TITLE: Telerehabilitation for Pediatric Patients with Traumatic Brain Injury: Clinical Effectiveness, Cost-Effectiveness, and Guidelines

DATE: July 17, 2015

RESEARCH QUESTIONS

1. What is the clinical effectiveness of telerehabilitation for pediatric patients with traumatic brain injury?

2. What is the cost-effectiveness of telerehabilitation for pediatric patients with traumatic brain injury?

3. What are the evidence-based guidelines regarding the use of telerehabilitation in pediatric patients with traumatic brain injury?

KEY FINDINGS

No relevant literature was identified regarding telerehabilitation for pediatric patients with traumatic brain injury.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library, University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2010 and July 3, 2015. Internet links were provided, where available.

SELECTION CRITERIA

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.
**Table 1: Selection Criteria**

<table>
<thead>
<tr>
<th>Population</th>
<th>Pediatric patients with traumatic brain injury (TBI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention</td>
<td>Telerehabilitation services (involving assessment and management of condition)</td>
</tr>
<tr>
<td>Comparator</td>
<td>Q1 &amp; 2: Face-to-face rehabilitation; No comparator</td>
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<td>Q3: No comparator</td>
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<tr>
<td>Outcomes</td>
<td>Q1: Clinical effectiveness (e.g., disability rating scale, functional independence level, cognitive function, any rehabilitation or functional outcomes); Harms (e.g., rates of complications such as pneumonia, meningitis, atelectasis, anemia)</td>
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<td></td>
<td>Q2: Cost-effectiveness outcomes</td>
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<td>Q3: Evidence-based guideline regarding the use of telerehabilitation in this patient population</td>
</tr>
<tr>
<td>Study Designs</td>
<td>Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, economic evaluations, evidence-based guidelines</td>
</tr>
</tbody>
</table>

**RESULTS**

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, economic evaluations, and evidence-based guidelines.

No relevant health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, economic evaluations, or evidence-based guidelines were identified regarding telerehabilitation for pediatric patients with traumatic brain injury.

References of potential interest are provided in the appendix.

**OVERALL SUMMARY OF FINDINGS**

No relevant literature was identified regarding telerehabilitation for pediatric patients with traumatic brain injury; therefore, no summary can be provided.
REFERENCES SUMMARIZED

Health Technology Assessments
No literature identified.

Systematic Reviews and Meta-analyses
No literature identified.

Randomized Controlled Trials
No literature identified.

Non-Randomized Studies
No literature identified.

Economic Evaluations
No literature identified.

Guidelines and Recommendations
No literature identified.

PREPARED BY:
Canadian Agency for Drugs and Technologies in Health
Tel: 1-866-898-8439
www.cadth.ca
APPENDIX – FURTHER INFORMATION:

Health Technology Assessments – Adult Population

   See: Neurology, pages 9-11

Systematic Reviews and Meta-analyses – Support for Family Members


Randomized Controlled Trials

Unspecified Population Age, Mixed Population Age, or Alternate Modality


Non-Randomized Studies

Unspecified Population Age, Mixed Population Age, or Alternate Modality


Support for Family Members


Adult Population


Economic Evaluations – Unspecified Population

Clinical Practice Guidelines

Unspecified Methodology/Recommendations Not Specific for Pediatrics

See: Recommendations to Address Gaps, pages 8, 45, and 47

See: 4. Specific Populations; Rural and Remote, pages 29-30

Alternate Indication/Primarily Consensus Based


Review Articles
