From evidence to everyday clinical PRM practice

Stefano Negrini

Chair of Physical and Rehabilitation Medicine
University of Brescia, Don Gnocchi Foundation
Director of Cochrane Rehabilitation

Trusted evidence.
Informed decisions.
Better health.

Disclosure

ISICO (Italian Scientific Spine Institute): stock

Director of Cochrane Rehabilitation

Medtronic: consultant

Janssen Pharmaceutical: advisory board

European Journal of Physical and Rehabilitation Medicine: congress expenses

Evidence Based Clinical Practice

The integration of

- best research evidence
- with clinical expertise
- and patient values

Sackett DL et al. How to practice and teach EBM. Edinburgh: Churchill Livingstone (2000).

The Know-Do Gap

High quality evidence is not consistently applied in practice[1]

Examples in clinical practice:

- Statins decrease mortality and morbidity in post-stroke, but they are under-prescribed[2]
- Antibiotics are overprescribed in children with upper respiratory tract symptoms[3]

Examples in health system policies:

- Evidence is not frequently used by WHO[5]
- Out of 8 policymaking processes in Canada[4]
  - Only 1 was fully based on research
  - Other 3 were partially based on research

1. Majumdar SR et al. From knowledge to practice in chronic cardiovascular disease: a long and winding road. J Am Coll Cardiol. 2004; 43(10):1738-42
2. LaRosa JC et al. Effect of statins on the risk of coronary disease: a meta-analysis of randomized controlled trials. JAMA. 1999; 282(24): 2340-6
3. Arnold S et al. Interventions to improve antibiotic prescribing practices in ambulatory care. Cochrane Database Syst Rev. 2005: CD003539
4. Lavis J et al. Examining the role of health services research in public policy making. Milbank Q. 2002; 80(1): 125-54
5. Oxman A et al. Use of evidence in WHO recommendations. Lancet. 2007; 369(9576): 1883-9.

Why there is the Know-Do Gap ?

Evidence not focused on the end-users:[1]

- Epidemiologically and methodologically focused
- Missing details on interventions and settings

Lack of knowledge management skills and infrastructure[2]

- Individual health care professionals
  - Volume of, and access to research evidence
  - Time to read
  - Skills to appraise, understand and apply research evidence
- Health care teams (standards of care)
- Health care system and organization (finance and equipments)
- Patients (adherence and compliance)

1. Glenton C et al. Summaries of findings, descriptions of interventions, and information about adverse effects would make reviews more informative. J Clin Epidemiol 2006; 59: 770-8.
2. Grimshaw JM et al. Changhing physician's behavior: what works and thoughts on getting more things to work. J Contin Educ Health Prof. 2002, 22(4): 237-43

Knowledge Translation

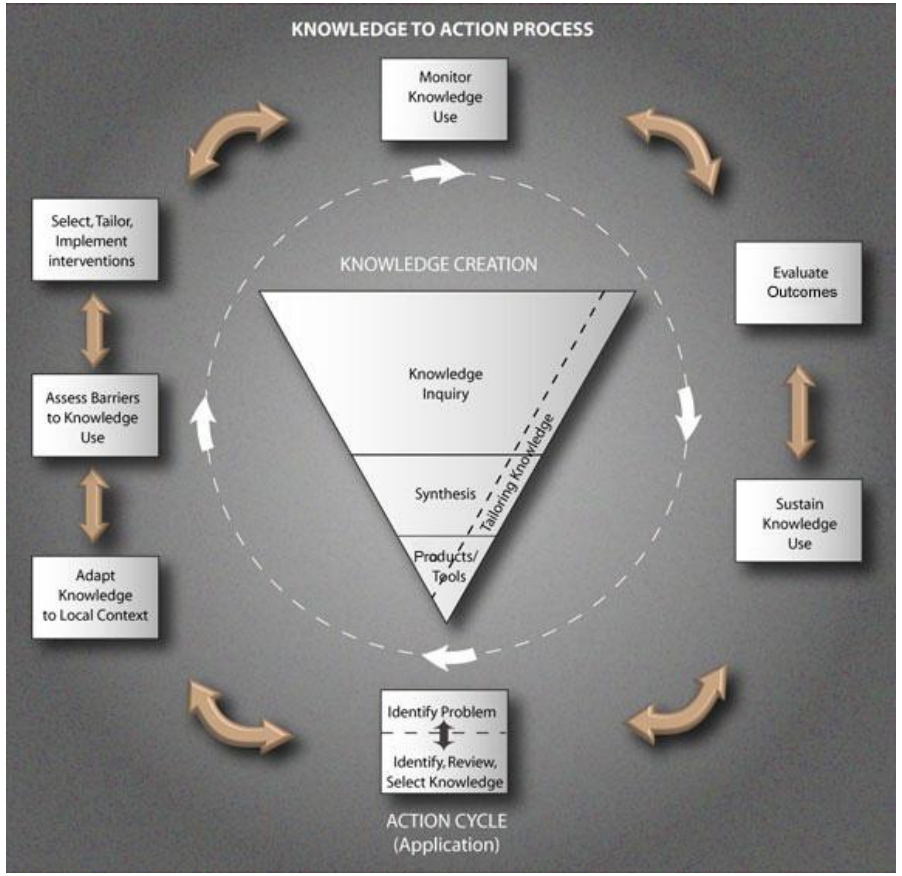
A dynamic and interactive process that includes the synthesis, dissemination, exchange, and ethically sound application of knowledge to improve health, provide more effective health services and products, and strengthen the health care system

