

Lessen the Burden – CREATE THE BUZZ: Knowledge Translation

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APTA
KentuckySM

A Chapter of the American
Physical Therapy Association

October 1 - 2, 2021



2021 ANNUAL CONFERENCE

OBJECTIVES



- To define & understand knowledge translation (KT)
- To appreciate why KT is important
- To provide a framework for knowledge translation in physical therapy in PT
- To outline the role of the KT Broker
- To identify possibilities for your involvement

**When you hear “Knowledge Translation”,
what do you think about?**

KNOWLEDGE TRANSLATION

- Knowledge translation is the development, synthesis and ethically-sound application of research findings within a complex system of relationships among researchers and knowledge users.

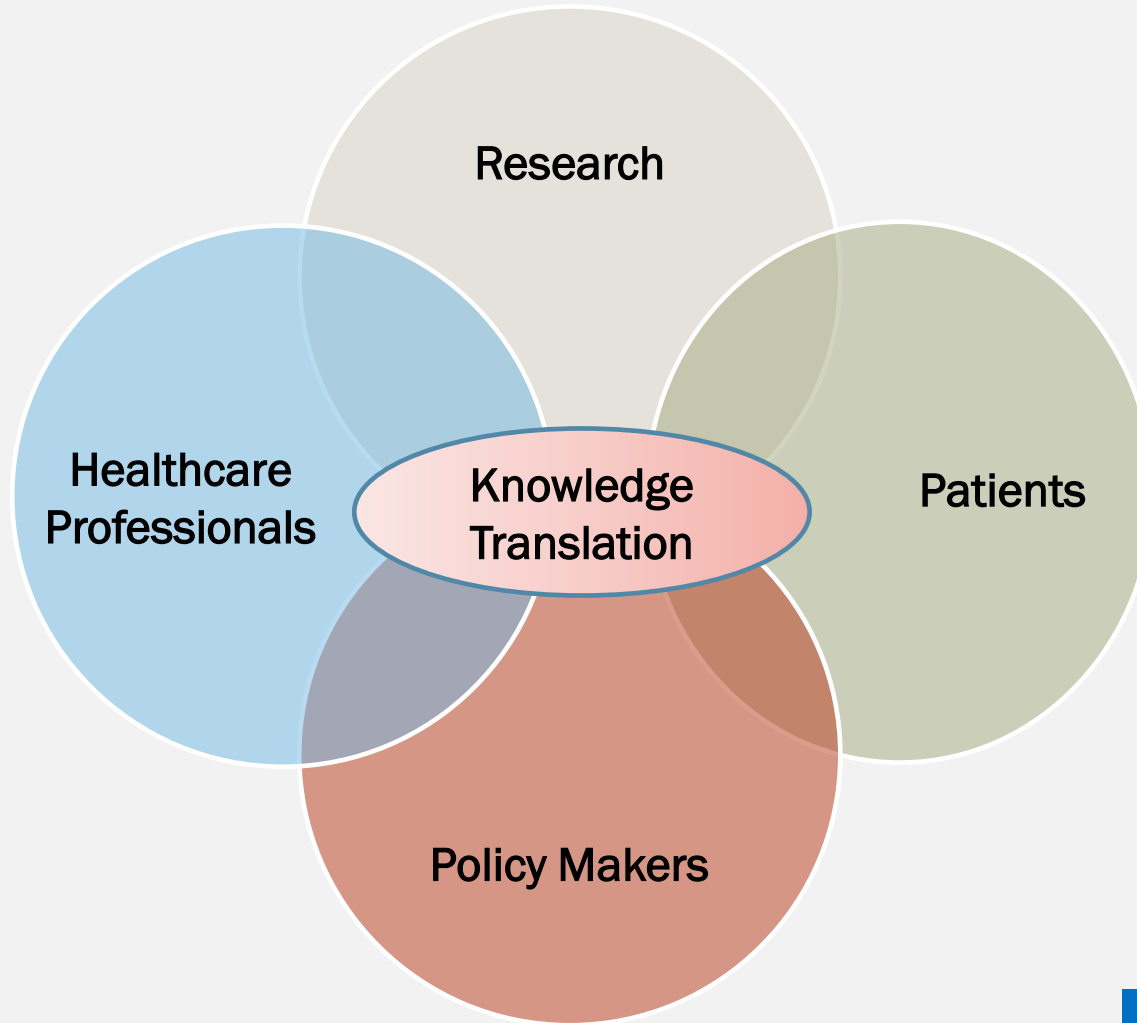
Community of Practice

Motivation
intrinsic/extrinsic

Support
compensation
time/resources
training/mentoring
workplace structure

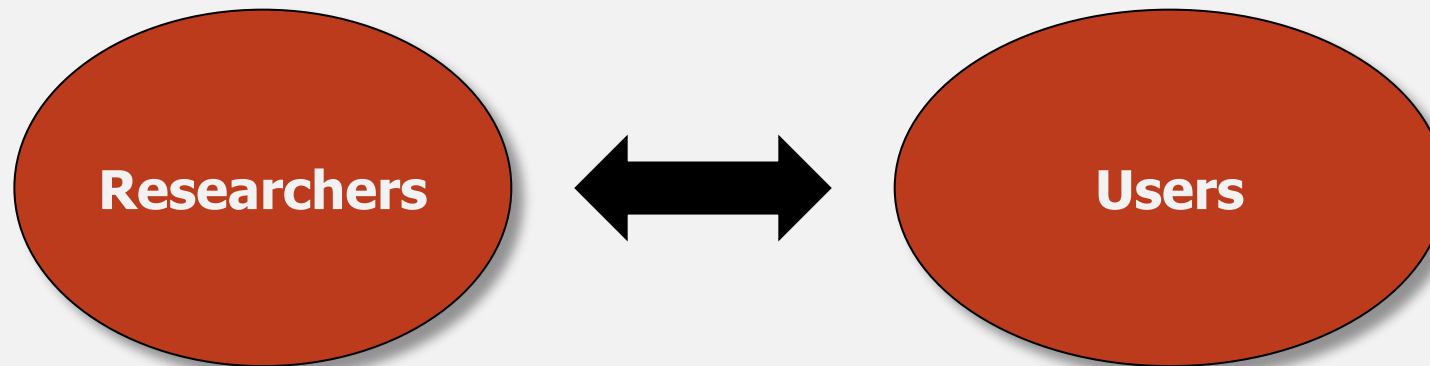
Applicability
practice setting
context

MODEL OF KNOWLEDGE TRANSLATION

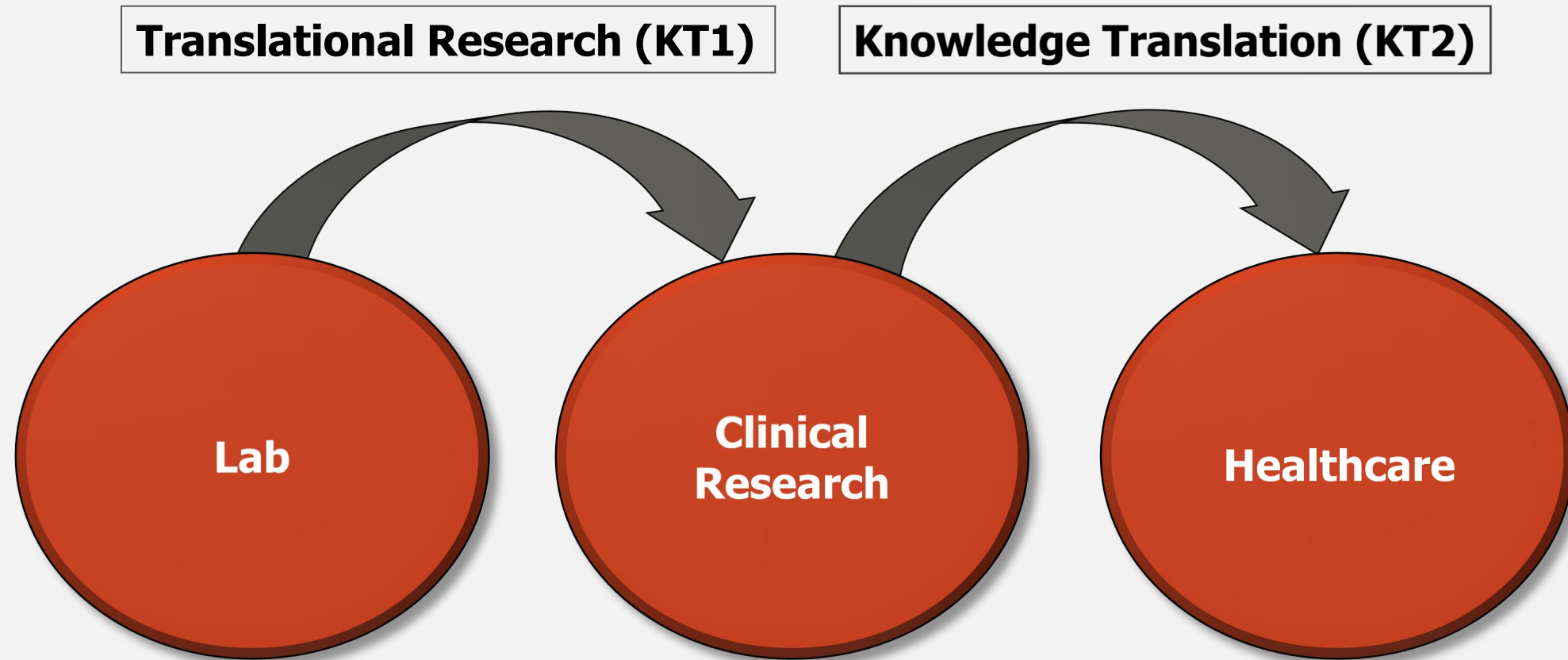


Knowledge Translation is about ensuring:

