



Brain Center
Rudolf Magnus

Challenges and opportunities in knowledge translation:

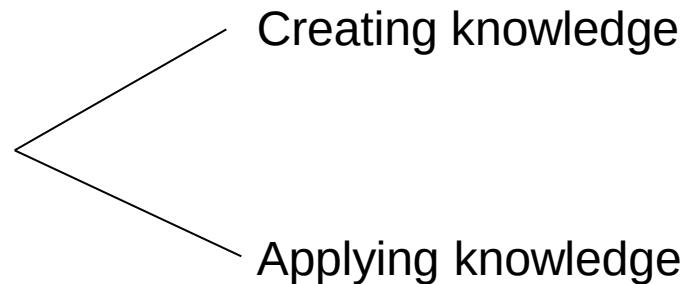
Using evidence to improve outcomes

Marjolijn Ketelaar

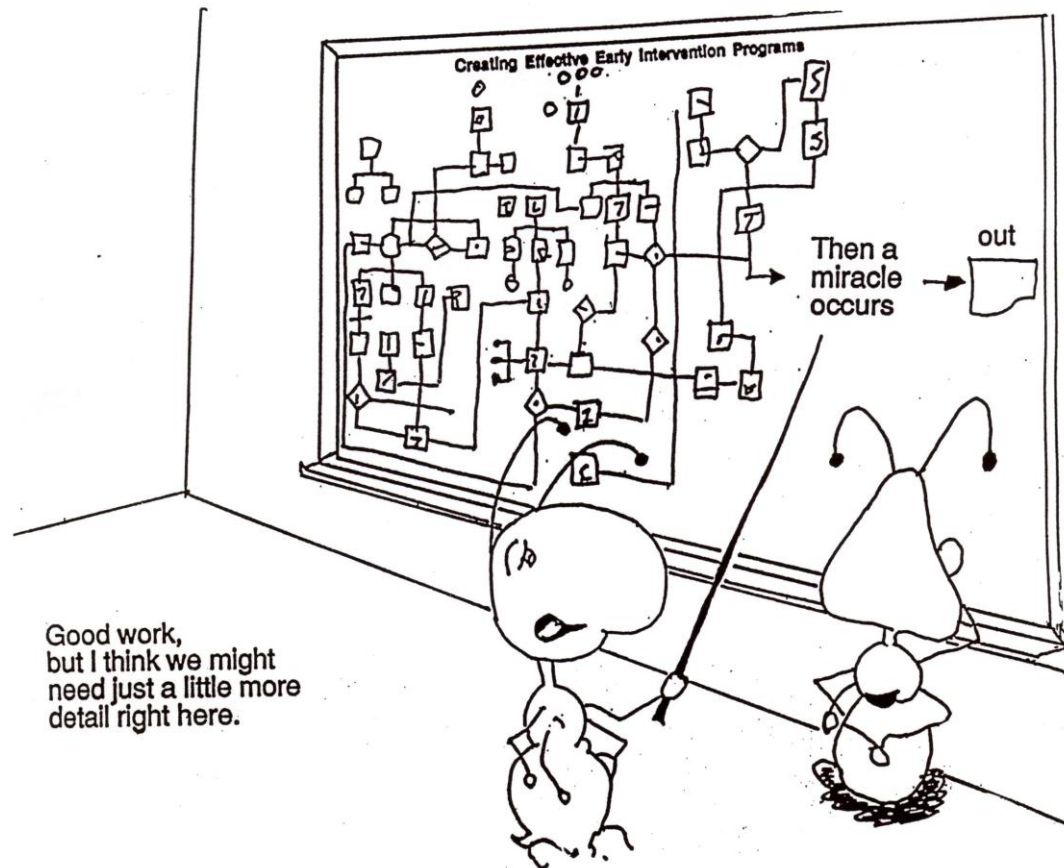
Brain Center Rudolf Magnus
University Medical Center Utrecht
and
De Hoogstraat Rehabilitation
The Netherlands

- Implementation
- Knowledge transfer
- Research utilization
- ...

Knowledge translation



Knowledge translation: A miracle?



Clinical practice lags behind research evidence !



Clinical practice lags behind research evidence !