Canadian Institute of Health Research[1]

Dissemination and implementation, implementation science, research use, knowledge transfer and uptake/exchange[2]

1. Mc Kibbon KA et al. A cross sectional study of the number and frequency of terms used to refer to knowledge translation in a body of health literature in 2006: a tower of Babel ? Impl Sci. 2010; 5:16.
2. www.cihr-irsc.gc.ca/e/29418.html.

Knowledge to action framework



Graham ID et al. Lost in knowledge translation: time for a map ? J Contin Ed Health Prof. 2006; 26(11):13-24.

Knowledge creation

Knowledge inquiry

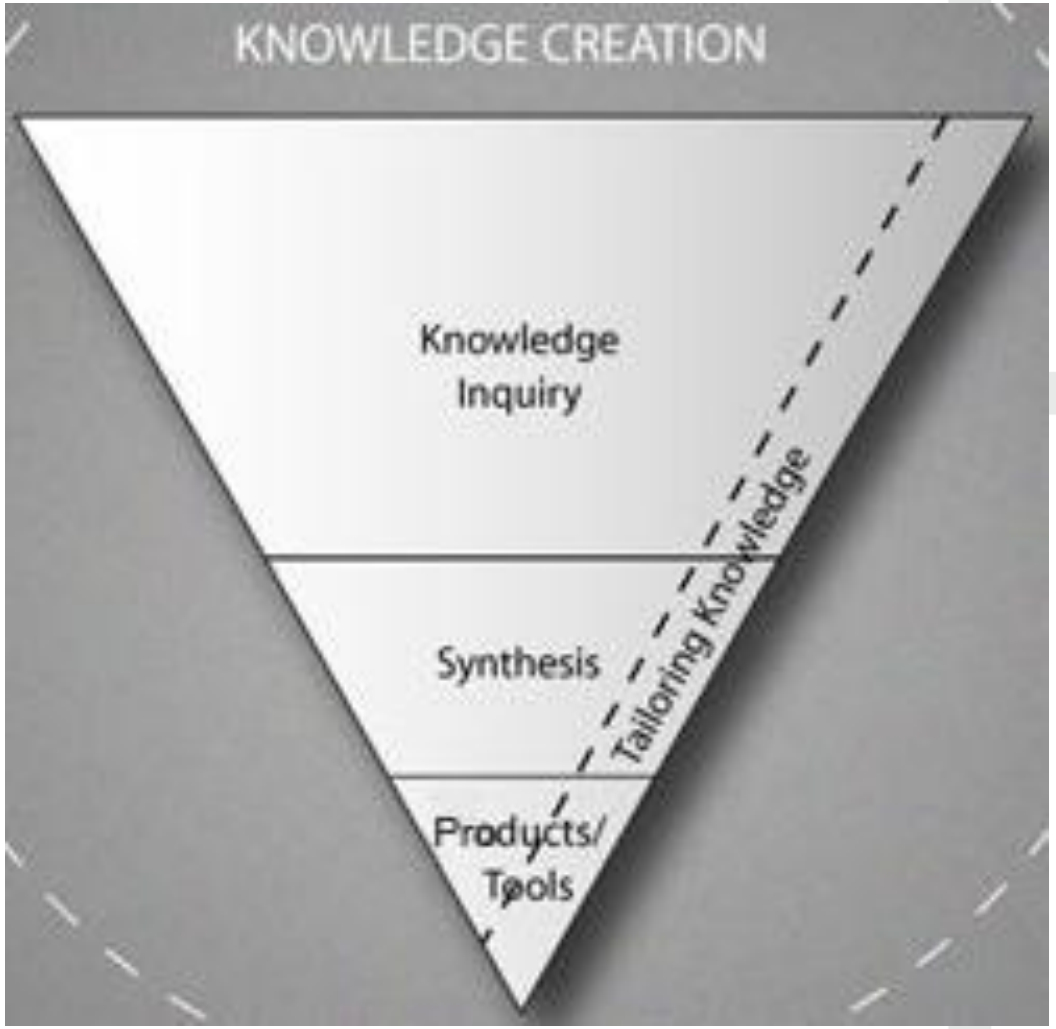
- Primary research studies

