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

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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
What progress have we made in getting evidence into practice?

Total elapsed time from Lancaster to adoption: 264 years

104 years
- 1497: Vasco da Gama: 100 of 160 crew died of scurvy; citrus suspected as cure

146 years
- 1601: Capt James Lancaster sails with 4 ships: crew on Ship #1 given 3 tsps of lemon juice daily; 0% mortality. 40% of crew on other 3 ships perish.

48 years
- 1747: James Lind, British Navy physician conducts random trial of 6 treatments for scurbutic sailors on HMS Salisbury: citrus again proves effective against scurvy

70 years
- 1795: British Navy orders that citrus fruits become the diet on all navy ships.

104 years
- 1865: British Board of Trade adopts the innovation, ordering proper diets on merchant vessels.

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To implement, transfer, deploy evidence-based practices to the field necessarily requires:

- Resources
- Leadership
- Training
- Practice Change

Readiness
Multiple methods of support
Culture of professional development
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.

Barwick et al 2005
Pillars of Ontario’s System of Care for CMH

- Evidence-Based Treatments
- Access to Service
  - Intake Screening
  - BCFPI
- Training for Practice Change
- Outcomes
  - Outcome Management
    - CAFAS
- Learning Organizations
- Benchmarking Indicator Development

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Study Objectives

- Reviewed the literature in knowledge transfer, organizational change, and implementation science
- Surveyed leaders and practitioners in 80 CMHCs across Ontario regarding their utilization of research-based information and their readiness for change
- Interviewed 12 experts in implementation science
- Made recommendations for system of care improvements
Active strategies, collaboration, leadership are important
Sharing tacit knowledge face-to-face is powerful
Resistance to change – from the system, leaders, and practitioners – needs to be recognized and addressed
Change is complex and requires buy-in from a critical mass – create a tipping point!
Distillation of research knowledge into practice guidelines is insufficient to create practice change
Implementation requires a collaborative effort
Strategize on multiple levels: practice, organization, system, nature of evidence, the support plan
Review Highlights -2

❖ Practitioners need:
  ❖ better access to the research base
  ❖ venues for sharing tacit knowledge
  ❖ to develop capacity for life-long learning
  ❖ to strike a balance between treatment fidelity and re-invention in the practice environment
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
Survey Highlights - 1

- **Response Rate:**
  - 72.5% Executive Directors
  - 12.2% practitioners from an *estimated* population of 3,951
  - Most had social work backgrounds
  - 77.8% had >16 years experience in the field

- 50% of CMHC had budgets between $1-5 million
  - Providing a wide range of services
Survey Highlights - 2

- Internet use:
  - Majority (>80%) feel it is very likely their organization will go to the web for resources
    - 100% of Ex Dir are linked
    - 92% of practitioners are linked at their desk
    - 7.6% of practitioners are linked elsewhere

Significance?

Access to the evidence base is highly dependent upon access to the internet and to electronic databases.
Survey Highlights -3

What are they linked to?

- 67% of practitioners and 77% executive directors are affiliated with universities/colleges…
- Fewer than 40% of CMHCs have membership access to university or college libraries

Significance?

This represents an important and actionable barrier to the evidence base.
Survey Highlights -4

CMHC Organizational Capacity for Research Utilization

- Acquire – can they find the research evidence they need?
- Assess – can they assess the quality of research, its relevance and applicability?
- Adapt – can they adapt the information to suit their needs, client population(s) and environment?
- Apply – can they adopt and implement the research information into their context(s)
How well is your organization able ACCESS (find and obtain) research-based knowledge?

- Not Well
- Somewhat Well
- Well
- Very Well

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

- Time
- Difficulty of Material
- Information Quantity
- Availability
- Money
- Staff
- Web Access
- None

Ex Director
Clinical Staff
What sources does your organization use to access research information?

- Journals
- Conferences
- Press Releases
- Advisory Committees
- Newsletters
- Organizations
- On-site researcher
- Off-site researcher
- Motivated staff
- None

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How well is your organization able to ASSESS the reliability and quality of research?
How does your organization assess the reliability and quality of research information?