Published by Oxford University Press on behalf of the International Epidemiological Association
© The Author 2005; all rights reserved. Advance Access publication 20 April 2005

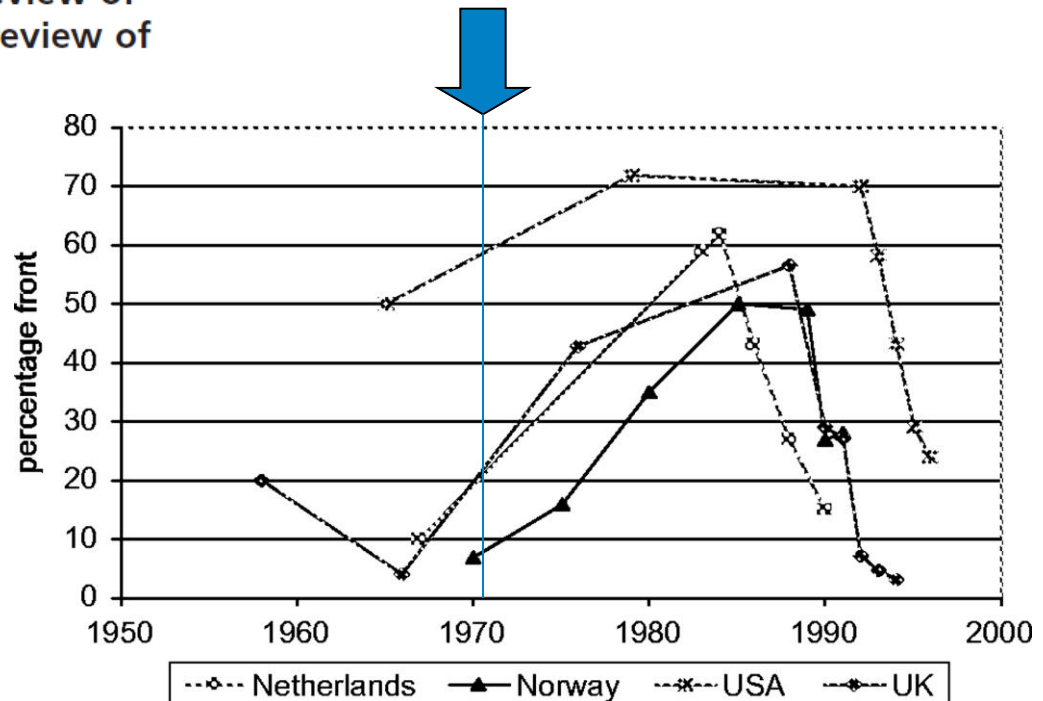
International Journal of Epidemiology 2005;34:874-887
doi:10.1093/ije/dy088

CHILD HEALTH

Infant sleeping position and the sudden infant death syndrome: systematic review of observational studies and historical review of recommendations from 1940 to 2002

Ruth Gilbert,^{1*} Georgia Salanti,² Melissa Harden¹ and Sarah See^{1,3}

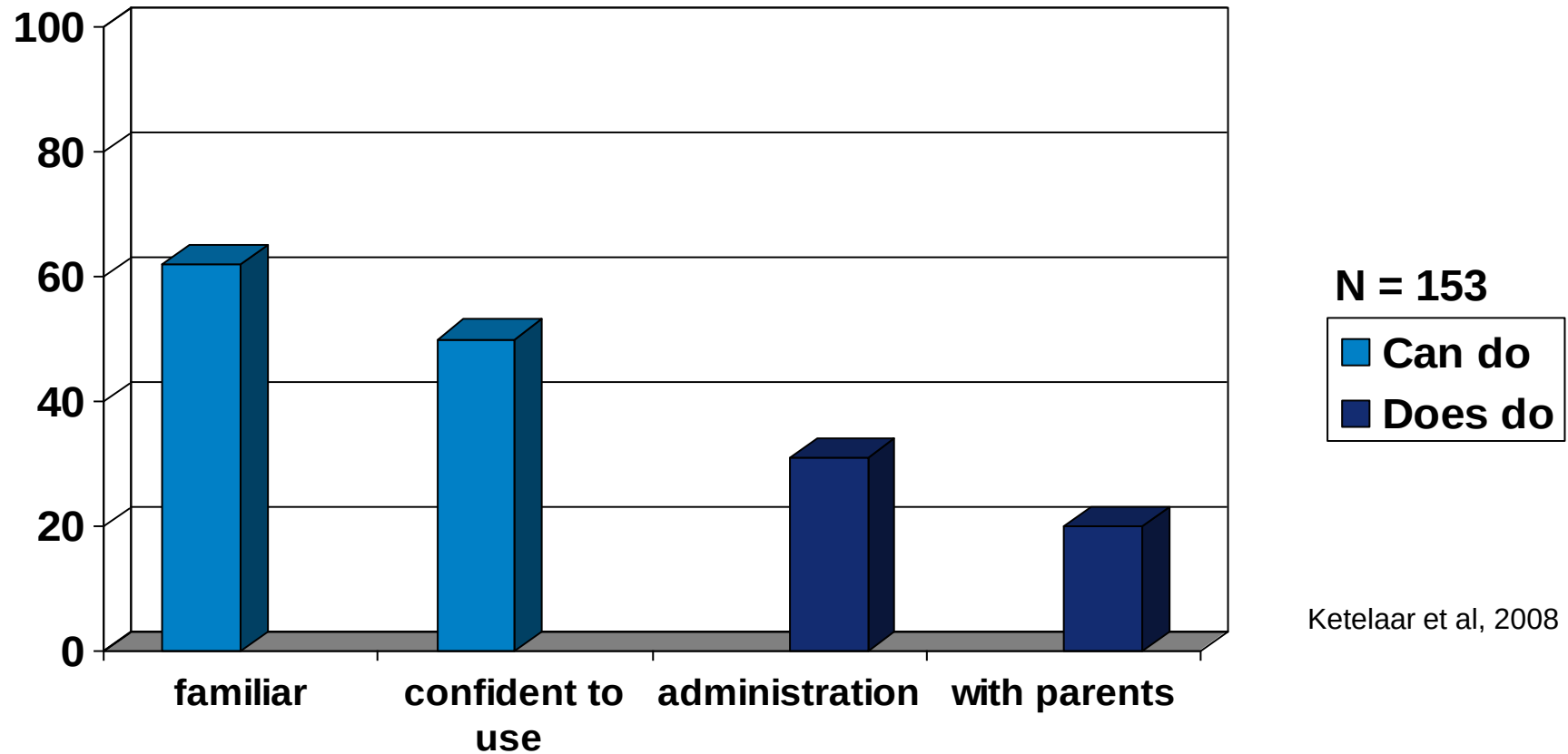
20 years!