Knowledge synthesis

- Secondary research studies (systematic reviews)

Knowledge Tools/products

- Guidelines
- Algorithms
- Messages for end-users



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The Action Cycle (application)

Identify problem; identify, review, select knowledge

Adapt knowledge to local context

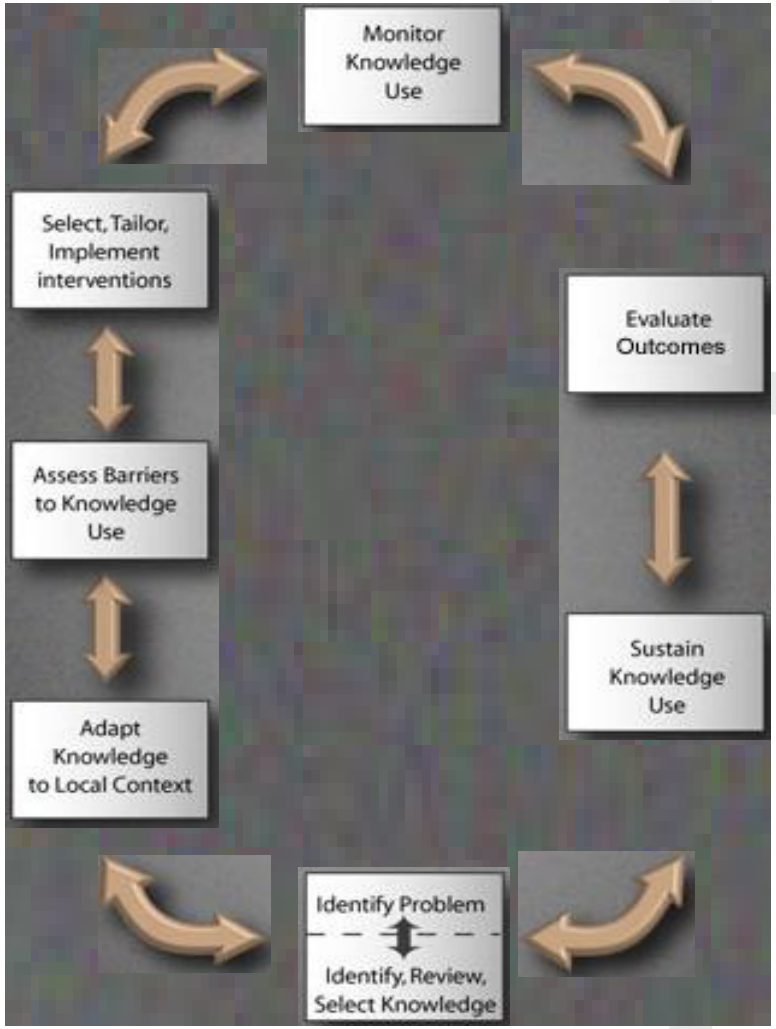
Access barriers – facilitation to knowledge use

Select, tailor, implement interventions

Monitor knowledge use

Evaluate outcomes

Sustain knowledge use



Graham ID et al. Lost in knowledge translation: time for a map ? J Contin Ed Health Prof. 2006; 26(11):13-24.

