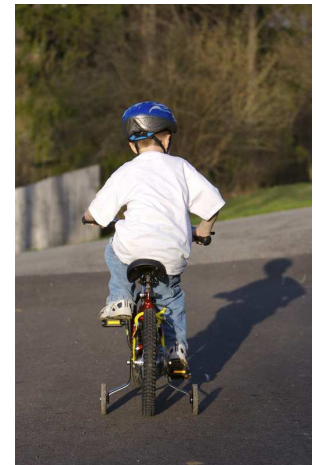


Applying research to improve health outcomes

Presented by Virginia Wright, PT, PhD
Bloorview Research Institute
at the CN-CYR Workshop: October 19, 2008



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How do we as a pediatric rehabilitation community/network ensure that research is relevant and accessible and used by clinicians?



Is the research relevant?

- Where did the research question come from (sources)?
- How do researchers and clinicians within the same facility/university network relate to each other?
- Do researchers and clinicians work together to refine the research question and design the research?
- What is the composition of the research team? Does the infra-structure support the inclusion of clinicians and decision makers and families in the research process?
- Engagement of families and clinicians and decision makers from square one.

Building relationships

- ❖ “Both partners in the transfer and exchange process – those who transfer research information and the audience who might use the information – must be convinced that the exchange offers something of value.” Reardon et al., 2006
- ❖ How many psychiatrists does it take to change a lightbulb?

Is there ability and willingness within the health care system to alter assessment and intervention practice?

- ❖ Senior management support: research 'departments' or 'institutes' and clinical facilities must have shared visions and missions
- ❖ There must be readiness and willingness to support change
- ❖ Engagement of decision makers/policy makers in the entire research process – new models in Canada emerging to facilitate this partnership

Sharing research results

- ❖ Time is of the essence!
- ❖ Question: Who needs to know?
- ❖ The message must be understandable and fit with the needs of the audience
- ❖ What is the actionable idea that comes from the message?
- ❖ What format of transfer is best? SADLY, NOT PUBLICATIONS!

Refer to Knowledge Transfer Planning Guide
(Reardon et al., 2007)

How do researchers get new knowledge to those who can use it to improve outcomes?

- ❖ Whose role is this dissemination? How important is it to the researcher?
- ❖ How has this been attempted in the past? ... conferences, publications
- ❖ What else do we try to do now?
- ❖ How is knowledge transfer funded?
- ❖ Development of training materials/manuals as part of the research to encourage adoption of the new assessment/intervention – who takes responsibility for sharing these?

Is there a feedback loop from clinician to researcher?

If clinicians adopt the new assessment or
intervention/technology

They may say:

- ❖ It is perfect! The outcomes are as hoped!
- ❖ It could be better if ...
- ❖ It doesn't seem to work as shown in the
research

Now what?

The clinician researcher

- ❖ Who is this person? Qualifications?
- ❖ Canadian Child Health Clinician Scientist Program (CCHCSP)
- ❖ “Need to know and need to create change”
- ❖ How might this individual help us in our quest to bridge the gap between clinical care and research?

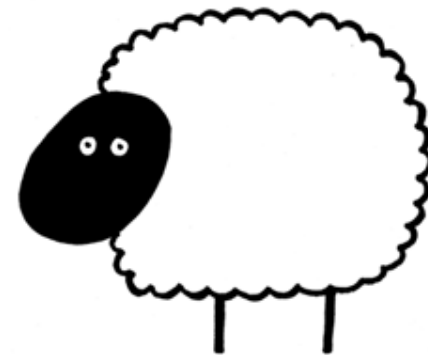
Clarifying the concepts in knowledge transfer

(Thompson et al., 2006)

- ❖ Researcher must forge and sustain relationships with opinion leaders, champions, facilitators, linking agents, change agents
- ❖ Assumes that increasing the availability of knowledge will lead to behaviour change (Arthroscopic surgery vs PT example [Kirkley et al., 2008; Marx, 2008, Canadian Physiotherapy Association communique Sept 2008]); Defalzacort in DM to slow progress of disease example [Biggar et al.]

Changing practice

- Do people (e.g., clinicians) make rationale decisions? (Kolbert, 2008)
- Remember: people tend to follow the herd with respect to their actions (happily, the herd is occasionally right!) (Thaler and Sunstein, 2008)



Don't follow me
I haven't got a clue

Changing practice

What goes around comes around

- Muscle strengthening for children with CP
- Constraint-induced therapy
- Conductive Education

Maybe now we have supporting evidence to justify use?

