Current Issues and Trends for the Rehabilitation of People with ABI and Cognitive Impairment

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Selected Topics

1. Context for Delivery of Interventions
2. Top down Approaches
3. Bottom up Approaches
4. Guideline Development
5. Methods of Delivery of Intervention
Context for Delivery

• Shorter lengths of stay and earlier commencement of therapy.
• Neuroplasticity supporting both top down and bottom up approaches
• Technology
• New evidence regarding potential cognitive decline in TBI in relationship to environmental enrichment\(^1\)
Top Down Approaches

Features:

• Address an occupational performance that is valued by the person
• Person is critical in devising the approach to treatment
• Potential for transfer to other tasks
• Requires metacognition

Sample Interventions: Goal Management Training and CO-OP
Top Down Approaches

Cognitive Orientation to Occupational Performance (C0 – OP) (Dawson et al., 2009)²

• Based on CO-OP approach for children (Poletajko & Mandich et al., 2001, 2004)³,⁴

• Principles:
  • Metacognitive approach
  • Verbal self instruction
  • Contextualized
  • Goals meaningful to client
Top Down Approaches

5 Elements Of CO-OP

1. Client Selects goals
2. Intervention arises from observation-based process of identifying performance problems
3. To bridge the gap between treatment goal and performance cognitive strategies are used including Global Strategy (Goal, Plan, Do, Check) and domain specific/task specific strategies.
4. Therapists guide clients to self discover appropriate strategies. This is believed to result in self-efficacy.
5. Significant others need to reinforce the global and domain specific strategies.

(Dawson et al., 2009)
Bottom-up Approaches

- Evidence for effectiveness of these approaches exist. (Van Heugten et al., 2012)\(^5\)

- ACRM Cognitive Rehab Manual and Training
  http://www.acrm.org/publications/cognitive-rehab-manual
Bottom-up Approaches

Technology Based Approaches

- New versatile hardware: PDAs, Tablets, GPS
  (e.g. For Memory in daily life, De Joode et al., 2013)\textsuperscript{6,7}
  (e.g. For Way Finding, Chang 2010)\textsuperscript{8}

- New software: APS for ABI; Virtual Reality
  - Virtual Reality Based Interventions
    (e.g. Community Living Skills, 2009)\textsuperscript{9}

- Use of online cognitive remediation
  - Internet Based Delivery of Cog Rehab (Bergquist et al, 2008, 2010)\textsuperscript{10,11}
• 27 Life-Changing iPhone and iPad Apps for People with Brain Injury
  http://www.brainline.org/content/2011/05/23-lifechanging-iphone-ipad-apps-for-people-with-brain-injury.html

• APP-titude: Apps for Brain Injury Rehab Assessment, Communication, Cognitive Rehab, Compensation

• Memory Apps for Traumatic Brain Injury (TBI)
  http://www.aphasiahope.org/2013/04/29/3735/

• 100+ Top Apps for Brain injury (iPhone/iPad)
Guideline Development

• New emphasis on Guideline Development

• E.g.

  Stergiou-Kita et al, 2012\textsuperscript{12}

  Guidelines for Return to Work.

  – based on Rigorous Review of Literature and expert opinion
Guideline Development Process

1. Define Guideline Objectives & Future Users
2. Complete Systematic Literature Review
3. Gather Panel Researchers & Clinical Users
4. Write Recommend. Using Research Evidence + Clinical Expertise
5. Ensure Recommend. Applicable to Practice
6. Pilot Test Guideline in Practice
New Methods of Delivery

• Changing delivery in the day hospital environment – the “block system” in Toronto Rehab Day Hospital.

• Consider enrichment and structure of discharge environment.

• Use of technology for outreach

• Training of volunteers and support staff to deliver intervention
References


References


