

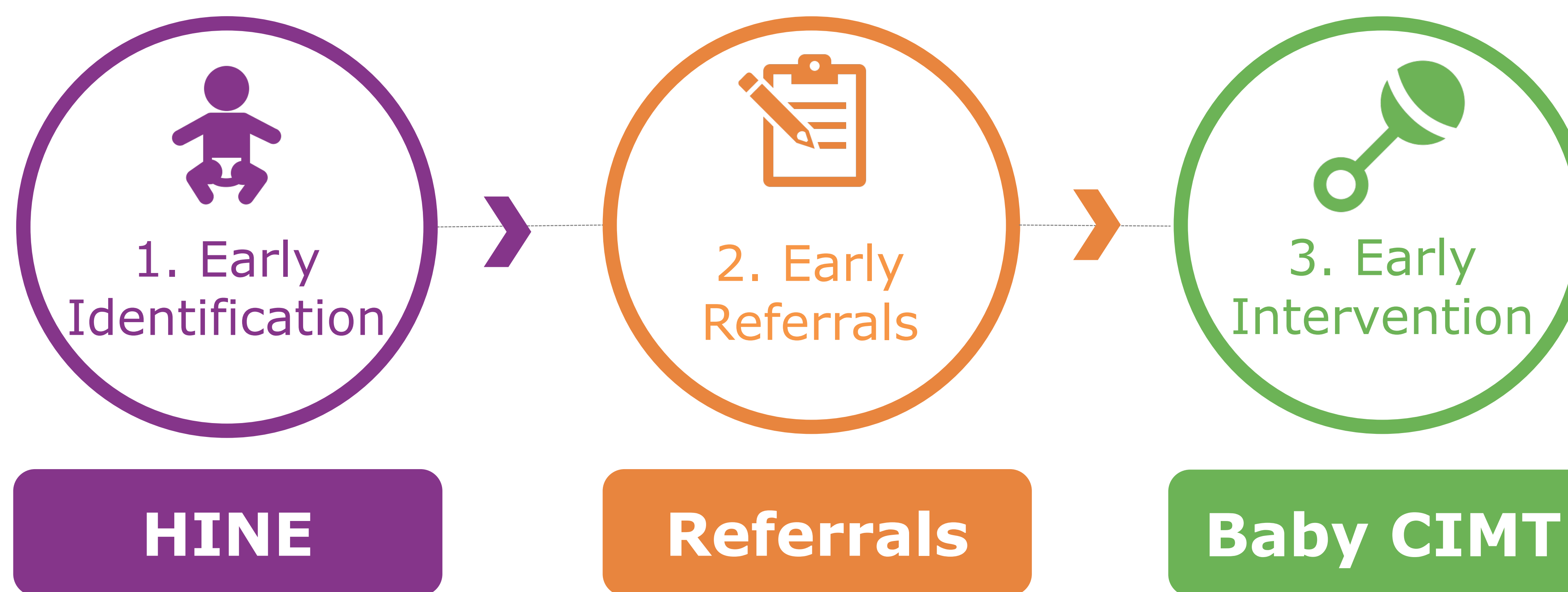
R. Willis BSc, N. Kapil BSc, S. Aimola MPH, S. Lam-Damji OT, A. Makino MD, the Baby-CIMT Implementation Group, D. Fehlings MD

## Background

- In Canada, the average age of CP diagnosis lags behind international standards.<sup>1</sup>
- For early detection of CP, Clinical Practice Guidelines (CPG) recommend the Hammersmith Infant Neurological Examination (HINE).<sup>2</sup>
- CPGs recommend Baby Constraint Induced Movement Therapy (CIMT) to improve arm and hand function in infants with Hemiplegic CP.<sup>3</sup>
- Early intervention for CP is critical to harness early neuromuscular plasticity.<sup>3</sup>

## Methods: Knowledge to Action

- Engaged neonatal follow-up programs, local rehabilitation/children's treatment centres and community-based Occupational Therapists (OTs)/Early Interventionists (EIs) at five sites across Ontario.
- A Knowledge to Action Cycle Framework<sup>5</sup> was used to implement an early identification to early intervention (Baby-CIMT) program.
- The Action Cycle has three stages:



**Action:** Integrate the HINE in neonatal follow-up clinics.

**Implementation Strategy:** Facilitated webinar on administering and scoring the HINE for neonatal follow-up clinicians. Support HINE uptake at monthly Community of Practice meetings to iterate process.