Introduction of new therapies (no research yet)

- MEDEK
- Kinesiotaping
- WiiFit

Golden opportunities for research (clinician-researcher partnerships) before becomes accepted clinical practice
OR is it going to be a missed opportunity?

Changing practice

- ❖ What happens when there is a lot of choice, such as when we have to choose among a similar set of outcome measures? Does inertia prevail? Are the best choices even made when evidence is reviewed? (*The Paradox of Choice*, Schwartz, 2005)
- ❖ How might the **nudge** concept help? (Thaler and Sunstein, 2008)
 - ❖ Incentives
 - ❖ Best practice guidelines
 - ❖ Desk magnet: GMFM questions? Who are you going to call? Your knowledge broker!

from Sussman, Sept 2008, AACPDMD

Changing practice

Possible nudges:

- ❖ Incentives
- ❖ Best practice guidelines (easily–accessed)
- ❖ Desk magnet: GMFM questions? Who are you going to call? Your knowledge broker!

- ❖ May be times when a shove is called for:
i.e., use of a certain measure is mandated
- ❖ Use of Goal Attainment Scaling by PTs
- ❖ Use of WeeFIM instrument by in-patient team
- ❖ Require education and support (Knowledge broker) to put into use (and careful thought pre-mandate!)

Processes of behaviour change ...

Stages of change in health behaviours
(Proschaska et al, 2002):

Precontemplation

Contemplation

Preparation

Action

Maintainence

(Transtheoretical model of change)

Processes of behaviour change

Stages of change in professional behaviours
(Grol et al, 2007):

Orientation

Insight

Acceptance

Change

Maintenance

→ **Capacity**

→ **Performance**

As discussed by Ketelaar et al., 2008

Example of clinical practice/research partnership that has lead to changes in assessment and intervention at our centre

- ❖ **Community Balance & Mobility (CB&M)**
Assessment: designed as a balance outcome measure for adults post-stroke (Howe and Inniss, 200)
- ❖ Adopted by our PTs for outcome evaluation of in-patients (ages 8 to 18 years) who have acquired brain injuries
- ❖ After 1 year of use, PTs were convinced of clinical utility – they wanted to know about its psychometric properties in pediatrics

- ❖ Partnership with PT researcher: investigative team consisted of PT researcher (PI), PT clinician and physician
- ❖ Three-centre study (should help transfer use to clinical practice)
- ❖ 6 clinical PTs hired as PT assessors (study purchased their clinical time)
- ❖ Intensive training on CB & M (training and testing DVDs made)
- ❖ While 4 of the PTs had been very frequent users of the CB and M pre-study, all noted great improvements in the consistency of their administration and scoring of the test (Side benefit: clinical practice improvement)

- ❖ Study PTs note much greater use now of CB & M with clinical clients (and now part of standard outcome protocol)
- ❖ Videos demonstrate much better administration of the test
- ❖ Greater awareness of high level balance limitations may lead to better targeted interventions (and better outcomes assuming effectiveness of these interventions?)
- ❖ Training/testing materials from the research could be shared for clinical use

It doesn't always work this way ...

- ❖ **Development of new observational gait assessment (known as Bloorview Barefoot Gait Assessment):** need identified by researcher and clinical team
- ❖ Team received funding to develop the new scale
- ❖ Successful development and initial validation over a 2-year period with 2 clinical PTs and gait lab kinesiologist
- ❖ One key PT on team left on mat leave and then did not return
- ❖ One other key PT left on mat leave just as we were starting to report results
- ❖ Presented at large pediatric meeting in Sept 2008

Observational gait scale

- ❖ ? Uptake – will depend on who heard the talk
- ❖ Difficult to get uptake in-house at present unless PT researcher leads the clinical initiative
 - associated with time/funding issues
- ❖ Ironically the PTs who have expressed intense interest in using the measure are those working with acquired brain injury
 - ? applicability to that clinical group
- ❖ Also need to design and distribute test manual and criterion test - ? who will do, ? cost coverage (time and materials) – need to build into the study so ready to use post-study

Knowledge broker (KB)

- ❖ Since therapists rely strongly on peers for learning and using new knowledge, make use of this: “‘educationally influential” therapists may be an effective way to help move research into practice’ (Ketelaar et al., 2008, p. 203)
- ❖ The KB facilitates the interaction between clinicians, researcher and policy makers. Uses active educational strategies and provides support for integration of new knowledge into practice

Example of 'knowledge broker' process

- ❖ “Moving motor growth research into clinical practice”
Russell et al., *CanChild (2006-2008)*
- ❖ Study of the effectiveness of a multi-faceted active strategy for knowledge translation using knowledge brokers (KBs) to facilitate use of evidence based measures of gross motor function
- ❖ Purpose: get these measures into clinical use!
- ❖ Process: physical therapists at each of 30 children's treatment centres trained as KBs: multi-media educational materials developed for their use with clinicians
- ❖ If effective, recommendation might be that CTCs find and provide support for KBs in their facility