Prevalence of front position among healthy infants

Gilbert et al. *Int. J. Epidemiol.* 2005;34:874-887

Knowledge and use of GMFCS*



Ketelaar et al, 2008

* 2-minute easy to use classification system for severity of CP, to improve communication and prognosis Palisano et al 1997



> 1000 strategies to improve hand hygiene in health care



■ Areas most frequently missed during hand washing
■ Less frequently missed
■ Not missed

Adapted from Taylor L (1978), An evaluation of hand-washing techniques - I, Nursing Times, 12 January, pp 54-58



Germ Farm



Scrub'em!
www.1st-in-handwashing.com



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Research – Practice gap

Impact on patient outcomes!



Knowledge Translation

“a dynamic and iterative **process** that includes the **synthesis**, **dissemination**, **exchange**, and ethically sound **application** of knowledge to improve health, provide more effective health services and products and strengthen the healthcare system”

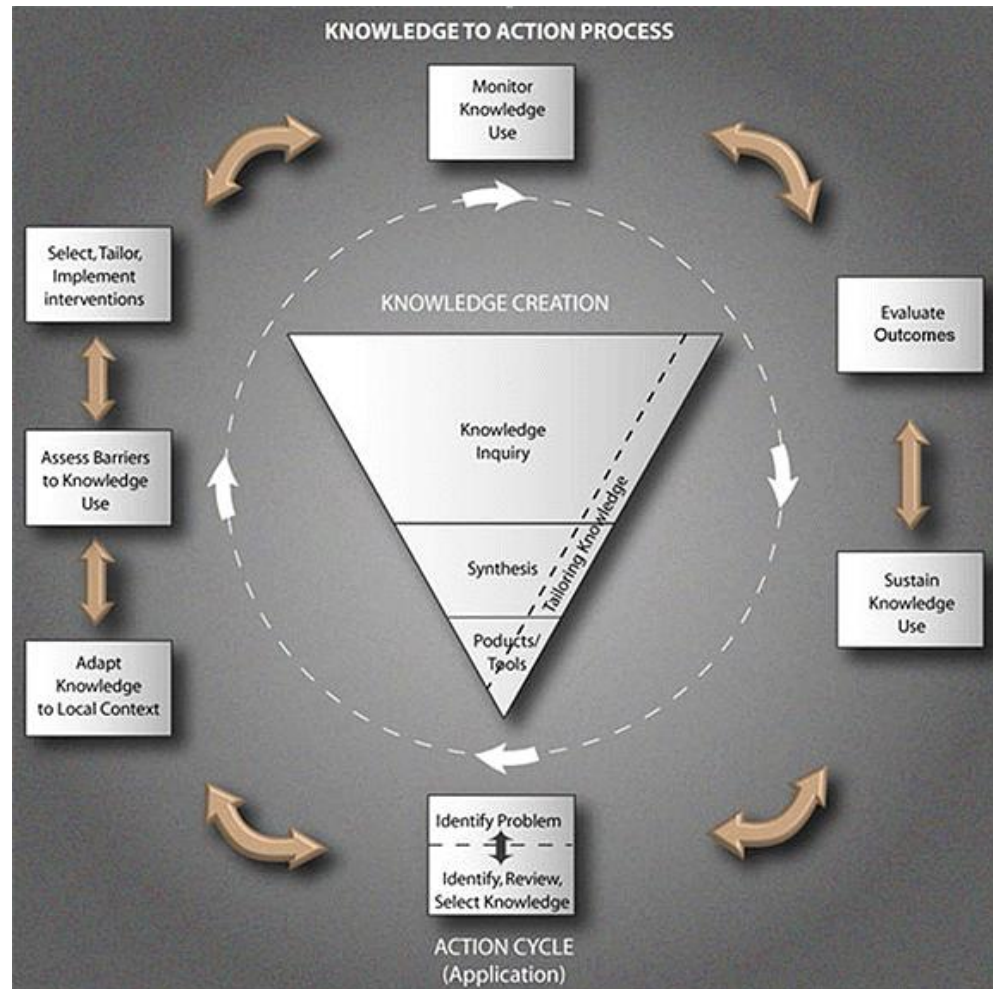
Canadian Institutes of Health Research (2009)