**Outcomes:** Number of neonatal follow up clinicians using the HINE.

**Action:** Neonatal follow up clinics refer infants identified at high risk for HCP to Baby-CIMT OTs at rehabilitation centres.

**Implementation Strategy:** Established Baby-CIMT OT leads at each site. OT leads and neonatal follow up clinicians developed strategies to streamline referrals to Baby CIMT.

**Outcomes:** Infant age at the time of referral; Number of referrals to the Baby-CIMT program

**Action:** Baby CIMT OT leads perform initial assessments, and develop a personal parent-mediated 6-week Baby-CIMT home program.

**Implementation Strategy:** Facilitated a Baby-CIMT webinar for site OT Leads. OT Leads trained local community OTs/EIs on Baby-CIMT and site-specific processes.

**Outcomes:** Age at initial rehabilitation assessment; Parent and clinician program satisfaction.

## Success Markers

Sites have completed initial steps for implementation, including:

- ✓ Neonatal follow-up clinicians attended HINE webinar
- ✓ Rehabilitation OT leads attended & facilitated Baby-CIMT webinars
- ✓ OT leads completed Mini Assisting Hand Assessment (mini-AHA) training
- ✓ Sites refined referral processes

## Next Steps

- Support sites through monthly Community of Practice meetings.
- Collect data to assess program implementation.
- Develop Baby-CIMT online toolkit to sustain knowledge use.

## Impact

- Improve access to early identification and treatment for infants across Ontario at high risk for HCP.
- Continue to evolve clinical practice for infants at high risk of HCP across Canada.

## References

- [1] Boychuck, Z., Andersen, J., Fehlings, D., Kirton, A., Oskoui, M., Shevell, M., Majnemer, A., & PROMPT Group (2020). "Current Referral Practices for Diagnosis and Intervention for Children with Cerebral Palsy: A National Environmental Scan". *The Journal of pediatrics*, 216, 173-180. [2] Romeo, D. M., Cioni, M., Palermo, F., Cilastro, S., & Romeo, M. G. (2013). Neurological assessment in infants discharged from a neonatal intensive care unit. *European journal of paediatric neurology*, 17(2), 192-198. [3] Morgan, C., Fetters, L., Adde, L., et al. (2021). "Early Intervention for Children Aged 0 to 2 Years With of at High Risk for Cerebral Palsy International Clinical Practice Guideline Based on Systematic Reviews". *Jama Pediatrics* [4] Eliasson, A.C., Nordstrand, L., Ek, L., Lennartsson, F., Sjostrand, L., Tedroff, K. & Kruminde-Sundholm, L. (2018). "The effectiveness of Baby-CIMT in infants younger than 12 months with clinical signs of unilateral cerebral palsy; an explorative study with randomized design". *Research in Developmental Disabilities*, 72, 191-201. [5] Graham, I., Logan, J., Harrison, M.B., Straus, S.E., Tetroe, J., Caswell, W., RN, Robinson, N., Lost in knowledge translation: Time for a map?, *Journal of Continuing Education in the Health Professions: Winter 2006 - Volume 26 - Issue 1 - p 13-24* doi: 10.1002/chp.47

## Research Objective

To implement, evaluate and sustain change in clinical practice for early identification of HCP and an early intervention Baby CIMT program at five sites across Ontario.

## Sites

