to its capacity to evolve with new innovations. The majority of executive directors and clinical staff perceive their organization as doing “somewhat well” in this regard. Clearly, there is potential here to improve CMHCs’ access to

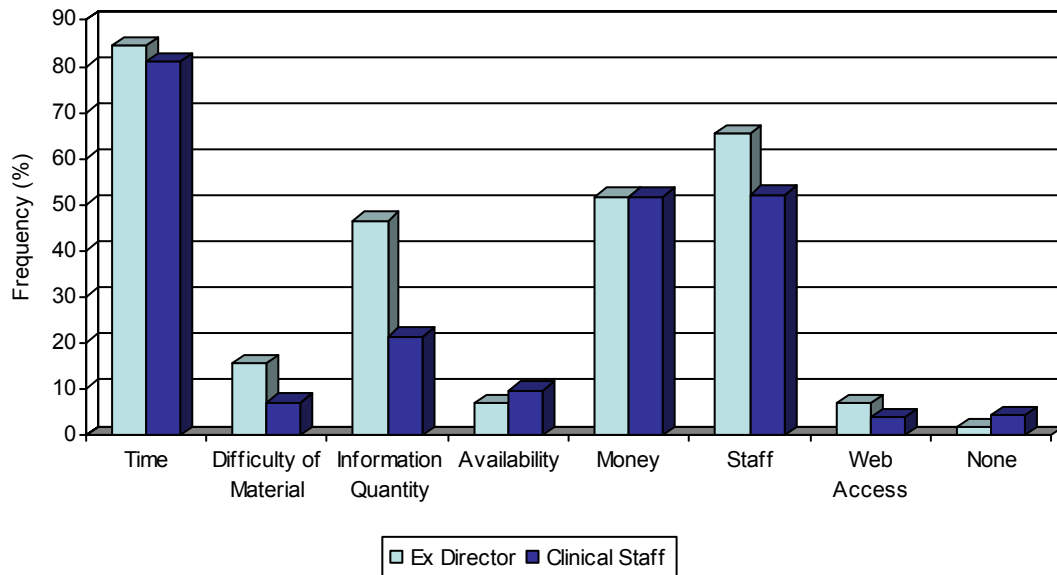
research knowledge, and this is something that should be addressed because it relates to the eventual implementation of evidence-based practices.

**Figure 3.1** How well is your organization able to ACCESS (find and obtain) research-based knowledge?



The barriers to accessing research knowledge are presented in Figure 3.2. Both executive directors and clinical staff cite time, money, and staff most frequently. Executive directors perceive the level of difficulty of research material, the overwhelming amount of information, and lack of staff as greater barriers than do clinical staff.

**Figure 3.2** What barriers are faced by your organization in accessing research-based knowledge?



Other interesting themes arose when clinical staff were asked to indicate what other barriers they experience in accessing research-based knowledge. An important concern is the **lack of access to university libraries**.

*(We are) one hour away from closest university library.*

*While materials can sometimes be accessed through our local university or adult mental health facility, there are many limitations including lack of resources within the community, lack of financial assistance to obtain materials, and lack of staff to assist in the research and location of materials. For those of us who are fulfilling multiple responsibilities, such as clinical manager, supervisor, and direct service provider due to funding cuts, this is a huge mountain to climb. I know the program I supervise could be contributing to the research data if I had easier access to and assistance with current published research.*

*University Libraries/access to journal articles are over 100 kilometers away.*

*Limited university library peer-reviewed articles must often be obtained via indirect and/or time-consuming means such as inter-library loan or photocopying microfiche; info provided by CMHO does not always provide enough info about where/how info was obtained to allow informed interpretation and application to specific cases; it is however an excellent source of general information.*

*It would be helpful if we had access to the university library databases.*

*Limited access to relevant scientific literature at university level.*

Also noted is poor access to **French-language literature**.

*Poor access to resources in French even though these exist as my studies at the university level were mostly all done in French here in Ontario. This applies to resources both for professionals as well as for French speaking clients.*

Clinical staff express concern regarding barriers at the **organizational and/or systemic levels**, identifying priority setting, organizational commitment, and time spent on mandated clinical screening and outcome management activities as barriers.

*We need to organize and prioritize accessing research based knowledge and evidence-based practices. And (we) need to put the discussion into supervision, in part by training supervisors.*

*I believe the biggest barrier is a systemic barrier; specifically, the lack of an organizational commitment that allows and fosters front line staff to have time to collect, review, and implement relevant material. I believe, in theory, there is a commitment to allow staff the time to read, collect, and research materials. However, in practice, this commitment falls short when faced with prioritizing other demands, such as long wait lists, calls from community members, and the day-to-day clinical momentum of the families with whom we work.*

*Too much administrative time spent on CAFAS, BPI,(and) accreditation and not enough on research 'pd' prep time.*

Still others express concern regarding the **availability and/or quality of the research evidence**, and the bias toward **lab-initiated research evidence** as opposed to field-level effectiveness research and evaluation.

*We have to be careful with research-based information as (there are) huge problems in reliability and validity in human research. Also, much of research is cognitive-behavioural (in nature, and) not all of us work in that area, (thus) we miss intriguing opportunities. Besides, research base needs to include qualitative as well as quantitative approaches.*

*Day treatment research-based knowledge and restraint reduction is limited.*

*Lack of relevant research for diverse populations.*

*Some of the so-called “science” types are actually into quite questionable techniques. People think they are getting state of the art but are actually being handed crap. (There are) some “real” science-types, too, fortunately.*

*Not a lot of research done on some of the specific areas; a lot of good work is not research-based and doesn’t mean it’s not effective.*

Some clinical staff identify the **formats and venues for access** as a central barrier.

*Information is better passed on via trainings etc., therefore finances become the roadblock.*

*All have identified in this agency a need to more regularly attend workshops, conferences etc.; the budget prevents this however.*

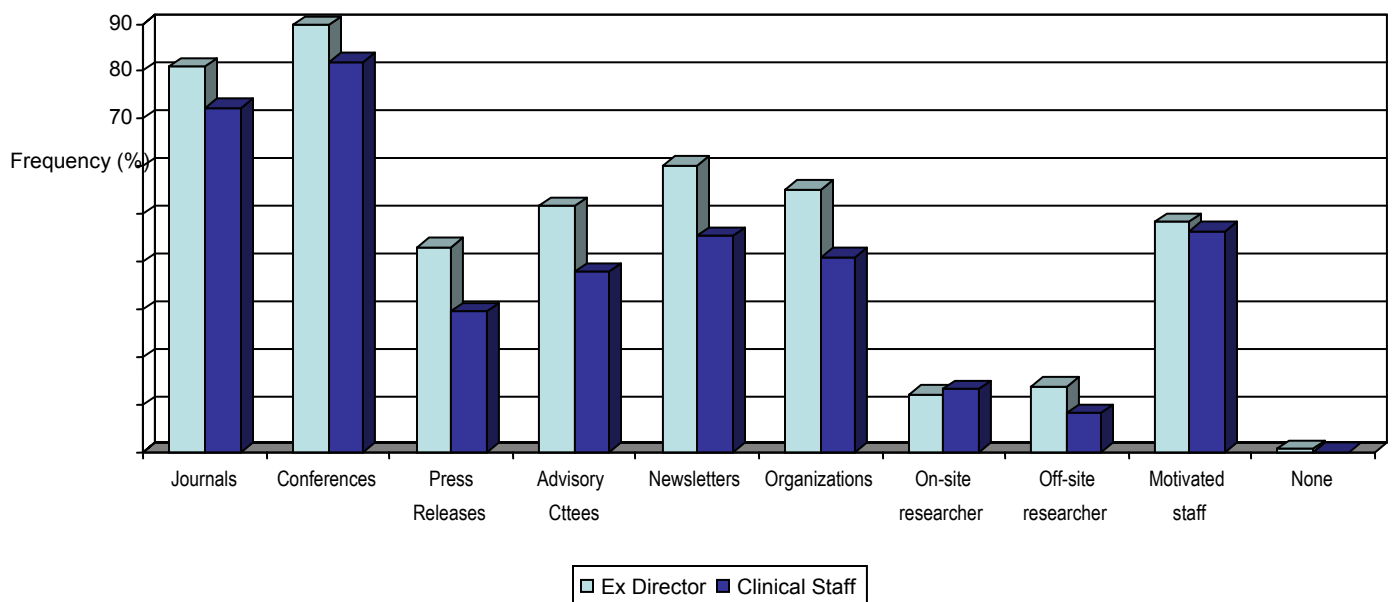
*Conferences and other avenues of specialized training are not readily available and are too expensive for the agency to fund. And some staff are unaware they require training in specialized areas.*

Some **attitudes** regarding the role research evidence plays in informing clinical practice is also of concern.

*Lack of overall clinical organization and leadership. On the other hand, much of the clinical work can effectively be carried out without research-based knowledge.*

Clinical staff endorse a number of sources used to access research information, showing a similar pattern for the most frequently endorsed formats, such as conferences, journals, newsletters, contact with other organizations, and advisory committees (Figure 3.3). There is variation in the nature of

**Figure 3.3** What sources does your organization use to access research information?

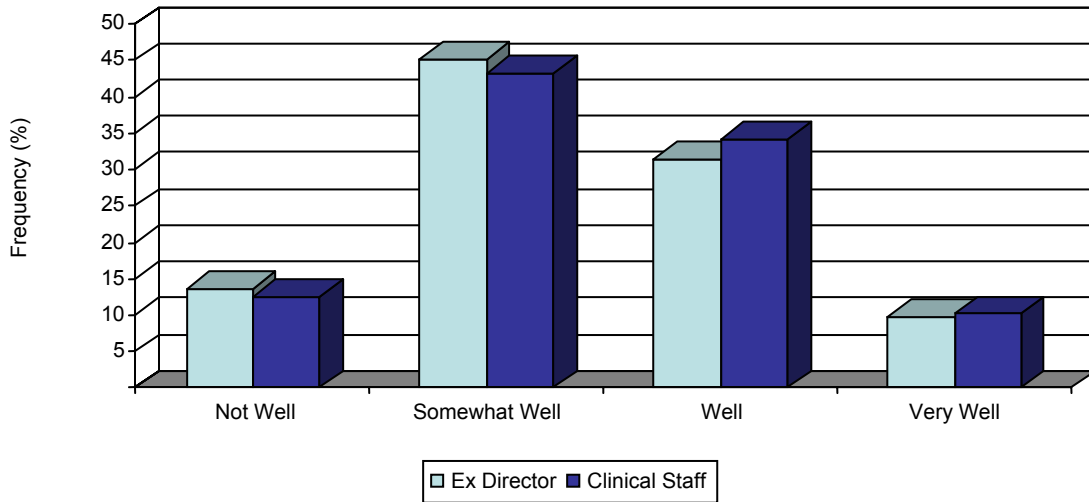


these activities across CMHCs; some organizations use a “best practices committee to discuss and examine materials,” while others perceive an absence of leadership: “we don’t have leadership in this area or designated person to take responsibility so each to his own, every office to its own.”

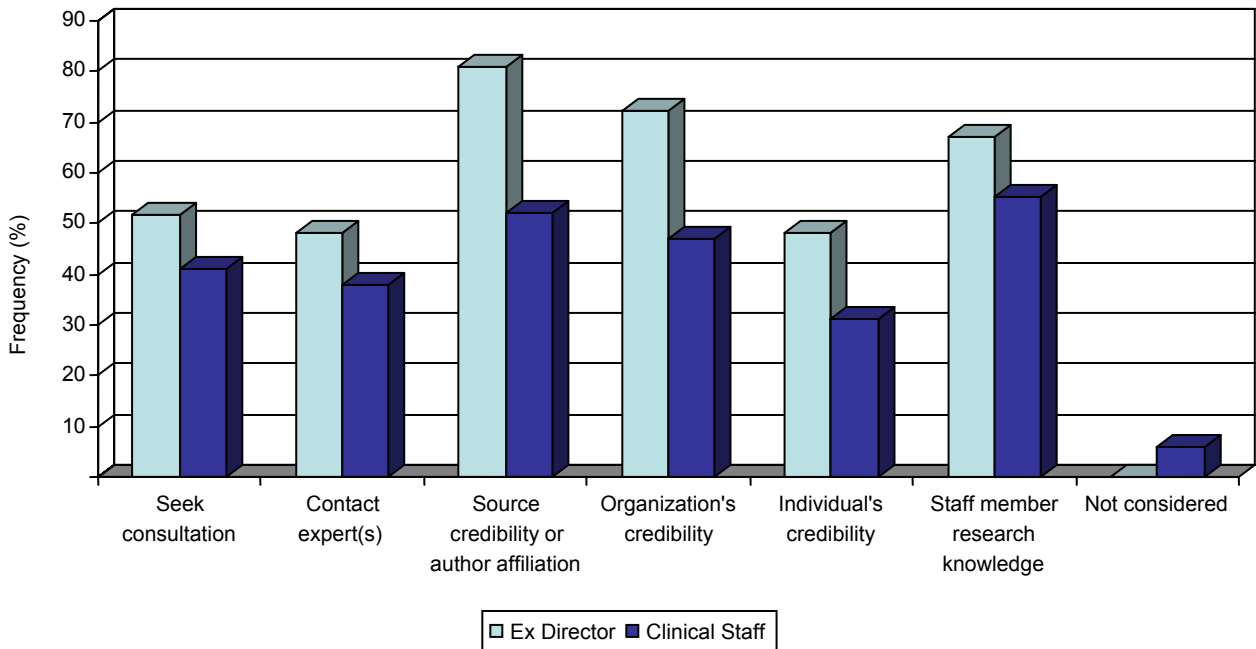
**Capacity to Assess the Reliability and Quality of Research**

The majority of respondents from both groups rate their organization’s capacity to assess the reliability and quality of research as “somewhat well” (Figure 3.4). This response suggests a need for some type of

**Figure 3.4** How well is your organization able to ASSESS the reliability and quality of research?



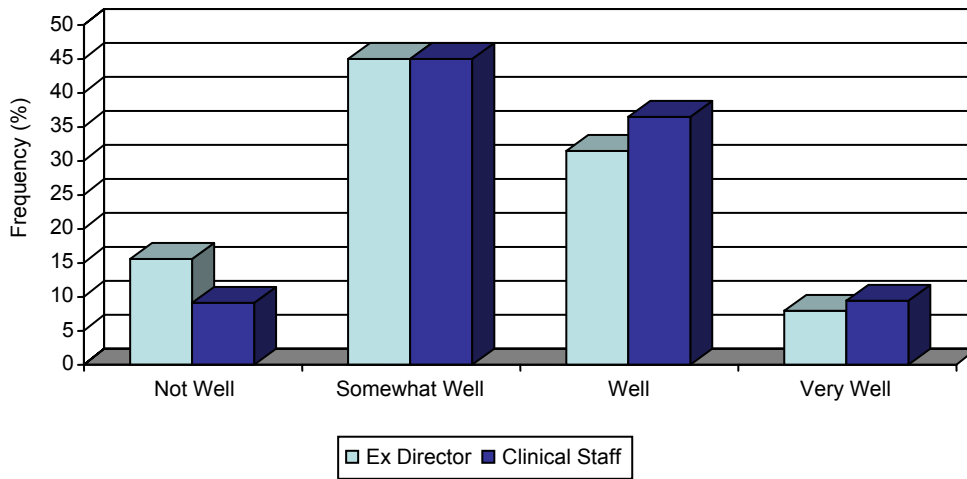
**Figure 3.5** How does your organization assess the reliability and quality of research information?



### Capacity to Adapt Relevant Information from Research

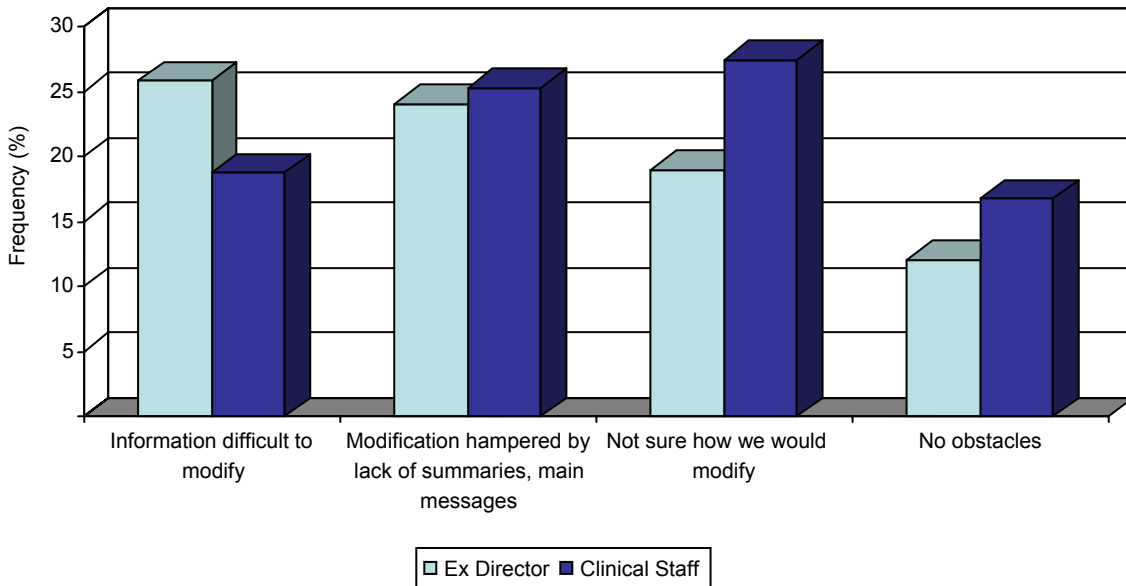
Again, results show great similarity between executive directors and clinical staff regarding the extent to which they perceive their organization can modify research information to meet the needs of clients and/or programs (Figure 3.6). Fewer than half from either group believe their organization can adapt research knowledge “somewhat well.” Less than 10% of both groups felt they are doing this “very well,” suggesting there is room for improvement in this regard and that perhaps specific training on fidelity and “reinvention” of EBPs is required.

