

CADTH RAPID RESPONSE REPORT: SUMMARY OF ABSTRACTS

Integrated Care Models for Acquired Brain Injury: Clinical Effectiveness, Cost- Effectiveness and Guidelines

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Research Questions

1. What is the clinical effectiveness of integrated care models for patients with acquired brain injury with mental health and/or substance use disorders compared to patients who do not have access to patient-centered care?
2. What is the cost-effectiveness of integrated care models for patients with acquired brain injury with mental health and/or substance use disorders compared to patients who do not have access to patient-centered care?
3. What are the evidence-based guidelines for patients with acquired brain injury with mental health and/or substance use disorders?

Key Findings

One randomized controlled trial was identified regarding the clinical effectiveness of integrated care models for patients with acquired brain injury with mental health and/or substance use disorders who do not have access to patient-centered care. Additionally, one evidence-based guideline was identified for patients with acquired brain injury and mental health and/or substance use disorders.

Methods

A limited literature search was conducted by an information specialist on key resources including Ovid Medline, PsycINFO, 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. The search strategy was comprised of both controlled vocabulary, such as the National Library of Medicine's MeSH (Medical Subject Headings), and keywords. The main search concepts were acquired brain injury and substance use or mental health and integrated care. No filters were applied to limit the retrieval by study type for questions 1 or 2. A methodological filter was applied to limit retrieval to guidelines for question 3. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2014 and May 8, 2019. 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

Population	Patients with acquired brain injury with mental health and/or substance use disorders
Intervention	Q1-2: Integrated care models Q3: All type of care models
Comparator	Q1-2: No patient-centered care, non-integrated care models Q3: No comparator needed
Outcomes	Q1: Clinical effectiveness (e.g., incarceration, hospitalization, readmission, length of stay, substance use, health outcome, etc.) Q2: Cost-effectiveness Q3: Guidelines
Study Designs	Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, economic evaluations, and evidence-based guidelines.

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.

One randomized controlled trial and one evidence-based guideline was identified pertaining to the use of integrated care models for patients with acquired brain injury with mental health and/or substance use disorders who do not have access to patient-centered care. No relevant health technology assessments, systematic reviews, meta-analyses, non-randomized studies or economic evaluations were identified.

Additional references of potential interest are provided in the appendix.

Overall Summary of Findings

The authors of the included randomized controlled trial (RCT)¹ sought to assess the effectiveness of a step-based collaborative care approach for adolescents with traumatic brain injury along with mental health and/or substance use issues. The study randomized 120 subjects to receive either step-based collaborative care or control care and patients were assessed 12 months after they were hospitalized due to injury. Overall, researchers concluded that adolescents in the step-based collaborative care group had fewer episodes of both alcohol and drug use and depressive symptoms when compared to the control group although results were not considered statistically significant.¹

The identified evidence-based guideline² encompassed a systematic review, identifying six articles pertaining to a variety of traumatic brain injury integrative care approaches. The guideline recommends that integrated and collaborative care for traumatic brain injury should involve caregivers and family in the decision-making process to create personalized care for patients, while taking into consideration the severity and type of symptoms the patients is exuding.²

References Summarized

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses

No literature identified.

Randomized Controlled Trials

1. Zatzick D, Russo J, Lord SP, et al. Collaborative care intervention targeting violence risk behaviors, substance use, and posttraumatic stress and depressive symptoms in injured adolescents: a randomized clinical trial. *Jama, Pediatr.* 2014 Jun;168(6):532-539
[PubMed: PM24733515](#)

Non-Randomized Studies

No literature identified.

Economic Evaluations

No literature identified.

Guidelines and Recommendations

2. Luaute J, Hamonet J, Pradat-Diehl P, Sofmer. Behavioral and affective disorders after brain injury: French guidelines for prevention and community supports. *Ann Phys Rehabil Med.* 2016 Feb;59(1):68-73.
[PubMed: PM26697992](#)

Appendix — Further Information

Previous CADTH Reports

3. Duration of physiotherapy rehabilitation after acquired brain injury: a review of guidelines. (*CADTH Rapid response report: summary with critical appraisal*). Ottawa (ON):CADTH; 2018.
<https://www.cadth.ca/duration-physiotherapy-rehabilitation-after-acquired-brain-injury-review-guidelines> . Accessed 2019 May 17
4. Long-term psychosocial support interventions for individuals with moderate to severe acquired brain injury: clinical and cost effectiveness. (*CADTH Rapid response report: summary of abstracts*). Ottawa (ON):CADTH; 2018
<https://www.cadth.ca/long-term-psychosocial-support-interventions-individuals-moderate-severe-acquired-brain-injury> . Accessed 2019 May 17.
5. Multidisciplinary rehabilitation interventions for patients with acquired brain injuries: clinical effectiveness, cost-effectiveness, and guidelines. (*CADTH Rapid response report: summary of abstracts*). Ottawa (ON):CADTH; 2016.
<https://www.cadth.ca/multidisciplinary-rehabilitation-interventions-patients-acquired-brain-injuries-clinical-0> . Accessed 2019 May 17.

Clinical Practice Guidelines

Mental Health or Substance Abuse Not Specified in Population

6. Department of Veteran Affairs, Department of Defense. VA/DoD clinical practice guideline for the management of concussion-mild traumatic brain injury. 2016;
<https://www.healthquality.va.gov/guidelines/Rehab/mtbi/mTBICPGFullCPG50821816.pdf>
f Accessed 2019 May 17
7. Prouteau A, Stefan A, Wiart L, Mazaux JM. The evaluation of behavioural changes in brain-injured patients: SOFMER recommendations for clinical practice. *Ann Phys Rehabil Med*. 2016 Feb;59(1):23-30.
[PubMed: PM26797075](https://pubmed.ncbi.nlm.nih.gov/26797075/)
8. Marshall S, Bayley M, McCullagh S, et al. Updated clinical practice guidelines for concussion/mild traumatic brain injury and persistent symptoms. *Brain Inj*. 2015;29(6):688-700.
[PubMed: PM25871303](https://pubmed.ncbi.nlm.nih.gov/25871303/)

Non-Randomized Studies

Comparator Not Specified

9. Janak JC, Cooper DB, Bowles AO, et al. Completion of multidisciplinary treatment for persistent postconcussive symptoms Is associated with reduced symptom burden. *J Head Trauma Rehabil*. 2017 Jan/Feb;32(1):1-15.
[PubMed: PM26709579](https://pubmed.ncbi.nlm.nih.gov/26709579/)

Patients with Mental Health or Substance Abuse Not Specified

10. van Velzen JM, van Bennekom CA, van Dormolen M, Sluiter JK, Frings-Dresen MH. Evaluation of the implementation of the protocol of an early vocational rehabilitation intervention for people with acquired brain injury . *Disabil Rehabil.* 2016;38(1):62-70. [PubMed: PM25738905](#)

Review Articles

11. Singh R, Kucukdeveci AA, Grabljevec K, Gray A. The role of interdisciplinary teams in physical and rehabilitation medicine. *J Rehabil Med.* 2018 Aug 22;50(8):673-678. [PubMed: PM29944171](#)