- Seek consultation
- Contact expert(s)
- Source credibility or author affiliation
- Organization's credibility
- Individual's credibility
- Staff member research knowledge
- Not considered

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

- Not Well
- Somewhat Well
- Well
- Very Well

Frequency (%)

Ex Director
Clinical Staff

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Factors Related to Organizational Change

Characteristics of the Adopting Organization
- Leadership, motivation, resources, competing priorities

Characteristics of the Exchange between Stakeholders
- Social networks influence diffusion: early adopters vs. laggards

Characteristics of EBP to be Adopted
- Relative advantage; compatibility; complexity; trialability; observability

Characteristics of the Setting
- Social networks influence diffusion: early adopters vs. laggards

KTE strategies: development and engagement

adapted from Miller 2001
Organizational Readiness for Change Scale

The literature identifies several important factors that appear to influence the change process. The TCU Organizational Readiness for Change (ORC; Simpson 2002) assessment focuses on the following dimensions and subscales:

**Motivation for Change**
- Program needs
- Training needs
- Pressures for change

**Program Resources**
- Offices / Staffing
- Training Needs
- Equipment

**Organizational Dynamics**
- Staff Attributes
  - Growth
  - Efficacy
  - Influence
  - Adaptability

**Organizational Climate**
- Mission
- Cohesion
- Autonomy
- Communications
- Stress
- Change
Evidence for the ORC

- Substance abuse field / criminal justice / social agencies
- National sample of 500 staff members from > 100 programs
- 18 scales contain average of 6.4 item – 25 minutes to do
- Program-level alpha’s range from .64 to .92 (Lehman, Greener & Simpson, 2002)
- Barwick et al study: item reduction for sake of manageability - half the scales had alpha’s > .60
Clinical staff sense pressure for change 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 desire training in different areas: clinical staff see a need for training to improve client engagement with treatment, while executive directors see a need for training in monitoring client progress.

Motivation for Change
44% of clinical staff view offices as inadequate for group treatment; this may have implications for future implementation of group-based EBTs.

Adequacy of computers reported in this study contradicts anecdotal reports from the field.

General agreement on the value and opportunity for professional development.
Opportunities for personal growth are seen as 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.

Both groups have confidence in their clinical efficacy and willingness and ability to influence their co-workers, two characteristics that bode well for change.

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.
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.

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.
Interview Highlights -1

- Developing “buy-in” for EBP implementation is necessary at all levels in the system
  
  “Conscripts make lousy converts”

- Skepticism among practitioners presents a significant barrier to the implementation of evidence-based practices.
  
  “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”

- 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!
Interview Highlights -2

• Create organizational cultures that foster change
  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 produced
• Change takes time and requires a sustained effort and plan for long term maintenance
• Implementation requires the creation and maintenance of “culture of adherence”
  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 water down the intervention
• 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.
  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
Interview Highlights -3

• Consider system-wide implementation of evidence-based practices

• Inform consumers of the evidence-based treatment options as they become more widely available.

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

Anonymous
1. Connect CMH to the evidence base

Benefits could be realized if CMHC’s were connected to the faculties and web-based resources (i.e., library databases) of 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.

- CMHO could play a role in facilitating this linkage
- Create opportunities for linkage and exchange among practitioners, researchers, and decision-makers
- Develop regional teams responsible for reviewing the literature and making summaries available to others. This could be done centrally, by CMHO, or provincially by the Centre of Excellence for Child and Youth Mental Health
- For future EBP publications produced by CMHO (or others), a more comprehensive knowledge translation approach is needed, i.e., community of practice for specific client populations
2. Reintroduce professional development and networking as a core activity across the sector

There is a desire for an expanded practitioner role and we must address the confining cycle of service delivery for an ever increasing list of clients waiting at the door. There are risks associated with waiting for service, and there is a human capital cost for the sector.

- Research is needed to examine the costs and benefits associated with a reorganization of service delivery, whereby practitioners are allotted a certain percentage of time for continuing professional development & networking. Would this negative or positively affect service delivery? Outcomes?

- Explore how Ontario’s growing capacity for videoconferencing within the telehealth / telepsychiatry initiatives might provide a cost effective & practical solution for sharing new knowledge.
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 with the implementation of EBPs. When EBPs are implemented in a system of care, it is the purview of the government (funder) to institute these rewards/incentives.

Incentives can be beneficial in making the achievements of early adopters observable to the rest of the field. What strategies can we use to highlight successes in CMH care?

- CMHO Annual Conference, and other venues, can be used to showcase and acknowledge excellence in service provision. A special award could be introduced for providers doing innovative things, i.e., development & evaluation of ‘promising’ practices, excellence in culturally sensitive service delivery.
Taking Action - 4

4. Encourage the adoption of Berwick’s 7 rules for disseminating innovations

(1) Find sound innovations
   Ontario Solution: Develop a CMH Practice Group

(2) Find and Support Innovators
   Ontario Solution: Encourage leaders to provide innovators time and decision-latitude, perhaps through an “Innovators Competition” whereby practitioners could apply in a competitive process for funds to explore an innovation elsewhere in the world and develop a task group and plan to bring it back to Ontario.