Knowledge to Action framework

Creating
knowledge

Applying
knowledge



Graham et al. J Contin Educ Health Prof 2006

Research – Practice gap



Using evidence to improve outcomes

Traditional methods of KT have focused on publication of journal articles and conference presentations

Perspective of researcher



Suggested reading

III STEP Series

A Collaborative Model of Service Delivery for Children With Movement Disorders: A Framework for Evidence-Based Decision Making



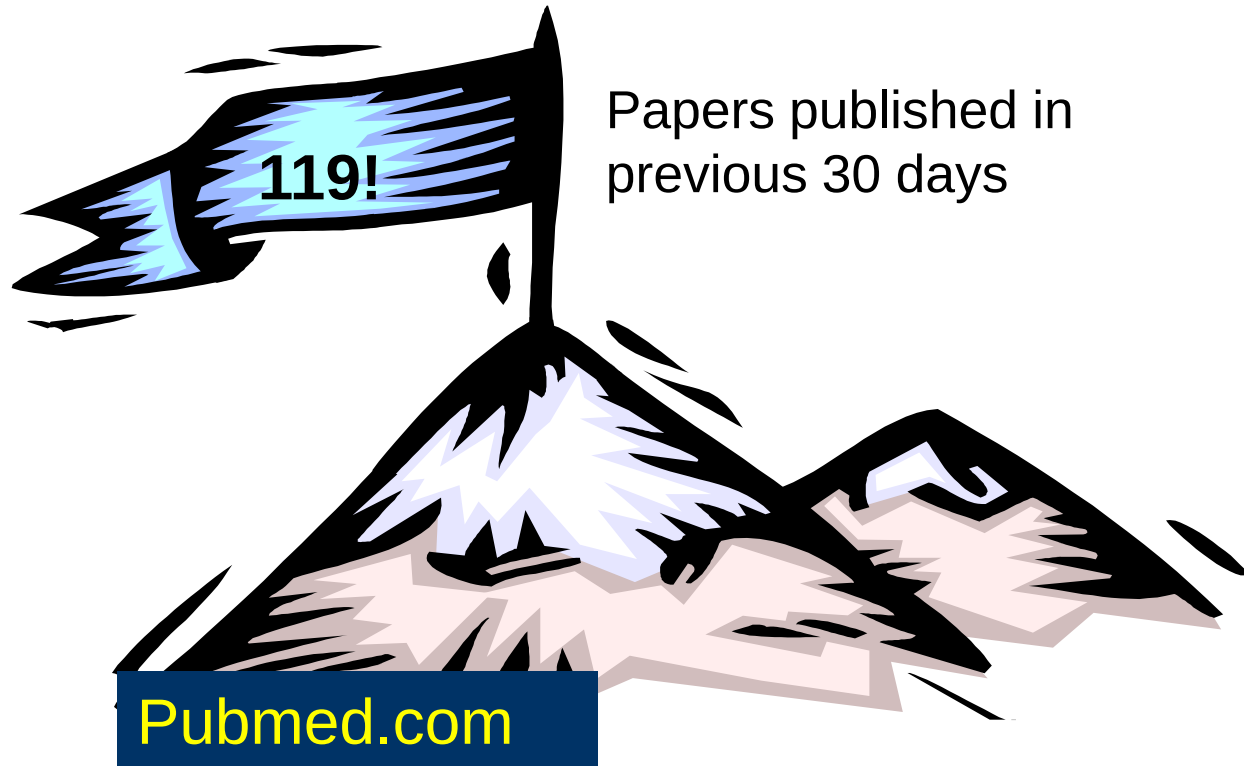
Models of physical therapist service delivery provide a framework for integration of knowledge, research, and assumptions in a clinically relevant context that facilitates evidence-based decision making. In this perspective, a collaborative model of service delivery for children with movement disorders is presented. The focus is on services that address child and family priorities and preferences in settings where children live, learn, and play. The *International Classification of Functioning, Disability and Health (ICF)* is applied to identify relationships among the components of functioning, environmental, and personal factors that are important for the plan of care and achievement of outcomes. An assumption of the model is that physical therapists use multiple types of evidence to guide decision making. Application of the model and how child and family priorities change over time are illustrated through a longitudinal case report of a child with cerebral palsy. [Palisano RJ. A collaborative model of service delivery for children with movement disorders: a framework for evidence-based decision making. *Phys Ther*. 2006;86:1295-1305.]

