

## **Lack of awareness about Prevalence of Developmental Coordination Disorder (DCD) in Preterm infants in the Northern Alberta Neonatal Program**

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### **Introduction:**

Developmental Coordination Disorder (DCD) has a prevalence rate of ~ 5% among school aged children more commonly among Low Birth Weight male infants born preterm  $\leq 32$  weeks gestational age (GA). Data on DCD in Northern Alberta is lacking. We hoped to elucidate the prevalence of DCD among preterm infants admitted to the Royal Alexandra Hospital (RAH) Neonatal Intensive Care unit (NICU) and identify risk factors associated with DCD to aid in its diagnosis and to provide therapy.

### **Methods:**

Analytics, Data Integration, Measurement & Reporting (DIMR) services of Alberta Health Services provided a list of preterm infants (<37 weeks) who were born in Northern Alberta from 2000-2008, admitted to RAH NICU, and were diagnosed with DCD based on ICD code. Data abstracted from Clinical records and Glenrose Neonatal and Infant Follow up clinic database included Perinatal variables, Neonatal variables, and developmental testing scores when available. When applicable, schools were approached after parental consent for any developmental assessments results. Information is still awaited on 6 patients. Infants with cerebral palsy, significant cognitive delay (full-scale IQ<70), and/or were legally blind (VA<20/200) were excluded. Approval was granted from Human Research Ethics Board of the University of Alberta.

**Results:** Out of the 150 infants identified by DIMR, 2 were term, 50 were excluded, and 10 were lost to follow up. 67 (44.6%) patients coded as DCD, had no indication of DCD on their clinical or school records although at least 5/67 did not have formal developmental testing at 5 years of age. Only 15 infants fulfilled the criteria for DCD with GA  $33.0 \pm 3.6$  weeks (mean  $\pm$  SD) & BW  $1915 \pm 666$  g (mean  $\pm$  SD) with 69.2% males. The total number of infants born <37 weeks during this study period in Northern Alberta was 11,787.

**Conclusions:** Our research on DCD in Northern Alberta revealed significantly lower number of DCD cases in preterm infants than is reported in the literature. This suggests awareness of DCD in regional, educational and medical systems as well as at Health Information Management (HIM) is significantly lacking. Research shows that without help the motor difficulties in children with DCD can impact activities of daily living, academic achievement, emotional behavioral, psychological functioning, and social engagement, all of which can be a huge cost to the medical system. A prospective study using the Little DCD questionnaire to screen preterm infants and thereafter diagnosing them at 5 years of age would identify these children.