- ‘users’ are aware of and use research evidence to inform their decision making
- Research is informed by current available evidence and the experiences and information needs of ‘end users’



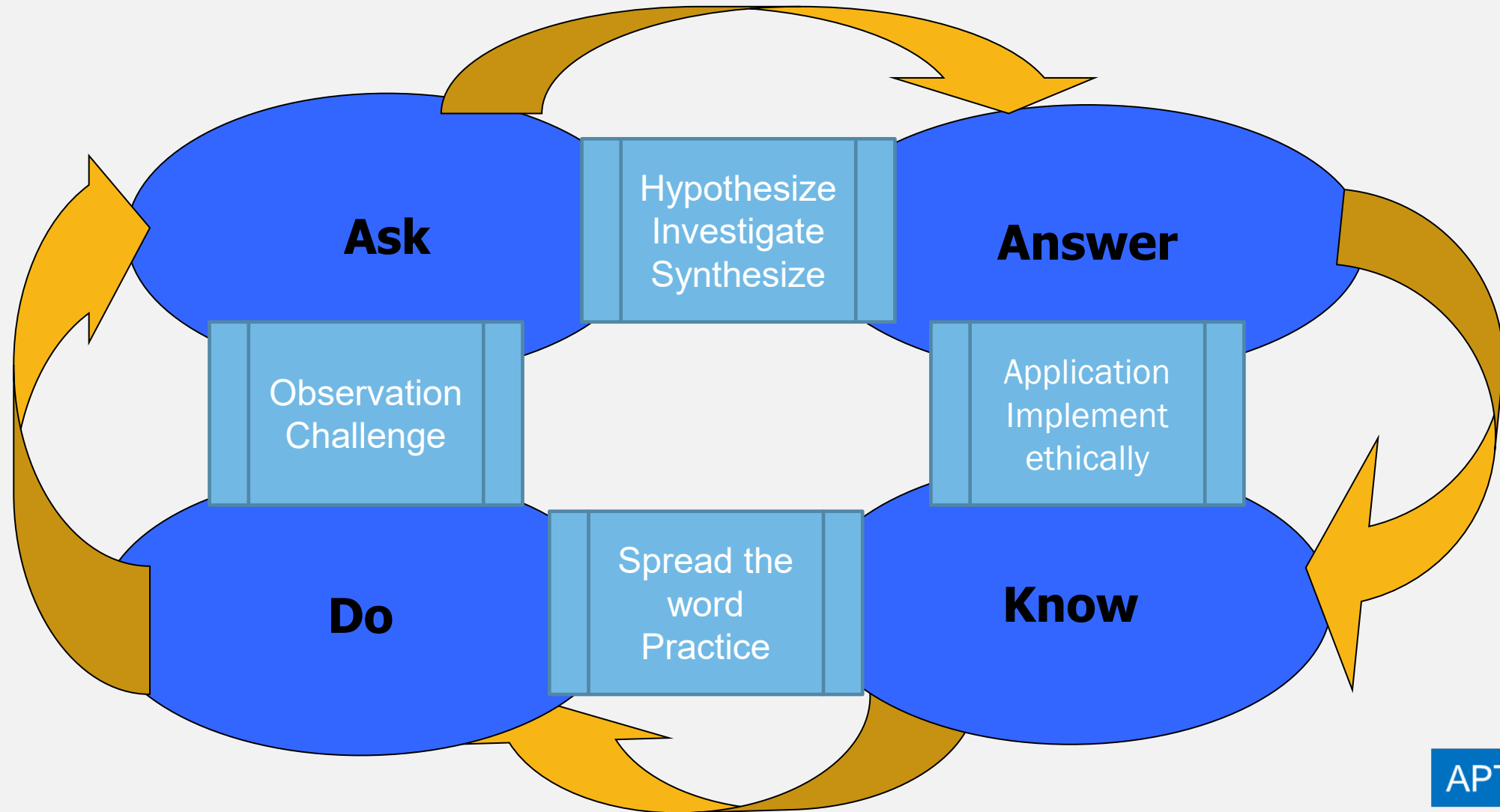
KNOWLEDGE TRANSLATION



What do you feel are some potential perceived barriers when considering collaboration of KT?

Place your *answer* in the chat box – and let's discuss!

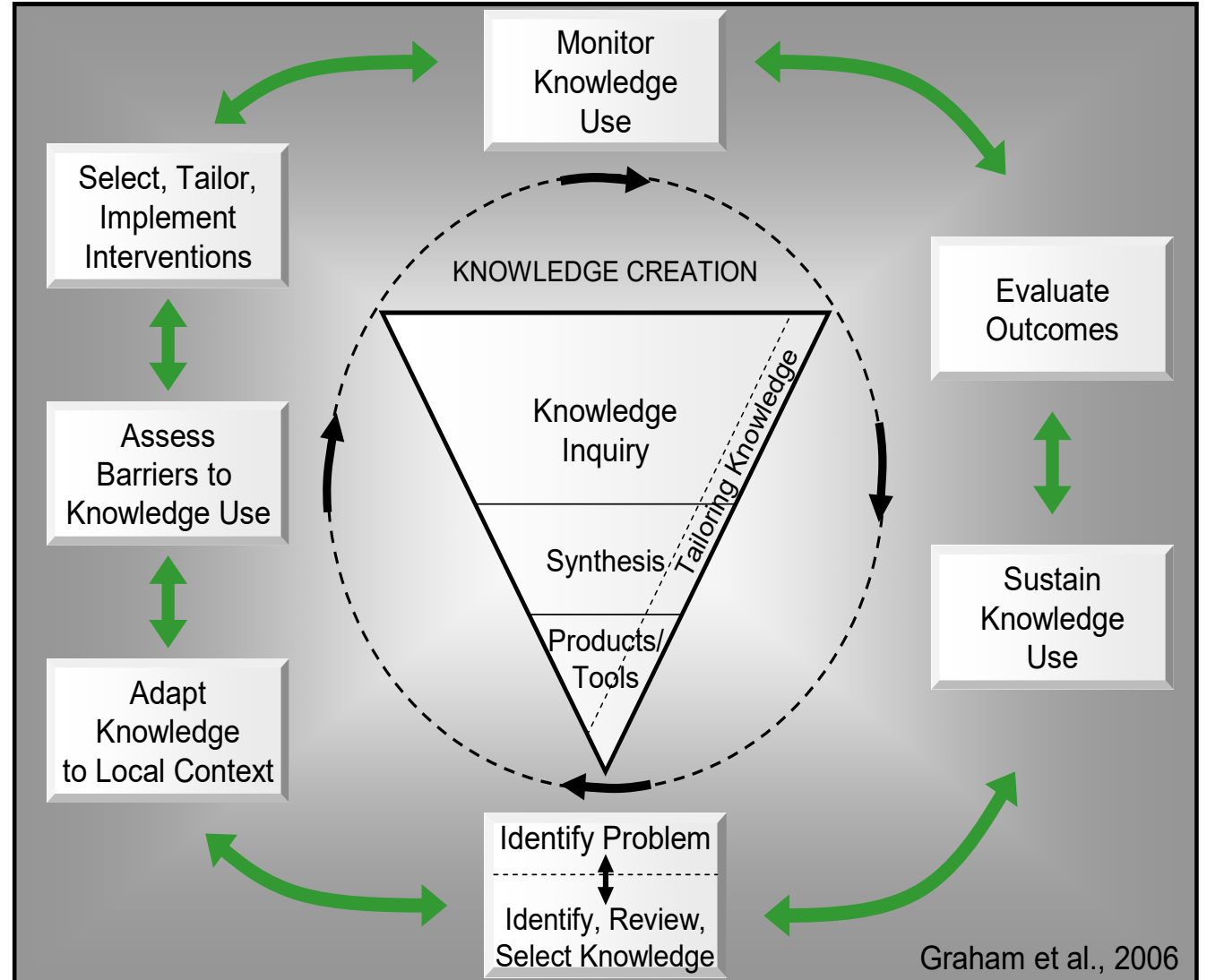
KT KEY CONCEPTS :CLOSING THE KNOW - DO GAP



KT FRAMEWORK



Knowledge-to-Action Cycle





On average there is a 17-year gap between the discovery of evidence to its full application...

Knowing how is not enough; we must do

PTJ Editorial 2015

THE KNOWLEDGE BROKER

Will You Be a PT KT BROKER?



INFORMATION MANAGER

seek and share relevant health research, as well as context specific knowledge



LINKING AGENT

PROVIDING A MECHANISM TO ENABLE COLLABORATION.