**Figure 3.6** How well is your organization able to ADAPT (modify to meet client or program needs) relevant information from research?



Respondents were asked to identify barriers to their ability to adapt research information to meet client and program needs (Figure 3.7). Barriers were identified by only a quarter of the respondents from both groups of respondents, yet there was relative agreement that the lack of summaries, brief reports, and main messages are barriers to organizational capacity to modify the evidence for their own clients and programs.

**Figure 3.7** What obstacles does your organization face in adapting what is relevant?



When asked to identify other barriers to research adaptation, clinical staff overwhelmingly point to limited resources, e.g., **staff time**, as an important barrier.

*I work in a residential treatment facility and the environment is always fast paced and (we are) often experiencing various crises. What information we do receive is lost quickly because no time is allotted for staff sit down free of the front line obligations to consider the material, review how we can implement what we think would benefit us, etc. Simply put, getting the information is one thing...freeing up the front line staff, the primary ones who will be implementing it on a daily basis to develop ways of adapting it, is the piece that is often overlooked. Without that second piece, the first is negated.*

Staff **resistance to change** is also identified as a barrier.

*Resistance by some staff if (the) evidence-based practice does not fit within their clinical orientation and training. Some staff perceive inclusion of evidence-based practices as too "top-down" and prescriptive.*

The notion of **fidelity** and that evidence-based practices would lose their validity and reliability if they are modified is also identified as a barrier.

*Often, evidence-based practices are not intended to be MODIFIED—since it would then not be evidence-based (at least until it had then been researched).*

*Sometimes the model that is being used requires it to be applied in its exact form to ensure fidelity of the program and the expected results. An example of this is the Incredible Years Program.*

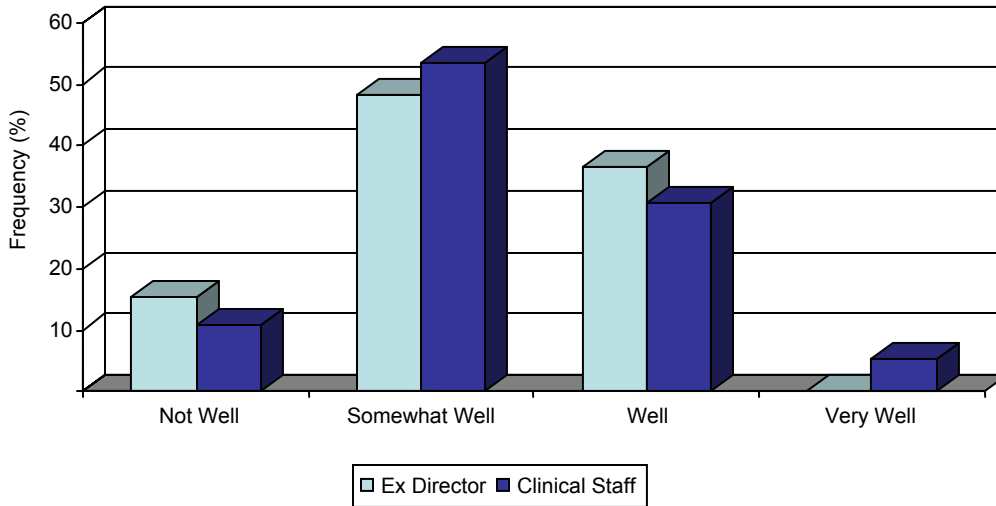
The perception that the transfer of EBPs to clinical practice must adhere to strict fidelity to a prescribed approach is not fully supported by the research. While there are certain treatments whose effectiveness can demonstrably be shown to be related to fidelity and supervision, there are other instances in which this is not the case (Nock et al., 2004). Key elements associated with effective adaptations include reliable measures of implementation to discriminate implementation issues from effectiveness issues, and an understanding of the underlying principles so that adaptations do not violate the principles associated with effectiveness (The Conduct Problems Prevention Research Group, 2002; Dusenbery et al., 2003).

### **Capacity to Apply Research Information**

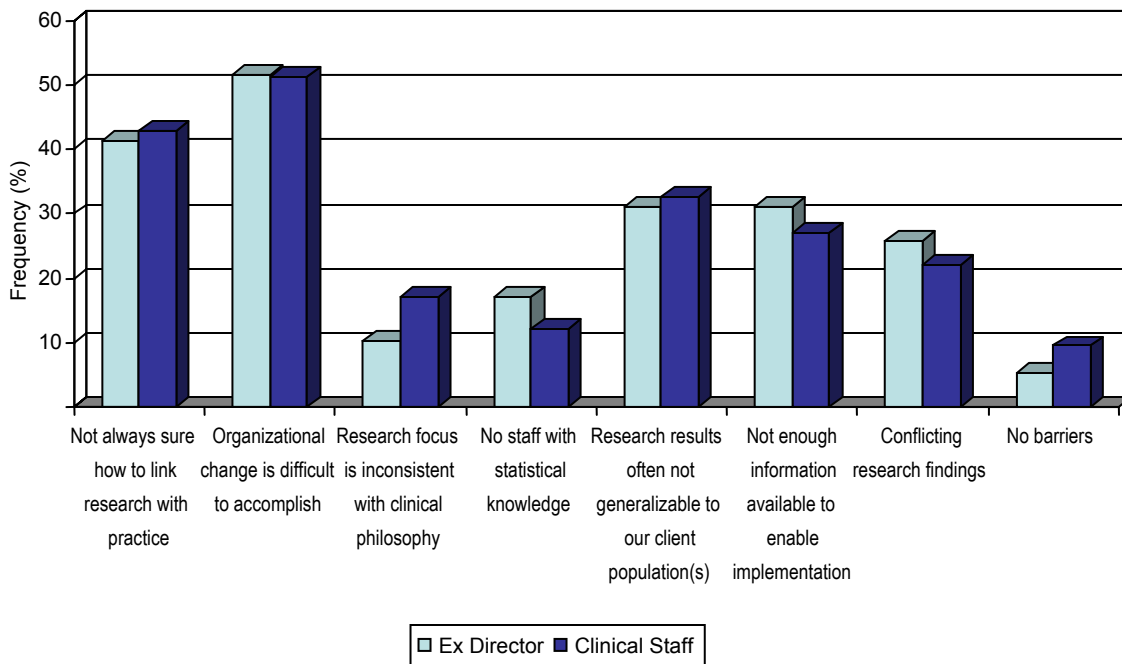
Both executive directors and clinical staff perceive their organizations as implementing and adopting research information "somewhat well" (Figure 3.8). As before, these results provide a good benchmark and suggest room for improvement.

Executive directors and clinical staff are fairly similar in their perceptions of the barriers impeding the implementation and adoption of research information in clinical practice (Figure 3.9). Half of the respondents from both groups acknowledge that organizational change is difficult to accomplish, with almost as many feeling unsure about how to make the link between research and practice. One-third of respondents in both groups perceive the generalizability and often conflicting nature of research information and the lack of specific implementation assistance are additional barriers.

**Figure 3.8** How well is your organization able to APPLY research information?



**Figure 3.9** What barriers does your organization face in applying research information?



**Summary**

For the most part, there is agreement among executive directors and clinical staff regarding their organizations’ capacity to use—access, assess, adapt, and apply—research knowledge. Overall, both groups rate their organizations as using research information “somewhat well.” These findings provide a useful benchmark for CMHO member organizations from which they can track changes in their capacity to access, assess, adapt, and apply research knowledge over time.



### Organizational Readiness for Change

The literature identifies major factors seemingly involved in transferring EBPs to practitioners in the field, however understanding how to do it needs improvement (Simpson 2002). Simpson and colleagues have incorporated these major factors as elements in an integrated framework. This kind of infrastructure is particularly important for conducting systematic studies of efforts to disseminate feasible and effective treatment innovations.

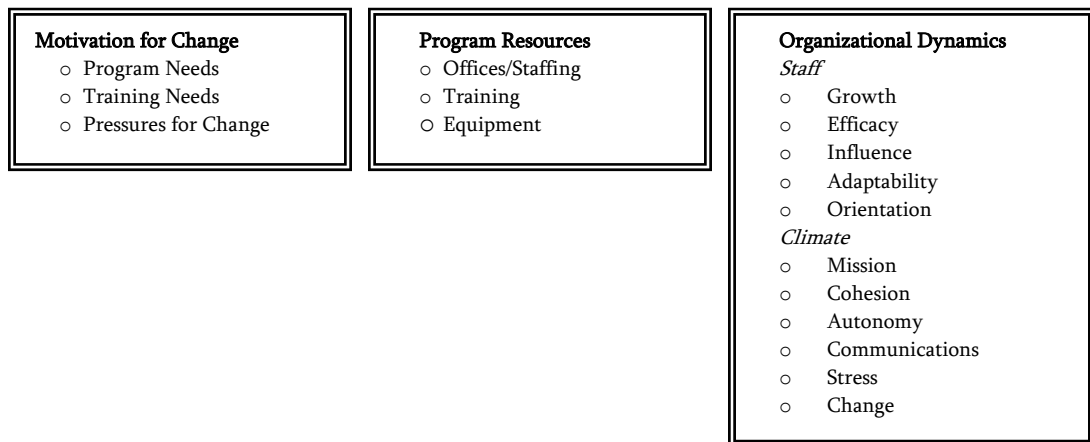
Although “change” at both the personal and organizational levels is constant and universal, making it intentional and positive requires attention and planning. This is especially true at the organizational level, which incorporates the collective attitudes, actions, and relationships of a group of individuals. There is growing consensus that problems in transferring research to practice are more likely to be due to organizational factors (e.g., leadership attitudes, staff resources, organizational stress, regulatory financial pressures, management style, tolerance for change) than how materials are disseminated (e.g., packaging, training, roll-out).

#### Texas Christian University (TCU) Program Change Model

Simpson (2002) presents a process model of program change that describes the introduction of new knowledge into a program or organization. This process includes exposure to new knowledge (i.e., new practice), adoption of the practice or knowledge, implementation or exploratory use, and practise or routine use. If fully realized, the transfer process can then lead to program or organizational change and improvement. Each of these stages of transfer can be impacted by organizational attributes. Of particular importance are institutional and individual readiness (e.g., motivation and resources), and organizational dynamics, such as climate for change and staff attributes.

The literature identifies several important factors that appear to influence the change process. The TCU Organizational Readiness for Change (ORC) assessment focuses on the following dimensions and subscales, as shown in Figure 3.10.

**Figure 3.10 – TCU ORC Dimensions**



Motivational readiness by leaders and staff members (defined as perceived need and pressure for change) combines with personal attributes (e.g., professional growth, efficacy, influence, and adaptability) to facilitate implementation of new knowledge or practices. Organizational climate

factors (e.g., clarity of mission and goals, staff cohesion, communication, and openness to change) and institutional resources (e.g., staffing levels, physical resources, training levels, and computer usage) are additional components to consider. Motivational readiness is critical, however, and is subject to external influences from funding agencies and peers. It also has a facilitating effect on organizational climate, and increased motivation by the leader can lead staff to reshape organizational goals and increase their readiness for change (Lehman et al., 2002).

The TCU Organizational Readiness for Change assessment includes 115 Likert-type (5-point agree-disagree) items for measuring the 18 domains depicted in Figure 4.10. Its development was guided by the recent literature on technology transfer (Backer, David, & Soucy, 1995), training transfer (Goldstein, 1991), organizational development and change (Judge, Thoresen, Pucik, & Welbourne, 1999; Porras & Roberston, 1992), and organizational climate (Furnham & Gunter, 1993; James & McIntyre, 1996; Koys & DeCotiis, 1991). Organizational-level assessments are perhaps the most challenging because they require data to be taken from individuals within the organization and then aggregated in ways that “represent” the organization. The ORC was adapted for use in this context. Specifically, the executive director version was reduced to 66 items from 115, and the clinical staff version was reduced to 67 items. Also, some of the language was changed to be more appropriate for the children's mental health sector rather than addictions facilities, for whom the measure was initially developed and evaluated. Parallel versions were adapted for the program director (executive director) and clinical staff (see Appendix B). The ORC focuses on organizational traits that predict program change, and it can be useful as a diagnostic tool for planning interventions to improve organizational functioning. For this study, items were retained if they were deemed sufficiently relevant by the project team and CMHO subcommittee.

### **Scale Reliability**

Reliability of each of the 18 ORC (modified) scales was computed with Cronbach's alpha. Results for the ORC-ED and ORC-CS versions are presented in Table 3.4. Overall, 6 of the 18 scales for executive directors and 9 of the 18 scales for clinical staff had reliabilities above .60. This level of reliability among scale items is somewhat weaker than the reliability reported by the scale authors (Lehman, Greener, & Simpson, 2002), suggesting the subscale items are not measuring a unidimensional latent construct, or there is less uniform agreement regarding the subscale constructs among our groups of executive directors and clinical staff. It should be noted, however, that the scale items were used in this context because they and their underlying constructs are supported by the empirical literature as being of importance to the change process, and they are used here in an exploratory and descriptive way rather than to confirm specific hypotheses. Moreover, several items from the original scale were deleted through a consultation process between the project team and the CMHO subcommittee, and as you reduce the number of items, scale reliability diminishes. As such, our data do not constitute a true psychometric test of the ORC items and subscales.

**Table 3.4 – Psychometric Properties of the Adapted Organizational Readiness for Change Survey**

Subscale	Items	Executive Directors (N=48)	Items	Clinical Staff (N=414)
<b><i>Motivation for Change</i></b>				
Program needs for improvement	6	.75	7	.84
Immediate training needs	4	.79	4	.73
Pressures for change	7	.70	7	.64
<b><i>Adequacy of Resources</i></b>				
Offices	3	.50	3	.57
Staffing	4	.10	3	.18
Training	3	.32	3	.60
Computer access	7	.59	7	.54
E-communications	4	.76	4	.69
<b><i>Staff Attributes</i></b>				
Growth	3	.53	3	.60
Efficacy	2	.21	2	.38
Influence	3	.61	3	.52
Adaptability	3	.56	3	.41
<b><i>Organizational Climate</i></b>				
Mission	2	.49	2	.36
Cohesion	2	.85	2	.72
Autonomy	3	.22	3	.27
Communication	2	.31	2	.59
Stress	3	.47	3	.68
Change	5	.45	5	.60

### Organizational Readiness for Change Subscales

Means and standard deviations (*SDs*) of the modified ORC subscales for clinical staff and executive directors are shown in Table 3.5. Higher scores on a scale represent “more” of the attribute being represented. Scores for each scale are obtained by summing responses to its set of items (after reversing scores on reflected items by subtracting the item from 6), dividing the sum by the number of items included (yielding an average), and multiplying by 10 to rescale the final scores so they range from 10–50 (e.g., an average response of 2.6 for a scale becomes a score of 26).

### Motivational Readiness for Change

Motivational forces for change are complex but include perceptions of current status in regard to clinical (e.g., assessment and services) as well as organizational (e.g., clinical and financial recording) functioning (Lehman et al., 2002). Unless motivation is “activated,” individuals within an organization are unlikely to initiate change behaviours. With respect to the three areas that seem particularly important for motivational readiness for change, results indicate that executive directors perceived a significantly higher level of *program needs for improvement*, while clinical staff perceived greater level of *pressures for change*. Groups were the same relative to their perceived *immediate training needs*.

**Table 3.5 – Organizational Readiness for Change: Means and Standard Deviations for Clinical Staff and Executive Directors**

	Executive Director (N=39)		Clinical Staff (N=303)		<i>T</i>
	Mean	SD	Mean	SD	
<b><i>Motivation for Change</i></b>					
Program needs for improvement	33.38	7.12	28.44	7.74	-3.799**
Immediate training needs	29.61	9.02	27.94	8.35	-1.165
Pressures for change	28.24	6.59	32.76	5.63	4.623**
<b><i>Adequacy of Resources</i></b>					
Offices	34.62	7.48	31.94	10.01	-2.017
Staffing	27.82	4.77	27.81	5.95	-0.15
Training	36.67	6.49	35.09	8.39	-1.373
Computer access	34.25	5.69	36.12	5.76	1.906
E-communications	42.18	5.17	42.32	6.10	.136
<b><i>Staff Attributes</i></b>					
Growth	29.91	8.74	29.87	8.23	-.033
Efficacy	38.97	4.32	39.84	5.19	.992
Influence	37.95	5.70	39.26	5.22	1.465
Adaptability	38.97	5.83	38.86	5.02	-.136
<b><i>Organizational Climate</i></b>					
Mission	37.95	6.56	39.49	6.28	1.435
Cohesion	36.79	8.92	34.06	9.78	-1.661
Autonomy	36.50	5.18	36.34	5.57	-.170
Communication	39.10	5.11	35.58	8.30	-3.720
Stress	32.56	6.60	34.95	8.07	1.772
Change	37.95	3.99	34.75	5.46	-4.503

\* p < .05, \*\* p < .0001

*Program need for improvement* is a reflection of perceived strengths and weaknesses of a program. Leadership concerns may focus more on patient flow, assessment and reporting systems, referral systems, billing records, etc., while clinical staff may be more sensitive to patient assessment needs and access to services. Because of these different concerns between management and staff, the corresponding scales in the executive director and clinical staff versions of the ORC have a different item set for this content domain.

