

Equitable Access to Education for all Canadians

Attention Deficit Hyperactivity Disorder (ADHD) is the most common childhood mental health condition affecting 5-12 per cent of children worldwide, an average of one to two children in every Canadian classroom¹. It is characterized by developmentally atypical levels of inattention, activity and impulsivity that result in functional impairments in daily activities. Children with ADHD are prone to poor academic achievement, disruptive classroom behaviour and learning difficulties⁴.

While ADHD is the most frequent mental health challenge⁵ encountered by educators, the disorder continues to be inconsistently identified, understood and accommodated for within the Canadian school system. Accordingly, students with very similar learning profiles often receive very different levels of understanding and assistance. Despite the robust evidence base on academic problems associated with ADHD^{3,5,6,7,8} many school boards continue to question the direct impact of ADHD on a student's learning.

Although not a learning disability by definition, ADHD can severely impair a student's learning. Typically, students with ADHD process information more slowly than their peers and have poor executive function skills, which impede the acquisition of many essential academic skills, such as fluent reading, reading comprehension, written expression, mathematical problem-solving) as well as learning strategies, study skills, and organizational skills^{6,7,9,10,11,12,13,14}. Affected individuals report a reduced quality of life¹⁵ and are at increased risk for; dropping out of school, not going onto post secondary education^{16,17}, unintentional injuries¹⁸, behavioural problems and academic and social difficulties in school¹⁹. Treatment for this disorder should always be multi modal and include; educating the child and family about ADHD, medical management, educational accommodations, education remediation when indicated, behavioural interventions and possible psychological treatment²⁰.

The positive news is that - with the proper treatment and support - children with ADHD can grow up to be productive, successful and contributing members of society. Without these in place, there is a substantial human and economic cost paid by children, their families, the education system and society as a whole²¹. Children with ADHD are at higher risk of dropping out of school, delinquency, crime, substance abuse, teen pregnancy and traffic accidents. However, effective educational and medical treatments for ADHD can reduce the overall burden of ADHD by controlling symptoms, improving children's functioning and substantially reducing indirect costs to families²².

In order to improve academic outcomes and classroom environments and decrease the cost of ADHD to society, the Centre for ADHD/ADD Advocacy, Canada (CADDAC) requests that:

- ADHD be recognized as an academic and developmental risk by all provincial Ministries of Education
- School board implement consistent monitoring of students with ADHD and those suspected of having ADHD for academic difficulties
- Educators be provided with professional development on ADHD through their school board
- Students with ADHD who are at risk academically be identified through a formal recognition process as exceptional learners.

ADHD as an Academic and Developmental Risk Factor

Studies conducted worldwide have indicated that ADHD impedes academic attainment and increases a student's risk of grade repetition, special education, suspension/expulsion, lower grade point average and dropout. Students with ADHD have fewer years of education and are less likely to attend college¹³. Some educators and educational boards are still under the misguided belief that students with ADHD just need to be properly medicated and all symptoms impacting learning will disappear. While medication may suppress some symptoms, it will not necessarily allow students with ADHD to reach their potential. In fact, research shows that children who are treated with BOTH stimulant medication and behavioural strategies have the best outcomes with respect to social skills, parent-child relationships and reading achievement²³. While medication may improve attention and concentration, data for the past thirty years has shown that it does not promote learning and academic achievement with regard to children, adolescents and adults²⁴. Rather, the academic achievement gap between students with and without ADHD increases across the school years, even when students with ADHD are being treated with stimulant medication. A large-scale US study found that children using ADHD medication have better mathematics and reading scores than non-medicated peers with ADHD, but that "these gains are insufficient to eliminate the test-score gap between children with attention-deficit/hyperactivity disorder and those without the disorder"²⁵.

Systematic monitoring of students with a diagnosis of ADHD or suspected ADHD can identify cognitive deficits, gaps in learning and academic difficulties early so appropriate supports can be provided ensuring that these students don't fall behind their peers^{22,26}. One of the benefits can be increased identification of children with the inattentive form of ADHD and girls with ADHD, subgroups that are often not readily identified in a classroom setting²⁷.