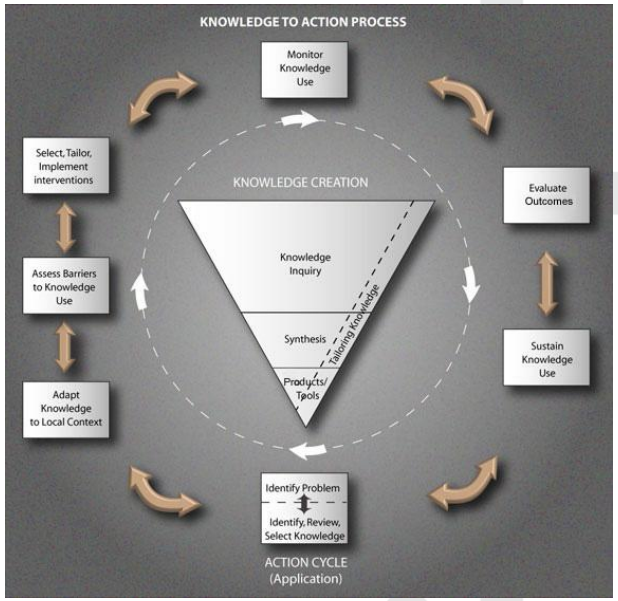
Human behaviours to be considered

Repetitive behaviours

- They allow to free the brain for higher level thinking (diagnosis, prognosis)
- Nevertheless, they gradually drive to reduced quality
- Only regular checks allow to identify this loss of quality

Resistence to change

- Individuals
- Organizations
- Systems

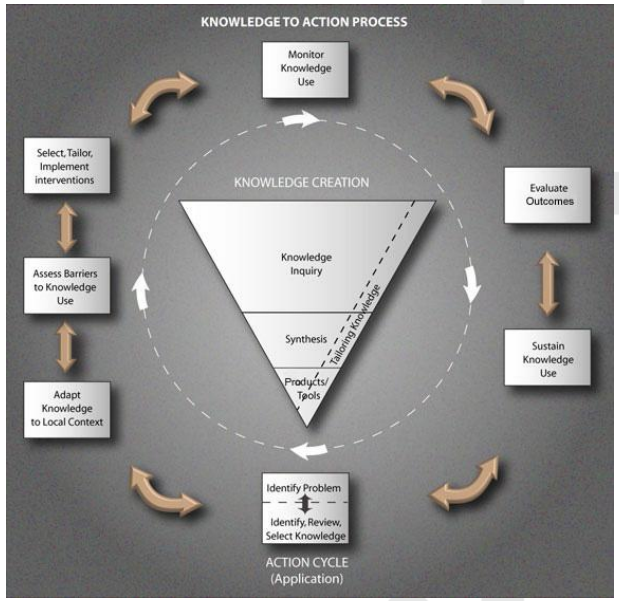


Implementation of evidence

Micro-level: individuals
- Surrender to evidence
- Use facilitators (clinical charts)

Meso-level (organizations)
- EBM Continuous Quality Improvement groups
  - Human and financial resources
  - Specific thematic projects on a regular basis

Macro-level (Health Systems)
- National guidelines and flow-charts
- Data collection
- Rewarding system



Cochrane
Colloquium Seoul

23rd - 27th October 2016
Grand Hilton Seoul, Korea
Challenges to evidence-based health care and Cochrane

Facilitating the Uptake of Cochrane Evidence in Health Care Organizations

Challenges and different approaches to improve the quality, timeliness and usability of Cochrane Reviews

Plenary II • 22 October 2016

Marguerite Koster
Senior Manager, Evidence-Based Medicine (EBM) Services Unit
Kaiser Permanente Southern California

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Barriers to Systematic Review Uptake

ATTITUDES	• Not useful, threat to decision-making autonomy, disagree with results, resistance to change
KNOWLEDGE	• Unaware of SR influence/importance, don't know how to access relevant SRs; overwhelming volume, redundancy, varying quality
SKILLS	• Lack skills to find, assess, interpret or use SRs
BEHAVIOR	• Anticipate patient or clinician resistance, difficulty with conflicting results, can't identify key points for decision making

(Ioannides, 2016; Tricco et al., 2016; Wallace et al., 2014)

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How can health care systems/organizations proactively identify and deploy effective medical practices using Cochrane evidence?