**Table 3.6 – Need for Program Improvements**

<b>Program Needs</b>						
<i>Your organization needs assistance with:</i>						
<b>Clinical Staff</b>	<b>Disagree Strongly</b>	<b>Disagree</b>	<b>Undecided</b>	<b>Agree</b>	<b>Agree Strongly</b>	<b>Response Average</b>
Assessing client needs	17.2	56.6	6.4	18.6	1.2	2.30
Matching needs with services	10.5	44.5	8.6	33.7	2.6	2.73
Increasing program participation by clients	5.8	37.3	15.3	35.1	6.5	2.99
Measuring client performance	6.2	34.5	12.9	38.8	7.4	3.07
Raising overall quality of service	9.8	37.2	13.7	34.5	4.8	2.87
Using client assessments to guide clinical and program decision	7.4	46.2	12.0	29.9	4.5	2.78
Using client assessments to document program effectiveness	6.5	29.8	18.0	39.7	6.0	3.09
<b>Executive Directors</b>						
Documenting service needs of clients for making treatment decisions	6.0	54.0	14.0	26.0	–	2.60
Tracking and evaluating performance of clients over time	4.0	20.0	8.0	54.0	14.0	3.54
Obtaining information that can document program effectiveness	6.0	10.0	10.0	56.0	18.0	3.70
Evaluating staff performance and organizational functioning	4.1	49.0	14.3	22.4	10.2	2.86
Selecting new treatment interventions and strategies for which staff need training	2.0	28.6	12.2	51.0	6.1	3.31
Generating timely management reports for clinical and outcome data	2.0	18.0	6.0	54.0	20.0	3.72

Executive directors perceive a greater need for assistance in tracking and evaluating performance of clients, obtaining information that can document program effectiveness, selecting new treatment interventions and strategies for which staff need training, and generating timely management reports for clinical and outcome data (Table 3.6). Clinical staff perceive that assistance is needed for measuring client performance and using client assessments to document program effectiveness.

*Training needs* assess perceptions of need for training in several general staff areas. Interests for clinical staff lie in training that would assist them in increasing client participation in treatment and in

using computerized assessments (Table 3.7). It is possible that this latter item refers to the provincial outcome measurement tool. Executive directors perceive training needs in monitoring client progress and using computerized client assessments.

**Table 3.7 – Training Needs**

<b>Training Needs</b>						
<i>You need training for:</i>						
<b>Clinical Staff</b>	<b>Disagree Strongly</b>	<b>Disagree</b>	<b>Undecided</b>	<b>Agree</b>	<b>Agree Strongly</b>	<b>Response Average</b>
Assessing client problems and needs	15.0	53.2	6.3	24.3	1.2	2.43
Increasing client participation in treatment	8.9	34.5	9.4	42.9	4.3	2.99
Monitoring client progress	8.2	40.9	10.2	36.8	3.9	2.87
Using computerized client assessments	12.5	33.1	12.2	35.0	7.2	2.91
<b>Executive Directors</b>						
Assessing client problems and needs	6.0	56.0	4.0	24.0	10.0	2.76
Increasing client participation in treatment	12.0	40.0	8.0	38.0	2.0	2.78
Monitoring client progress	8.0	30.0	14.0	42.0	6.0	3.08
Using computerized client assessments	12.2	14.3	6.1	61.2	6.1	3.35

*Pressure for change* can come from internal (e.g., staff) or external (e.g., regulatory and funding) sources. These pressures vary in intensity and form a summative index in which they are likely to reach sufficient threshold for a decision to take action only at higher levels. As noted in Table 3.8, clinical staff perceive a significantly greater level of *pressures for change* than do executive directors. Whereas clinical staff perceive pressures for change stemming from staff members, supervisors, board members, funders, and accreditation bodies, executive directors feel somewhat less put-upon by their boards and accreditation bodies. Neither group senses pressure for change from clients or consumer groups.

**Table 3.8 – Pressures for Change**

<b>Pressures for Change</b>						
<i>Current pressures to make organizational changes come from:</i>						
<b>Clinical staff</b>	<b>Disagree Strongly</b>	<b>Disagree</b>	<b>Undecided</b>	<b>Agree</b>	<b>Agree Strongly</b>	<b>Response Average</b>
Clients in the program	10.2	43.9	11.7	29.5	4.6	2.74
Program staff members	3.4	23.8	11.7	52.6	8.5	3.39
Program supervisors or managers	1.5	9.9	9.2	62.5	16.9	3.84
Agency board members	5.6	25.7	34.1	28.9	5.6	3.03
Community action groups	7.5	38.8	28.4	23.9	1.5	2.73
Ministry and other funders	1.7	9.2	16.8	39.0	20.2	3.91
Accreditation or licensing authorities	2.2	21.7	16.8	39.0	20.2	3.53
<b>Executive Directors</b>						
Clients in the program	17.0	44.7	8.5	21.3	8.5	2.60
Program staff members	6.1	32.7	12.2	42.9	6.1	3.10
Program supervisors or managers	2.0	28.6	2.0	51.0	16.3	3.51
Agency board members	12.5	62.5	2.1	20.8	2.1	2.38
Community action groups	10.4	56.3	14.6	14.6	4.2	2.46
Ministry and other funders	6.1	24.5	12.2	49.0	8.2	3.29
Accreditation or licensing authorities	4.1	53.1	16.3	20.4	6.1	2.71

**Adequacy of Resources**

In addition to the psychological climate that envelops an organization, facilities, staff patterns and training, and equipment also are important considerations for determining organizational behaviour (Brown, 1997; Burrington, 1987; Jones & James, 1979; Pond et al., 1984). In some instances, organizational change might be highly desirable but unlikely due to staff workloads, clinical practice, and resources. Five resource areas are assessed by the ORC.

*Office* items refer to the adequacy of office and physical space available. Inadequacy of these resources reduces the ability of staff to incorporate new treatment approaches and is likely to be related to an overall lack of financial resources. As indicated in Table 3.9, both executive directors and clinical staff perceive their offices as adequate for providing services, although 44% of clinical staff hold low opinions (disagree strongly, disagree) of office adequacy for group treatment, and this may have implications for future implementation of group-based EBTs.

**Table 3.9 – Offices**

<b>Offices</b>						
<b>Clinical staff</b>	<b>Disagree Strongly</b>	<b>Disagree</b>	<b>Undecided</b>	<b>Agree</b>	<b>Agree Strongly</b>	<b>Response Average</b>
Your offices and equipment are adequate	9.1	25.5	5.7	47.5	12.2	3.28
Offices here are adequate for conducting group counseling	14.2	30.0	7.0	41.1	7.5	3.02
Offices here allow the privacy needed for individual counseling	10.3	17.0	8.6	47.0	17.0	3.43
<b>Executive Directors</b>						
Your offices and equipment are adequate	10.0	28.0	2.0	48.0	12.0	3.24
Offices here are adequate for conducting group counseling	–	6.0	4.0	76.0	14.0	3.98
Offices here allow the privacy needed for individual counseling	6.0	32.0	4.0	48.0	10.0	3.24

*Staffing* focuses on the number and quality of staff members available to do the work. Here again, we see agreement between executive directors and clinical staff who perceive there are too few clinical staff to meet current client needs, and that a larger support staff is needed to help meet program needs (see Table 3.10). This lack of human capital is supported by anecdotal reports in the field over the last decade.



**Table 3.10 – Staffing**

<b>Staffing</b>						
<b>Clinical Staff</b>	<b>Disagree Strongly</b>	<b>Disagree</b>	<b>Undecided</b>	<b>Agree</b>	<b>Agree Strongly</b>	<b>Response Average</b>
There are enough clinicians here to meet current client needs	46.6	33.9	6.5	9.4	3.6	1.89
A larger support staff is needed to help meet program needs ® <sup>2</sup>	0.7	20.6	16.5	38.6	23.5	3.64
Frequent staff turnover is a problem for this program ®	11.5	40.0	14.6	22.7	11.2	2.82
Clinical staff here are well-trained	2.6	7.9	13.9	62.2	13.4	3.76
<b>Executive Directors</b>						
There are enough clinicians here to meet current client needs	44.9	34.7	2.0	12.2	6.1	2.00
A larger support staff is needed to help meet program needs ®	4.0	16.0	10.0	42.0	28.0	3.74
Frequent staff turnover is a problem for this program ®	18.0	42.0	16.0	18.0	6.0	2.52

*Training resources* concern management and financial support for clinical staff training and development. Table 3.11 indicates there is agreement here again regarding the adequacy of training as an organizational priority and in staff and director opportunities to acquire new skills at professional conferences.

<sup>2</sup> ® indicates item was reverse-scored.

**Table 3.11 – Training**

<b>Training</b>						
<b>Clinical Staff</b>	<b>Disagree Strongly</b>	<b>Disagree</b>	<b>Undecided</b>	<b>Agree</b>	<b>Agree Strongly</b>	<b>Response Average</b>
Staff training and continuing education are priorities in this organization	6.0	19.6	13.6	44.5	16.3	3.45
You learned new skills or techniques at a professional conference in the past year	3.8	17.0	5.5	57.1	16.5	3.65
This organization holds regular in-service training	4.3	19.2	10.1	53.6	12.7	3.51
<b>Executive Directors</b>						
Staff training and continuing education are priorities in this organization	–	8.0	8.0	44.0	40.0	4.16
You learned new management skills or techniques at a professional conference in the past year	–	20.0	6.0	58.0	16.0	3.70
This organization holds regular in-service training	2.0	8.0	8.0	72.0	10.0	3.80

*Computer access* deals with adequacy and use of computers. Executive directors and clinical staff agree with the adequacy of computer access, computerization of client documentation, and the functional state of computer hardware (see Table 3.12). This finding does not match our perceptions stemming from our work supporting the implementation of the province's mandated outcome assessment tool across Ontario, where over the last five years we have heard anecdotal reports of the insufficiency of computers across the sector.

**Table 3.12 – Computer Access**

<b>Computer Access</b>						
<b>Clinical Staff</b>	<b>Disagree Strongly</b>	<b>Disagree</b>	<b>Undecided</b>	<b>Agree</b>	<b>Agree Strongly</b>	<b>Response Average</b>
Client assessments here are usually conducted using a computer	11.1	32.6	10.9	32.1	13.3	3.04
Computer problems are usually repaired promptly at this organization	4.8	17.8	7.7	52.6	17.1	3.59
Most client records here are computerized	8.2	20.6	5.8	41.7	23.7	3.52
You have a computer to use in your personal office space at work	1.0	2.4	0.2	50.0	46.4	4.39
Computer equipment in this organization is mostly old and outdated ®	19.6	47.4	13.9	14.8	4.3	2.34
You feel comfortable using computers	1.0	5.0	5.5	57.9	8.6	2.71
More computers are needed in this organization for staff to use ®	14.4	41.9	10.5	24.6	8.6	2.71
<b>Executive Directors</b>						
Client assessments here are usually conducted using a computer	10.2	30.6	12.2	36.7	10.2	3.06
Computer problems are usually repaired promptly at this organization	–	20.0	18.0	52.0	10.0	3.52
Most client records here are computerized	8.0	24.0	4.0	54.0	10.0	3.34
You have a computer to use in your personal office space at work	–	2.0	–	60.0	38.0	4.34
Computer equipment in this organization is mostly old and outdated ®	16.0	44.0	12.0	22.0	6.0	2.58

Staff here feel comfortable using computers	2.0	14.0	20.0	56.0	8.0	3.54
More computers are needed in this organization for staff to use ®	12.0	46.0	8.0	26.0	8.0	2.72

To explore this further, we compared the responses on this construct between clinical staff who responded by web survey and those who responded by faxing the Word version of the survey (note that all executive directors responded via web survey). Here we found no differences, although it is evident that paper respondents have higher agreement with the need for more computers in the organization, as shown in Table 3.13.

**Table 3.13 – Computer Access by Method of Response**

Clinical Staff Computer Access as a Function of Web or Paper Survey Method						
Web Survey	Disagree Strongly	Disagree	Undecided	Agree	Agree Strongly	Response Average
Client assessments here are usually conducted using a computer	11.2	32.7	12.1	32.4	11.5	3.00
Computer problems are usually repaired promptly at this organization	3.8	18.3	8.3	52.4	17.2	3.61
Most client records here are computerized	8.3	19.8	5.6	41.9	24.5	3.55
You have a computer to use in your personal office space at work	0.9	2.4	0.3	50.9	45.6	4.38
Computer equipment in this organization is mostly old and outdated ®	20.3	47.9	14.7	13.5	3.5	2.32
You feel comfortable using computers	0.9	5.0	5.3	58.8	30.0	4.12
More computers are needed in this organization for staff to use ®	13.2	44.1	11.5	22.6	8.5	2.69

<b>Paper Survey</b>						
Client assessments here are usually conducted using a computer	10.7	32.0	5.0	30.7	21.3	3.20
Computer problems are usually repaired promptly at this organization	9.0	15.4	5.1	53.8	16.7	3.54
Most client records here are computerized	7.7	24.4	6.4	41.0	20.5	3.42
You have a computer to use in your personal office space at work	1.3	2.6	–	46.2	50.0	4.41
Computer equipment in this organization is mostly old and outdated ®	16.7	44.9	10.3	20.5	7.7	2.58
Staff here feel comfortable using computers	1.3	5.1	6.4	53.8	33.3	4.13
More computers are needed in this organization for staff to use ®	19.2	32.1	6.4	33.3	9.0	2.81

*E-communications* refers to the use of email and the Internet for professional communications, networking, and information access. An estimated 7.9 million (64%) of the 12.3 million Canadian households had at least one member who used the Internet regularly in 2003, either from home, work, school, a public library or another location (Statistics Canada 2005). Research has only begun to look at Internet use among health care professionals. One study of computer use among nurse suggests that Internet use at work is low among nurses compared with other groups, despite adequate workplace access (Estabrooks, O’Leary, Ricker, & Humphrey, 2003). That study showed that while 57.8% of nurses had access to a computer, only 45.2% used it. Only 5.1% used a computer to look for practice information on the Internet while at work. In our study, approximately 90% of clinical staff and executive directors report using the Internet in the past month and having easy access to the Internet, while slightly fewer—about 80%—used the Internet for work-related information. As before, there are no differences between the perceptions of executive directors and clinical staff (see Table 3.14).

**Table 3.14 – E-communications**

<b>e-communications</b>						
<b>Clinical Staff</b>	<b>Disagree Strongly</b>	<b>Disagree</b>	<b>Undecided</b>	<b>Agree</b>	<b>Agree Strongly</b>	<b>Response Average</b>
You used the Internet in the past month	2.2	7.4	1.0	44.7	44.7	4.22
You have easy access for using the Internet at work	1.0	2.4	2.4	44.3	50.0	4.40
You used the Internet to get work-related information	1.4	7.7	3.8	62.7	24.4	4.01
You have convenient access to email at work	1.7	1.7	1.7	48.7	46.3	4.36
<b>Executive Directors</b>						
You used the Internet in the past month	–	4.0	–	48.0	48.0	4.40
You have easy access for using the Internet at work	–	–	4.0	54.0	42.0	4.38
You used the Internet to get work-related information	–	2.0	6.0	58.0	34.0	4.24
You have convenient access to email at work	–	6.0	2.0	58.0	34.0	4.20

Again, we sought to compare the responses of clinical staff who responded by web survey and those who responded by faxing the Word version of the survey. As indicated in Table 3.15, we find no differences between groups.

**Table 3.15 – E-communications by Method of Response**

<b>Clinical staff e-communications as a function of survey method (electronic vs. paper)</b>						
<b>Electronic Survey</b>	<b>Disagree Strongly</b>	<b>Disagree</b>	<b>Undecided</b>	<b>Agree</b>	<b>Agree Strongly</b>	<b>Response Average</b>
You used the Internet in the past month	1.8	7.4	0.9	46.5	43.5	4.23
You have easy access for using the Internet at work	0.3	1.8	2.9	44.6	50.4	4.43
You used the Internet to get work-related information	1.5	7.9	2.9	62.6	25.0	4.02

You have convenient access to email at work	1.2	1.5	1.5	49.6	46.3	4.38
<b>Paper Survey</b>						
You used the Internet in the past month	3.8	7.7	1.3	37.2	50.0	4.22
You have easy access for using the Internet at work	3.9	5.2	–	42.9	48.1	4.26
You used the Internet to get work-related information	1.3	6.4	7.7	62.8	21.8	3.97
You have convenient access to email at work	3.8	2.6	2.6	44.9	46.2	4.27

### Staff Attributes

Research on managerial coping (Judge et al., 1999), professionalism (Bartol 1979), and behavioural change models (Fishbein, 1995) converge on similar dimensions of attitude and functioning that influence organizational change. These have been reduced to four key areas. *Growth* measures the extent to which the clinician values and perceives opportunities for professional growth. Low value or opportunities for growth will likely be associated with low readiness for change and low value in adopting new technologies. While differences between executive directors and clinical staff on this dimension are not significant, the item responses in Table 3.16 below show that 42.2% of clinical staff report they do not read about new techniques or treatments on a monthly basis, and only one-quarter perceive they have enough opportunities to keep their clinical skills up to date.

**Table 3.16 – Growth**

<b>Growth</b>						
<b>Clinical Staff</b>	<b>Disagree Strongly</b>	<b>Disagree</b>	<b>Undecided</b>	<b>Agree</b>	<b>Agree Strongly</b>	<b>Response Average</b>
You read about new techniques and treatment information each month	5.8	42.2	12.5	33.1	6.5	2.92
You have enough opportunities to keep your clinical skills up-to-date	9.2	28.3	36.0	25.0	1.5	2.81
You regularly read professional journal articles or books on treatments	4.3	35.5	7.9	42.7	9.6	3.18

<b>Executive Directors</b>						
You read about new techniques and treatment information each month	8.0	30.0	4.0	46.0	12.0	3.24
You have enough opportunities to keep your clinical skills up-to-date	8.0	30.0	22.0	32.0	8.0	3.02
You regularly read professional journal articles or books on treatments	6.0	36.0	6.0	42.0	10.0	3.14

*Efficacy* measures staff confidence in their own clinical skills. Clinical practitioners with low efficacy will be less likely to readily adapt to change, and those with high efficacy more effectively seek, use, and integrate new information (Brown, Ganesan, & Challagalla, 2001). Clinical staff with high perceived efficacy are more likely to see the value in new technologies and have the confidence to effectively incorporate them into their counseling practices. The specific items in Table 3.17 below show that better than two-thirds of clinical staff and executive directors perceive high efficacy.

