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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 enrichment¹



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 (CO – 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)^{6,7}
(e.g. For Way Finding, Chang 2010)⁸
- New software: APS for ABI; Virtual Reality
 - Virtual Reality Based Interventions
(e.g. Community Living Skills, 2009)⁹
- Use of online cognitive remediation
 - Internet Based Delivery of Cog Rehab (Bergquist et al, 2008, 2010)^{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
<http://www.asha.org/Publications/leader/2012/120703/APP-titude--Apps-for-Brain-Injury-Rehab.htm>
- Memory Apps for Traumatic Brain Injury (TBI)
<http://www.aphasiahope.org/2013/04/29/3735/>
- 100+ Top Apps for Brain injury (iPhone/iPad)
<http://appcrawlr.com/ios-apps/best-apps-brain-injury>

Guideline Development

- New emphasis on Guideline Development
- E.g.
 - Stergiou-Kita et al, 2012 ¹²
 - Guidelines for Return to Work.
 - based on Rigorous Review of Literature and expert opinion



Guideline Development Process

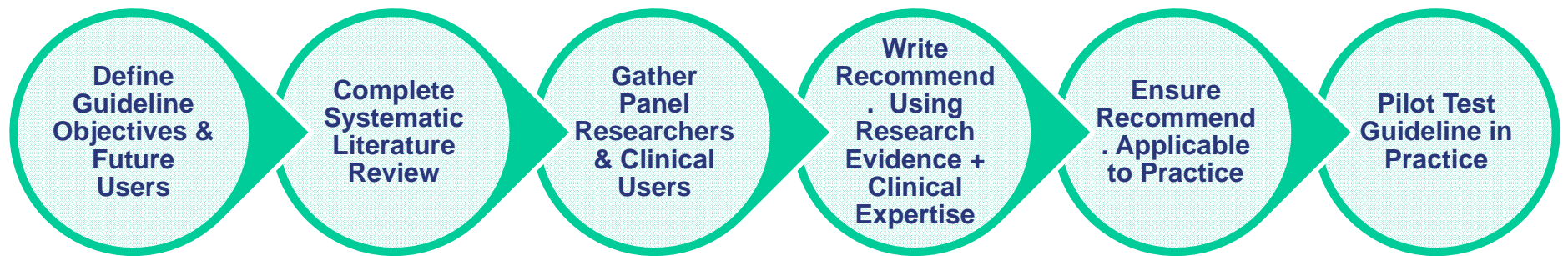
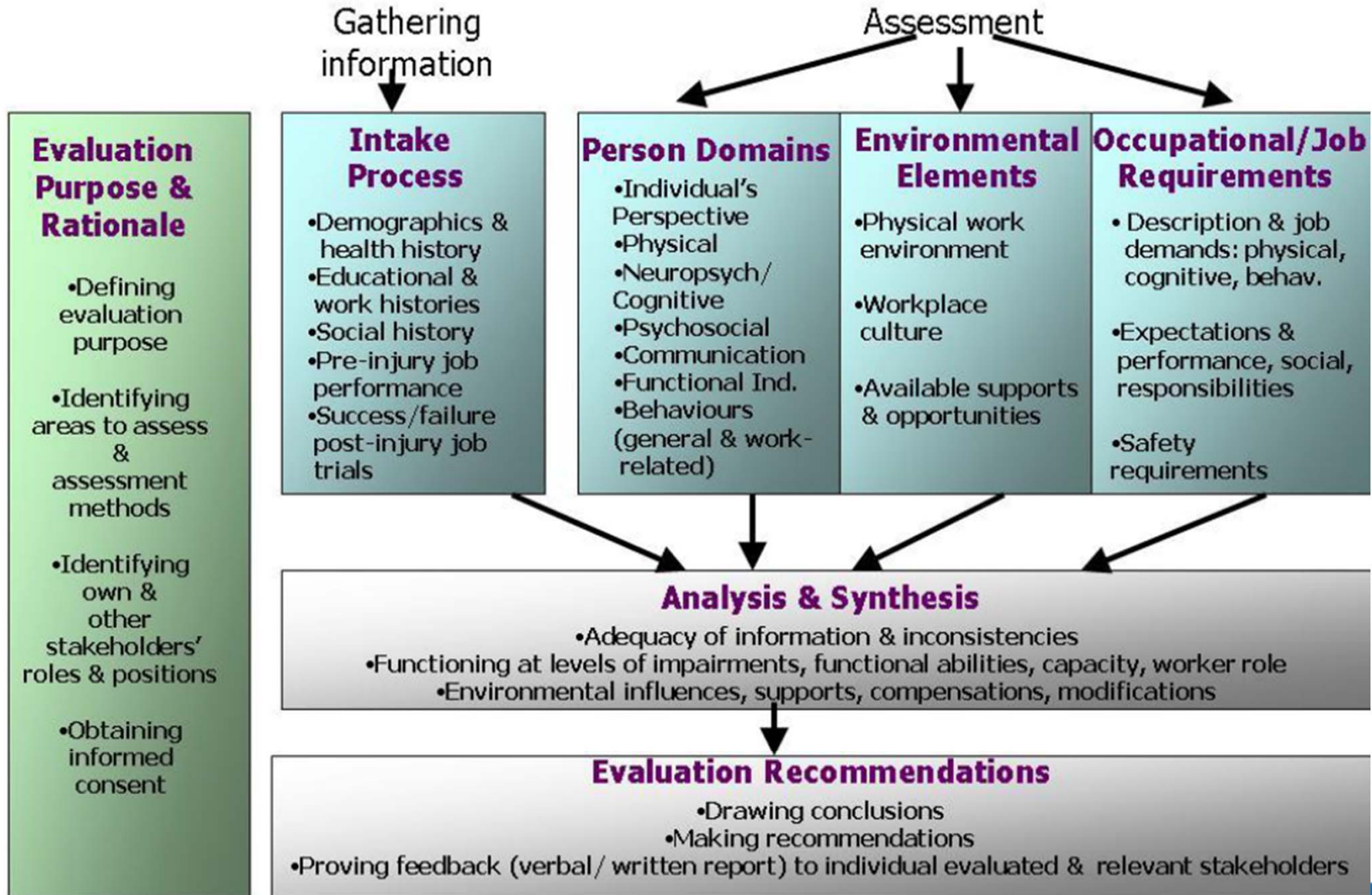


Figure 1: Evidence-Based Framework For Vocational Evaluation Following TBI



Stergiou-Kita, M., Dawson, D., & Rappolt, S. (2011). An integrated review of the process and factors relevant to vocational evaluation following traumatic brain injury. *Journal of Occupational Rehabilitation*, 21(3), 374-394.

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

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