CAPACITY BUILDER

IDENTIFYING SOURCES OF EVIDENCE, DEVELOPING SEARCH STRATEGIES, AND APPRAISING THE EVIDENCE



Definitions of “Broker”

- Businessperson who buys and sells for another in exchange for a commission
- A party who mediates between buyer & seller
- An agent involved in the exchange of messages or transactions

Definitions of “Knowledge Broker”

- An intermediary who connects individuals to knowledge providers
- Core function is connecting people to share & exchange knowledge

THE ROLE OF THE KT BROKER

- Engage stakeholders; promote interaction
- Involve partners in knowledge generation & dissemination
- Identify champions
- Build awareness
- Build relationships
- Strategic communication
- Facilitate capacity for ‘evidence-informed’ decision making
- Incorporate evaluation to ensure accountability

IS RESEARCH BEING APPLIED?

Knowledge Translation and Implementation Special Series

Cross-Sectional Study to Examine Evidence-Based Practice Skills and Behaviors of Physical Therapy Graduates: Is There a Knowledge-to-Practice Gap?

Patricia J. Manns, Amy V. Norton, Johanna Darrah

Manns et al PTJ
2015

P.J. Manns, PT, PhD, Department of Physical Therapy, University of Alberta, 2-50 Corbett Hall, Edmonton, Alberta, T6G 2G4 Canada. Address all correspondence to Dr Manns at:

Background. Curricula changes in physical therapist education programs in Canada emphasize evidence-based practice skills, including literature retrieval and evaluation. Do graduates use these skills in practice?

BARRIERS

“I had considerable freedom of clinical choice of therapy: my trouble was that I did not know which to use and when. I would gladly have sacrificed my freedom for a little knowledge.”

Sir Archie Cochrane. *Effectiveness and Efficiency: Random Reflections on Health Services*

BARRIERS

Personal Level

- lack of skills for searching, appraising, and interpreting; lack of **attitudes/incentives** (e.g. peer group standards of care not in line with desired practice)

Organizational

- Lack of **time**, computing **resources**, **access** to full text

Research Level

- not enough **evidence**
- relevant literature not compiled all in one place
- information overload... rich with diversity yet highly chaotic
- need tools/processes that can reliably and sensibly address information



“HOW TO KEEP THE SPIRIT ALIVE”

WITH GROWING PRESSURES IN PRACTICE TO DO MORE WITH LESS TIME AND FOR LESS MONEY, HOW DO YOU HELP CLINICIANS THAT YOU WORK WITH TO “KEEP THE SPIRIT ALIVE”?

Productivity expectations

- Balancing productivity with advancing professional development/excellence - meeting employer requirements

Timely Information: Easing the Burden

- Efficient communication in various formats (online forums, video conferencing, face-to-face meetings, social media, blog, special interest group or Continuing education (CE) meetings)

Promoting Engagement/ Participation

- Blending of mandatory participation with participant choice in level of involvement

Administrative support

- Cost/benefit discussion - Successfully collaborate with administration

AVENUES FOR INFORMATION DISSEMINATION

Clinical Practice Guidelines (CPGs)

- statements that include **recommendations** intended to optimize patient care that **are** informed by a systematic review of evidence and an assessment of the benefits and harms of alternative care options
- should be based upon the best available research evidence and practice experience

Infographics

- a collection of imagery, charts, and minimal text that gives an easy-to-understand overview of a topic

Peer reviewed publications and presentations

CLINICAL SCENARIO

You are the PT KT Broker for developing, implementing and sustaining the use of clinic practice guidelines (CPGs) for management of Heel pain.

How will you accomplish this?

CLINICAL SCENARIO

- 24 y/o male, runs avg 40-60 mi/week; wants to train for half-marathon
- Developed (L) heel pain 6wks ago, tried reducing running, including stretching, use of ice, and NSAIDS; 3 weeks ago, stopped running, continued ice, NSAIDS, stretching
- Still has pain 6-7/10 with walking \bar{p} 10 min

Clinical decision making...

what interventions would you recommend? Why?

PLANTAR FASCIOPATHY IN RUNNERS

Based on Physio Edge 060 Plantar fasciopathy in runners - Imaging & education with Tom Goom @tomgoom

1 Plantar fasciopathy pathology

Plantar fasciopathy is a degenerative process with a similar presentation to tendinopathy, including features of collagen breakdown, calcification and nerve and vascular ingrowth



2 Stages of plantar fasciopathy

Plantar fasciopathy often moves through a pain dominant stage and a load dominant stage.

a. Pain dominant phase.

The plantar fascia is sensitive to load and painful and stiff first thing in the morning similar to a reactive tendinopathy. Symptoms are often present with daily activities especially walking longer distances or prolonged standing. This stage typically lasts around 2-8 weeks. Treatment aims to decrease pain by reducing or modifying aggravating activities.



Prognosis

Plantar fasciopathy is considered to be a self-limiting condition of variable duration. With treatment, symptoms usually improve within 3-6 months, however patients performing regular prolonged periods of standing and painful loading may require 9 months or longer.

Risk factors

The risk factors associated with plantar fasciopathy may differ between the athletic and the sedentary populations.

In the athletic population PF may be more closely linked to changes in training load such as increased training pace, changes in footwear or in foot strike pattern



In the sedentary population high body mass index (BMI) may be a key risk factor.

Reduced ankle dorsiflexion and reduced great toe extension are often considered risk factors for PF but display mixed results in the research.

PF has also been associated with reduced toe flexor and evtor strength (Sullivan et al. 2015) and decreased hamstring flexibility.



Van Leeuwen et al. (2016) found changes in ROM, strength and foot posture were inconsistently associated with developing plantar fasciopathy

References: van Leeuwen (2016) Factors L, Willemsberg T et al. Higher body mass index is associated with plantar fasciopathy (plantar fasciitis): a cross-sectional study of runners. Clinical and Imaging. Risk Factors for PF. Med and sports exercise.

BROUGHT TO YOU BY

clinicaledge.co

@davidkpope

Putting Heel Pain On the Run

Plantar fasciitis is a common cause of heel pain resulting from overuse, obesity, or poor foot support.

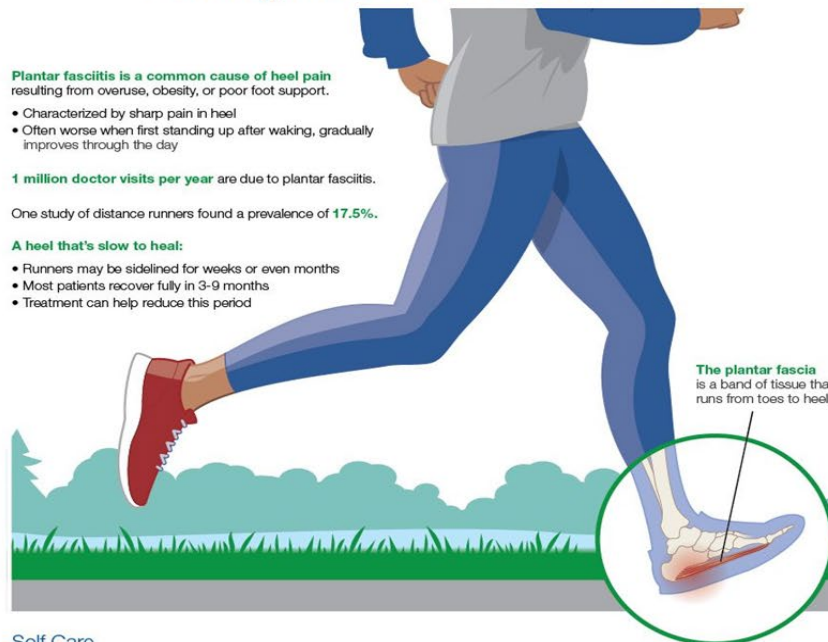
- Characterized by sharp pain in heel
- Often worse when first standing up after waking, gradually improves through the day

1 million doctor visits per year are due to plantar fasciitis.

One study of distance runners found a prevalence of 17.5%.

A heel that's slow to heal:

- Runners may be sidelined for weeks or even months
- Most patients recover fully in 3-9 months
- Treatment can help reduce this period



The plantar fascia is a band of tissue that runs from toes to heel

Self Care



New shoes

Don't run in worn-out shoes; running shoes should be replaced after about 400-500 miles.



Arch stretches

Grab toes and gently pull them towards you.



Icing

Apply cloth-covered ice pack or frozen water bottle to heel for 15-20 minutes 3-4 times per day.



Tennis ball

Place a tennis ball under your arch and roll with moderate pressure front to back.



New sport

Switch to lower-impact exercise such as biking or swimming.

Treatment

If self-care is insufficient, medical treatments and therapies can help speed healing. Surgery is very rarely needed and only in chronic cases.



Shoe inserts

Help support arch and decrease plantar fascia stress.



Night splints

Keep the plantar fascia stretched overnight.



Taping

Carefully positioned athletic tape may reduce strain and pain.



Injections

Steroid medication or platelet-rich plasma may help relieve pain.



Percutaneous fasciotomy

Ultrasound guided treatment using a needle or ultrasonic probe may stimulate a healing response.