Many educators still lack adequate knowledge on ADHD and how it can have deleterious effects on a student's learning²⁸. Without adequate knowledge about ADHD, educators tend to misinterpret the behavioral manifestations of ADHD in the classroom as attributable to poor parenting or defiant behaviour. This results in stigmatization of the child and the entire family; a family that is already stressed from dealing with this medical disorder. Unfortunately, these misunderstandings lead to academic struggles being disregarded and inadequately accommodated for, resulting in lower academic achievement, increased dropout rates and lower levels of post secondary education achievement.

When teachers are provided with information and professional development on ADHD, a marked reduction both in the child's ADHD symptoms and improved academic test scores can be observed²⁹. A large-scale Australian study reported substantial improvements in core symptoms of ADHD and academic attainments following brief but intensive and focused teacher professional development³⁰. A UK study reported substantial behavioural and academic benefits from simply providing teachers with brochures containing information about ADHD and advice on effective teaching approaches³¹.

Provincial Ministry of Education Recognition to Legally Receive Accommodations

In some provinces, ADHD is not formally recognized within a *special educational needs* category, therefore, a student with ADHD must have an identifiable, coexisting disorder such as a learning disability, behavioural disorder or possibly a physical disorder to meet the definitions of *exceptionality* which would then qualify them to receive learning accommodations. This issue has resulted in a lack of consistency across provinces, school boards - and even within boards - on how students with ADHD are to be recognized and assisted or even IF they are to be recognized at all.

Many boards have unwritten policies that require students be formally identified as exceptional students before teaching methods can be altered or extra assistance provided. This often requires a psychoeducational

assessment to provide a formal documentation of a learning disability.

Some boards insist students be two to three years behind academically before they will consider placing them on a waiting list for psychoeducational testing or will agree to classroom accommodations. Waiting lists for testing within the school system can be as long as two to three years. Families who are able to afford private testing can access identification and services other families cannot, resulting in an inequitable, two-tier system of access and service. Other boards, not understanding the negative effects of ADHD on a child's learning, refuse to have students tested at all.

Even if these obstacles are able to be overcome, students' symptoms of inattention, poor self-regulation of behaviour and emotion (as well as the underlying impairments in executive functioning) will have deleterious effects on all areas of these students' learning in ways that are not easily recognized by the untrained educator.

Some provinces work with systems that do not identify students as *exceptional* or *special needs learners*. While this could open the door to students with ADHD to receive accommodations, if properly applied, we need to ensure that if the practice of labelling students as exceptional does not exist, their rights nevertheless remain intact. It is the identification or the "labelling" of a student that often mandates the creation of an individualized education plan which cannot be removed simply at the discretion of a school, and ensures a student's right to receive accommodation throughout his or her academic career.

The availability of educational accommodations is seen as a student's intrinsic right as documented by The Ontario Human Rights Commission in its "Guidelines on Accessible Education". ADHD is clearly identified as a disability in this document. Provincial post secondary institutions recognize students with ADHD as having a disability. But for many this is too late – they are already struggling with issues of lack of self confidence caused by years of academic failure and negative feedback from educators misinterpreting behaviours and learning needs as willful and defiant behaviour.

Students with ADHD continue to fall through the cracks in our education system. Students who are impaired due to their ADHD continue to be denied the official identification and appropriate accommodations that would allow them to reach their academic potential⁴.

When we fail to recognize the students with ADHD who struggle in our school systems, and deny them the appropriate assistance, they do not quietly disappear into the school population. They continue to take up the entire school staff's time and attention – sometimes in inappropriate and very time-consuming ways. This allotment of attention and time – a reactive rather than a proactive response – is counterproductive. It does not lead to an increase in success for the student, rather it leads to frustration and demoralization.

Funding is often used as the reason for not identifying and accommodating students with this disorder. In fact, most students with ADHD can be accommodated in a regular classroom setting, provided the classroom teacher is appropriately supported by administration and has adequate knowledge about the disorder. An American study found that the average incremental annual cost to educate a child with ADHD from kindergarten to grade 12 is more than 18 times that of a non-ADHD child⁵. If we use up teaching resources to deal with students with ADHD anyway, why not proactively apply the appropriate resources that offer the best chance for these students' success?