(3) Invest in Early Adopters
   Ontario Solution: Leaders can encourage early adopters within their midst, to test innovations, to ‘run with’ an innovation ahead of the pack. Is there a clinical team interested in trying a new treatment? Provide them with time needed to explore and test out the innovation, AND THEN develop opportunities for early adopters to mingle with innovators in other social settings
4. Encourage the adoption of Berwick’s 7 rules for disseminating innovations

(4) Make Early Adopter Behaviour Observable
   Ontario Solution: Encourage social interaction beyond organizational silos

(5) Trust and Enable Re-invention
   Ontario Solution: Leaders can encourage and showcase individuals or organizations who take ideas from elsewhere and adapt them to their own environments. This could occur at the level of the organization, CMHO, or the Ministry.

(6) Create Slack For Change
   Ontario Solution: Leaders need to invest people’s time and energy into the use of EBPs and the management of outcomes and service quality. This needs to be planned for – it will not happen naturally.
Taking Action - 6

4. Encourage the adoption of Berwick’s 7 rules for disseminating innovations

(7) Lead by Example

Ontario Solution: Preparing to lead change at the CMHO level will set the example for CMH service providers, 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 for EBPs among Ontario service providers**

Successful implementation requires that level of awareness and philosophical stance to evidence be identified and addressed. Changing practitioners’ attitudes alone will be insufficient for change to occur, but it is an important factor.

- Conduct research on service provider knowledge and receptivity for EBP, preferably using qualitative approaches that can explore these issues in depth.
- Develop recommendations and methodologies for training in EBPs that account for practitioners’ knowledge and readiness, as well as availability of resources (time, costs) for such efforts.
6. **Make it easier for practitioners to acquire training in EBPs**

Requires support from leadership provincially and within organizations in the form of recognizing the value of training, providing release time, and establishing supports for funding. Also presumes people know how to go about securing the training they need.

- CMHO is well 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 application / supervision / fidelity could be addressed.

- Provincial government also has a role to play in the system-wide implementation of EBPs and they have an opportunity to build this into the CMH Policy Framework. To expect that CMHCs will move in this direction alone and in a one-off basis is inefficient and fiscally unrealistic.
7. **Explore the dynamics of board governance among CMHCs**

Our finding that boards are not a great source of pressure for change among executive directors needs to be explored.

- Research is needed to examine the role and function of boards in our service delivery system. Their perceived role relative to EBPs could also be explored, as well as the dynamics of the reporting relationship and how they might create a change culture and learning organization within the organization.
8. Create linkages with educators and professional colleges in social work and psychology

CMHO is ideally positioned to represent the interests of members regarding the education new graduates have upon entering the practice world. Stakeholders could work together to identify common goals and mechanisms for professional development.

- Partnership is needed to examine if new practitioners are learning what is necessary for an evidence-based quality management culture. Are they developing skills for continuous learning and reflective practice? To what extent are the needs of the workforce being addressed at the pre-service level?
- CMHO could partner with professional colleges to develop a mutually beneficial approach to professional development for mental health professionals – these systems exist but they need to be better aligned.
9. Help providers to evaluate the promising practices they are developing on the front lines

Lab-based interventions are but one end of the spectrum. Many promising practices are being developed, often with the distinct advantage of being culturally and developmentally sensitive. The knowledge and resources needed to evaluate such practices often evade service providers, and this is a gap that can be addressed through partnership.

- CMHO and/or the Centre of Excellence for Child and Youth Mental Health could help to broker academic-service provider relationships.
- An evaluative consultancy could be formed, bringing together experienced clinicians and researchers in CMH.
Pay special attention to the best of the past and present—in order to ignite the collective imagination of what might be.

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The full report on which this presentation is based can be found on the web at www.cmho.org and www.sickkids.ca and http://nirn.fmhi.usf.edu
What is NIRN?

The mission of the National Implementation Research Network (NIRN) is to close the gap between science and service by improving the science and practice of implementation in relation to evidence-based programs and practices.

Our purposes are to...

Advance the science of implementation across domains (e.g. mental health, substance abuse, education, juvenile justice) by:

- Conducting implementation research and evaluation.
- Developing and updating syntheses of relevant implementation research and practice descriptions.

Inform the transformation of human services by:

- Developing practical implementation frameworks to guide the transformation of behavioral health services.
- Providing technical assistance to governments, communities, foundations and individual agencies that are implementing evidence-based programs and practices.

Ensure that the voices and experiences of diverse communities and consumers influence and guide implementation efforts by:

- Supporting a network to impact implementation agendas as they relate to consumer and family issues, diversity, access, and effectiveness.
- Collaborating with diverse communities who wish to develop an evidence-base for a promising practice.