Source: MayoClinic.org

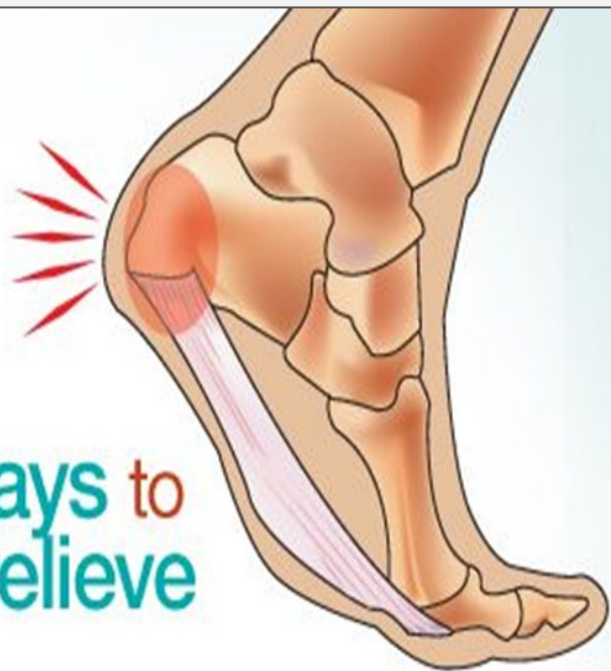


Don't let foot pain slow you down—get back in the race with the help of Mayo Clinic Sports Medicine.

Foot problems like plantar fasciitis are common among runners—and since they are often related to overuse, can strike late in a training regimen. Runners can get back on track with comprehensive evaluation and cutting-edge treatment at Mayo Clinic Sports Medicine. Using expert diagnostic assessment and a full spectrum of therapeutic options, Mayo Clinic can help you cross the finish line.

To schedule an appointment, visit [SportsMedicine.MayoClinic.org](https://www.MayoClinic.org) or call 612-746-7799.

6 smart ways to treat and relieve heel pain



- 1 Cushion Your Heels
- 2 Raise Your Arches
- 3 Wear a Night Splint
- 4 Control Foot Motion
- 5 Hot/Cold Therapy
- 6 Improve Foot Support

FootSmart®

www.footsmart.com

WELL-HEELED

WHEN IT COMES TO SHOES, HIGH HEELS ARE THE #1 CULPRIT OF FOOT PAIN

THE AVERAGE WOMAN OWNS 9 PAIRS OF HIGH HEELS



71%  OF WOMEN WHO OWN HIGH HEELS SAY THESE SHOES HURT THEIR FEET

PREVENTION: MAKE SMARTER SHOE SELECTIONS



- ✓ Cushioning at the front of the shoe
- ✓ Generous toe box area
- ✓ Heel height of two inches or less
- ✓ Slight heel or wedge encourages your arch to lift

HIGH HEELS CAN CAUSE INJURIES



Wearing heels daily can cause your Achilles tendon to shrink, putting you at greater risk of an injury when doing any activities while wearing flats, including exercise.



Any heel over two inches in height results in a shifting of your body weight forward, putting incredible pressure on the ball of your feet and toes.



- ✗ Pointy, closed toe
- ✗ High stiletto
- ✗ Crowded toe box
- ✗ Excessive wear on heels or soles
- ✗ Requires "breaking in"



ALTERNATE BETWEEN DIFFERENT TYPES OF SHOES



To/From work

At work

LIMIT TIME WEARING HIGH HEELS



SHOES THAT CAUSE THE MOST PAIN

71%  High heels

27%  Barefoot running shoes

26%  Boots

23%  Flats

23%  Flip Flops

APMA

Feet shouldn't hurt all the time. Persistent foot pain can be an indication of injury, irritation, or illness. See a podiatrist for more treatment options, or a custom prescription orthotic for proper alignment. Visit APMA.org to find a podiatrist near you.

TODAY'S
PODIATRIST

TIPS FOR DESIGNING INFOGRAPHICS

Simplicity Is the Best Policy

- Infographics should be simple, clean, concise and clear. Make sure the information being conveyed is well organized.

Nothing Takes Effect Without a Cause

- Emphasize cause and effect relationships in your presentation. Infographics spread awareness of these factors and enable people to voice their concerns.

Think in Color

- Color is the most effective tool by which authors guide and influence their readers. Color can give readers varied impressions, both conceptual and emotional.

Layout Is Not Just About Typography

- Infographics don't have to look like a piece from a newspaper or magazine. Tap your creativity: try different combinations of typography, illustrations, images, charts, diagrams and icons. Use a maximum of two or three fonts in the designs you create.

Make It Appeal the Eye

- Ensure that you have a clear idea of the final size of the graphic as you are working..

Be Verifiable

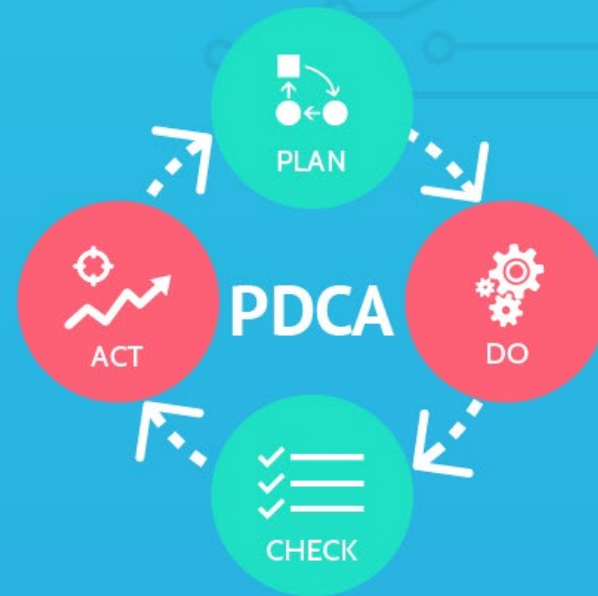
- Many infographics lead readers to the wrong conclusion due to a lack of verifiable information and detailed data resources. Make infographics trustworthy.