KT in the Emergency Ward

Janet Curran, RN, PhD

Presented at CCHCSP, October 2008

- ❖ Staff aware that evidence based practice necessary but ...
- ❖ **Oral tradition ruled as far as KT was concerned** – nurses sought info first from ‘expert’ colleagues, then went to clinical practice guidelines as a next source
- ❖ Publications, internet rarely used by others
- ❖ Novice nurses more likely than longer-term staff to go to web materials for info

Example of a funding initiative by CIHR that is intended to facilitate clinical uptake and application of research results

- ❖ Pediatric Outcome Indicators Competition (2007)
- ❖ Joint funding by CIHR and a pediatric partner that has provided specifications on the research focus
- ❖ Grant requires that investigative team partner with decision makers and policy makers from the outset of the project
- ❖ Part of the budget supports the knowledge transfer part of the research - detailed KT scheme had to be provided within the grant

CN-CYR MPOC initiative

- ❖ Integrated approach to join research and clinical practice to provide a look at Canadian experience of pediatric rehabilitation outcomes/effectiveness
- ❖ Brought together researchers and clinical leaders from CN-CYR member facilities
- ❖ CN-CYR 'Group think' to formulate the most relevant outcome measures question for the network
- ❖ MPOC chosen as measure that will pave the way for a system that will promote network wide use and evaluation of other outcome measures
- ❖ MPOC Subcommittee formed to work on the **integrated** clinical and research initiative. Practice and research working hand in hand –influencing and informing each other

Knowledge Translation Resources for Child Health

Presented by Laurie Snider, PhD
at MYCRN meeting, October 2008

maternal infant
child & youth
research network



réseau de recherche
en santé des
enfants et des mères



Objectives

To conduct an environmental scan of Knowledge Translation (KT) resources for child health in Canada.

To create a useable, interactive website which will promote dissemination of the results of the scan.

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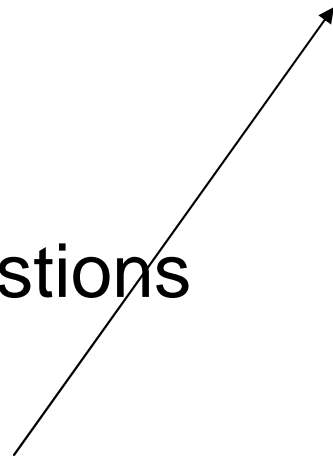


Methods: Stage I

Environmental Scan

- KT Survey Form
- Interview
- Open-ended questions
 - Recorded
 - Transcriptions
 - Themes-> Report

- Website design
 - Data Base



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Survey Form

KT ACTIVITIES	Our network/group			Top 3 priorities for next 2 years
	Is currently involved	Wishes to do	Has No interest	
a. Monitoring care gap <i>-between actual and optimal care</i>				
b. Knowledge synthesis of <i>best KT strategies</i>				
c. Elaboration of clinical practice guidelines				
d. Dissemination of clinical practice guidelines				
e. Identification barriers/solutions to best practices				
f. Advocacy and policy changes				
g. Trials of knowledge translation initiatives.				
h. Networking/forum for exchange between KT researchers				
i. Community advocacy				
j. Health promotion to families				
k. Chronic/ Illness care in the community				

Survey Form

CAPACITY BUILDING	Our network/group			Top 3 priorities for next 2 years
	Currently has	May offer our resources to MICYRN	Would look to MICYRN for assistance	
A. Training (<i>documents, workshops, courses</i>)				
Currently available?				
In development?				
Target?*				
B. Mentoring for junior and established investigators				
Currently available?				
In development?				

Interview

Open-ended questions:

How would you describe a KT tool?

Prompts:

- What are some aspects/features of a KT tool?
 - What is the purpose of KT tools for you?
 - Give an example of a 'KT Tool'.
-

What are effective strategies for a KT website?

- Information should emphasize clinical applicability and utility
- Language should be easy to understand
- A two-way exchange enhances the likelihood of knowledge uptake and the utilization of knowledge by the users



ZEN DOG



He knows not where he's going
For the ocean will decide -
It's not the **DESTINATION...**

...It's the glory of **THE RIDE**

Thank you!

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- Thanks as well to the address given by Dr M Sussman at the American Academy of Developmental Medicine and Children Neurology, Atlanta, Sept 2008 for the thoughts on behaviour change in slides 12 and 14