**Table 3.17 – Efficacy**

<b>Efficacy</b>						
<b>Clinical Staff</b>	<b>Disagree Strongly</b>	<b>Disagree</b>	<b>Undecided</b>	<b>Agree</b>	<b>Agree Strongly</b>	<b>Response Average</b>
You usually accomplish whatever you set your mind on	0.5	9.9	10.8	68.5	10.3	3.78
You are effective and confident in doing your job	–	1.7	5.0	71.5	21.8	4.13
<b>Executive Directors</b>						
You usually accomplish whatever you set your mind on	–	10.0	14.0	68.0	8.0	3.74
You are effective and confident in doing your job	–	2.0	2.0	80.0	16.0	4.10

*Influence* is the willingness and ability of a clinical practitioner to influence coworkers. Its purpose is to identify opinion leaders in the organization. Technology transfer and organizational change will be



most effective when the opinion leaders “buy” into change and use their influence to sell change to others in the organization. Again, items below show no differences between groups, with two-thirds perceiving adequate levels of influence with their peers (see Table 3.18).

**Table 3.18 – Influence**

<b>Influence</b>						
<b>Clinical Staff</b>	<b>Disagree Strongly</b>	<b>Disagree</b>	<b>Undecided</b>	<b>Agree</b>	<b>Agree Strongly</b>	<b>Response Average</b>
You frequently share your knowledge of new ideas with other staff	1.2	7.4	2.2	67.7	21.5	4.01
Staff generally regard you as a valuable source of information	0.2	2.6	15.8	70.6	10.7	3.89
Other staff often ask your advice about program procedures	0.2	9.6	10.4	66.0	13.7	3.83
<b>Executive Directors</b>						
You frequently share your knowledge of new ideas with other staff	–	6.0	4.0	60.0	30.0	4.14
Staff generally regard you as a valuable source of information	–	6.1	14.3	65.3	14.3	3.88
Staff readily implement your ideas about clinical and treatment issues	–	14.0	22.0	58.0	6.0	3.56

*Adaptability* is the ability of staff to adapt to a changing environment. Here again we see little variation between groups, as shown in Table 3.19, with two-thirds or better perceiving willingness to try new ideas and to adapt quickly, and only 20% feeling they are too cautious or slow to make changes.

**Table 3.19– Adaptability**

<b>Adaptability</b>						
<b>Clinical Staff</b>	<b>Disagree Strongly</b>	<b>Disagree</b>	<b>Undecided</b>	<b>Agree</b>	<b>Agree Strongly</b>	<b>Response Average</b>
You are willing to try new ideas even if some staff members are reluctant	–	1.7	2.4	68.8	27.1	4.21
You are sometimes too cautious or slow to make changes ®	7.9	53.2	18.0	19.7	1.2	2.53
You are willing to adapt quickly when you have to shift focus	–	3.8	10.3	70.4	15.4	3.97
<b>Executive Directors</b>						
You are willing to try new ideas even if some staff members are reluctant	2.0	–	–	65.3	32.7	4.27
You are sometimes too cautious or slow to make changes ®	12.0	52.0	14.0	22.0	–	2.46
You are willing to adapt quickly when you have to shift focus	–	4.0	10.0	72.0	14.0	3.96

### **Organizational Climate**

Collective appraisals (e.g., based on aggregated ratings) of an organizational environment indicates its “climate.” Several dimensions are commonly identified, and many are relevant to organizational change. In general, these revolve around mission and goals, group cohesion and cooperation, and openness. The ORC includes six scales in this dimension.

*Clarity of mission and goals* involves staff awareness of agency mission and management emphasis on goals. Organizations that lack mission or goal clarity are less likely to effectively identify their needs and are thus not likely to manage change in ways that improve program functioning. Items for this dimension show no differences in how executive directors and clinical staff perceive the mission of their organization and its place within their community’s service system (see Table 3.20).

**Table 3.20 – Mission**

<b>Mission</b>						
<b>Clinical Staff</b>	<b>Disagree Strongly</b>	<b>Disagree</b>	<b>Undecided</b>	<b>Agree</b>	<b>Agree Strongly</b>	<b>Response Average</b>
You understand how this program fits as part of the treatment system in your community	0.2	4.1	9.6	62.7	23.4	4.05
This organization operates with clear goals and objectives	2.4	6.7	11.1	61.5	18.3	3.87
<b>Executive Directors</b>						
You understand how this program fits as part of the treatment system in your community	–	8.0	12.0	70.0	10.00	3.82
This organization operates with clear goals and objectives	2.0	6.0	6.0	70.0	16.0	3.92

*Staff cohesiveness* focuses on work group trust and cooperation. As indicated in Table 3.21, one quarter of clinical staff and slightly more than 10% of executive directors perceive high levels of friction among staff. A sense of mutual trust and cooperation was more common in both groups.

**Table 3.21 – Cohesion**

<b>Cohesion</b>						
<b>Clinical Staff</b>	<b>Disagree Strongly</b>	<b>Disagree</b>	<b>Undecided</b>	<b>Agree</b>	<b>Agree Strongly</b>	<b>Response Average</b>
There is too much friction among staff members ®	19.6	40.1	14.0	19.8	6.5	2.54
Mutual trust and cooperation among staff in this organization is strong	3.4	18.0	21.6	47.4	9.6	3.42

<b>Executive Directors</b>						
There is too much friction among staff members ®	20.0	54.0	12.0	12.0	2.0	2.22
Mutual trust and cooperation among staff in this organization is strong	2.0	8.2	16.3	63.3	10.2	3.71

*Staff autonomy* addresses the latitude counselors are allowed in working with their patients. Greater than half of clinical staff and executive directors perceive clinicians as having autonomy or decision latitude in working with their clients, and this bodes well for organizational change (see Table 3.22).

**Table 3.22 – Autonomy**

<b>Autonomy</b>						
<b>Clinical Staff</b>	<b>Disagree Strongly</b>	<b>Disagree</b>	<b>Undecided</b>	<b>Agree</b>	<b>Agree Strongly</b>	<b>Response Average</b>
Treatment planning decisions for clients here often have to be revised by a supervisor	14.8	60.6	8.6	11.9	4.1	2.30
Clinicians here are given broad authority in treating their own clients	1.2	10.5	17.2	59.8	11.2	3.69
Clinicians here often try out different techniques to improve their effectiveness	2.2	14.6	25.4	54.0	3.8	3.43
<b>Executive Directors</b>						
Treatment planning decisions for clients here often have to be revised by a supervisor	8.0	64.0	18.0	8.0	2.0	2.32
Clinicians here are given broad authority in treating their own clients	2.0	14.0	12.0	56.0	16.0	3.70
Clinicians here often try out different techniques to improve their effectiveness	–	16.0	22.0	58.0	4.0	3.50

*Openness of communication* focuses on management receptivity to suggestions from staff and the adequacy of information networks to keep everyone informed. As indicated in Table 3.23, greater than 50% of clinical staff and executive directors perceive great receptivity to suggestions.

**Table 3.23 – Communication**

<b>Communication</b>						
<b>Clinical Staff</b>	<b>Disagree Strongly</b>	<b>Disagree</b>	<b>Undecided</b>	<b>Agree</b>	<b>Agree Strongly</b>	<b>Response Average</b>
The formal and informal communication channels here work very well	4.1	20.9	18.5	50.0	6.5	3.34
Staff members always feel free to ask questions and express concerns in this organization	3.6	10.6	9.8	54.7	21.3	3.80
<b>Executive Directors</b>						
The formal and informal communication channels here work very well	2.0	2.0	2.0	62.0	14.0	3.84
Staff members always feel free to ask questions and express concerns in this organization	–	2.0	10.0	70.0	18.0	4.04

*Stress* measures perceived strain, stress, and role overload. While both groups perceived stress among their workforce, neither felt the stress impeded their ability to be effective in their job, as indicated in Table 3.24.

**Table 3.24 – Stress**

<b>Stress</b>						
<b>Clinical Staff</b>	<b>Disagree Strongly</b>	<b>Disagree</b>	<b>Undecided</b>	<b>Agree</b>	<b>Agree Strongly</b>	<b>Response Average</b>
You are under too many pressures to do your job effectively	4.5	36.0	18.4	27.2	13.8	3.10
Staff members often show signs of stress and strain	0.5	15.1	12.0	55.5	17.0	3.74
The heavy workload here reduces program effectiveness	1.4	18.4	16.5	43.3	20.3	3.63

<b>Executive Directors</b>						
You are under too many pressures to do your job effectively	2.0	42.0	14.0	36.0	6.0	3.02
Staff members often show signs of stress and strain	2.0	28.0	12.0	50.0	8.0	3.34
The heavy workload here reduces program effectiveness	4.0	22.0	14.0	48.0	12.0	3.42

*Openness to change* concerns management interest and efforts in keeping up with change. Sample items include “It is easy to change procedures here to meet new conditions,” and “The general attitude here is to use new and changing technology.” For the most part, executive directors and clinical staff agree that they frequently hear good ideas for improving services, feel the general attitude is receptive to change, and feel encouraged to try out new ideas (see Table 3.25). However, 42% of clinical staff perceive that procedures do not change sufficiently quickly to meet new conditions.

**Table 3.25 Change**

<b>Change</b>						
<b>Clinical Staff</b>	<b>Disagree Strongly</b>	<b>Disagree</b>	<b>Undecided</b>	<b>Agree</b>	<b>Agree Strongly</b>	<b>Response Average</b>
Novel treatment ideas by staff are discouraged ®	14.9	51.1	21.6	10.1	2.4	2.34
You can change procedures here quickly to meet new conditions	7.4	42.4	23.7	24.0	2.4	2.71
You frequently hear good staff ideas for improving treatment	0.5	12.9	14.4	63.2	9.1	3.67
The general attitude here is to use new and changing technology	1.4	11.5	25.2	51.3	10.6	3.58
You are encouraged here to try new and different techniques	1.4	7.7	20.9	58.8	11.3	3.71

<b>Executive Directors</b>						
Novel treatment ideas by staff are discouraged @	34.0	52.0	6.0	6.0	2.0	1.90
You can change procedures here quickly to meet new conditions	–	22.4	16.3	51.0	10.2	3.49
You frequently hear good staff ideas for improving treatment	–	4.0	14.0	74.0	8.0	3.86
The general attitude here is to use new and changing technology	–	4.0	24.0	60.0	12.0	3.80
You encourage clinicians here to try new and different techniques	2.0	8.0	2.0	74.0	14.0	3.90

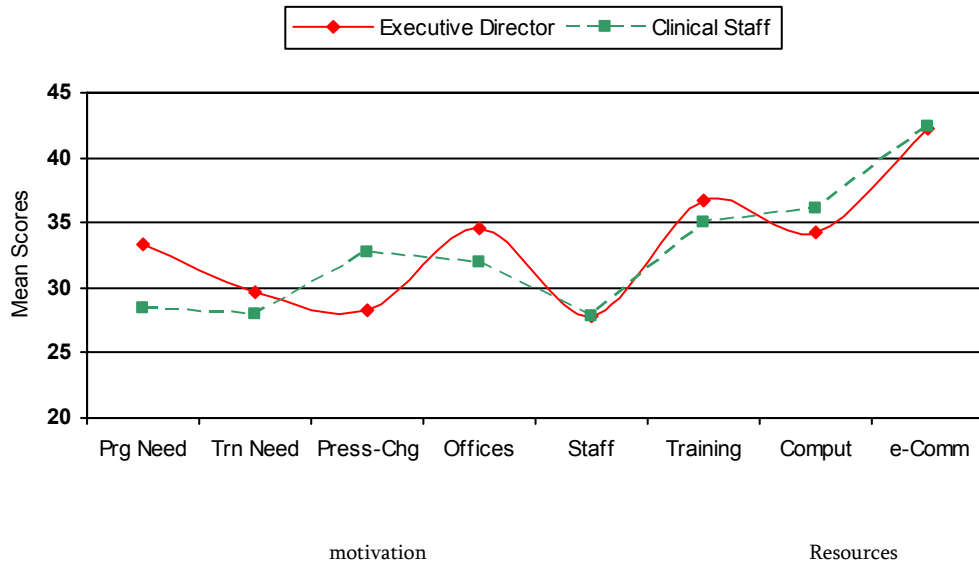
**Summary**

Executive directors are above the scale mean (30) with respect to several motivation and resource characteristics of organizational change, including program needs, offices, training, computers, and e-communications (see Figure 4.9). This means they do not perceive many program needs or weaknesses, nor a high need for training, and feel that the office and physical space available is more than adequate. They do not perceive high pressures for change, indicating a possible area for intervention because unless their perception of pressure for change increases, change is unlikely to happen. Only at higher levels of pressure for change are individuals likely to reach sufficient thresholds for a decision to take action. The issue of staffing, which focuses on the number of quality staff members available to do the work, is rated relatively low for both clinical staff and executive directors, suggesting another area requiring intervention.

Clinical staff practitioners are below the scale mean with respect to the motivation and resource characteristics of program needs, training needs, and staffing. They are high on scales of pressure for change. With respect to resource characteristics, clinical staff perceive high adequacy for offices, training, computer availability, and e-communications (See Figure 3.11), although there is some indication that office space may not be sufficiently adequate for group interventions.

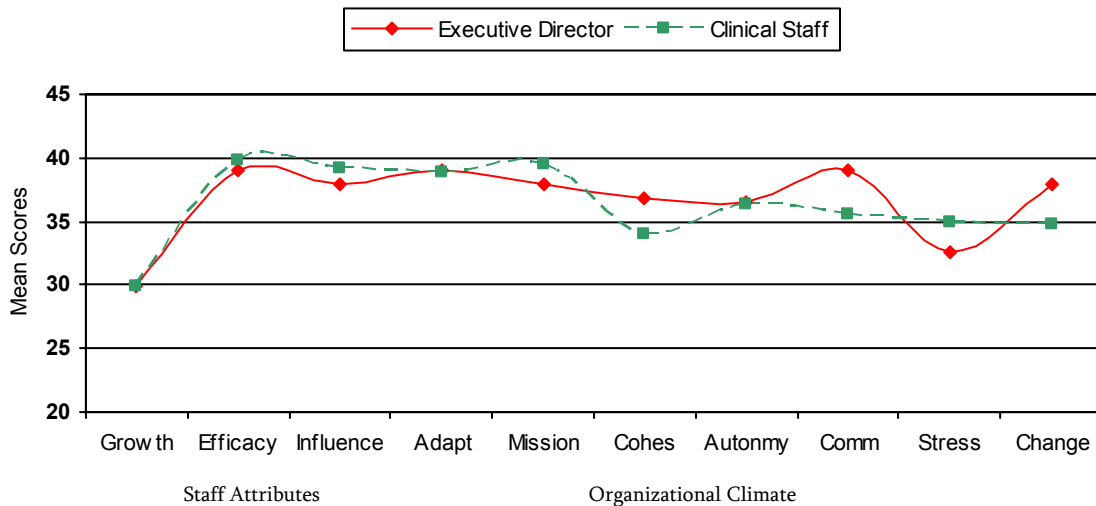
With respect to staff attributes, both executive directors and clinical staff held average perceptions of their opportunities for professional growth—high growth is associated with high readiness for change (see Figure 3.12). Both groups had high confidence in their clinical skills (self-efficacy), and felt they could influence their colleagues—both associated with high readiness for change. Both groups felt they were capable of adapting readily to a changing environment. With respect to organizational climate, both groups are well aware of their organizational mission and goals, and feel there is good trust and cooperation (cohesion) among colleagues. Both groups were also above average with respect to staff autonomy or the latitude allowed to practitioners in working with their clients. Openness of communication or management’s receptivity to suggestions from staff was also high, particularly so for

**Figure 3.11: Ratings of motivation and resources**



executive directors. Openness to change or management’s interest and efforts in keeping up with change was perceived to be high for both groups, but again, higher for executive directors. The measure of stress, the perceived strain and role overload, was high for both groups, but interestingly, not perceived to be as high for clinical staff compared to executive directors

**Figure 3.12: Ratings of self-attributes and organizational climate**



### Items Not Loading on ORC Constructs

Some of the items included in the survey do not load on any single scale, but they were included because they could be informative as they capture special information. Table 3.26 shows that 43% of clinical staff perceive staff resistance toward change, and this resistance is perceived by slightly fewer



executive directors (38%). Upwards of two-thirds of both groups feel there is tremendous value in communicating with other organizations around important issues, and this can be seen as an important aspect to develop further (e.g., forming practice groups or communities of practice). Half the respondents in both groups perceive they have adequate access to specialized mental health services. This finding is surprising, given the common lament regarding the shortage of child psychiatrists and primary care physicians, not to mention the long wait list for other services both within mental health and education (e.g., psycho-educational assessment or speech/language services).

**Table 3.26 – Additional Items**

<b>Additional Items</b>						
<b>Clinical Staff</b>	<b>Disagree Strongly</b>	<b>Disagree</b>	<b>Undecided</b>	<b>Agree</b>	<b>Agree Strongly</b>	<b>Response Average</b>
You prefer workshop training that is based on scientific evidence	1.9	6.9	14.3	55.0	21.9	3.88
You often have trouble implementing concepts learned at conferences	8.6	49.8	14.1	25.6	1.9	2.62
Some staff members here resist any type of change	5.5	23.6	11.7	43.4	15.8	3.40
You have staff meetings weekly	8.2	32.6	1.4	38.1	19.7	3.29
Policies here limit staff access to the Internet and use of email	22.8	48.1	4.6	19.5	5.0	2.36
Communication with other organizations that have similar interests would help	–	2.2	7.0	70.5	20.4	4.09
You learned new clinical skills or techniques from manuals or self-education materials in the past year	1.2	13.2	3.8	68.2	13.6	3.80
You need better access while at work to resources on the Internet	21.2	52.9	10.3	12.5	3.1	2.24
You have easy access to specialized consultations/treatments for clients when needed	5.5	29.7	10.8	44.6	9.4	3.23
The workload and pressures at your organization keep motivation for training low	3.4	34.1	23.0	31.4	8.2	3.07

<b>Executive Directors</b>						
Your staff prefer workshop training that is based on scientific evidence	–	14.0	22.0	52.0	12.0	3.62
Your staff often have trouble implementing concepts learned at conferences	2.0	28.0	18.0	46.0	6.0	3.26
You were satisfied with outside training available to your staff last year	2.0	24.0	20.0	38.0	16.0	3.42
Some staff members here resist any type of change	2.0	44.0	12.0	38.0	4.0	2.98
You have staff meetings weekly	4.0	36.0	6.0	44.0	10.0	3.20
Policies here limit staff access to the Internet and use of email	14.0	42.0	8.0	32.0	4.0	2.70
Communication with other organizations that have similar interests would help	–	4.0	6.0	74.0	16.0	4.02
You learned new management skills or techniques from manuals or other self-education materials in the past year	–	20.0	6.0	58.0	16.0	3.70
You need better access while at work to resources on the Internet	16.0	52.0	6.0	22.0	4.0	2.46
You have easy access to specialized medical or psychiatric consultations/treatments for clients when needed	12.0	24.0	14.0	42.0	8.0	3.10
The workload and pressures at your organization keep motivation for training low	6.3	58.3	22.9	6.3	6.3	2.48

## Reported Usage of Evidence-Based Treatments

Respondents were asked to indicate which evidence-based treatments are available in their organization. For purposes of this survey, evidence-based treatment is defined as “a treatment that has been developed through research, is supported by the results of controlled treatment studies, and has guidelines and procedures related to its implementation. Table 3.27 shows the results.

