

# Computer-based vision screening in pediatric acquired brain injury

Project Summary

Centre for Leadership in Acquired Brain Injury

Dr. Anne Hunt, Dr. Nick Reed, Alison Shier, Melanie DuMoulin, Salma Kassam, Sarah Sheffe

**Holland Bloorview**  
Kids Rehabilitation Hospital

**Bloorview**  
RESEARCH INSTITUTE

## SHARING OUR WORK

- Poster presentation at the CAOT conference May 2015
- Presentation at the fall retreat 2014, Centre for Leadership in ABI
- Plan to present findings to clinical staff of the participating clinics and units at Holland Bloorview
- Plan to write an article for publication in a peer-reviewed journal

## WHAT WAS THIS STUDY ABOUT?

We wanted to know if a computer-based vision screening assessment is feasible to use with children and youth with acquired brain injury (ABI). Although visual skills are important for performing everyday activities, they are not routinely assessed following brain injury. Impairment in vision may impact a child's performance on their daily activities and on some therapy assessments.

## WHAT DID WE DO?

- We identified a computer-based vision screening assessment.
- We pilot tested the vision screening assessment with typically developing adults and youth.
- We worked with the Brain Injury Rehab Team and Concussion Centre team to recruit children and youth with brain injury to participate.
- We assessed children and youth with mild, moderate, and severe brain injuries.
- We prepared to share initial results at the Canadian Association of Occupational Therapists' (CAOT) Annual conference in May 2015.
- We used these results to prepare for a larger study.

## IMPACT FOR CLIENTS, FAMILIES AND CLINICAL PRACTICE

The results of this study will enable us to understand if using computer based vision screening is helpful for identifying vision impairments in children and youth with brain injuries. With more research, our results will inform clinical practices regarding vision screening for these children.

## WHAT DID WE LEARN?

We learned that:

- Children and youth with different severities of brain injury are able to complete the computer-based vision assessment.
- Children with mild, moderate and severe brain injuries are able to follow the test instructions.
- Some children with brain injuries need additional time to complete the test.

## NEXT STEPS?

The results helped us to plan another study that will help us understand how accurate the computer-based vision test results are for children with brain injuries.

In the next study, children with brain injuries will complete the computer based vision screening. Next, they will have their vision examined by an optometrist. Then we will compare the results. This will tell us how accurate the computer vision screening test is for identifying vision impairments in children with brain injuries.

### TO LEARN MORE ABOUT THIS STUDY, PLEASE CONTACT:

Dr. Anne Hunt

Post-Doctoral Fellow, CRC

[ahunt@hollandbloorview.ca](mailto:ahunt@hollandbloorview.ca)

416-425-6220 x 6495

### WHO ARE WE?

Our research team includes researchers, occupational therapists and students. Our team members are from Holland Bloorview's Concussion Research Centre, and Brain Injury Rehabilitation Team and University of Toronto, Department of Occupational Science and Occupational Therapy.

- Dr. Nick Reed, Principal Investigator, CRC
- Dr. Anne Hunt, Post-Doctoral Fellow, CRC
- Ms. Salma Kassam, Occupational Therapist, BIRT unit
- Ms. Alison Shier, University of Toronto MScOT Candidate
- Ms. Melanie DuMoulin, University of Toronto MScOT Candidate
- Ms. Sarah Sheffe, Research Coordinator

### THANK YOU!

We thank all of our study participants and families. The contributions of staff from the BIRT team and Concussion Research Centre are gratefully acknowledged.

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Centre for Leadership in Acquired Brain Injury

**Holland Bloorview Kids Rehabilitation Hospital**

150 Kilgour Road, Toronto ON Canada M4G 1R8

T 416 425 6220 T 800 363 2440 F 416 425 6591 [www.hollandbloorview.ca](http://www.hollandbloorview.ca)

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