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The E-SCOPE Initiative

Evidence Scanning for Clinical, Operational and Practice Effectiveness and Efficiency

- Started in 2014; 16 projects in various stages of uptake (7 Cochrane)
- Collaboration between key groups to overcome barriers to SR uptake

- **EBM Specialists** function in similar role to **"Knowledge Brokers"**
  - "…work one-on-one with decision makers to facilitate evidence-informed decision making" (Dobbins et al., 2009)

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The E-SCOPE Initiative – How it Works

(Quarterly Cycle)

Search evidence

Screen abstracts (>1000/Q)

Select & appraise high-quality SRs/RCTs (~150)

Engage stakeholders

>70 studies,

>50 conversations

Implement practice

(2-3 initiatives)

Monitor project disposition

New topics suggested by stakeholders

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Exercise-Based Rehabilitation for Heart Failure

- Increase physician referrals and patient (~5,000) participation in HF cardiac rehabilitation (CR)
- Multiple evidence presentations, meetings with key stakeholders
- Physician education/detailing to promote and encourage increase in CR referrals Referral rates up 57% (2014-2015)
- Measurement: Unique paid claims up by 71% (2014-2015, n=988 to1699, respectively)
- Outstanding question: Internalize service or outsource?

Evidence Source: Taylor RS, Sagar VA, Davies EJ, Briscoe S, Coats AJS, Dalal H, Lough F, Rees K, Singh S. (2014). Exercise-based rehabilitation for heart failure. Cochrane Database of Systematic Reviews.

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Use of Continuous Passive Motion (CPM) Following Total Knee Arthroscopy (TKA)

- Reduce inappropriate use following TKA in patients with arthritis
- Multiple evidence presentations, meetings with key stakeholders
- Agreement reached to educate physicians and reduce CPM use, tracked use by provider
- Measurement: CPM orders decreased by 39% between 2014-2015
  - Possible reduction in expenditures on CPM machines
  - Improve efficiency by reducing staff time spent administering treatment.

Evidence Source: Harvey LA, Brosseau L, Herbert RD. (2014). Continuous passive motion following total knee arthroplasty in people with arthritis. Cochrane Database of Systematic Reviews.

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Epley Maneuver for Benign Positional Paroxysmal Vertigo (BPPV)

- Underused self-management intervention
- Multiple evidence presentations, meetings with key stakeholders
- Deployed online and mail-based educational outreach to 7,205 patients with recent diagnosis of BPPV
  - provide self-management materials
  - encourage use of Epley prior to provider visit/medication
  - links to online instructional videos and information
- Measurement: Reductions in provider visits, physician-patient online messages (indirect)

Evidence Source: Hilton MP. (2014). The Epley (canalith repositioning) manoeuvre for benign paroxysmal positional vertigo. Cochrane Database Syst Rev..

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Action cycle for Cochrane Rehabilitation

Action cycle	Cochrane Rehabilitation action	Product
Identify problem	Check the actual Cochrane Evidence relevant to Rehabilitation Identify and help to solve the problems with evidence of the rehabilitation world	Director: prioritization of future Cochrane Reviews with Cochrane Reviews Groups Methodology Committee: surveys, discussion and position papers
Adapt knowledge to local context	Comment Cochrane Reviews results for: • clinicians • students • politicians, to be informed from a rehabilitation perspective	Communication Committee: social media Pubblication Committee: Cochrane Corners in scientific journals, e-book
Access barriers – facilitation to knowledge use	Identify and collect all relevant Cochrane Reviews Prepare brief clinical summaries Diffuse the reviews Develop skills and knowledge in end-users Promote Evidence Based Clinical Practice	Review Tagging Committee: identification of reviews Communication Committee: web-site collection Publication Committee: Cochrane Corners and e-book Education Committee: courses
Select, tailor, implement interventions	Adapt Cochrane material for rehabilitation professionals Improve Cochrane methods to make them relevant to rehabilitation	All Committees as presented above
Monitor knowledge use	Check presence of Cochrane Reviews in Rehabilitation Guidelines and journals	Under development with Cochrane Central
Evaluate outcomes	Development of meaningful outcomes for the actions started	Under development with Cochrane Central
Sustain knowledge use	Support Evidence Based Clinical Practice in Rehabilitation	Education Committee: courses

Identify problem

Cochrane Rehabilitation action

- Check the actual Cochrane Evidence relevant to Rehabilitation
- Identify and help to solve the problems with evidence of the rehabilitation world

Product

- Director
  - prioritization of future Cochrane Reviews with Cochrane Reviews Groups
- Methodology Committee
  - surveys
  - discussion and position papers

Adapt knowledge to local context

Cochrane Rehabilitation action

- Comment Cochrane Reviews results for:
  - clinicians
  - students
  - politicians, to be informed from a rehabilitation perspective

