

# Improving Outcomes for Students with Acquired Brain Injury: A Systematic Search of Available Educator Resources

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## Background

- Despite being the leading cause of disability in children,<sup>1</sup> acquired brain injury (ABI) is not recognized as a category of exceptionality in Ontario schools.<sup>2</sup>
- Ontario teachers do not receive training related to ABI at the pre-service or practicing levels.
- Research has shown that educators around the globe lack knowledge about ABI.<sup>3,4</sup>
- A needs assessment was conducted with Ontario educators which revealed the desire for a short, engaging eLearning tool to raise educator awareness and knowledge about children with ABI.<sup>5</sup>
- An extensive environmental scan was completed to identify existing resources for educators about ABI.

## Research Question

What free, online resources exist for educators to support students with ABI in the classroom?



## Methods

Systematic Search of Grey Literature

- Identified key websites
- Located resources regarding ABI and children
- Internet-based search for additional resources

Primary Inclusion/Exclusion

Inclusion Criteria	Exclusion Criteria
Intended for adults (i.e. educators, parents, coaches)	Intended for children and/or youth
Produced in English	Not produced in English
Purpose: To support students with ABI	No information about supporting students with ABI
Topic: Supporting students with ABI in school (elementary or high)	Does not address supporting students with ABI in school (elementary or high)
Online, free	Not accessible online, and/or cost associated with access

Expert Review & Recommendations

Secondary Inclusion/Exclusion

Inclusion Criteria	Exclusion Criteria
Intended for educators and/or school personnel	Intended for an audience other than educators and/or school personnel
Supporting students with ABI is a primary focus	Supporting students with ABI is not a primary focus
Relevant to the Canadian education system or can be easily modified to become relevant	Not relevant to the Canadian education system and cannot be easily modified to become relevant
Intended to support students with ABI in elementary school	Not intended to support students with ABI in elementary school

Suitability Assessment of Materials Screening<sup>6</sup>

Expert Review of Accuracy

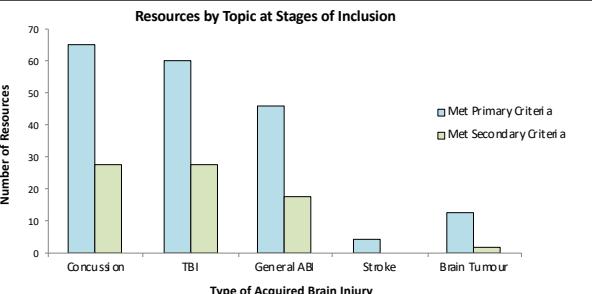
## Results

**Results from the Systematic Search of Grey Literature**

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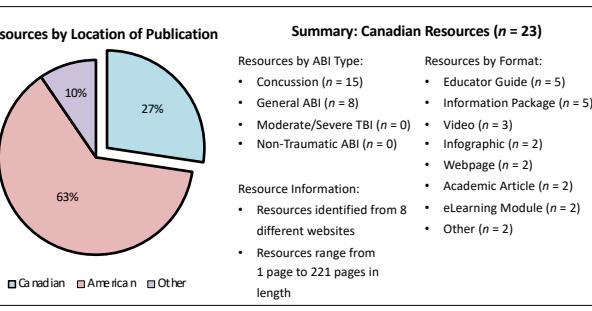
graph TD
    A[Resources Identified through Key Websites (n = 217)] --> C[Total Resources Identified (n = 278)]
    B[Resources Recommended by Experts (n = 18)] --> C
    D[Resources Identified through General Search (n = 43)] --> C
    C --> E[Resources that Met Primary Inclusion Criteria (n = 188)]
    C --> F[Resources Excluded (n = 90)]
    E --> G[Resources that Met Secondary Inclusion Criteria (n = 84)]
    E --> H[Resources Excluded (n = 104)]
    G --> I[Canadian Resources (n = 23)]
    G --> J[Resources Excluded (n = 61)]
  
```

**Resources by Topic at Stages of Inclusion**



Type of Acquired Brain Injury	Met Primary Criteria	Met Secondary Criteria
Concussion	~65	~30
TBI	~60	~30
General ABI	~45	~18
Stroke	~5	~2
Brain Tumour	~12	~2

**Resources by Location of Publication**



Location	Percentage
Canadian	~63%
American	~27%
Other	~10%

**Summary: Canadian Resources (n = 23)**

Resources by ABI Type:

- Concussion (n = 15)
- General ABI (n = 8)
- Moderate/Severe TBI (n = 0)
- Non-Traumatic ABI (n = 0)

Resources by Format:

- Educator Guide (n = 5)
- Information Package (n = 5)
- Video (n = 3)
- Infographic (n = 2)
- Webpage (n = 2)
- Academic Article (n = 2)
- eLearning Module (n = 2)
- Other (n = 2)

Resource Information:

- Resources identified from 8 different websites
- Resources range from 1 page to 221 pages in length

## Results

- There is a significant **lack of resources** for Canadian educators regarding supporting students with ABI.
- Resources must be developed for Canadian educators to support students with **non-traumatic ABI** and **moderate/severe traumatic brain injury** since no resources currently exist.
- Development of **future resources** for Ontario educators should focus on how to provide support for students with ABI without the recognition of ABI as a category of exceptionality.
- There is a need for existing resources for educators to be made more **accessible**, as it took **more than 100 hours** to locate this number of resources.
- No resources currently exist that satisfy Ontario educators' desire for a short, eLearning intervention module to raise knowledge and awareness about ABI.

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## Relevance to Clients and Families

- This search will inform the development of an eLearning intervention, co-created with educators and families, to increase educators' knowledge of ABI and improve social, emotional, and academic outcomes for children with ABI.
- The eLearning intervention aims to raise awareness of ABI and promote the acceptance and support of students with ABI in inclusive classrooms.
- The eLearning intervention will allow for integration between the healthcare and education systems to provide the most efficacious support for children with ABI.
- The eLearning intervention is intended to build educators' capacities to support the success of all individual learners and prioritize an individualized approach to education.

## References

<sup>1</sup>Schneier, A. J., Shields, B. J., Hostettler, S. G., Xiang, H., & Smith, G. A. (2006). Incidence of pediatric traumatic brain injury and associated hospital resource utilization in the United States. *Pediatrics*, 118(2), 483-492.

<sup>2</sup>Zinga, D., Bennett, S., Good, D., & Kumpf, J. (2005). Policy and practice: Acquired brain injury in Canadian educational systems. *Canadian Journal of Educational Administration and Policy*, 43.

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<sup>4</sup>Hartman, L. R., Duncanson, M., Farahat, S. M., & Lindsay, S. (2015). Clinician and educator experiences of facilitating students' transition back to school following acquired brain injury: A qualitative systematic review. *Brain injury*, 29(12), 1387-1399.

<sup>5</sup>Stevens, S., Provvidenza, C., Zheng, S., Agnihotri, S., Hunt, A., & Scratch, S. E. (Accepted). Understanding the needs of Ontario educators in supporting students with acquired brain injury in the classroom. *Journal of School Health*.

<sup>6</sup>Smith, S. (2008). SAM – Suitable Assessment of Materials for Evaluation of Health-Related Information for Adults. In *Beginnings Guide*.