Key Words: *Children, Cerebral palsy, Clinical decision making, Evidence-based practice, International Classification of Functioning, Disability and Health, Movement disorders.*

Robert J Palisano

Using evidence to improve outcomes

Perspective of therapist



Papers published in
previous 30 days

Cerebral palsy:

119 hits

4 papers a day!



Passive dissemination strategies are useful to increase **awareness and knowledge** but **do not lead** to substantial **changes** in practice!

(Grimshaw et al 2001; Forsetlund et al 2009; Haines et al, 2004).



How to bridge the gap?



HOW?

- Scientific papers
- Conferences
- Training courses
- Workshops
- Factsheets
- Websites
- Newsletters

....



What works to promote evidence-based practice?....data from 93 studies

1. **No single approach** is effective in all situations
2. **Multi-faceted interventions** targeting the barriers to change are likely more effective than single interventions
3. **Ongoing** dissemination of information (tailored format)
4. **Interaction** between research and users
5. **Social influence** (power of influential people to persuade)
6. **Facilitation** (provision of technical, financial, organizational and emotional support)
7. **Reinforcement** (reminders, rewards for collaborative behaviour)

Walter, Nutley & Davis. What works to promote evidence-based practice? A cross-sector review. Evidence & Policy 2005.



Behaviour change?



Behaviour change!

(not easy*)



*Understatement

TABLE 1. 10-step model for inducing change in professional behavior (Grol & Wensing, 2004)

Orientation

1. Promote awareness of innovation
2. Stimulate interest and involvement

Insight

3. Create understanding
4. Develop insight into own routines

Acceptance

5. Develop positive attitude to change
6. Create positive intentions/decision to change

Change

7. Try out change in practice
8. Confirm value of change

Maintenance

9. Integrate new practice into routines
 10. Embed new practice in organization
-



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Intention
and
Able to do



Does Do



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Tailored, multi-faceted interventions that seek to redress the unique workplace barriers to research utilisation, and that are tailored to the stage and outcome of interest are recommended

(Baker et al, 2010; Menon et al, 2009; Cheater et al, 2005; Haines et al, 2004)

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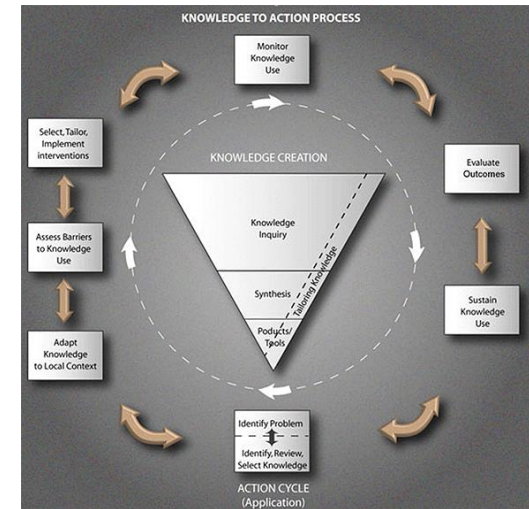
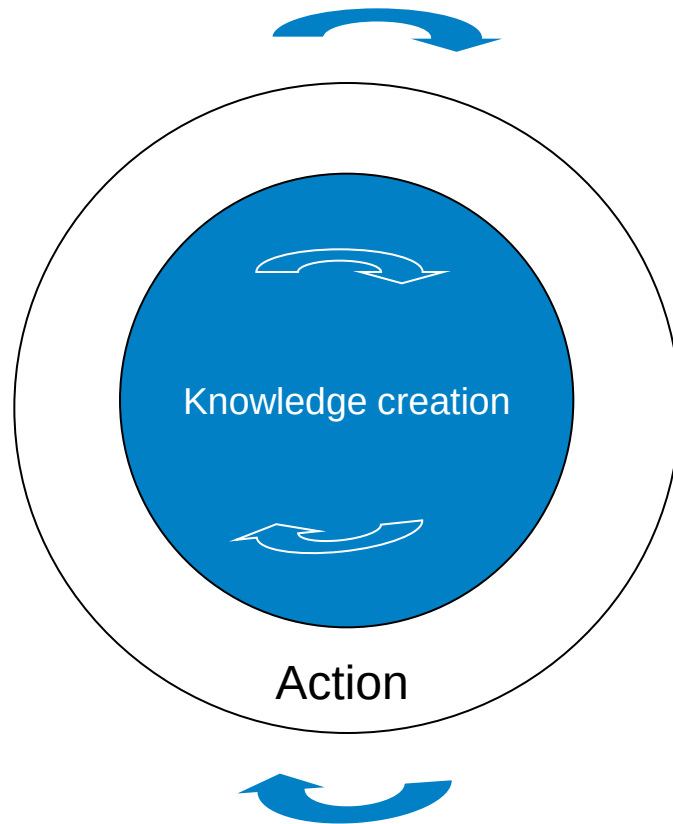
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“a dynamic and iterative **process** that includes the **synthesis**, **dissemination**, **exchange**, and ethically sound **application** of knowledge to improve health, provide more effective health services and products and strengthen the healthcare system”



