

A Descriptive Analysis of Health Quality Markers in the CP-NET Clinical Database: Exploring Ideas to Improve Clinical Care Pathways for Children with Cerebral Palsy in Ontario

Flora Wan, Lauren Switzer, Darcy Fehlings and the CP-NET Clinical Database Investigator Group

Introduction

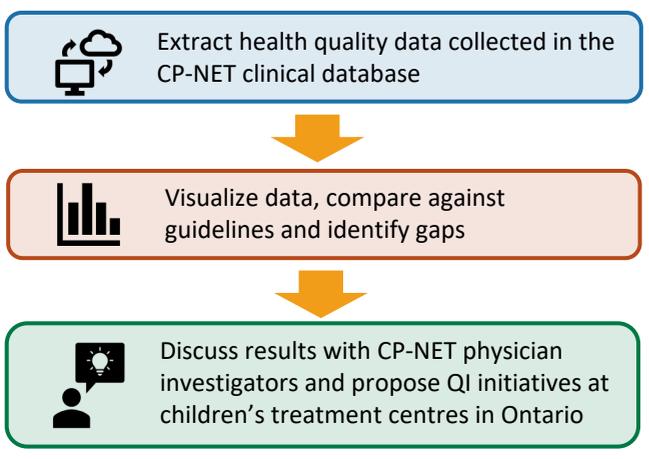
The **CP-NET clinical database study** collects information from families of children with CP across Ontario, including markers of **Health Care Quality**:

Health Quality Marker	International Guidelines
 <p>Age of CP Diagnosis</p>	A diagnosis of CP or high risk of CP between 4 to 12 months of age is recommended based on a clinical practice guideline of early detection care pathways ^[1]
 <p>Brain Imaging</p>	MRI brain imaging is recommended by the American Academy of Neurology (AAN) for all children with suspected CP as part of the diagnostic work-up ^[2]
 <p>Vitamin D</p>	Vitamin D supplements are recommended by the AACPDM ^[3] for all children with CP GMFCS III-V to prevent osteoporosis
 <p>Hip X-Rays</p>	Hip X-rays are recommended by the AACPDM ^[3] for all children GMFCS III-V to track the risk for progressive hip subluxation

Objectives

- **Identify gaps** between health quality markers in the clinical database and international guidelines
- Propose **quality improvement initiatives** to improve clinical care for children with CP in Ontario

Methods



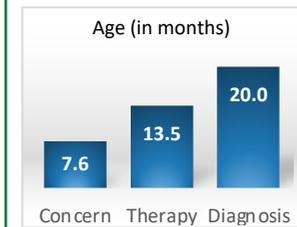
Understanding data related to health quality markers can help identify new initiatives to improve clinical care for children with CP in Ontario



Point your camera at the image above to learn more about Care Pathways for Early Detection of CP!

Results

Age of CP Diagnosis



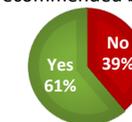
An average age of diagnosis of 20 months represents a late diagnosis of CP – clinicians should aim to diagnose CP before 12 months^[1]

Brain Imaging



Vitamin D

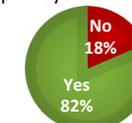
“Does your child take Vitamin D as recommended by a doctor?”



39% of children (GMFCS III-V) are not taking Vitamin as recommended by a doctor

Hip X-Rays

“Has your child ever had a hip X-ray?”



18% of children (GMFCS III-V) have not received a hip X-ray

Discussion

The following QI priorities are proposed based on the identified gaps and discussions with CP-NET investigators:

- **Lower the Age of CP Diagnosis:** Develop a QI initiative to promote early identification of high risk of CP
- **Vitamin D:** Increase awareness in rehabilitation clinics on prescribing Vitamin D to prevent osteoporosis
- **Hip X-Rays:** Propose site-specific initiatives to ensure that all children GMFCS III-V receive hip X-rays

Acknowledgements

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- The Ontario Brain Institute (OBI) for funding this project
- Families for contributing their data to build this database

[1] Novak, Iona, et al. "Early, accurate diagnosis and early intervention in cerebral palsy: advances in diagnosis and treatment." *JAMA pediatrics* 171.9 (2017): 897-907.

[2] Ashwal, S., et al. "Practice parameter: diagnostic assessment of the child with cerebral palsy: report of the Quality Standards Subcommittee of the American Academy of Neurology and the Practice Committee of the Child Neurology Society." *Neurology* 62.6 (2004): 851-863.

[3] The American Academy for Cerebral Palsy and Developmental Medicine (AACPDM)