**Table 3.27 – EBT Use in Practice**

<b>Evidence-Based Treatments</b>	<b>Frequency</b>
Aggression Replacement Training (ART)	4.8
Brief Strategic Family Therapy (BSFT)	39.2
Bullying Prevention Program	22.2
Behavioural Parent Training	41.2
Behavioural Teacher Training	3.5
COPE	42.7
Cognitive Behaviour Therapy (CBT)	65.1
Earls court Under 12 Outreach Program (ORP)	8.7
Earls court Girls Connection	3.3
Family Effectiveness Training	4.3
Families and Schools Together (FAST)	3.9
Functional Family Therapy (FFT)	8.7
Good Behaviour Game	0.9
Helping the Noncompliant Child	7.8
Homebuilders	2.6
I Can Problem Solve	5.0
Intensive Behavioural Intervention (IBI)	21.8
Linking the Interests of Families and Teachers (LIFT)	1.3
Life Skills Training	28.5
Multidimensional Treatment Foster Care (MDTFC)	6.1
Multisystemic Therapy	35.9
Narrative Therapy	38.8
Nurse-Family Partnership	1.8
Perry Preschool Program	0.9
Positive Behaviour Support (PBS)	4.1
Project Towards No Drug Abuse (Project TND)	1.1
Promoting Alternative Thinking Strategies (PATHS)	3.5
Psychopharmacology	29.3
Right from the Start	29.3
School Transitional Environmental Program (STEP)	3.4
Stop Now and Plan (SNAPP)	32.4
Teaching Family Model	2.4

The Incredible Years	36.4
Wraparound	42.5

Space was provided for respondents to fill in EBTs not listed in our table above, as indicated in Table 3.28.

**Table 3.28 – Other Treatments Used in Practice**

<b>Respondents' EBT</b>	<b>Number</b>
123 Magic (Dr. Thomas Phelan)	3
Anger Management	2
Art Therapy	3
BET Crisis	1
Brief Solution Focused Therapy	6
Brief Therapy	4
Children in the Middle	1
Classwide Social Skills Kindergarten Program (J. Hundert & P. Burlak)	1
Cognitive Enrichment Advantage (CEA)	2
Coping Cat (Kendall's program for children/families with anxiety difficulties)	1
Early Years	4
EMDR: Eye Movement Desensitization & Reprocessing	2
Emotion Management Groups	1
Emotionally Focused Family Therapy	2
Exposure Response Prevention intervention for OCD (including CBT)	1
Families First Day Treatment	1
Grief/Bereavement Group	1
Group Therapy	1
Home Improvements	1
Intensive Family Services for CCAS	1
Intergenerational Trauma Treatment Program	1
Interpersonal Therapy	1
Jack Bush Creighton Model	1
Modified Interaction Guidance	8
Motivational Interviewing	1
Outreach Family Therapy	1
Parenting A Balancing Act (PABA)	1
Parents Kids & Mother Goose	1

Play Therapy	1
Psychopharmacology	1
Ready-Set-Go	1
Residential Treatment	1
Re-Think	1
Right From the Start	2
Roots of Empathy	1
Seeking Safety	1
Separation/Divorce	2
Single Session Therapy	1
Social Learning-Oriented Interventions (e.g., Oregon Social Learning Institute)	1
Social Skills Training	1
T.E.A.M. Sports Program	1
TAPP-C: The Arson Prevention Program for Children	1
The Brief Child and Family Phone Interview	1
Thera-Play	1
Therapeutic Crisis Intervention (TCI)	1
Tools for Parenting	1
Understanding & Managing Aggressive Behaviour (UMAB)	1
VOICE	1
Watch Wait and Wonder	2

The programs and practices indicated in Table 4.27 have not met the criteria for *rigorous* research, although they may have been studied and found to be effective. Moreover, respondents sometimes identified EBTs in the “other” category even though they were included in the response options of the earlier question. The good thing is that clinical practitioners are looking for more systematic and effective ways to conduct interventions with children and families. The experience they gain in attempting to implement these defined programs and practices will probably help when the time comes to implement programs and practices that meet the more stringent definitions set down by the mental health profession.

Respondents were asked to comment on the extent to which they perceived their organizations’ services or programs were supported by research evidence, as shown in Table 3.29.

Only 50% of executive directors perceive that their services/programs are somewhat supported by research evidence, while the majority of clinical staff feel more optimistic, with 40% stating they perceived their organizations’ services and programs are “pretty much” supported by research evidence. This information provides a useful benchmark against which to measure change over time.

**Table 3.29 – Extent of Research Evidence Supporting Treatments in Use**

To what extent are your organization’s services/programs supported by research evidence?						
	<b>Not at All (1)</b>	<b>Somewhat (2)</b>	<b>Pretty Much (3)</b>	<b>Very Much So (4)</b>	<b>Don’t Know (5)</b>	<b>Response Average</b>
Clinical Staff (n=444)	0.7	29.7	39.9	22.1	7.7	3.06
Executive Directors (n=51)	2.0	51.0	35.3	11.8	–	2.57



*Much of the intellectual capital of an organization is not written down anywhere but resides in the minds of the staff. Communicating this know-how across an organization and beyond typically occurs informally, through the sharing of stories.*



*Hubert St-Onge & Debra Wallace, 2003*

Chapter 4

Interviews with International Experts in Implementation



# Experts' Perspectives on Implementing Evidence-Based Practices

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## Highlights

- ☞ *Developing “buy-in” for the implementation of evidence-based practices is necessary at all levels in the system—among practitioners, leaders, and policy makers—and primarily involves identifying the relative advantage of the practice (what are the benefits in the practice for me and my client, and how does it make my job easier?) and demonstrating availability of the resources, training, and leadership required to effect the change.*
- ☞ *Skepticism among practitioners presents a significant barrier to the implementation of evidence-based practices. Continued professional education and specific training is integral to counteracting the misconceptions, fear, and skepticism.*
- ☞ *Identifying “champions” for evidence-based practice is key at all levels in the system—the champion can be anybody, but it has to be somebody!*
- ☞ *Resistance to change occurs at the level of the individual practitioner and collectively within the organization. Leaders need to create organizational cultures that foster change by promoting professional growth, innovation, and decision latitude.*
- ☞ *Change takes time and requires a sustained effort and plan for long-term maintenance. Beginning with a vision and realistic plan, consideration must be given to facilitators and barriers at all levels of the system, as well as to the unique characteristics of the practice being implemented and the individuals adopting it.*
- ☞ *Implementation requires the creation and maintenance of “culture of adherence” or a system of quality management and evaluation that ensures outcomes are acceptable and that contributes to an overall culture of evidence-based practice.*
- ☞ *A more equitable balance must be struck between contending with long wait lists for clinical service and the time required for innovation and professional development. We need to make room to get off the treadmill and to develop a culture where this is accepted. That there are too few practitioners to provide service to too many children and their families is not the service providers' burden to bear alone—it is a systemic issue that requires innovative solutions at all levels.*
- ☞ *Implementation of evidence-based practices will be slow if service providers are expected to go this route alone in a one-off fashion. We need to consider system-wide implementation initiatives similar to those used for screening and outcome management in Ontario.*



- ☞ *Consumers need to be informed of the evidence-based treatment options as they become more widely available so that they might make the most informed choices regarding the care of their children. All children's mental health stakeholders have a duty in this regard.*
- ☞ *Partnership between funders, providers, and researchers can go a long way to creating opportunities for effectiveness research. This, in turn, will contribute to our knowledge of what treatments work, for whom, and in what contexts. Such partnerships will also serve an educational purpose by demystifying research and improving practitioners' competencies in determining which treatments are worthwhile and to what extent they may be "reinvented" to serve distinct client populations.*

## **Background**

There is no question that researchers devote a great deal of resources to developing and testing the efficacy of clinical innovations that improve the health of patients and their families, however translating these innovations into practice has met with significant challenges. Many evidence-based programs and practices are only partially adopted into clinical practice, and many are not adopted at all (Grimshaw, Shirran, Thomas, et al., 2001; Rogers, 2003). More alarming is the evidence that suggests that many harmful practices are perpetuated to the detriment of consumers of health services (West, Barron, Dowsett, et al., 1999). For instance, there is evidence that group treatment for high risk youth led to escalations in self-reported smoking and teacher-reported delinquency over three years (Poulin, Dishion, & Burraston, 2001).

This failure to translate research into clinical practice has recently gained the attention of national agencies and funding bodies. There is increasing concern regarding the limited resources available to ensure the adoption of effective and beneficial mental health care innovations. Thus, it is critical to understand which methods work best.

To this end, we consulted with several experts in the mental health field who had been involved in projects examining the implementation process—bringing evidence-based practice to clinical settings—and, in many cases, studying this process. The goal was to increase our knowledge about the diffusion and adoption of evidence-based innovations from research into practice, and to identify the important lessons learned.

## **Methodology**

### **Participants**

The project team began with a preliminary list of renowned and published experts in large-scale implementation of evidence-based practices in the mental health field in both Canada and the United States who have practical experience in EBP implementation. This list was refined through discussions with the Evidence-Based Practices Subcommittee of Children's Mental Health Ontario. In particular, an attempt was made to balance our list with Canadian and Ontario-based experts. In addition, all identified experts were asked to suggest names of others in the area of EBP implementation that they felt the research team should interview. As a result, a total of 11 individuals were identified and agreed to participate in a telephone interview.

## Data Collection

Semi-structured telephone interviews were conducted with our identified implementation experts. Guideline questions were developed by the investigative team and were subsequently refined following consultation with the Evidence-Based Practices Subcommittee of Children's Mental Health Ontario (Appendix B). The main questions addressed in the interviews were: what were the lessons learned, and what are the important practical considerations for implementing EBPs?

The in-depth interviewing method allowed the research coordinator to engage in directed conversations with experts and to elicit detailed and nuanced descriptions of their experiences, observations, and worldviews (Charmaz, 1991; McCracken, 1998). Experts signed informed consent forms, which were faxed and returned to the research team. All interviews were audiotaped and transcribed verbatim. In the case of two interviews, the tapes were undecipherable and the research team relied on the extensive field notes taken by the research coordinator for the project. Interviews ranged in length from 20 to 50 minutes, with an average of 30 minutes.

## Analysis

Detailed field notes were taken during the interviews and constituted the textual data. All field notes and expert interviews were analyzed using a conventional technique for qualitative data analysis. Analysis of the textual data involved thematic content analysis, a dynamic form of analysis of verbal data oriented toward summarizing the informational content and describing the patterns and regularities in the data. Three project team members (Stasiulis, Boydell, and Barwick) reviewed the data transcripts, first to gain an overall sense of the content, and then again to identify important themes and emphases. These themes were discussed and agreed upon, and formalized in a codebook used to standardize the coding of the transcripts. This approach to the analysis of qualitative data follows a generally understood analytic process of reading transcripts, noting and comparing themes for coding, transforming codes into categories, and finally, contrasting and reviewing themes among the members of the research team (McCracken, 1998; Patton, 1990).

Within the context of qualitative research, issues of reliability of the data and validity of research findings are included under the umbrella of trustworthiness, which comprises attributes of credibility, transferability, dependability, and confirmability (Creswell, 1998; Diekelmann, 1992). Team-based peer debriefing was conducted with relative agreement on emerging trends and observations, prolonged engagement with the topic in terms of immersion in the literature occurred, and an audit trail of field notes, meeting minutes, and analytic decisions were available to research team members (Erlandson et al., 1993).

## Results

Experts in the implementation of evidence-based practices identified factors that facilitate implementation, as well as the barriers and challenges inherent in the implementation process from the initial "buy-in" phase to sustainability and future growth.

### **The “Buy-In”**

The process of getting “buy-in” involves primarily informing and educating potential implementers about the relative advantage of the practice and the validity and value of the scientific evidence behind the practice. Interviewees stressed that to be effective and sustainable, implementation cannot be forced or coerced.

*If you push it down their throats, then they'll just sabotage it. There's no point in that.*

*We decided to go with more of a carrot than a stick mode.*

*Conscripts make lousy converts.*

### **Weighing the Pros and Cons**

In the initiation phase, when people are making a decision to adopt the implementation or when the implementation plan is being introduced, people are in a mode of risk assessment. The perception of whether adopting a practice is risky or not is dependent upon a number of factors. Relative advantage, a term borrowed from one of the experts from the organizational literature, refers to the benefits of implementing a practice or why it's good to do this kind of thing. Advantages might include the practice or program will increase the organization's image, it will make you more effective, and it will help consumers. Communicating these benefits in multiple ways is important initially and throughout the implementation process.

*Just kept talking. Just kept inviting people. I'd have (program creator) up to a conference and invite people to hear, to send literature out.... It's sort of like you feel you're a bit of a front man for GM when you do that. But we're trying to not sell people but just trying to inform people that this is something worthy of us looking at.*

*There are people that are contemplative....ah go to this training and I'll just see if I'm convinced that it's a decent thing.*

*If people have a sense that there's lots and lots of reasons why you should be doing this thing, the effect of that tends to carry over clear to the end, to the implementation process.*

Belief that the resources and support will be in place throughout the implementation also factors into the risk assessment equation. Is it doable? Will there be on-going training? Is it worth the effort?

*Okay, another pilot where people get all this special attention and special resources but then when it's over, I've still got to do my job. So, how much do I invest? How much do I get families to invest in something that could disappear? That's a challenge if you're trying to get system-wide change going on, you've got to be there for the long haul.*

### **Questioning the Evidence behind “Evidence-Based Practices”**

Issues around the validity and value of the evidence behind evidence-based practices appear to be a prevalent concern and potential barrier to obtaining buy-in among practitioners. According to the experts, many clinical practitioners hold the belief that therapy is an art form and cannot be studied empirically. Thus, they are suspicious of other sources of evidence and in general do not have confidence in research-based programs. Many do not feel it is possible to measure the changes that take place during therapy.

*A lot of people trained in the social work area, a lot of family therapists, are trained with that kind of notion that it's an art form and you can't really study it and you can't empirically validate it.*

*People don't respect evidence-based practice...despite the importance of it...when it really comes down to it, there's such skepticism.*

*The general perception on the part of many people in the children's mental health field is that whatever they happen to be doing is evidence-based...just a general sense that it feels like it works...patients report that it works.*

Education and training on the importance and applicability of evidence-based practices and research is seen as being integral to counteracting the misconceptions surrounding evidence-based practices among practitioners.

*From my point of view, one of the real weaknesses of training clinical psychologists in general is a weakness in exposing our students to best practice for children and adolescents in general.*

*Like their training, their orientation is not to look at data and I don't know how else you can generate information. So, it's sort of like, you know, within that profession, you've got to create a sensitivity around the importance of evidence-based practice.*

In addition, the experts reported that many practitioners also question the effectiveness of these interventions in the context of the real world situations in which they practise. While a program of practice may demonstrate efficacy within a controlled setting, the same effects may not be obtainable in a natural setting. A few of the experts themselves conceded that unless fidelity to a program is maintained, its effectiveness may be compromised. One expert stressed that the dissemination of a practice should not occur until it has been empirically validated within the field. Yet, cultural factors, practice settings, and client characteristics require some level of adaptation or reinvention of the practice in its transfer to the real world setting. More studies examining the effectiveness of evidence-based practice and the specific variables that will affect implementation in usual care settings are needed.

*If you then take that (practice) and try to superimpose it or introduce it into a children's mental health centre where often times you will have an MSW or PhD Psychologist or some other form of training who is dealing with all kinds of problems and trying to implement that quote unquote lab technique in a clinic setting is very difficult to do...So that's a huge challenge to demonstrate the effectiveness and the evidence base for these interventions under normal field conditions.*

### **Getting Everyone on Board**

For a practice to be successfully initiated, there must be buy-in from all levels within an organization. The importance of having a champion was also identified by the EBP experts.

*This champion "could be anybody, but had to be somebody."*

*The thing is, with buy-in, I think you need several layers of buy-in. It won't work if the administrators buy-in and the front liners don't. Equally, it won't work if the front liners buy-in and the administrators don't.*

*You have to have people who are willing to champion it...somebody has to stand up and be willing to say 'you know what, this is what we need to do and this is how we need to do it and I'm going to be around for awhile.' It grows up within a culture. But, it has to have a champion.*

Several experts also mentioned the importance of having more than one champion. Their experience suggested that if an identified champion left the agency or organization, the initiative could fall apart. One expert identified the importance of a key policy maker whose key mission involved a commitment to move EBP into the state mental health system.

### **Resisting Change**

Resistance to change was identified by the experts as a major obstacle to getting buy-in. This resistance occurs on both individual and organizational levels. In general, change is difficult for any person or organization, and it is important for leaders in organizations to acknowledge and address the factors that affect resistance.