Creating knowledge

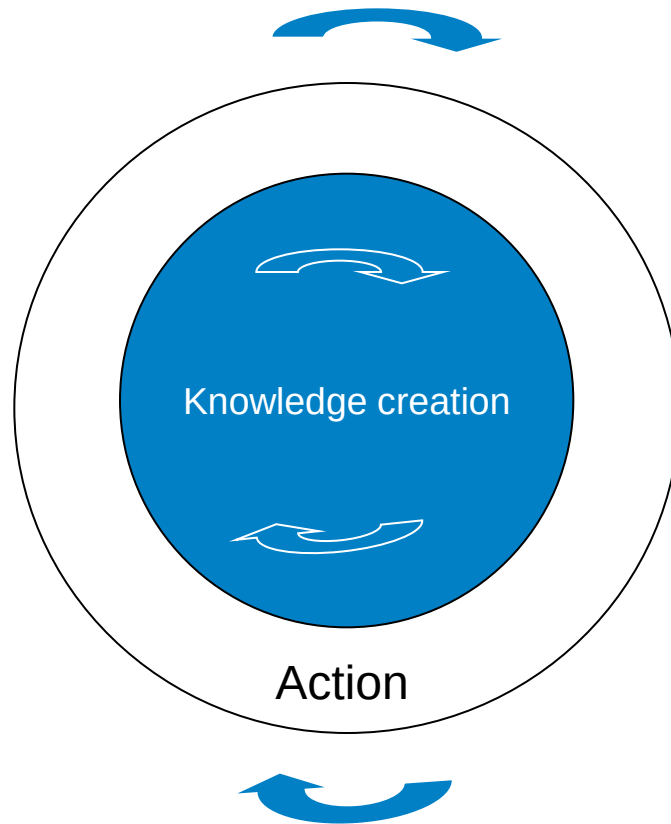
&

Applying knowledge





Integrated Knowledge Translation



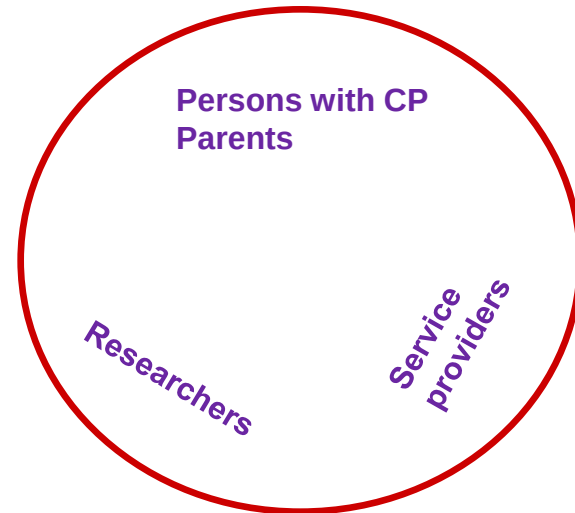
Engagement of stakeholders!

- Service providers
- Persons with disabilities
- Program managers, decision-makers
- Policy makers

Not only as end-users!

Experiences from the Netherlands:

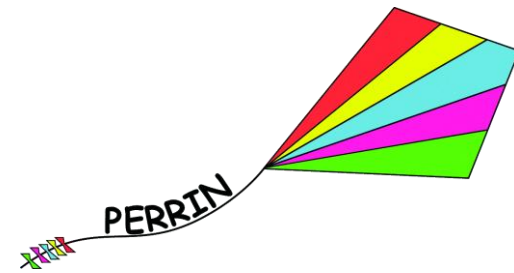
Collaboration and using networks



Russell et al, 2011
Rivard et al, 2010

Background

2006



- Dutch Guideline for Diagnosis and Treatment of Children with CP

227 pages...



- Results from longitudinal study on development of children with CP (PERRIN): www.perrin.nl

Ready for implementation??