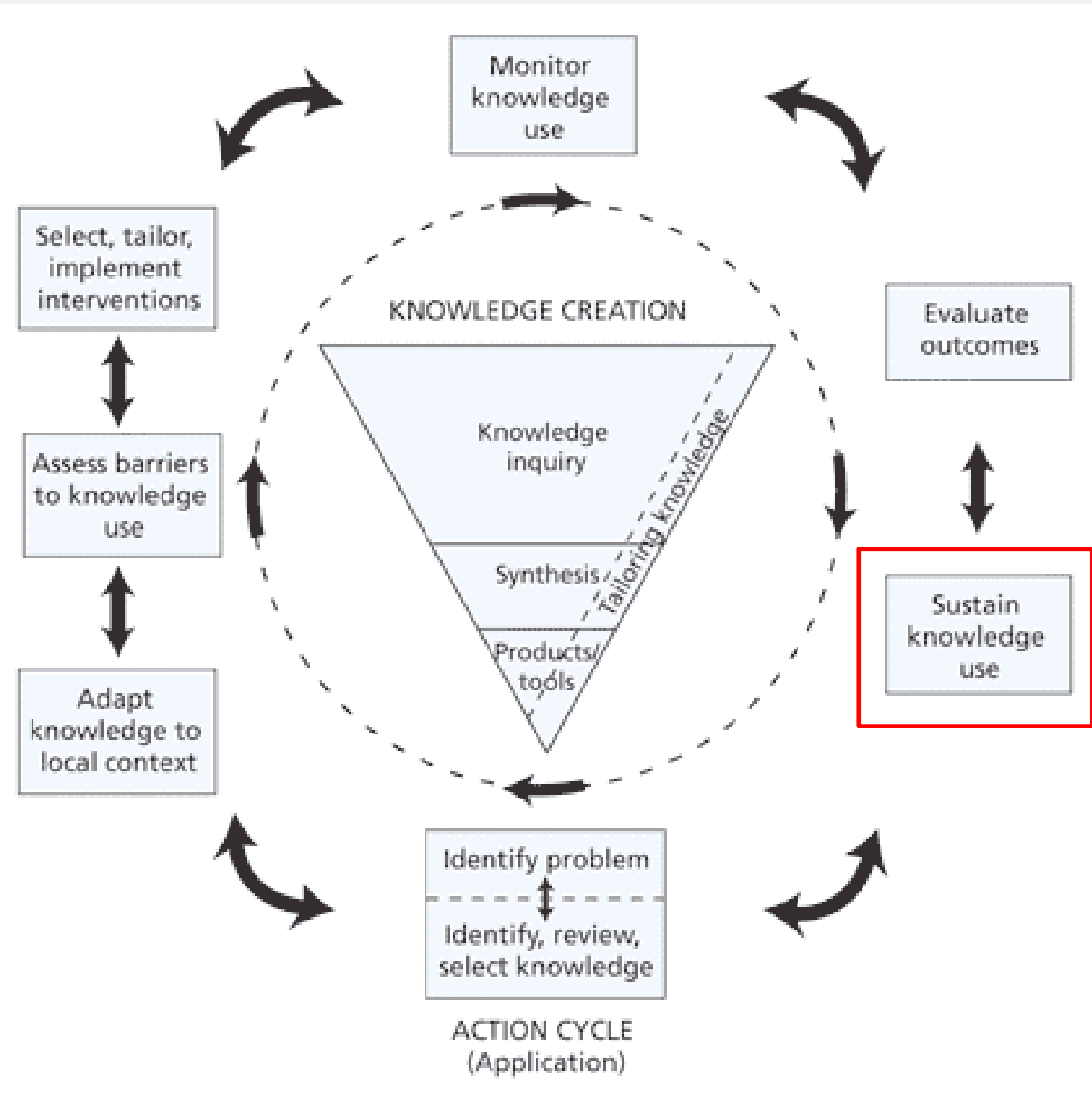
How do you, **CREATE THE BUZZ....?**



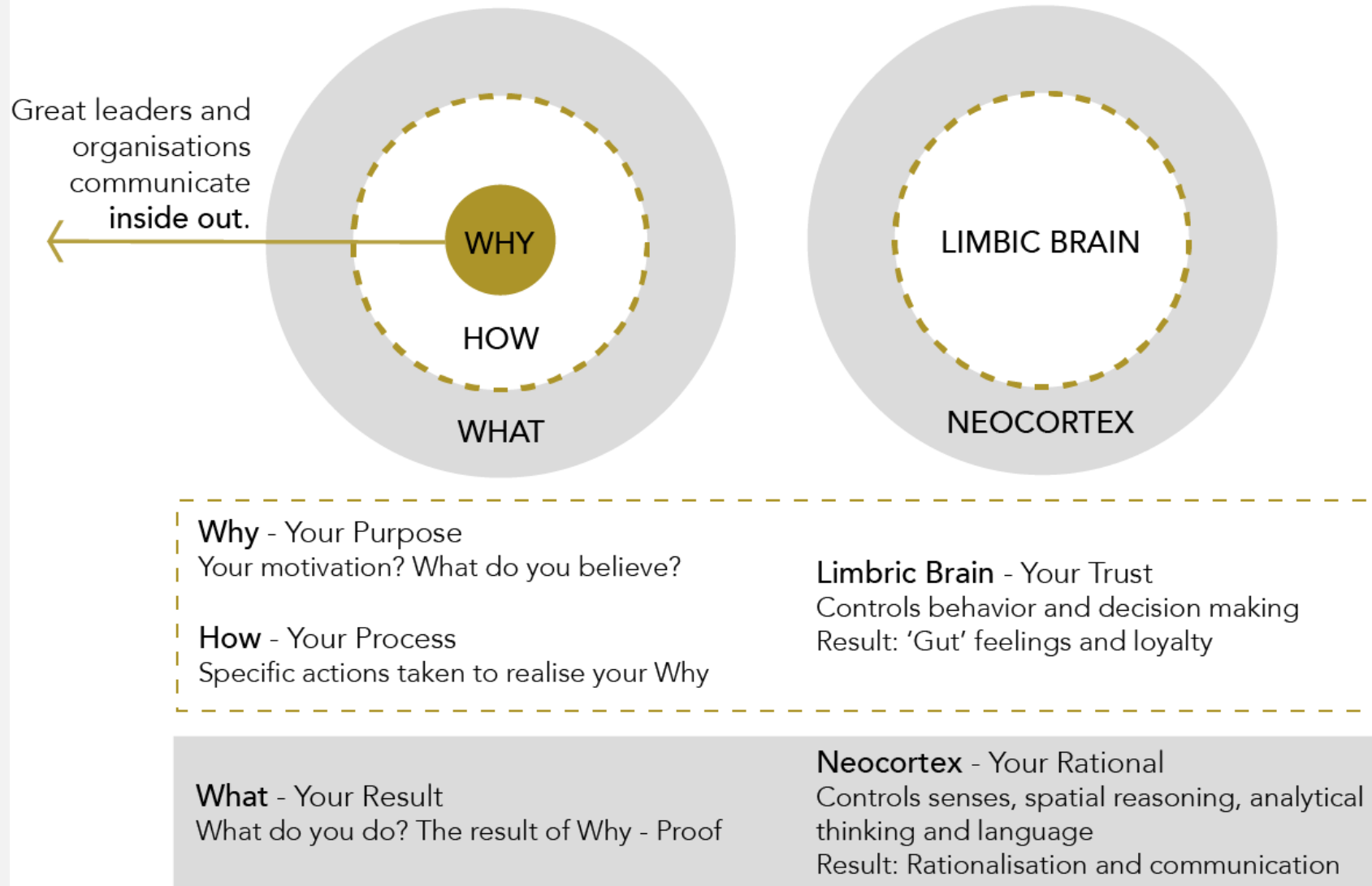
- What do we want to achieve?
- How do we know if a change is an improvement?
- What change will result in improvement?
- Begin the cycle



- Find a process to improve
- Understand causes of process variation
- Identify how to reduce variations
- Begin the cycle



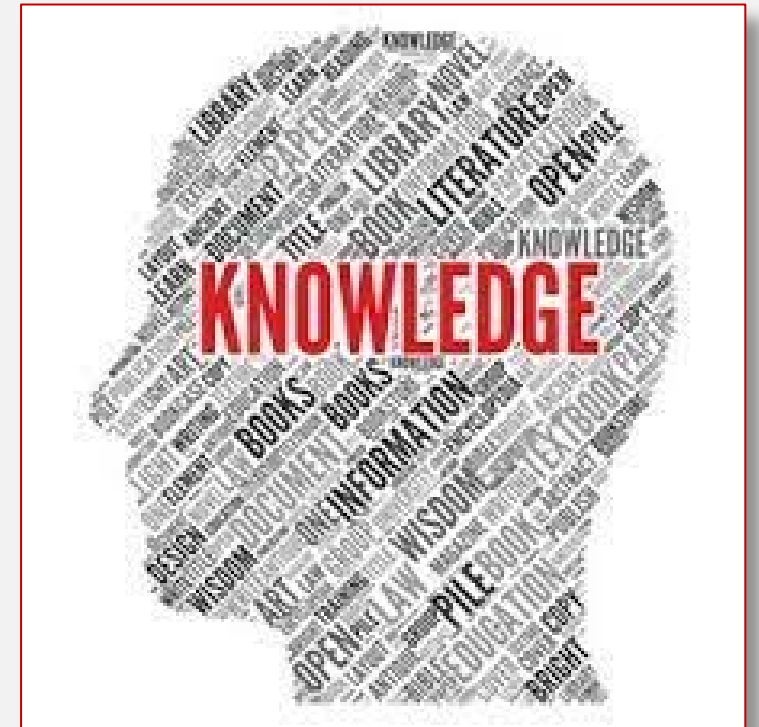
The Golden Circle + Human Brain



DEVELOPING EVIDENCE-BASED CLINICIANS VIA KT

5 Key Questions to be answered for KT considerations

1. **What** knowledge should be transferred?
2. **Whom** should the knowledge be transferred?
3. **Whom** should the knowledge be transferred?
4. **How** should the knowledge be transferred?
5. **What Effect** should knowledge be transferred?



THE ROLE OF RELATIONSHIPS

Relationships = Essential Bridge for KT

Communication = Increased Potential for KT

Trust = Greater Potential for KT

Developing relationships through effective communication while gaining trust is essential in KT practice

PRACTICE-BASED CASE SCENARIO FOR KT

Background/Purpose

Engage therapy leaders and rehab clinicians in specific skill acquisition of EBP considerations via knowledge transfer allowing immediate adoption into clinical practice.

Efficiency and Consistency in Clinical Care and Outcomes – “Do more with less”

- Promotion of ICF Categorizations and Considerations – i.e. Activity and Participation Limitation Identification
- Proper Intensity/Types of Interventions and Resource Utilization
 - Exercise Prescription and Task-Specific Training
 - Frequency/Duration of Care/LOS
- Promote thorough and accurate documentation for patient progress and optimal outcomes

Key considerations for goal attainment?

WHAT KNOWLEDGE SHOULD BE TRANSFERRED?

- Examination and Evaluation considerations of ICF
- Task Specific Practice – Functional Deficits
- Intervention and Rx Intensity
- POC/Resource Utilization
- Documentation Standards



WHOM SHOULD KNOWLEDGE BE TRANSFERRED?

Knowledge Translation?

- Direct to the consumer!
 - Alternative to “Train the Trainer”
- ✓ *Clinician*
- ✓ *Clinical Leaders*





**WHOM SHOULD
THE
KNOWLEDGE BE
TRANSFERRED?**



HOW SHOULD THE KNOWLEDGE BE TRANSFERRED?

- Stakeholder Buy-in/Agreement
- Virtual Classrooms
- “Bitesize” doses – i.e. “less is more”
- 5-month period (June through September)
- Knowledge check modules (virtual feedback/responses)
- Application learning – Mini “Labs”
- Recorded Session(s) completions
 - Module 1 – 2758
 - Module 2 – 2441
 - Module 3 – 2146
- Post training follow up
 - Skill Acquisition
 - Practice Integration
 - Documentation (Clinical Record Review)