*The question is, why is it that people don't adopt evidence-based practice or why don't they change? The question is how has it happened when they do? That's the unusual case. The rule, I think, is reluctance to change.*

### **Individual Resistance**

For some practitioners, reluctance to change stems from their vested professional identities. Their choice of therapies and practices is seen as something they, as professionals, are entitled to make and many administrators in the past have supported that view.

*If I choose to be a psychoanalyst or if I choose to be a family therapist or I choose to be a behaviour therapist, I'm entitled as a professional to make that choice. I think that's supported by many administrators that allow their staff to make decisions about the kinds of therapies that they practise, and so the idea that the right to make that choice would be superseded by some other kind of decision-making process is something that I think a lot of clinicians resist... They're professionally invested in that identity and it was something that they had a lot of personal gratification from and they, as far as they could see, their perceptions were that it was something helpful, so why change?*

Embedded in that professional identity is the corresponding belief that the work that goes on during therapy is somehow deeper and more meaningful than, for example, behaviour therapy. Consequently, it's harder to measure, not amenable to direct observation, and not something that can be measured with a rating scale.

*I think there is a general sense on the part of a lot of clinicians that the evidence-based interventions are superficial.*

*People don't want to change from what they've done even though the data doesn't support what they've been doing for like, twenty years.*

One of the main strategies suggested by experts is to counter practitioner resistance by showing respect and drawing upon their experiences in ways that can help inform and develop evidence-based programs, and to focus on the relational aspects of the proposed practice change.

*You have to be respectful and you have to approach them and say, 'Listen you guys are smart, you have a lot of experience. Let's find out which of the things that you are doing seem to be working the best.' Evidence-based practice to me is a multi-stage process and part of it is implementing randomized trial-generated evidence-based interventions, but part of it is also finding out how, in the clinical world, to do that.*

*The aspects of the relationship which are so important in much of the training of the clinicians is something that we've had to emphasize even more in the cognitive behaviour therapies which often have a reputation for not dealing with a relationship. It's not really true of course, but I think that's a reputation. So, in the training we've emphasized the relationship aspects.*

*A lot of it had to do with emphasizing the relationship aspects and giving the clinicians a sense that the manual was not a script that had to be followed in the way of, you know, if you're in a play, you have to read your lines.*

### **Organizational Readiness**

A few of the experts talked about the fact that there is also a general organizational resistance to change. Within any organization, there tends to be a small group of people who are willing to contemplate change and a much larger group who are not ready for change. Engaging those who are keen and ready for change is essential for initiating an implementation successfully and could help inspire and motivate others who are in a different stage of readiness.

*You want the best people for the job who are really keen and motivated... You set up an EBP program for failure if you don't have the best people objectively doing the work.*

*And if it's successful for them, then there's a group of contemplators who will watch the program and if it seems to work and it doesn't blow up and then they'll be the second wave of adopters. So I think it's to try not to force change but to work with people who are ready for change because they'll introduce it successfully.*

Experts also talked about ways to create an organization that fosters readiness for change. In particular, giving people decisional latitude was stressed as being extremely important for encouraging risk-taking and flexibility. Ensuring that jobs were challenging, with opportunities for further training and growth, was also seen as being important for creating change readiness.

*If you look at the predictors of readiness for change, then decision latitude was one of the biggest ones. People who had challenging jobs who felt they had a lot of decisional control...also felt more confident that they can successfully execute change.*

*If people feel like they've been part of a decision, if they feel the decision is logical...that ends up affecting whether (the EBP) gets implemented well or not.*

*We've got to help people make a shift and we have to continually offer new training and new opportunities for people to grow through the knowledge that's being generated.*

### **Sustaining the Momentum**

The rationale and the level of support and resources that are put in place at the beginning of the implementation must be maintained throughout all stages of the adoption process. In fact, according to the early findings of a qualitative study on the barriers to implementation currently being conducted

by one of the interviewees, these factors may become even more important as more challenges and barriers arise as the program continues.

*The other thing is that you also have to have done things right at the beginning, in the middle, and at the end or there will be things that will trip you up there as well.*

*At the outset, almost everybody sees more facilitators than barriers. By the time they're in the latter stages of implementation, they're seeing more barriers than facilitators.*

### **Realistic Visioning and Planning**

The EPB experts talked about the importance of having a vision and realistic plan to sustain the implementation. This entails fully understanding the characteristics of the implementation. For example: What kind of clinical treatment is this? How well developed is it? What are the training needs for it? How many sessions will it be? What is it focusing on? By knowing the intervention's characteristics, expectations can be more realistic and the implementation better supported.

*When you start something you have to have a vision for sustainability.*

*I would have tried to be more planful.*

*It's understanding those (characteristics of the implementation) that's going to be most important when it comes to putting one of these new clinical practices into place within a new clinic.*

*Build in more time. I think everybody is sort of unrealistic about how long these things take. I think it's easy to underestimate how intense this work is.*

### **Maintaining a Culture of Adherence**

Maintaining a culture of adherence means not only ensuring fidelity to the practice, but also encouraging collaboration and involvement of everyone within the organization, as well as between organizations.

*Adherence is really important and you get better outcomes when people adhere more closely to the intervention. But turnover rates, maternity leaves, stuff like that...it just sort of waters down the intervention.*

*The fidelity at least to the principles of the treatment and to the core techniques are working well and the clinicians are seeing improvements in kids and that helps to motivate them.*

Involving all levels of management and front-line staff in on-going training is viewed as being very important to maintaining the integrity of the practice as well as to keeping up morale and interest. Getting people together also fosters support and communication.

*If we do not involve the supervisory level middle management in the training, in the supervision, and in the management of the project, then things can fall apart.*

*I think the really important part was just bringing people together, sharing experiences, and supporting one another through it.*

*I think because we did create this consortium, we've been able to get the sites to realize how important the activity is and to realize that you can get more out of it if there is a collaborative working arrangement going on.*

### Strategies for Sustainability

Some of the practical strategies for effectively sustaining implementations discussed in the expert interviews included top management support, dedicated resources, and the freedom for staff to express their feelings, doubts, etc. While all these factors need to be present throughout the implementation process, one expert felt that access to technical assistance was especially pivotal.

*If you have access to technical support at the beginning, it will get you off to a good start...it has a really strong correlation with good outcomes. A much stronger correlation with having access to technical assistance at the latter stages of implementation is evident. But people don't tend to think about it. They do this "ta ra ra boom de ya" thing. They get the thing off the ground and then everybody kind of walks away from it and then it falls.*

The strategy of performance monitoring was identified as the "single, most powerful predictor of good outcomes."

*If you're watching and things start to go wrong, you have a better sense of being able to tinker and correct and get things back up to speed, than if you sort of, at the end, kind of look around and say, 'well, did this do anything or not?'*

*Instituting a performance monitoring system is the single best thing anybody can do to help predict the successful implementation of practice.*

### Other Barriers

The immense case load and long waiting lists with which most children's mental health service providers are faced is a significant barrier to successfully implementing new practices. The time and resources necessary for supporting, learning, and implementing EBPs are impeded by the daily demands placed upon practitioners.

*In children's mental health, we keep on a treadmill that is paced in such a way that there is almost not enough time to make changes.*

One of the financial barriers to implementation are licensing requirements that involve not only cost but also an extremely long time to deal with lawyers and others involved in the purchase of evidence-based programs or services.

*Many terrific interventions are invested privately and services must be purchased...if you have to purchase the service, it's a costly thing.*

Overcoming expectations with respect to medication was identified by one of the experts as a barrier to using evidence-based practices.

*I think for anybody in the children's mental health sector that's trying to promote or integrate more evidence based psychological or social psychological interventions has this tremendous challenge of trying to overcome many people's expectations, including parents and others, that the best thing to do is medicate the problem out of existence.*



## **Integrating Research**

A pervasive theme that emerged in interviews with implementation experts was the critical necessity of integrating research into service delivery. When research is integrated into mental health service delivery, it acts as a significant enabler of evidence-based practice in several ways.

### **Bridging the Research-Practice Gap**

By incorporating an evaluative component into the practice being implemented, the outcome of what clinicians are doing can be measured. This collaborative process enables clinicians to provide feedback that will help determine how the particular treatment or practice can be improved to suit their settings. Not only does this add to the reliability and validity of the implementation, but it helps to bridge the gap between researchers and clinicians, which has implications for both generating new evidence and dissemination.

*The next generation of evidence-based interventions is out there now. Some of the things that clinicians are doing are probably far better than existing evidence-based practices. Somehow, you have to find, on the one hand as a researcher or somebody promoting evidence-based interventions, you have to adopt a kind of respectful stance to clinicians...there are probably some things that are going to constitute the next generation, the next state of the art.*

*That's the benefit probably to having a piece of research based in an organization like mine rather than you know a lofty university where they're going to publish in some journal that no mental health agency would ever get to read.*

### **Teasing Out What Works**

With so many layers and variables involved in implementation research, trying to tease them out poses a significant challenge. Fortunately, a variety of investigators are now getting reasonably good, rigorously funded studies underway to scientifically examine the implementation of EBPs, rather than simply through descriptive case studies. It was strongly suggested that government should build an evaluation component into all service delivery programs to determine what works.

*We're looking at a range of context variables to see whether organizational culture and climate affects the ability of therapists who have been trained on these evidence-based trauma treatment models to deliver the model with fidelity...a complex study and we're still in the middle of it.*

### **Demystifying Research**

Partnering research with clinical practice also “raises the whole general awareness of research enormously.” By learning about the value of research and what it can offer, practitioners are more likely to be amenable to evidence-based practices.

*I do a lot of presentations on trying to demystify research as a part of evidence-based practice. If you think something is going to work because it's shown itself to be effective, translating it into your agency and your community needs an evaluation attached to it, so you can train people to not be afraid of data.*

Linking with a university also opens up additional resources and knowledge that can benefit practitioners. On a practical level, establishing these kinds of partnerships is seen as being easy to do.

*It's really a dynamic system of education (partnering with a university)...it has to be done on a practitioner level, and universities have to become much more involved in providing those kinds of courses and stuff.*

*Most of these crosswalks can be made quite easily because almost everybody working in this sector came from a university. They were trained in universities...these connections would not be too difficult to make or maintain.*

### **Some Final Thoughts**

Despite the number of challenges and barriers espoused by our experts, there was a prevailing optimism that these challenges could be met and the barriers overcome.

*I thought well, what we're going to find is we're going to find that all the really powerful predictors are things that we can't do anything about, like charismatic leadership, like the structure of an organization, like power and relationships...and that's not what we found. We found that there are all these things that people can in fact do or change, like performance monitoring. In other words, how much risk somebody thinks they're going to take by adopting a practice—you can affect that! You can tell them all the science behind it. You can tell them all kinds of things about how to do it. So, in other words, these are really things that people can, in fact, do.*

*You can't give up on people. You can't give up on a whole system even though there are individuals within the system who kind of trash it.*



*Most people are in favour of progress,  
it's the change they don't like.*



*Anonymous*

Chapter 5  
Report Synthesis



# Best Practices for Transfer and Implementation of Evidence-Based Practices

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Although the current gap between research and practice has been linked primarily to failings in dissemination (Scullion, 2002), it is critical to acknowledge that one can have the most ideal mechanisms in place to transfer knowledge, but if the recipient individual or organization is not prepared to receive (and more importantly, make use of) that information, then practice change is unlikely to occur. In fact, there is growing consensus that problems in transferring research to practice are more likely to be due to organizational factors (e.g., leadership attitudes, staff resources, organizational stress, regulatory and financial pressures, management style, tolerance for change) than how materials are disseminated (Backer, 1995). This report has recognized the need to not only address knowledge transfer and exchange, but also to focus on readiness for change and barriers to implementation. As stated at the outset, we believe that it is not sufficient to build the Cadillac of knowledge-transfer models in the absence of understanding what is needed to prepare organizations and practitioners in the field to receive and implement this new knowledge.

*Widespread dissemination of research findings has not necessarily resulted in widespread adoption of evidence-based practice.*

## The Complexity of Evidence-Based Practice

Although the quantity of research evidence may be overwhelming, the quality may not be. It is unclear how much of the research evidence published annually is of sufficiently high quality (with respect to scientific rigor and practical relevance) to merit changing practices or policies in response. To complicate matters, scientific evidence is often lacking or controversial regarding many important mental health problems. Moreover, additional research is needed to identify the “active ingredients” of specific treatments so they may be “reinvented” for other contexts and populations, and implementation research has yet to identify fully the “active ingredients” for implementation strategies and processes.

Consequently, current perceptions of evidence-based practice clearly require attention. Though we have a widely accepted definition of evidence-based practice, as a “conscientious, explicit, and judicious use of current best evidence in making decisions about individual patients” (Sackett et al., 1996), there remains no consensus as to what exactly constitutes an evidence-based practice. Silagy and Haines (1998) describe EBP as an approach that “takes account of evidence at a population level as well as encompassing interventions concerned with the organization and delivery of health care.” Research evidence is one important component of the decision-making process, but not the only component. Additional considerations include clinical expertise, patient preference, needs, priorities, and resources. Including research evidence in service decision-making appears simple, however complexities arise

when one considers what is meant by “research evidence.” For example, our survey of executive directors and clinicians revealed concerns regarding the bias toward lab-based research evidence as opposed to community-level research. In addition, many respondents indicated the conflicting nature of research information is a barrier.

### **The Need for Learning Organizations and Continuous Professional Development**

These findings highlight the need for continued education regarding EBPs at multiple levels—manager, practitioner, decision-maker, and consumer. Stakeholders need to acquire the attitudes that are the foundation of evidence-based practice (Corrigan et al., 2001), as many have received training that is not germane to the principles and practices outlined in evidence-based practices. Managers and clinical supervisors need training in EBPs to effectively lead and supervise their staff. Practitioners require EBP knowledge to become more open to their adoption and more skilled in their execution and management of related outcomes. Consumers need to be educated regarding EBPs so they might advocate for the delivery of services that produce the most consistent and cost effective outcomes, thereby producing the levels of pressure for change required for a decision to take action. Decision-makers need to understand the complexity of the change process, as well as the nature of the evidence, so that they might support system-wide implementation of effective practices throughout the system and deliver the appropriate financial supports and incentives to promote the requested changes.

### **The Need to Develop an Evidence-Based Culture**

EBPs are not widely used because of specific obstacles that include individual and organizational barriers (Drank et al., 2003). These obstacles have been identified in this report through the review of extant literature, through our field survey, and in our expert interviews. At the individual level, practitioners may lack the basic knowledge and skills required to assimilate EBPs into their regular approach to treatment. In addition, work-related factors, such as job stress and burnout, frequently undermine interest in new and innovative practices (Corrigan et al., 2001). At the organizational level, ineffective leadership, insufficient collegial support, and bureaucratic constraints may hinder a team's efforts to implement and maintain such practices. Attention to greater resources, such as staffing and computers, and system-level implementation approaches need to be considered at the regional and provincial levels of governance.

There is no question that the implementation of EBPs is more likely to be successful in what can be termed an *evidence-based culture*. Such a culture includes leadership in the form of change managers or champions, involvement of stakeholders at all levels of the system: particularly bi-directional face-to-face communication between researchers, decision-makers, and clinicians, and involvement of families and other consumers. Organizations that have a high need for change and specialized training, who experience higher levels of pressure for change, are appropriately resourced (offices, computer access, linkages to academia) and staffed by knowledgeable practitioners who are adaptable, take responsibility for staying up-to-date, practise reflectively, and enjoy a sense of efficacy and influence in their practice are also part of the ideal change culture. The evidence-based culture has an organizational climate characterized by clarity of mission and goals among staff, staff cohesiveness and autonomy, openness of communication and openness to change, and lower levels of job stress. In addition, careful attention is needed in staff selection, training, and coaching, and in continuous quality improvement feedback systems for staff at all levels of an organization (e.g., Huber, Godfrey, et al., 2003).

### **Champions of EBPs**

The literature on implementation of evidence-based practice is unanimous in highlighting the important role of leadership. Our literature review and expert interviews supported this finding. Effective leadership that is characterized by open and honest communication can significantly influence the change process. Only strong leadership can build an organizational culture supportive of change, establish aims for improvement, and mobilize resources to meet those aims. Middle managers and clinical supervisors in particular can play a vital role in creating and sustaining change. While organizational culture is clearly an important factor in EBP implementation, it is not necessarily easy to change. The organizational culture of a community-based agency, hospital, or other organization is built up over a number of years, and is the product of decisions by a large number of actors. An organization that realizes the need to develop a strategy for implementing EBPs, but whose organizational culture is not supportive of innovation and risk taking, faces a difficult dilemma. In such a situation, only active and visible support from clinical and middle and upper managerial leadership is likely to bring about successful change. This support involves affording clinical staff with decisional latitude and control regarding their work, which prepares them for initiating change. In addition, the literature reveals the importance of acknowledging issues of power and authority. It has been suggested that managers have failed to use their position and organizational authority to influence the use of research in practice (Omery & Williams, 1999).

### **Systemic Involvement of Key Stakeholders**

There is a critical need to invest in getting people to network. Because health care organizations are such complex systems, improving their performance requires the participation of actors from many different parts of the system, and from related sectors such as child welfare, education, and juvenile justice. It is not always easy to bring individuals from different disciplines, departments, and organizations together, but when it happens, the results can be dramatic. The concept of “community of practice,” adopted to support the implementation of the province’s mandated screening and outcome assessment tools, provides an example of bringing stakeholders together to exchange their tacit knowledge and developing practices in a specific area (Barwick et al., 2002). The sharing of knowledge in communities of practice has been shown to create a forum in which to develop and maintain best practices (Wenger, McDermott, & Snyder, 2002). Within any organization, there tends to be a group of individuals who are willing to contemplate change—the innovators and early adopters. Engaging these individuals in face-to-face venues is essential for successfully initiating an EBP and helps to inspire and motivate others—the early and late majority—who are at different stages of readiness.