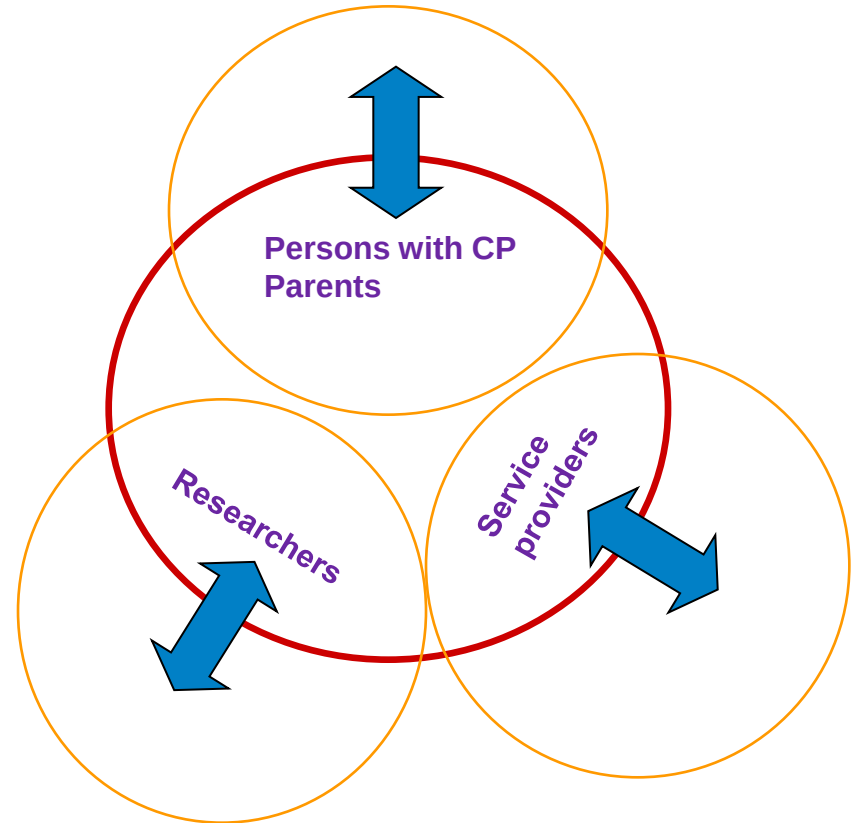
Many barriers



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Experiences from the Netherlands:

Collaboration and using networks



Categories of Innovativeness*



*From E.M. Rogers, Diffusion of Innovations, 4th edition (New York: The Free Press, 1995)

Collaboration!

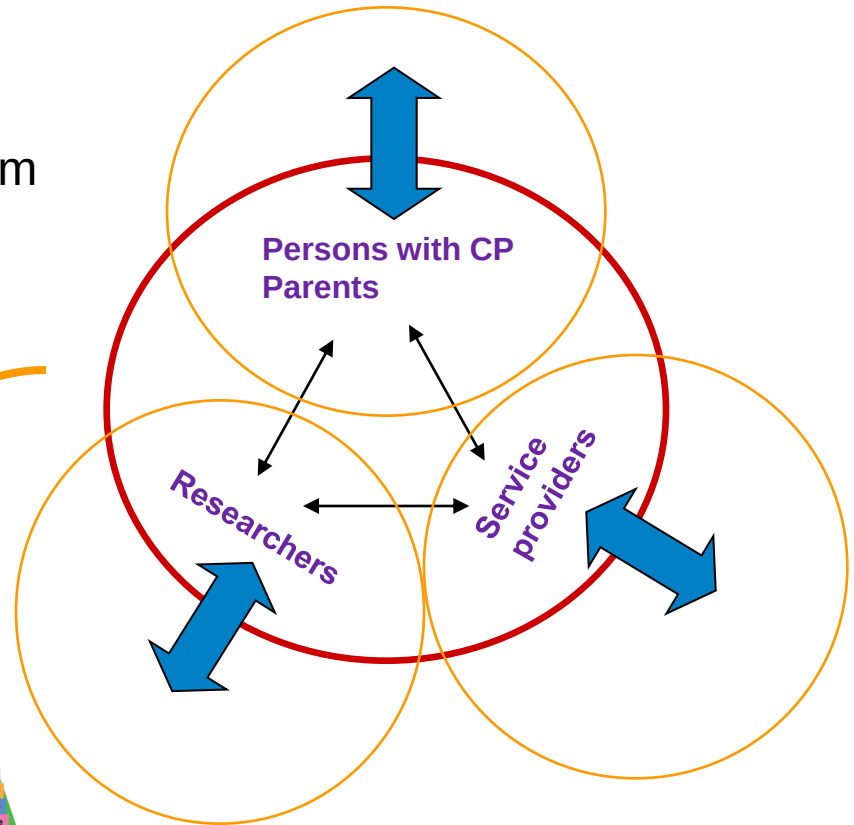


Meetings
Web-based forum

Co-creation



GMFCS
PEDI
MACS
GMFM
CAPE
etc



Planned action

Tailored, multi-faceted interventions that seek to redress the unique workplace barriers to research utilisation, and that are tailored to the stage and outcome of interest are recommended

