



The value of multidisciplinary diagnostic assessment of
children with unexplained intellectual disability:
TIDE Complex Diagnostic Clinic at B.C. Children's Hospital

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Short running title: Multidisciplinary assessment of complex intellectual disability

Clara D.M. van Karnebeek^{1,2,3,4}

Tyler Murphy^{2,3,5}

Wynona Giannasi^{3,6}

Marion Thomas^{3,7}

Mary B. Connolly^{2,3,4,5}

Sylvia Stockler^{1,2,3,4}

and the TIDE CDC Team

TIDE CDC Team:

Linlea Armstrong^{3,7}

Susan Baer^{3,8}

Anthony Bailey^{3,8}

Maria Boldut^{1,2,3}

Vann Chau^{2,3,5}

Jean-Paul Collet^{2,3}

Michelle K. Demos^{2,3,5}

Patrice Eydoux^{3,9}

Robin Friedlander^{3,8}

Gabriella A. Horvath^{1,2,3}

Osman S. Ipsiroglu^{2,3,10}

Mir Lafek^{1,2,3}

Anna M. Lehman^{3,4,7}

M.E. Suzanne Lewis^{3,4,7}

Barbara McGillivray^{3,7}

Tanya N. Nelson^{3,9}

Millan S. Patel^{3,4,7}

Ramona Salvarinova^{1,2,3}

Kathryn Selby^{2,3,4,5}

Christèle du Souich^{3,7}

Hilary D. Vallance^{3,9}

Margot I. van Allen^{3,7}

Wyeth W. Wasserman^{3,4,7,11}

Affiliations:

1. Division of Biochemical Diseases;
 2. Department of Pediatrics;
 3. Treatable Intellectual Disability Endeavour in British Columbia (www.tidebc.org);
 4. Child and Family Research Institute;
 5. Division of Neurology;
 6. President of Howegroup Public Sector Consultants Inc.;
 7. Department of Medical Genetics;
 8. Division of Child and Adolescent Psychiatry; Department of Psychiatry;
 9. Department of Pathology & Laboratory Medicine;
 10. Division of Developmental Pediatrics;
 11. Center for Molecular Medicine and Therapeutics;
- B.C. Children's Hospital, University of British Columbia, Vancouver, B.C., Canada

*** Corresponding Author:**

Clara D.M. van Karnebeek, MD PhD

Clinical Assistant Professor

Division of Biochemical Diseases, Rm K3-201

Department of Pediatrics, B.C. Children's Hospital

4480 Oak Street. Vancouver B.C. V6H 3V4, Canada

tel: 604-871-2628 / fax: 604-875-2349

email: cvankarnebeek@cw.bc.ca

ABSTRACT

Purpose: To evaluate the yield, costs, provider and patient satisfaction of the newly established multidisciplinary Complex Diagnostic Clinic (CDC) for patients with unexplained intellectual disability (ID) at a tertiary care center.

Methods: ID patients with complex systemic and/or neurologic features remaining unexplained after thorough investigations are referred to the CDC, and evaluated by 3 medical specialists followed by multi-disciplinary rounds to formulate a differential diagnosis and testing plan. Analyses included surveys and interviews, (retrospective) chart review, costs calculations and comparison.

Results: During 7 clinics held over 16 months, 24 children (9 male) were evaluated; average age 7 years 11 months (range 9 months-18 years), and previously seen by 2 to 10 specialist services. The diagnostic yield of the CDC was higher than expected with confirmed and working diagnoses in respectively 9 (38%) and 11 (46%) children. Costs savings included fewer trips to the hospital and fewer tests via more streamlined evaluation. Positive feedback was received from both patient families, and medical professionals.

Conclusion: The CDC is an innovative model of personalized medicine and platform for translational medicine, with collaborative specialties successfully interpreting clinical, biochemical, and genomic data to end the burden of a diagnostic odyssey and improve care and outcomes.

KEYWORDS:

intellectual disability, multidisciplinary, clinic, care coordination, diagnostic evaluation, etiology

Full Manuscript submitted to Genetics in Medicine