

**Title:**

Rapid Translation of Evidence Home-Based Baby Constraint Induced Movement Therapy (CIMT) into Practice

**Project Team Members:**

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**Rationale:**

Hemiplegic cerebral palsy (HCP) leads to significant arm and hand impairment with lifelong participation and well-being impacts for the child and family. Only 24% of interventions for children with cerebral palsy are effective indicating gaps in research to practice exists. Evidence-based interventions in infants at risk for HCP is limited.

Research suggests when the injured infant brain is exposed to early motor-based intervention the brain is capable of reorganizing neural motor pathways leading to improved arm and hand use. Recently, a randomized study from Sweden showed early implementation of a very modified form of home-based CIMT during the first year of life leads to improved arm and hand function in infants at risk for HCP. An informed evidence-based home Baby CIMT program is unavailable in Canada.

# Baby constraint induced movement therapy (CIMT) leads to improved arm and hand use in infants at risk of hemiplegic cerebral palsy

**Objective:**

To adapt Sweden's Baby CIMT home program to test its feasibility and its impact through the design of a Baby CIMT Community Partner Consultation Care Pathway to address this gap in service.

**Care Pathway Design:**

The Baby CIMT Community Partner Consultation Care Pathway will engage families with infants at risk of HCP early in their development and will see infants up to and including 21 months of age. Infants will receive a neurological assessment, the Hammersmith Infant Neurological Examination (HINE), and receive two arm and hand function assessments. The family will receive a personal Baby CIMT parent mediated home program to meet the infant's unique needs. The community therapist and/or early interventionists will support the family to implement Baby CIMT through once weekly home visits to coach families on the implementation of Baby CIMT reinforcing the Baby CIMT home program. The clinic will provide ongoing consultation support as needed to both family and community practitioners to sustain Baby CIMT.

**Deliverables:**

- Baby constraint therapy education workshop & webinar
- Developed baby constraint therapy care pathway

**Evaluation:**

The feasibility of implementing a parent mediated Baby CIMT home program, the outcome of Baby CIMT, and the impact of the care pathway will be evaluated.