Fortunately, several strategies are emerging that have the potential to connect the solitudes that currently exist. Overall, there appears to be a clear need to develop new structures and processes—connective tissue—to explicitly assist the flow of relevant information and influence between all the concerned parties. As well, more distal stakeholders, such as funders, universities, independent research and policy advocates, and patients and families need to be more effectively brought into the mix.

In terms of new structures and processes, researchers (particularly those working in applied areas) could equip themselves to communicate more effectively and regularly with decision-makers and practitioners. To accomplish this, many researchers could benefit from better training and support to work with media, community, and policy groups. University governance need to advocate for communications and policy work to be accepted as “academic currency” and rewarded equivocally (or at least not penalized) by universities and other academic centres. Researchers could also (as many

already do) involve themselves in more multidisciplinary activities that are problem focused, as opposed to working in “silos” of specialization. Most importantly, researchers could investigate more collaborative models that explicitly involve practitioners and policy makers—who are working in contexts where the research needs to be used—as meaningful partners in all stages of research. Research partnerships also need to be built with consumers, families, and community leaders. Our research also revealed the need to investigate ways of increasing the involvement of families, so that information about EBPs may reach them. Consumer advocacy groups have a critical role to play at the organizational, board, and system levels because they are an important source of pressure for change—something that appears to be missing at present.

Building on the importance of exchange in knowledge transfer (Lee & Garvin, 2003), there is a role for more partnerships between children's mental health organizations, regional government, and researchers. Such partnerships can develop reciprocal relationships where innovative and effective techniques can be transferred to clinical practice, evaluated and revised in accordance with real-world experience (Sherrod, 1999), and where researchers can assist in the evaluation of “promising” interventions as they are developed in the field. Service providers must be involved in setting research agendas and be active participants in applied research. Researchers must find nontraditional ways to share their research findings so that they are relevant and applicable to the field. Policy-makers need to base their policy decisions on research rather than public opinion.

Yet another strategy involving all the stakeholders identified so far has been proposed but not yet widely implemented (Waddell, 2001). This strategy requires new functions and structures to be created to specifically train and employ people—*knowledge brokers*—who are both research literate and knowledgeable about clinical settings and needs of practitioners and decision-makers. These knowledge brokers also need to be highly skilled at communicating with all the parties involved as well as with the media. Currently, it is rare to have an identified individual whose role is to disseminate research evidence and ensure that decision-makers' needs are brought into the research process in a systematic way.

### **Performance Monitoring**

Performance monitoring is an essential component of evidence-based practice and, perhaps, of any quality human service program (Felner, Fazavva, et al., 2001; Wolf, Kirigin, et al., 1995). At the practitioner level, interactions with consumers and stakeholders can be assessed and used to inform coaching and supervision routines designed to further the professional competencies and development of the practitioner. At the management level, assessments of the performance of individual units can inform decisions about staff training programs, coaching, and supervision routines, and assessments of overall program outcomes can inform decisions about the mission and goals of an agency. To be useful, performance monitoring needs to be built into the day-to-day functioning of an organization so that assessments and reports of assessments are well integrated with agency functioning.

### **Training Opportunities**

Our findings clearly suggest a direction for training: in particular, interventions that foster individual practitioner training and organizational development. Research has explored the impact of educational training on the day-to-day practices of mental health practitioners and shown that practitioners who complete these types of programs have improved attitudes about innovative practices (Cook et al., 1998). The issue of professional development, however, represents an inherent tension. Practitioners represent the group that most requires training and professional development, yet they are inundated

by the number of clients needing service and the lack of resources to support these services. This begs the question of how they can take time away from the field to engage in professional development.

### **A Final Word**

At the end of the day, to successfully implement evidence-based practices, practitioners will have to do more than learn specific procedures and practices. Multi-dimensional practices are key—that is, most likely to lead to behavioural change—particularly when characterized by sustained interaction and hands-on practice (Carpinello et al., 2002). They will require increased knowledge and positive attitudes toward evidence-based practice, as well as the appropriate organizational structures in place to support their use. In addition, they will need to be rooted in a social influence process designed to support maintenance and fidelity of new and innovative practices. The innovation that evidence-based practice represents still faces many challenges, however, as our implementation expert interviews revealed, “it is possible.”





*Pay special attention to the best of the past  
and present—in order to ignite the collective  
imagination of what might be.*



*David Cooperrider  
Case Western Reserve University*

Chapter 6  
Recommendations to CMHO



# Taking Action

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## 1. Connect CMHC's to the Evidence Base

Tremendous benefits could be realized if CMHC's were connected to the faculties and web-based resources (i.e., library databases) of their local colleges and universities. Survey results indicate that the lack of access to college and university databases poses a significant barrier to the abilities of clinical staff to access the current literature in children's mental health.

- 1.1. CMHO could address this by offering a central link to the University of Toronto library system as an affiliate member.
- 1.2. Create opportunities for dialogue and exchange among practitioners, researchers, and decision-makers. Venues such as the Biennial Niagara Conference on Evidence-Based Treatment for Child and Adolescent Mental Health, directed Dr. William Pelham from the University of Buffalo together with Dr. Charles Cunningham from McMaster University, represent the kind of venue required. Consider partnering with these organizations to host the conference so that it can happen annually rather than bi-annually, bring it to a less expensive local (currently held in Niagara-on-the-Lake), and/or secure funding to make it more widely available via videoconferencing.
- 1.3. Develop regional teams responsible for reviewing the literature and making summaries available to others in the region, or do this centrally through CMHO and have it posted on the website. There is a vacuum of responsibility for this activity with each organization, and a centralized approach could be well received and useful.

CMHO has produced a series of *Handbooks for Children's Mental Health Practitioners*, and this has to be commended as an important step in bring the research evidence to the attention of the practitioner.

- 1.4. Should CMHO choose to produce other issues in their EBT series, it would be useful to plan beyond dissemination. Simply making the products available to the membership will not ensure that the information is absorbed and used in practice. A community of practice approach might be taken to assemble practitioners around a particular target client population, with the purpose of reviewing the evidence base, related EBTs, and discussing how these treatments relate to what is currently offered in the Ontario system.

## 2. Reintroduce professional development and networking as a core activity in CMHCs.

In light of shrinking budgets and program closures, this is likely to be extremely controversial. That clinical staff are dancing as fast as they can is of no surprise to those in the field, but the desire for an expanded role is supported by the results of our survey. Clinical staff would like to expand their responsibilities to be able to take part in continuing education (e.g., in-service, reading, networking), but they are caught in a confined cycle of service delivery for an ever increasing list of clients waiting at the door. Much has been said about the risks associated with long wait lists for service. However, what is the additional cost in human capital for the CMHCs?

- 2.1. CMHO could commission a demonstration project to examine the costs and benefits associated with the reorganization of clinical practice, whereby clinical staff are allotted certain percentages of time for continuous professional development and networking that is supported by a corresponding percentage of the organization's budget. In-service and professional development budgets are often the first casualties in times of limited resources, yet what is the cost of this action on professional competency? Would such a re-distribution significantly impede service delivery?
- 2.2. The province's growing capacity for videoconferencing within the telehealth/telepsychiatry initiatives might provide a cost effective and practical solution for sharing new knowledge. While our experience with training for the province's outcome measurement tool has led us to conclude that this format is not the best suited for EBP/EBT training (professionals prefer the face-to-face and personal contact offered in in-situ training), there are several opportunities to share important presentations from conference and other venues with professionals located in more distant, rural, and remote areas of Ontario.

### **3. Develop incentives for the implementation of evidence-based practices.**

Several theories of change address the importance of rewards or incentives as reinforcing factors that assist in the implementation of evidence-based practices (e.g., Green et al., 1980; Green et al., 1991). When EBPs are implemented system-wide, it would seem to be the purview of the province to institute these rewards or incentives, however it may be appropriate for some type of incentives to come from CMHO. A system of reward or incentive may have an additional benefit in that it would make the achievements of early adopters observable to the rest of the field (Berwick, 2003). What strategies can be implemented to highlight the successes of some in the field?

- 3.1. The CMHO annual conference could be used to showcase and acknowledge excellence in service provision. CMHO might consider introducing service awards for providers doing innovative things (e.g., the evaluation of a "promising" intervention, excellence in culturally sensitive treatments, success with a particular intervention or with addressing a particular client population in an effective way).

Work being conducted by the Agency for Health Care Research and Quality (AHRQ) in the US is examining the effect of incentives on producing increased quality in health care delivery (AHRQ, Pub. No. 04-0057). There is an extensive theoretical literature about the determinants of the effectiveness of incentive arrangements in several disciplines, including economics, psychology, and organizational behaviour. Some of this research has identified that the characteristics of the incentive itself and of the context in which it is applied can determine the likelihood the incentive will be effective. For instance, an important financial characteristic of the incentive is that it should take into account the cost of complying with the measure. The report also describes some measure of success in using reputational incentives, where hospitals with low performance scores were more likely to engage in quality improvement activities when their performance level was released to the public. In the US, this type of activity is referred to as "quality-based purchasing" and is being increasingly studied. Early work provides some evidence that both performance-based payment and reputational incentives can work to improve health care quality. We can look to ongoing research to inform the extent of use of quality-based purchasing, provider attitudes toward both incentives and the use of various types of performance measures, and preliminary estimates of the impact of this approach on quality.

**4. Encourage the adoption of Berwick's seven rules for disseminating innovations in children's mental health care.**

Implementation research, while in its infancy, supports certain behaviours that might help leaders to better nurture the dissemination of good changes in mental health care for children.

**Rule 1: Find Sound Innovations** – Although this seems obvious, our research for Ontario providers suggests that these organizations, for the most part, have no formal mechanisms for reviewing the literature or for identifying innovations for potential consideration. There is an assumption that the professional culture is one that continuously scans for new ideas, even though there is rarely anyone put in charge of scanning the key scientific journals or attending key scientific meetings and reliably reporting back to the organization.

**Ontario Solution** – CMHO can consider taking on the task of scanning the literature in a systematic way and of disseminating key scientific evidence (see recommendation 1.3). Alternatively, a group of clinical directors could come together to form a “children's mental health practice group” whose job would be to review the services provided in organizations and to establish linkages to the empirical literature and the outcome benchmarks generated by the provincial screening and outcome tools.

**Rule 2: Find and Support Innovators** – Organizations should identify (and hire) innovators, and provide time and support to investigate innovations in non-local communities. Berwick (2003) recounts a dated though highly regarded review of 61 major inventions across a variety of industries since the year 1900, 40% of which came from individuals acting alone rather than from corporate research and development efforts.

**Ontario Solution** – Encourage senior leaders to foster change by encouraging innovators within their organization, through time and latitude for decision-making. In a time of limited resources, reducing opportunities for travel and exchange only serves to limit our ability to succeed in providing the best mental health care by invigorated and knowledgeable clinical practitioners. This might be possible to encourage in individual organizations and/or through the development of an ‘Innovators Competition’ whereby practitioners could apply in a competitive process to CMHO for funds to explore an innovation elsewhere in the world.

**Rule 3: Invest in Early Adopters** – Leaders could spread the diffusion of innovation if they encouraged the curiosity of a few early adopters within their midst, those who want to test changes.

**Ontario Solution** – Identify early adopters within each organization so that they might be encouraged to “run with” an innovation ahead of the pack. Is there a team of clinical practitioners who are interested in trying out a new treatment? Provide them with the time needed to explore and test out the innovation. Develop opportunities for early adopters to mingle with innovators in other social settings.

**Rule 4: Make Early Adopter Activity Observable** – The early majority, 34% of each organization, changes through opportunities to observe the early adopters. Social situations work best for this level of exchange.

**Ontario Solution** – Encourage social interaction within and beyond the walls of each organization. Bring together innovators, early adopters, and the early majority in venues that can act as mechanisms for sharing knowledge. Bring in presenters to talk about topics of interest to your staff; many academics or practitioners will do this without a fee.

**Rule 5: Trust and Enable Reinvention** – Since new ideas often come from outside the current system, they must be “reinvented” to adapt to individuals contexts. Reinvention is a natural product of the diffusion of innovations.

*Ontario Solution* – Leaders should encourage and showcase individuals or organizations who take ideas from elsewhere and adapt them to their own environments. This could potentially take place at the level of the organization, the CMHO, and the Ministry (see Recommendation #3).

**Rule 6: Create Slack for Change** – To innovate takes time and money. Berwick captures this best by saying, “no system trapped in the continuous throes of production, existing always at the margin of resources, innovates well, unless its survival is also imminently and vividly at stake” (2003, p. 1974).

*Ontario Solution* – Leaders need to invest people's time and energy into the use of evidence-based practice and the management of outcomes and quality service. This must be planned for and supported by leadership when adopting evidence-based practices. Such adoption will not happen naturally in the regular course of providing day-to-day service.

**Rule 7: Lead by Example** – Leaders who champion the transfer of innovations must be prepared for resistance that can be quite vigorous at times.

*Ontario Solution* – Preparing to lead change at the CMHO level will set the example for children's mental health organizations, many of whom will need to be convinced of the need, relative advantage, and availability of support before they will move forward.

## **5. Explore the level of awareness and support of EBPs among Ontario service providers.**

The successful implementation of EBPs will require that the level of awareness and philosophical stance to evidence be identified and addressed. Changing practitioner attitudes alone will not be sufficient for successful implementation, yet it is a factor that should be addressed in any implementation plan. Some literature in this area already exists (e.g., O'Donnell, 2004), and further research could be conducted in Ontario through the direction of CMHO.

- 5.1. Conduct research on service provider knowledge and receptivity for evidence-based treatments, preferably using qualitative approaches that can explore these issues in depth. Develop recommendations for training of EBTs that can address practitioners' knowledge and readiness, as well as availability of resources (time, costs) required for these efforts.

## **6. Make it easier for practitioners to acquire training in EBPs.**

The task of acquiring training on specific EBPs requires support from leadership provincially and within organizations in the form of recognizing the value of such training, providing release time, and establishing supports for funding. It also presumes that people know how to go about getting the training needed.

- 6.1. CMHO is positioned to broker EBP training for their membership. EBP training could be tied to a clinical practice mentoring program according to EBP and region, in which issues related to skill development, “reinvention” or adaptation, and clinical supervision could be addressed.
- 6.2. The provincial government also has a leadership role to play in the system-wide implementation of EBTs and they have an opportunity to build this into a children's mental health policy framework. To expect that CMHCs will move in this direction alone, on a one-off basis, is inefficient and fiscally unrealistic.

## **7. Explore the dynamics of board governance among CMHCs.**

Findings from this project lead to certain questions regarding the role of boards governing children's mental health centres. In particular, how is that executive directors do not perceive pressure for change from their boards? What does this mean?

- 7.1. CMHO could commission research to explore the role and effectiveness of boards governing CMHCs. Specifically, what do boards perceive their role to be relative to the implementation of evidence-based practices, the importance of quality assurance (beyond client satisfaction), and the dynamics of reporting relationships? How might they create more of a change culture within service provider organizations?

## **8. Create linkages with educators and professional colleges in social work and psychology.**

CMHO is ideally positioned to represent the interests of their member organizations regarding the education new graduates are receiving and with which they are entering the working world. In addition, discussion with professional colleges could identify common goals and mechanisms for professional development among professional staff that, through common effort, could reduce the burden of professional development for individual organizations. Remembering that pressure for change must reach a high threshold before action is taken applies here.

- 8.1. Are students of social work, psychology, and child care learning what is necessary for an evidence-based quality management culture, and are they developing the skills for continuous learning and reflective practice? To what extent are the needs of the work force being addressed at the level of pre-service education? There is an inherent symbiotic relationship between service providers and colleges: colleges require internship placements and service providers require additional staff to address the service delivery burden. This relationship stands to be re-examined though, particularly in the face of a changing practice environment.

We have experience in this area of interest. When members of our project team became involved with training and implementation support for the province's mandated outcome tool, we contacted all of the province's community colleges and university programs of social work and psychology with an offer to train their faculty on the tool so that they might in turn train their students in child and youth care and social service programs. The purpose of this initiative was to reduce the training burden of the children's mental health service providers—who were already struggling with the training demands for their professional staff—while providing new graduates with additional required skills for entering the workforce. This process has worked very well with all of the community colleges, but there has been very little uptake on the part of university programs. Again, it comes down to pressure for change. Children's mental health centres provide much needed internship training, and therefore have an opportunity to create pressure for change in the training received by their potential interns. While this level of pressure was not needed to entice participation from community colleges, it may serve a purpose in dialogue with university programs that seek to place their students in field placements for training and/or research opportunities. This needs to be explored.

- 8.2. Children's mental health centres and professional colleges share a common goal: continued professional development and quality assurance for mental health professionals. CMHO could dialogue with the Ontario College of Social Workers and Ontario College of Psychologists to

explore partnerships in professional training and in the maintenance of quality among their professional staff.

**9. Help centres to evaluate the promising treatment approaches they are developing on the front lines.**

Lab-based treatment interventions are but one end of an important spectrum. Many promising treatment approaches are being developed on the front lines, often with the distinct advantage of being culturally and developmentally sensitive. The knowledge and resources needed to evaluate the effectiveness of these promising treatments often evade service providers, however, and this is an important gap that can be addressed through partnerships with researchers.

- 9.1. CMHO could help to broker these academic-service provider relationships, an activity that may be of interest to the Ontario Centre of Excellence for Child and Youth Mental Health at the Children's Hospital of Eastern Ontario (CHEO).
- 9.2. CMHO could consider forming an evaluation consultancy as a resource for their membership, bringing together experienced clinicians and researchers in children's mental health.

The Department of Mental Health in South Carolina provides an example of an academic-service provider relationship (Gintoli & Morris, 2003). They are partnering with the state's academic institutions in an effort to combat decreasing state mental health resources, building on new resources from grants, contracts, and collaborative relationships. Much of their work implementing best practices, whether in pilot projects or statewide replication, will be facilitated by the South Carolina Center for Innovation in Public Mental Health, which is a partnership between the South Carolina Department of Mental Health and the Department of Neuropsychiatry and Behavioral Sciences at the USC School of Medicine. The essential link for measuring progress is their partnership with South Carolina's multi-agency Data Warehouse, which has the capacity to provide unduplicated data on clients across the health and human service spectrum. This will allow them to track real world outcomes (school performance, juvenile justice involvement, health status) as they implement best practice interventions.