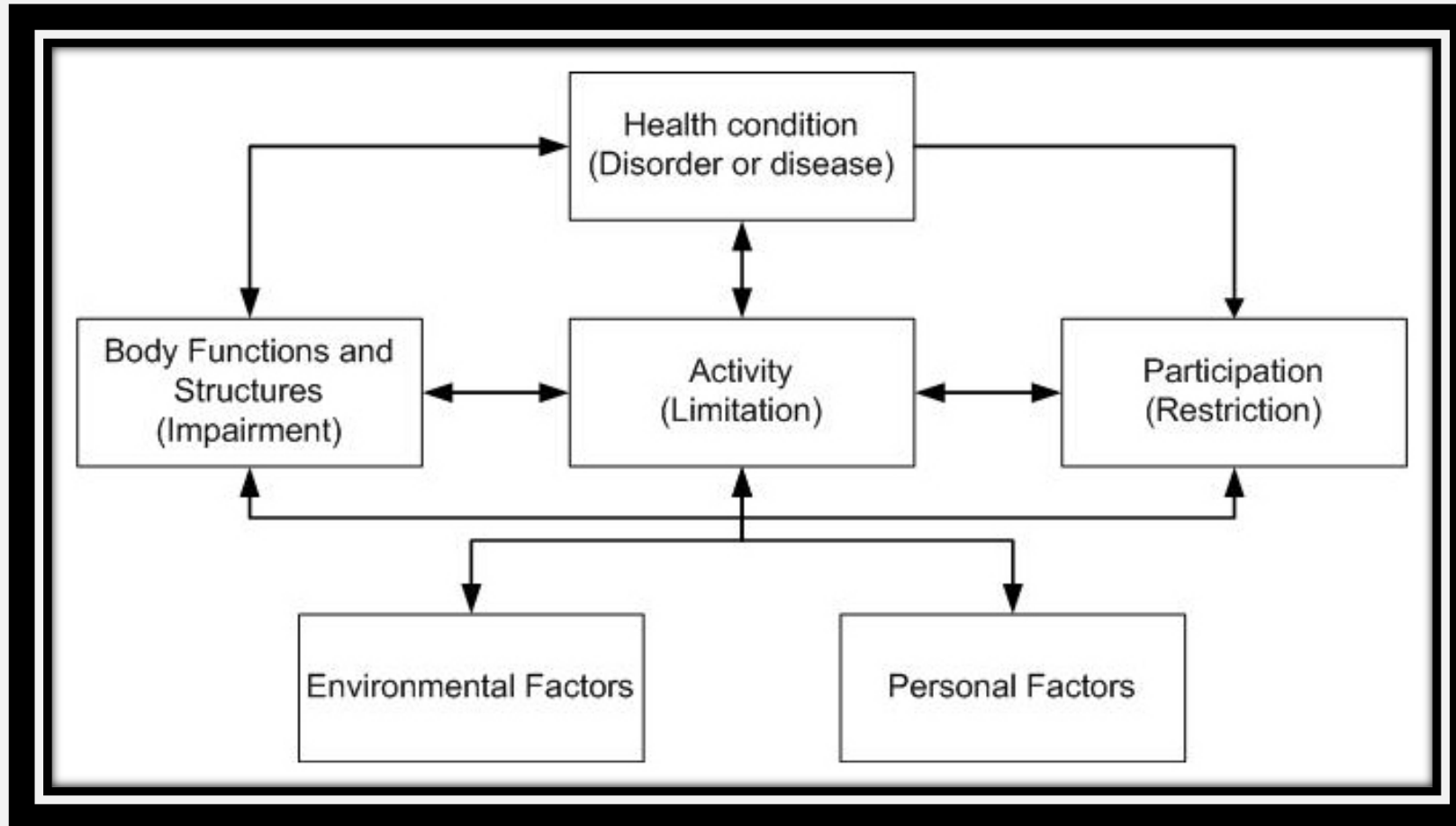


WHAT EFFECT SHOULD KNOWLEDGE BE TRANSFERRED?

Behavior Change

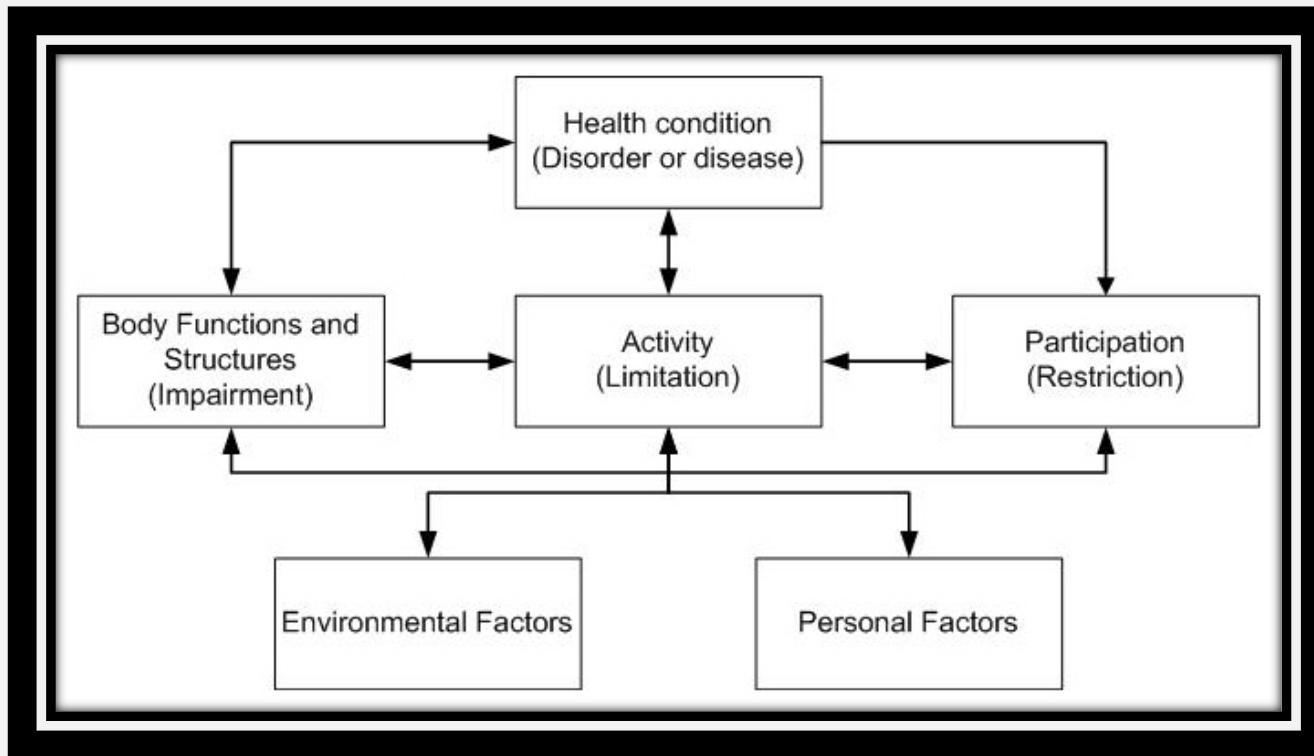
- Adoption of Evaluative/Examination Testing and Classifications via ICF
- Activity and Participation Limitation Identification via Task Specific Practice
- Inclusion of Intensity Validation via RPE Scales
- Plan of Care (POC) Development via frequency/duration of care - dosing, pacing and spacing
- Post-training documentation analysis via clinical record review (CRR)

INTERNATIONAL CLASSIFICATION OF FUNCTIONING, DISABILITY AND HEALTH FRAMEWORK (ICF) MODEL



INTERNATIONAL CLASSIFICATION OF FUNCTIONING, DISABILITY AND HEALTH FRAMEWORK (ICF) MODEL

Examination/Evaluation



Body Functions are physiological functions of body systems (including psychological functions).

Body Structures are anatomical parts of the body such as organs, limbs and their components.

Impairments are problems in body function or structure such as a significant deviation or loss.

Activity is the execution of a task or action by an individual.

Participation is involvement in a life situation.

Activity Limitations are difficulties an individual may have in executing activities.

Participation Restrictions are problems an individual may experience in involvement in life situations.

Environmental Factors make up the physical, social and attitudinal environment in which people live and conduct their lives..

FUNCTIONAL LIMITATIONS

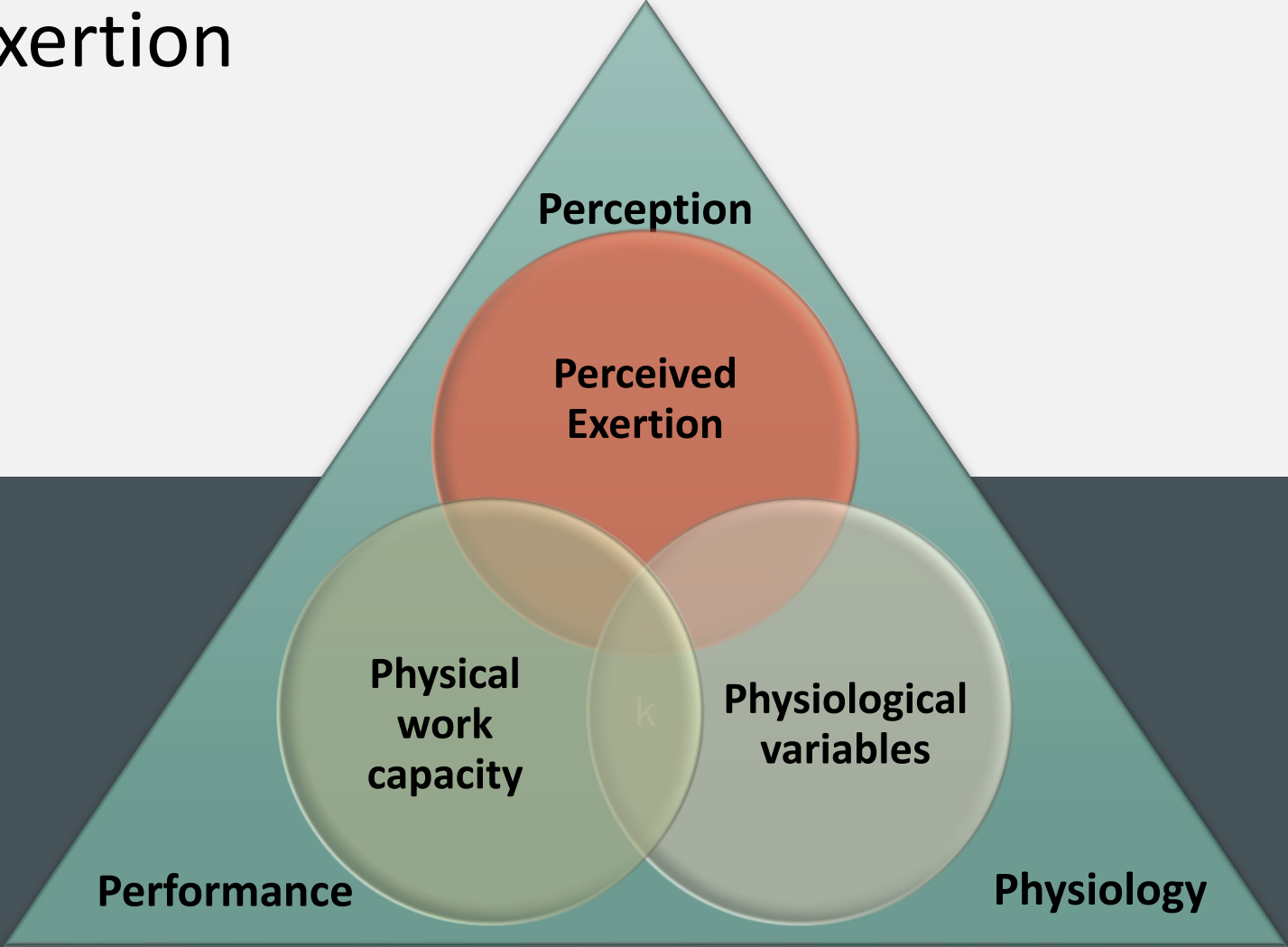
Impairments result in a restriction of the ability to perform a physical activity or task that is, or has been, usual for the individual

