Education Outcomes Associated with Full Day Kindergarten Among First Nations Children: A retrospective administrative database cohort study

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Introduction
The quality of early education children receive influences their developmental trajectories, with long-term effects extending into adulthood. First Nations children face many structural barriers to academic success. Few studies have examined the impact of education programs on removing these barriers to support better outcomes amongst First Nations children.

Objectives and Approach
We examined educational outcomes associated with full-day (FDK) versus half-day (HDK) kindergarten among First Nations children using data from the Manitoba Population Research Data Repository. We linked children’s education records with the Manitoba Health Registry and the First Nations Registry to identify all First Nations children who attended kindergarten in a Winnipeg school division (1998-2011). Children enrolled FDK were age- and sex- matched to children enrolled in HDK. Propensity scores used to adjust for confounding. Outcomes included academic achievements in grades 3, 7, and 8 and high school graduation. We used generalized linear models to test for differences in education.

Results
We identified 324 First Nations children enrolled in FDK and 595 matches in HDK in the study period. Among these, 37% FDK and 31% HDK students met or approached numeracy expectations in grade 3; and 30% FDK and 33% HDK met or approached numeracy expectations in grade 7. For reading expectations, 37% FDK and 33% HDK met or approached grade 3 reading expectations; in grade 8, roughly half of each group met or approached expectations for reading and writing. High school graduation rate for First Nations children in both FDK and HDK children was 60%. We found no differences in education outcomes when we tested for differences between HDK and FDK children.

Conclusion/Implications
Education outcomes did not differ between First Nations children enrolled in FDK vs. HDK programs. Kindergarten programs may be insufficient to overcome structural barriers to academic success that these children face. Culturally appropriate education strategies may be needed to support improved outcomes amongst this population.