*Innovation is the courageous act of creating something unique. It takes true courage and passion to attack conventional wisdom—including your own ideas—and fail your way to the achievement of something truly different.*



*SleepNet Corporation*  
*[www.thinksmart.com](http://www.thinksmart.com), 2004*





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## Project Team

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### The Hospital for Sick Children

**Melanie Barwick** is a Registered Psychologist in the Community Health Systems Resource Group and Associate Scientist in Population Health Sciences at The Hospital for Sick Children. She is Associate Professor in the Departments of Psychiatry and Public Health Sciences at the University of Toronto. Melanie completed her Ph.D. in Educational Psychology from McGill University in 1992, and went on to two successive post-doctoral fellowships within the Department of Psychiatry, University of Toronto at the Hincks Institute in the areas of developmental psychopathology, language impairment, and infant attachment. Her program of research in children's mental health systems and knowledge translation focuses on the implementation of evidence-based practices. Together with Bruce Ferguson, she is the Lead for the provincial initiative for outcome measurement for Ontario.

**Katherine Boydell** is a Qualitative Sociologist and Health Systems Research Scientist in the Community Health Systems Resource Group and Scientist, Population Health Sciences at The Hospital for Sick Children. She is Associate Professor in the Departments of Psychiatry and Public Health Sciences at the University of Toronto. Katherine has a Master of Health Sciences in Epidemiology from the University of Toronto, and she received her doctorate in Sociology from York University in 1996. Her program of research in children's mental health systems and knowledge translation focuses on access to mental health care for children and youth in rural and remote communities, pathways to care for youth at ultra high risk for psychosis and youth who have experienced psychosis, and pediatric telepsychiatry. She has a special interest in innovative methods of translating research, particularly in the form of arts-based dissemination models.

**Elaine Stasiulis** works as a research coordinator on various projects at the Hospital for Sick Children. Her undergraduate degree is in Health Studies with a minor in Psychology at the University of Waterloo, and she obtained her Master of Arts in Sociology at Central European University (affiliated with Lancaster University in the UK) in Warsaw, Poland. Using qualitative methodology, her main area of research has been in mental health, working initially within the adult mental health sector. More recently, her research interest has included first episode psychosis, childhood survivors of cancer, and knowledge transfer within children's mental health in rural communities.

**Bruce Ferguson** is Director of the Community Health Systems Resource Group at The Hospital for Sick Children, and Professor of Psychology, Public Health Sciences, and Psychiatry at the University of Toronto. Dr. Ferguson received his Ph.D. in Psychology at Monash University in Australia. Dr. Ferguson has taught at Carleton University and the University of Ottawa, and has been a visiting scientist at the National Institute of Mental Health in Bethesda, Maryland. His research interests include community intervention and prevention programs, neurological basis of hyperactivity and other learning disorders in children, and the development of antisocial behaviour in children and adolescents. Currently, Dr. Ferguson is focusing his efforts on strengthening communities for children and youth to produce the best outcomes and successes.

### **Louis de la Parte Florida Mental Health Institute**

**Karen Blase** is a Research Professor at the University of South Florida and co-director of the National Implementation Research Network. She received her doctorate in Developmental and Child Psychology from the University of Kansas with a focus on school-based interventions and with research and training experiences with the Achievement Place Research Project. She has been a program developer, researcher, trainer, evaluator and published author in the human service field for over 25 years. She also led the development of a national replication and implementation program for the teaching-family model.

**Dean Fixsen** is a Research Professor at the University of South Florida and co-director of the National Implementation Research Network. Dean received his doctorate in Experimental Psychology from the University of Kansas in 1970, and has been actively involved in developing and extending the evidence base of the Teaching-Family Model and summarizing the steps involved in program development and dissemination. He has co-authored nearly 100 publications, served on numerous editorial boards, and advised local, state, and federal governments.

### **Evidence-Based Practices Committee of Children's Mental Health Ontario**

Joanne Johnston – Manager Accreditation and Special Projects, CMHO  
Karen Engel (Chair) – Executive Director, Yorktown Child and Family Centre, Toronto  
Claire Fainer – Executive Director, East Metro Youth Services, Toronto  
Dick Meen – Clinical Director, Kinark Child and Family Services, Markham/Whitby/  
Barrie/Oakville/ Newmarket/Coburg/Peterborough  
Doug Brown – Clinical Director, Peel Children's Centre, Mississauga  
Mark Totten – Director of Research, Youth Services Bureau of Ottawa, Ottawa  
Fred Schmidt – Psychologist, Lakehead Regional Family Centre, Thunder Bay  
Jeff Carter – Psychologist, Madame Vanier Children's Services, London  
Yvonne Bohr – York University (Psychology Dept) and Aisling Discoveries Child & Family Centre,  
Toronto  
Sally Wills – Executive Director, Child and Youth Wellness Centre, Brockville  
Greg Lubimiv – Executive Director, The Phoenix Centre for Children and Families, Pembroke



## Appendix A – Expert Interview Protocol

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Introduction: Explanation of the purpose of the research, the people and organizations involved, reasons for interviewing people who have had experience with the roll out of an evidence-based program or project and/or a knowledge base in this area.

1. Can you tell me about a recent practice or program that you had experience in implementing?
2. What were the main barriers and challenges to implementing this practice?
3. What helped to facilitate the implementation? (e.g., solid leader, good funding, etc.)
4. What were the key factors or elements that helped to make it happen? What stood out as being important?
5. In retrospect, what would you have done differently?
6. What advice would you give with respect to implementing evidence-based practices?
7. Is there anyone else in this field that you think we should speak with regarding implementing evidence-based practices?



## Appendix B – Clinical Staff Survey

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<b>Cover Letter</b>
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Dear Colleague,

Children's Mental Health Ontario's Evidence-Based Practices Committee is engaged in a project that will investigate the most effective means to transfer new knowledge about children's mental health practices to children's mental health centres in Ontario.

A very important part of this project is a survey of all Children's Mental Health Ontario member centres, to hear your views and experiences about what facilitates the use of evidence-based practices, and what the barriers and challenges may be for centres. The survey data will form a vital component of the project, as it will ensure that the relevant, "real world" issues for children's mental health centres are considered and addressed. Survey data will be used to guide our future efforts related to implementing and supporting evidence-based practice in Ontario by informing us as to what you need and value.

Although this survey is web-based, we have provided a printed hard-copy of the survey for those of you who do not have ready access to a computer. You can either fax or mail the completed survey to the project coordinator. All responses will be kept strictly confidential and will be pooled with the web-based survey results.

You may direct your questions about the survey to the project coordinator, Elaine Stasiulis at tel: 416-813-7654 ext. 5676 or by email at [elaine.stasiulis@sickkids.ca](mailto:elaine.stasiulis@sickkids.ca). Questions about the project can be directed to me, Joanne, at 416-921-2109 or by email at [joanne@cmho.org](mailto:joanne@cmho.org).

The survey will "close" on July 26, 2004, after which time it will no longer be possible to respond.

Regards,

Joanne Johnston  
Manager, Accreditation and Special Projects, CMHO

**Welcome !**

Thank you for taking the time to complete this survey. Your input is very important. We expect the survey to take 15 minutes to complete.

**Please tell us about yourself**

**1. Please indicate your discipline/profession: (mark all that apply)**

- Psychology
  - Social Work
  - Social Services
  - Child/Youth Care
  - Medicine: Psychiatry
  - Public Health Administration
  - Other (please specify)
- 

**2. How many years experience do you have working in a children's mental health centre?**

- 0-2
- 3-5
- 6-10
- 11-15
- 16 years or over

**3. Which type of programs are you affiliated with? (mark all that apply)**

- residential
  - day treatment
  - crisis
  - intensive child and family services
  - mental health services for children 0-6 years
  - intake
  - community based treatment
  - prevention and early intervention
  - other (please specify):
- 
- 

**4. Please indicate if you are:**

- front line clinical staff
- clinical manager/supervisor who is NOT also providing direct service
- clinical manager/supervisor who IS also providing direct service

**5. Please indicate the primary service area for your organization. (mark all that apply)**

- rural
- suburban
- urban



**6. The Ministry of Children and Youth Services divides children's mental health services into 9 regions. Please indicate which region your organization is located in.**

- Toronto
- Central West
- South West
- Hamilton-Niagara
- Northern
- North East
- Central East
- South East
- Eastern

<b>Utilization of New Knowledge in Children's Mental Health</b>
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We are interested in your organization's capacity to access, assess, adapt, and apply new research-based knowledge in order to enhance children's mental health services and programs.

**7. How well is your organization able to ACCESS (find and obtain) research-based knowledge?**

- not well
- somewhat well
- well
- very well

**8. What barriers are faced by your organization in ACCESSING research-related knowledge? (mark all that apply)**

- time (for seeking and reviewing material)
- level of difficulty of research material
- too much information (overwhelming)
- information is unavailable
- lack of resources: money
- lack of resources: staff
- lack of resources: web access
- no barriers
- other (please specify)

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**9. What sources does your organization use to ACCESS research information? (mark all that apply)**

- journals
- conferences, forums
- press releases
- advisory committees
- newsletters
- organizations
- on-site researcher
- off-site research consultant
- research-motivated individual on staff
- no resources

other (please specify)

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10. **How well is your organization able to ASSESS whether research is relevant, reliable, and of high quality?**

- not well
- somewhat well
- well
- very well

11. **How does your organization ASSESS the reliability and quality of research? (mark all that apply)**

- seek consultation or second opinion
  - contact expert(s)
  - credibility of source or author affiliation
  - supported/used by credible organization
  - supported/used by credible individual
  - staff member(s) research knowledge
  - not considered
  - other (please specify)
- 

12. **How well is your organization able to ADAPT (modify to meet client/program needs) relevant information from research?**

- not well
- somewhat well
- well
- very well

13. **What obstacles does your organization face in ADAPTING (modify to meet client/program needs) what is relevant? (mark all that apply)**

- information is difficult to modify
  - modification is hampered by lack of brief reports/summaries/main messages
  - not sure how we would modify
  - no obstacles
  - other (please specify)
- 
- 

14. **How well is your organization able to APPLY (implement and adopt) research information?**

- not well
- somewhat well
- well
- very well

15. **What barriers does your organization face in APPLYING research information? (mark all that apply)**

- not always sure how to link research with practice

- organizational change is difficult to accomplish
  - research focus is inconsistent with clinical philosophy
  - no staff with statistical knowledge
  - research results often not generalizable to our client population(s)
  - not enough information available to enable implementation
  - conflicting research findings
  - no barriers
  - other (please specify)
- 

**16. To what extent are your organization's services/programs supported by research evidence?**

- not at all
- somewhat
- pretty much
- very much so
- don't know

**17. How likely is your organization to use resources provided on the Internet?**

- unable to use (no internet access)
- very unlikely
- unlikely
- very likely

**18. Does your organization have membership access to a university or college library?**

- yes
- no

**19. Are you affiliated with a college or university? (eg., supervising students, faculty appointment, pursuing continuing education)**

- yes
- no

**20. Is your organization connected to the web?**

- yes
- no

**21. Are you connected to the web at your organization?**

- yes, at my desk (personal access)
- yes, in my building (shared access)
- no

**Readiness for New Knowledge**

This section of the survey asks questions about how you, as a clinical staff member and/or manager, perceive your organization's capacity to deal with new research/treatment knowledge in children's mental health.

**22. Your organization needs assistance with:**

	Disagree Strongly	disagree	undecided	agree	agree strongly
1) assessing client needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2) matching needs with services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) increasing program participation by client...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4) measuring client performance performance..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5) raising overall quality of service...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) using client assessments to guide clinical and program decisions...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) using client assessments to document program effectiveness...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**23. You need training for:**

	Disagree Strongly	disagree	undecided	agree	agree strongly
1) assessing client problems and needs...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2) increasing client participation in treatment...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) monitoring client progress...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4) using computerized client assessments...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**24. Current pressures to make organizational changes come from:**

	Disagree Strongly	disagree	undecided	agree	agree strongly
1) clients in the program...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2) program staff members...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) program supervisors or managers...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4) agency board members...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5) community action groups...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- |  |                          |                          |                          |                          |                          |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 6) Ministry and other funders...             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7) accreditation or licensing authorities... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**25. How strongly do you agree or disagree with each of the following statements?**

	Disagree Strongly	disagree	undecided	agree	agree strongly
1) You prefer workshop training that is based on scientific evidence...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2) Your offices and equipment are adequate...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) You often have trouble Implementing concepts learned at conferences...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4) You understand how this program fits as part of the treatment system in your community...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5) Treatment planning decisions for clients here often have to be revised by a supervisor...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Staff training and continuing education are priorities in this organization...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) You frequently share your knowledge of new ideas with other staff..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8) You were satisfied with the training offered at workshops available to you last year...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9) You used the Internet in the past month...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10) There is too much friction among staff members...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11) Some staff members here resist any type of change...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12) Staff generally regard you as a valuable source of information...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13) You have easy access for the Internet at work...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14) Client assessments here are usually conducted using a computer...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- |   |                          |                          |                          |                          |                          |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 15) You learned new skills or techniques at a professional conference in the past year... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16) You are under too many pressures to do your job effectively...                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 17) Clinicians here are given broad authority in treating their own clients...            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 18) You read about new techniques and practices each month...                             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 19) Computer problems are usually repaired promptly at this organization...               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 20) Novel treatment ideas by staff are discouraged...                                     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 21) There are enough clinicians here to meet current client needs...                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 22) You have enough opportunities to keep your management skills up-to-date...            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 23) Mutual trust and cooperation among staff in this organization are strong...           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 24) Most client records here are computerized...  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 25) You are willing to try new ideas even if some staff members are reluctant...          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 26) This organization operates with clear goals and objectives...                         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 27) Staff members often show signs of stress and strain...                                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 28) You have staff meetings weekly...   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 29) You usually accomplish whatever you set your mind on...                               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 30) It is easy to change procedures here to meet new conditions...                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

- |  |                          |                          |                          |                          |                          |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 31) Clinicians here often try out different techniques to improve their effectiveness...                             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 32) You used the Internet to get work-related information...   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 33) The formal and informal Communication channels here work very well...  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 34) Policies here limit staff access to the Internet and use of e-mail...  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 35) Offices here allow the privacy needed for individual treatment...  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 36) You are sometimes too cautious or slow to make changes...  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 37) The heavy workload here reduces program effectiveness...   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 38) You regularly read professional journal articles or books on treatment...  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 39) Communication with other organizations that have similar interests would help...                                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 40) Other staff often ask your advice about program procedures...  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 41) This organization holds regular inservice training...  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 42) You learned new clinical skills or techniques from manuals or other self-education materials in the past year... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 43) You frequently hear good staff ideas for improving treatment...  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 44) You are effective and confident in doing your job...   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 45) You have a computer to use in your personal office space at work...  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 46) A larger support staff needed to help meet service needs...  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

- |   |                          |                          |                          |                          |                          |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 47) The general attitude here is to use new and changing technology...                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 48) You always feel free to ask questions and express concerns in this organization...      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 49) You need better access while at work to resources on the Internet...                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 50) You have easy access to specialized consultations/treatments for clients when needed... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 51) You have convenient access to e-mail communication...                                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 52) You are encouraged here to try new and different techniques...                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 53) You are able to adapt quickly when you have to shift focus...                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 54) Computer equipment in this organization is mostly old and outdated...                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 55) You feel comfortable using computers...   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 56) Frequent staff turnover is a problem for this organization...                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 57) Clinical staff here are well-trained...   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 58) The workload and pressures at your organization keep motivation for new training low... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 59) More computers are needed in this organization for staff to use...                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 60) Offices here are adequate for conducting group counseling...                            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



<b>Evidence-Based Treatment</b>
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For the purpose of this section of the survey, evidence-based treatment is defined as: A treatment that has been developed through research, is supported by the results of controlled treatment studies, and has guidelines and procedures for its implementation.

**26. Please indicate which of the following evidence-based treatments are provided by your organization.**

- Aggression Replacement Training (ART)
- Brief Strategic Family Therapy (BSFT)
- Bullying Prevention Program
- Behavioral Parent Training
- Behavioral Teacher Training
- COPE
- Cognitive Behaviour Therapy (CBT)
- Earls court Under 12 Outreach Program (ORP)
- Earls court Girls Connection
- Family Effectiveness Training
- Families and Schools Together (FAST)
- Functional Family Therapy (FFT)
- Good Behaviour Game
- Helping the Noncompliant Child
- Homebuilders
- I Can Problem Solve
- Intensive Behavioural Intervention (IBI)
- Linking the Interests of Families and Teachers (LIFT)
- Life Skills Training
- Multidimensional Treatment Foster Care (MDTFC)
- Multisystemic Therapy
- Narrative Therapy
- Nurse-Family Partnership
- Perry Preschool Program
- Positive Behaviour Support (PBS)
- Project Towards No Drug Abuse (Project TND)
- Promoting Alternative Thinking Strategies (PATHS)
- Right from the Start
- School Transitional Environmental Program (STEP)
- Stop Now and Plan (SNAPP)
- Teaching-Family Model
- The Incredible Years
- Wraparound
- Others (please specify)

**27. In your own work do you use any courses of treatment considered evidence-based?**

- yes
- no
- I am not providing direct service

**You have completed the survey.**

Thank you for your time! You have completed the survey. You can either fax or mail your responses to the project coordinator at the following:

Elaine Stasiulis  
Project Coordinator  
Community Health Systems Resource Group  
The Hospital for Sick Children  
555 University Avenue  
Toronto, Ontario  
M5G 1X8

Fax: (416) 813-7258

Information from this survey will be included in the project report, which will be distributed to all CMHO centres upon completion. We thank you for taking precious time to complete this survey.

Project Team and CMHO