Cognitive deficits/mental disorders/behaviors may impact functional limitations such as confusion, impaired judgement or decision making

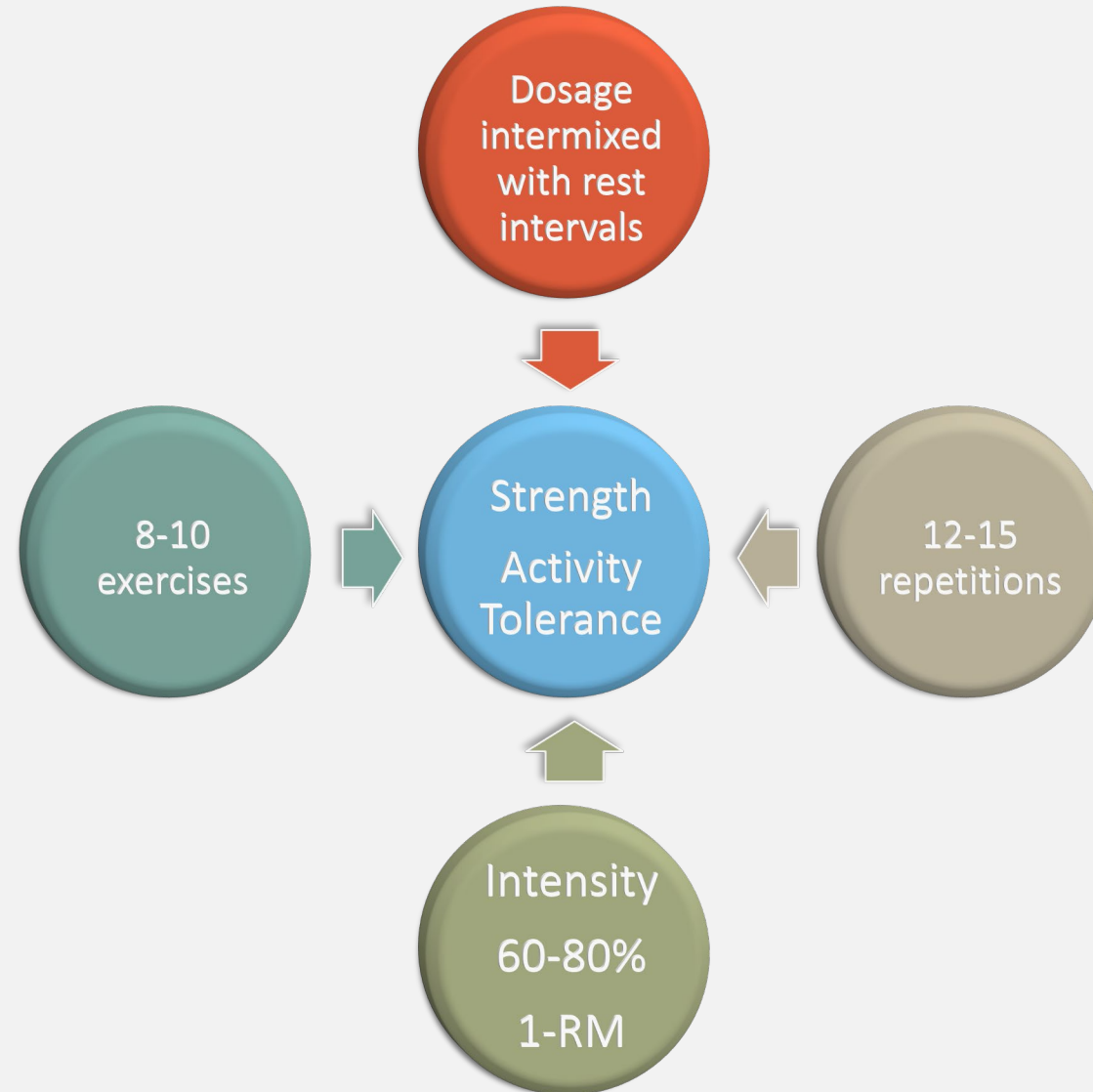
Rehabilitation Goal: Maximize and/or maintain functional ability

How to get there? Prescriptive activity and exercise aimed at addressing the identified functional and/or knowledge deficits.

Perceived Exertion



EXERCISE AND ACTIVITY PRESCRIPTION



Activity and Exercise Prescription

| Patient Self-Report Measures of Level of Intensity and Dyspnea | | | | | |
|--|------------------------------|--------------|------------|--|--|
| DYSPNEA SCALE | HOW SHORT OF BREATH ARE YOU? | | BORG SCALE | HOW DIFFICULT WAS THE ACTIVITY/ EXERCISE TO PERFORM? | TALK TEST |
| | | | 6 | No exertion at all | At rest |
| | | | 7 | Extremely light | |
| 0 | Nothing at all | | 8 | | Gentle walking or "strolling" |
| 1 | Very slightly | | 9 | Very light | |
| 2 | Slightly | | 10 | | Steady pace, not breathless |
| 3 | Moderately | | 11 | Light | |
| | | | 12 | | Brisk walking, able to carry on a conversation |
| 4 | Somewhat severely | TARGET RANGE | 13 | Somewhat hard | |
| | | | | 14 | |
| 5 | Severely | | 15 | Hard | Very brisk walking, must take a breath between 4-5 words |
| 6 | | | 16 | | |
| 7 | Very severely | | 17 | Very hard | Unable to talk and keep pace |
| 8 | | | 18 | | |
| 9 | Very, very severely | | 19 | Extremely hard | |
| 10 | Maximally | | 20 | | |

| Modified Scale | Ordinal Borg RPE Scale | Percent Effort | Perceived Work Load |
|----------------|------------------------|----------------|---------------------|
| | 6 | 20% | Very, very light |
| | 7 | 30% | |
| | 8 | 40% | |
| 1 | 9 | 50% | Very light |
| 2 | 10 | 55% | Fairly light |
| 3 | 11 | 60% | |
| | 12 | 65% | Moderately light |
| 4 | 13 | 70% | |
| | 14 | 75% | Hard |
| 5 | 15 | 80% | |
| 6 | 16 | 85% | Very Hard |
| 7 | 17 | 90% | |
| 8 | 18 | 95% | Very, very hard |
| 9 | 19 | 100% | |
| 10 | 20 | Exhaustion | |