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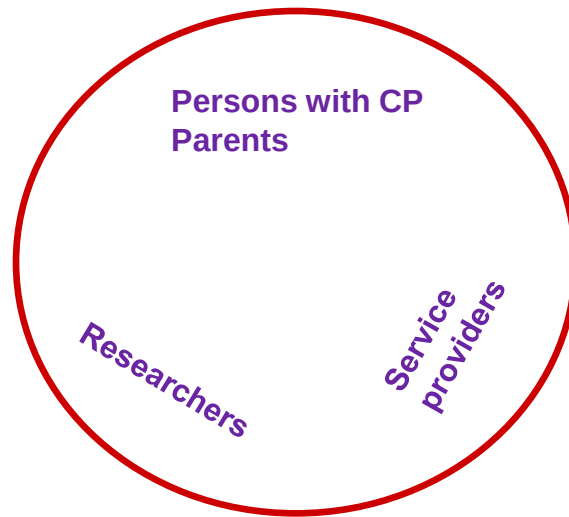
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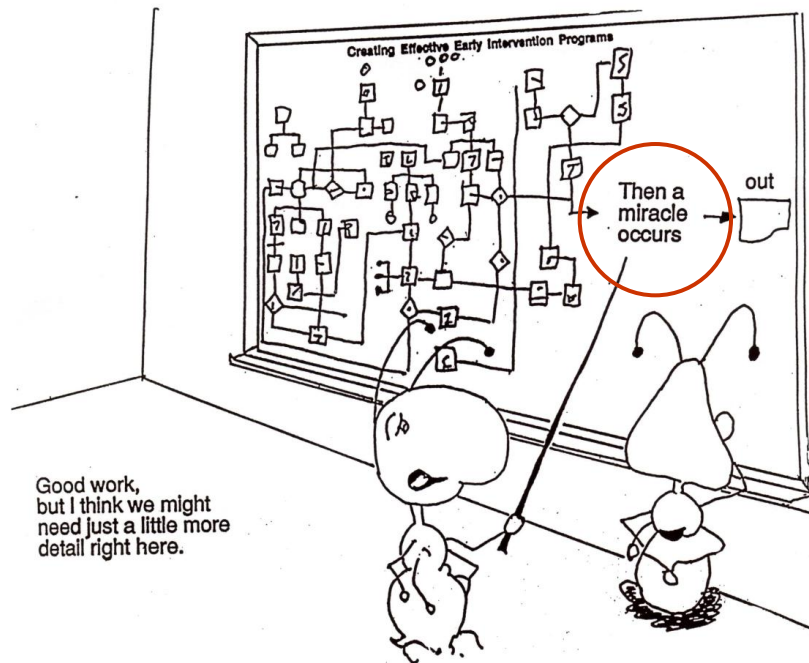


Networks

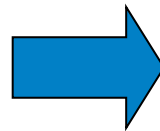


“The close connection of CHARM to the educational and clinical field will also promote the necessary implementation in practice.”

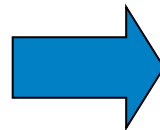




“The close connection of CHARM to the educational and clinical field will also promote the necessary implementation in practice.”



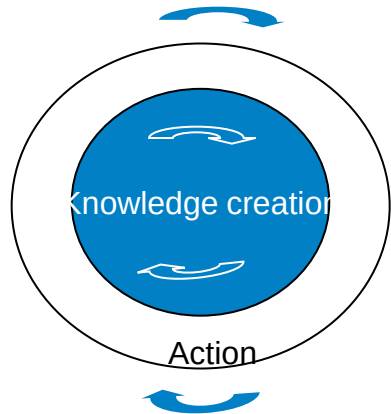
- Knowledge on...
- Insight in



- Applying knowledge
- What's the impact?
- How does it make a difference in the lives of people with disabilities?



Does Do



No single approach is effective in all situations

Stages in behaviour change

Interaction between research and users

Planned action

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Have a save journey
and have FUN!



Relevant sources :

CIHR (Canadian Institute of Health Research):
<http://www.cihr-irsc.gc.ca/>

INVOLVE National Institute for Health Research:
<http://www.invo.org.uk/>

<http://www.involvingpeopleinresearch.org.au/>

www.cachild.ca

<https://www.cerebralpalsy.org.au/>

<http://www.pencru.org/>

www.cp-research.nl/cp_inbox (in Dutch)

M.Ketelaar@dehoogstraat.nl