Product

- Communication Committee
  - social media
- Pubblication Committee
  - Cochrane Corners in scientific journals
  - e-book

Access barriers – facilitation to knowledge use

Cochrane Rehabilitation action

- Identify and collect all relevant Cochrane Reviews
- Prepare brief clinical summaries
- Diffuse the reviews
- Develop skills and knowledge in end-users
- Promote Evidence Based Clinical Practice

Access barriers – facilitation to knowledge use

Product

- Review Tagging Committee
  - identification of reviews
- Communication Committee
  - web-site collection
- Publication Committee
  - Cochrane Corners
  - e-book
- Education Committee
  - courses

Select, tailor, implement interventions

Cochrane Rehabilitation action

- Adapt Cochrane material for rehabilitation professionals
- Improve Cochrane methods to make them relevant to rehabilitation

Product

- All Committees as presented above

Monitor knowledge use & Evaluate outcomes

Cochrane Rehabilitation action

1. Check presence of Cochrane Reviews in Rehabilitation Guidelines and journals
2. Development of meaningful outcomes for the actions started

Product

- Under development with Cochrane Central

Sustain knowledge use

Cochrane Rehabilitation action

- Support Evidence Based Clinical Practice in Rehabilitation

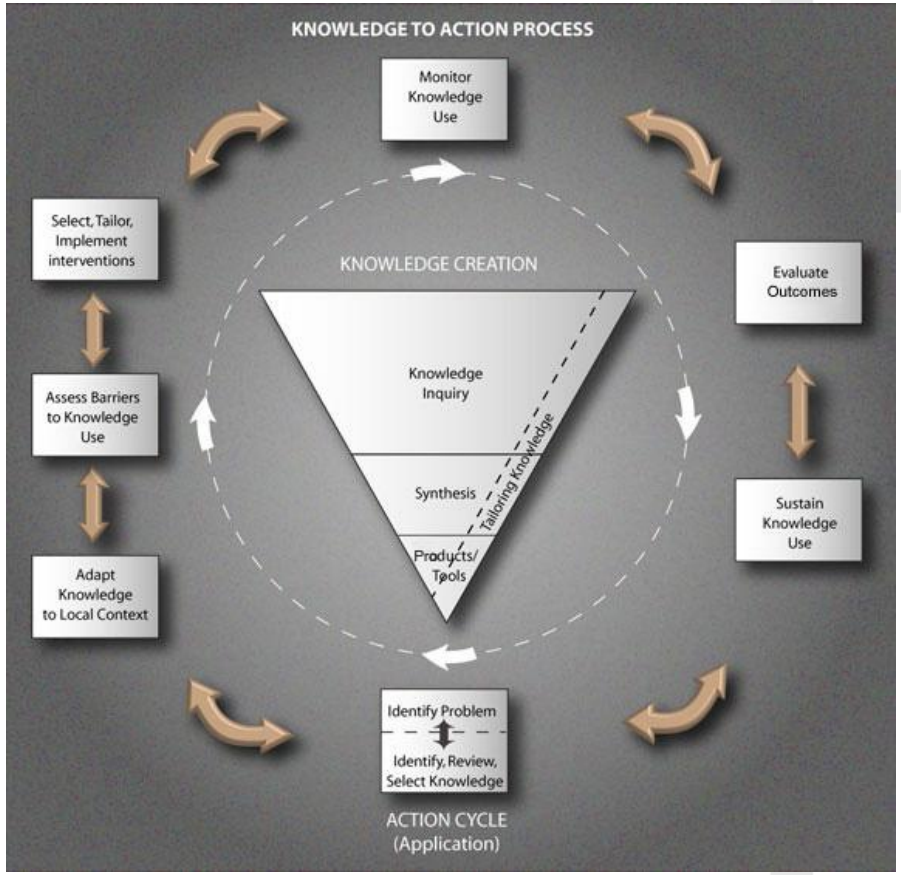
Product

- Education Committee
  - courses

Take home messages

Adapting to evidence is a real work that requires:

- Acceptance of the evidence
- Reorganization of one's own work (individual or collective)
- Identification and overcoming of barriers
- Need of resources to make the change possible
- Sustainability in time
- And, most of all, willingness to change !



Thank you

stefano.negrini@unibs.it
@ProfNegrini
www.dongnocchi.it - www.unibs.it

cochrane.rehabilitation@gmail.com
@CochraneRehab
www.rehabilitation.cochrane.org

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