

## **Child and Adolescent Brain Injury Rehabilitation Service (CABIRS) – Improving outcomes for children with mild to moderate brain injury**

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The Child and Adolescent Brain Injury Rehabilitation Service (CABIRS) was established to address an unmet need for children and adolescents with a mild to moderate traumatic brain injury.

The project objectives were:

- To address unmet need among children and youth with brain injury from vehicle-related accidents
- To improve function after brain injury through short term rehabilitation
- To ensure a timely and supported return to school and community participation following mild to moderate traumatic brain injury
- To reduce carer-related stress following brain injury

Key recommendations from the Centre for Disease Control and Prevention Paediatric mild traumatic brain injury (mTBI) Guideline (Lumba-Brown, A et al 2018) include:

- Use validated, age-appropriate symptom scale to diagnose mTBI
- Assess evidence-based risk factors for prolonged recovery
- Provide patients with instructions on return to activity customised to their symptoms
- Counsel patient to return gradually to non-sports activities after no more than 2-3 days of rest

The recommendations outlined in the guideline helped to inform the CABIRS model of care and approach. Services are provided via a range of approaches, including face to face, telehealth (phone and videoconference) and website resources, ensuring specialist services and advice are available to all consumers.

Children who sustain a brain injury as a result of a vehicular accident, are at greater risk of a more severe brain injury, with significant impacts on function, participation and carer well-being. The CABIRS model of care allows consumers to have early and accessible information and support, through paediatric specific online resources, timely phone triage and early recommendations, and, if indicated, discipline specific assessment and intervention. Positive change scores across symptom ratings, return to school stages and return to sport stages indicates an improvement in impairment and activity levels following short term, individualised brain injury rehabilitation for children and young people who experience a mild to moderate brain injury as a result of a vehicular accident. Consumer feedback received indicates carers value the service and support on offer through CABIRS, and the specialised input and information provided decreased their stress and concern related to the injury.

CABIRS has established a model of care in line with current mTBI evidence and guidelines, filling a longstanding gap for this cohort, who previously were unable to access coordinated, multi-disciplinary brain injury rehabilitation services. Along with minimising Emergency Department re-presentations and inpatient bed days saved, the care provided by CABIRS has facilitated positive recovery, successful community participation, and reduced carer stress post mTBI.

### References:

Lumba-Brown, A, Owen-Yeates, K, et al, Centers for Disease Control and Prevention Guideline on the Diagnosis and Management of Mild Traumatic Brain Injury Among Children, JAMA Pediatr. 2018 Nov 1;172(11):e182853. doi: 10.1001/jamapediatrics.2018.2853.