Session Objectives

At the conclusion of this presentation, participants will be able to:

• Define knowledge translation
• Explain the phases of the knowledge-to-action framework
• Describe the rationale and evidence regarding the importance of amount, intensity, and variability of locomotor practice
• Explain how these training parameters can be applied during clinical physical therapy sessions
• Describe specific strategies to facilitate translation of evidence into clinical practice, including use of the Knowledge-to-Action Framework, audit and feedback, and leadership support.

Key Points

Introduction to Knowledge Translation

Overview of High Intensity Training
Translation into Clinical Practice
K2A Plan Development
**Video**

*17 years or more for evidence to be used in practice (Morris et al, 2011)*

**Impact on Healthcare**

- An estimated $200B in research is wasted
  - part of this is attributed to research findings not being translated into practice, programs, policy

- 17 years or more for evidence to be used in practice
  (Morris et al, 2011)
Gaps in US Healthcare

FIGURE 5-2 Schematic of the health care system today. Republished with permission of IOM (Institute of Medicine), from IOM. Best care at a Lower Cost: The path to continuously learning health care in America. 2013. Permission conveyed through Copyright Clearance Center, Inc.

Lack of Translation

Consistent evidence of failure to translate research findings into clinical practice

- 30-45% patients do not get treatments of proven effectiveness
- 20–25% patients get care that is not needed or potentially harmful

(McGlynn et al, 2003; Grol R, 2001; Schuster, McGlynn, Brook, 1998.)

Knowledge Translation (KT)

"the 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 health care system."

-Canadian Institutes of Health Research
KT Terminology

Four Categories of KT

End of grant KT/Dissemination
The researcher develops and implements a plan for making knowledge users aware of the knowledge generated through a research project.

KT / Implementation Science
The study of how to promote uptake of research/knowledge in decision making.

Integrated KT research
Research approaches that engage potential knowledge-users as partners in the research process. Requires a collaborative or participatory approach to research that is action oriented and is solutions and impact focused.

KT / Implementation Practice
Promoting/facilitating the uptake of research/knowledge in decision making.

KT Research vs Practice

• KT Research (Implementation Research)
  • Gaps in decision making
  • Knowledge synthesis and distillation
  • Determinants of knowledge/research use
  • Effectiveness of KT Strategies

• KT Practice
  • Implementing evidence
  • Reducing know-do gaps
  • Evaluation of the impact of evidence
  • Requires unique skill set

Straus, Tetroe, and Graham, 2013
K2A Cycle: A Planned Action Model

• Based on a concept analysis of 31 planned action theories
• Developed to help make sense of the black box known as 'knowledge translation' or 'implementation'
• Holistic view of the phenomenon by integrating the concepts of knowledge creation and application or action
• Other theories can apply at each stage of the action cycle (e.g. psychological, sociological, organizational, educational theories, etc)


K2A framework

• Ranked the 13th most frequently cited medical education articles in past 40 years (Azar 2015)
• Identified as the most frequently cited implementation framework since 1990 (Skolarus et al 2017)
• The focus of a citation analysis and systematic review (Field et al 2014)
The knowledge creation funnel conveys the idea that knowledge needs to be increasingly distilled before it is ready for application.

- **Knowledge Inquiry:** First generation knowledge (e.g., broad base primary studies or information)
- **Knowledge Synthesis:** Methodologies for determining what is known in a given area or field and what the knowledge gaps are (e.g., Systematic reviews) – 2nd generation knowledge
- **Knowledge Tools/Products:** Refined knowledge for decision-making (e.g., guidelines, decision aids, algorithms) - 3rd generation knowledge

The K2A in rehabilitation:
- ~6% of all K2A citations
- 136 articles cited K2A
- 31 articles used K2A to guide project
- 22 published KT projects
- 2 implemented a CPG

Other KT frameworks also used:
- Hudon et al (2014) identified 8 PT KT studies that used an explicit framework

Key Points

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