SKILL ACQUISITION FOR ACTIVITY AND PARTICIPATION

Consistency

- Performance over multiple trials or sessions

Flexibility

- Performance under a variety of conditions

Efficiency

- Performance with a certain level of energy expenditure

TASK-SPECIFIC TRAINING DEFINED

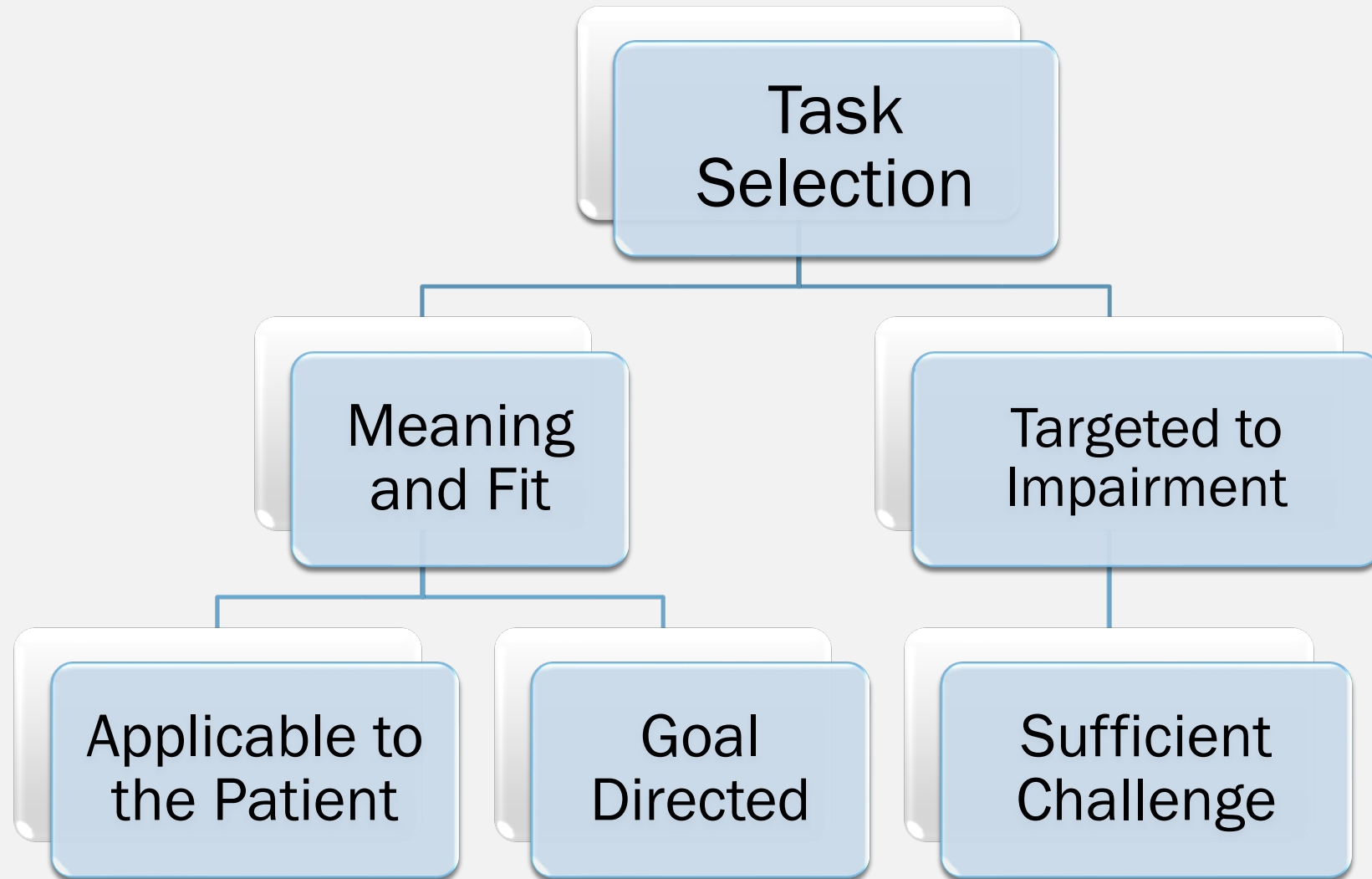
What is a Task?

- Difference between Body Structure/Function and Activity
 - Body Structure/Function = muscle performance, timing, and balance
 - Activity = walking from the living room to the kitchen for dinner and returning to the living room

What is Task-Specific Training ?

- Goal directed
- Coordinated movements and/or sustained postures
- Replicate some component of daily activities
- Aim towards reconstruction of the whole activity
- Reinforced with positive and timely feedback

PRINCIPLE - TASK SELECTION



OVERALL CONSIDERATIONS FOR TASK SPECIFIC TRAINING

- Progress the “challenge” based on the desired outcome
- Monitor patient’s response to treatment in a single session and across sessions
- Identify overall progress towards functionally based goals using objective measures



Task Challenge

Task Performance
(consistency;
flexibility;
efficiency)

REFINE YOUR PRACTICE AND FOSTER PERCEIVED VALUE

Adopt a new routine

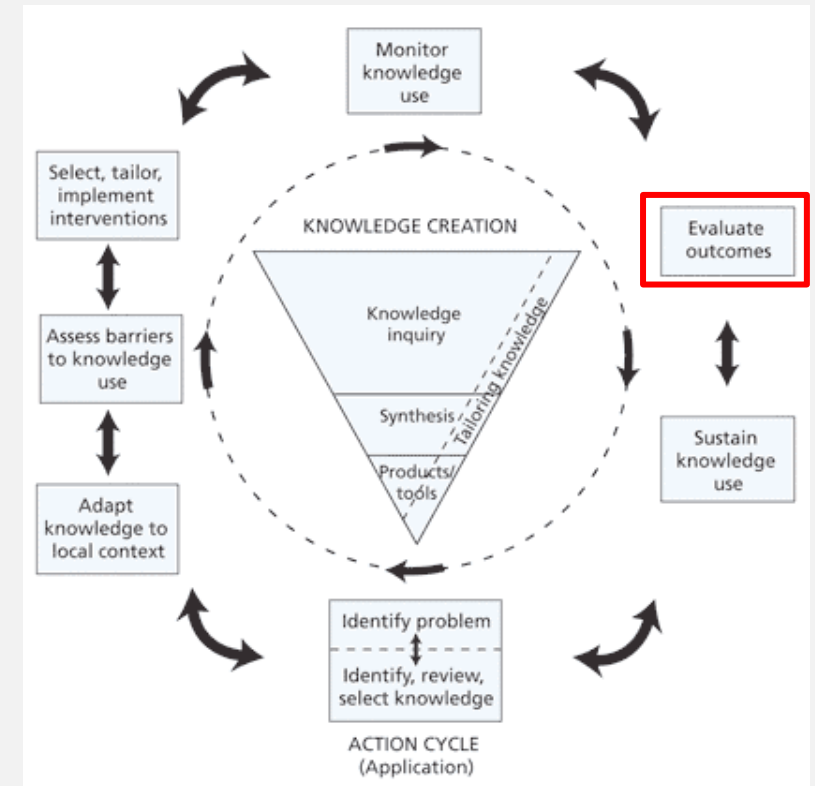
1. Rehabilitation is about skill acquisition
 - Maximize consistency, flexibility, and efficiency
2. Make Task-Specific Training your priority intervention
 - *Differentiate* what you do in Rx sessions compared to the HEP
3. Develop a task that fits with your patient's specific needs.



KT RESULTS

Measures of Clinician Empowerment, Level of Engagement, Support, Adoption into Practice

- Number of OT and PT staff who completed training
 - 2966 PT/PTAs and OT/COTAs
 - Target: $\geq 50\%$ of target audience
 - **Result: average attendance across all 3 modules 67.7%**
 - Survey - Level of Confidence Attestation
 - “I feel I will be able to apply this information to my practice”
 - Target: $\geq 70\%$ Agree or Strongly Agree
 - **Result: average across all 3 modules 89.8%**
- Reviewed completed discharged patient’s medical records prior to/post training
- All examined records demonstrated behavioral change in practice (i.e. task-specificity, exercise prescription, RPE, etc...)



OPPORTUNITIES

- Increase prevalence of task-specific training in post-operative cases
- Progress strength training by adding resistance (intensity) rather than adding repetitions
- Summarize progress in terms of demonstrated and observed skill consistency, flexibility, and efficiency rather than advancement of exercises
- Do more with gait training – quality versus quantity

STRENGTHS OF THE KT PROJECT

- **Recognized need company-wide**
 - Therapist engagement
 - Therapy practice - EBP
- **Re-stabilization in company structure**
 - Therapist in senior leadership
 - Local structure for therapy support determined
- **Operational support for training**
 - Wanted to see behavior change
 - Trust in the end product to be produced
- **Senior leadership support**
 - Resource allocation
- **Enthusiasm among local therapy leaders**
- **Available technology and technological expertise**
- **Resource references available to clinicians**



SUMMARY OF THE KT PROJECT AND SUSTAINABILITY

Limitations

- Short timeline for development
- Inexperience with virtual classroom for clinical teaching
- Additional activities to reinforce learning were optional
- Competing priorities – EMR integration, technology updates

Sustainability

- Learning/reference modules made available for CEUs
- Reinforced concepts and use in other practice-based projects
- Made available patient-facing resources to aid in adherence and self-management
- Intermittent chart audits – qtrly QAPI - CRR



CLINICAL PRACTICE GUIDELINES



As of 10/1/2021

- Published Member Resources = 300+ CPGs
- Planning Phase = 21 CPGs
- Appraising Literature = 8 CPGs
- Drafting Phase = 5 CPGs
- External Review Phase = 3 CPGs

*Guidelines are provided to assist in clinical decision making, not to take the place of clinician judgment.

- Remember... that each patient and each situation is unique...
- Remember... to listen and observe the patient that is directly in front of you...

SUMMARY

Considerations for KT Implementation

- PDSA/PDCA, determine and describe the “WHY” and ensure leadership
- Foster training opportunities to convert practice behaviors
- Support by ALL stakeholders is critical
- Consider competing priorities as a factor and prioritize!
- Consistent clinical message with lasting clinical support tools increases likelihood of sustaining change

Reflection of Session Objectives

- To define & understand knowledge translation (KT)
- To appreciate why KT is important
- To provide a framework for knowledge translation in physical therapy practice
- To outline the role of the KT Broker
- To identify possibilities for your involvement