If these students are not to be identified as exceptional learners, if there is no consistency in how they are to be assisted in their learning, and if educators do not receive appropriate training on this disorder, then we continue to squander the potential these students have to become successful contributing members of society.

- ¹ Polanczyk G, de Lima MS, Horta BL, Biederman J, Rohde LA. The worldwide prevalence of ADHD: a systematic review and metaregression analysis. *Am J Psychiatry* 2007; 164(6):942-948.
- ² Barbaresi J et al. Long-Term School Outcomes for Children with Attention-Deficit/Hyperactivity Disorder: A Population-Based Perspective. *Journal of Develomental & Behavioural Pediatrics*, Vol. 28, No 4, August 2007.
- ³ Currie J, Stabile M. Child Mental Health and Human Capital Accumulation: the Case of ADHD. *J Health Econ.* 2006; 25(6): 1094-1118.
- ⁴ British Columbia Medical Association. "Your Attention Please": A Call to Improve Access to Care for ADHD Patients.
- ⁵ Pelham W, Foster E, Robb JA. "The Economic Impact of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents." *J Pediatr:Psychol* 2007; 32(6):711-727.
- ⁶ Breslau J, Miller E, Breslau N, Bohnert K, Lucia V, Schweitzer J. (2009) The impact of early behavior disturbances on academic achievement in high school. *Pediatrics*. 123(6):1472-6.
- ⁷ Loe IM, Feldman HM. (2007). Academic and educational outcomes of children with ADHD. J Pediatr Psychol. ;32(6):643-54⁸ Capano L, Minden D, Chen SX, Schacher RJ, Ickowicz A.(2008).Mathematical learning disorder in school-age children with attention-deficit hyperactivity disorder. *Can J Psychiatry*;53(6):392-9
- ⁹ Re AM, Pedron M, Cornoldi C.(2007). Expressive writing difficulties in children described as exhibiting ADHD symptoms. *Journal Learning Disabilities*, 40 (3): 244-255.
- ¹⁰ Capano L, Minden D, Chen SX, Schacher RJ, Ickowicz A.(2008). Mathematical learning disorder in school-age children with attention-deficit hyperactivity disorder. *Can J Psychiatry*.;53(6):392-9
- ¹¹ Frazier TW, Youngstrom EA, Glutting JJ, Watkins MW. (2007) ADHD and achievement: meta-analysis of the child, adolescent, and adult literatures and a concomitant study with college students. *J Learn Disabil*. 40(1):49-65
- ¹² Volpe RJ, DuPaul GJ, DiPerna JC et al (2006). Attention Deficit Hyperactivity Disorder and Scholastic Achievement: A Model of Mediation via Academic Enablers. *School Psychology Review* 35(1): 47-61
- ¹³ Fletcher J, Wolfe B (2008). Child mental health and human capital accumulation: The case of ADHD revisited. *J Health Economics* 27: 794-800.
- ¹⁴ Mayes SD, Calhoun SL(2007). Learning, attention, writing, and processing speed in typical children and children with ADHD, autism, anxiety, depression, and oppositional-defiant disorder. *Child Neuropsychol*; 13(6):469-93.
- ¹⁵ Danckaerts M, Sonuga-Barke EJ, Banaschewski T, Buitelaar J, Döpfner M, Hollis C, Santosh P, Rothenberger A, Sergeant J, Steinhausen HC, Taylor E, Zuddas A, Coghill D.(2010). The quality of life of children with attention deficit/hyperactivity disorder: a systematic review. *Eur Child Adolesc Psychiatry*, 19(2):83-105. Epub 2009 Jul 26.
- ¹⁶ Barkley RA, Fischer M, Smallish L, Fletcher K.(2006). Young adult outcome of hyperactive children: adaptive functioning in major life activities. *J Am Acad Child Adolesc Psychiatry*. 45(2):192-202.
- ¹⁷ Biederman J, Petty CR, Fried R, Kaiser R, Dolan CR, Schoenfeld S, Doyle AE, Seidman LJ, Faraone SV. (2008). Educational and occupational underattainment in adults with attention-deficit/hyperactivity disorder: a controlled study. *J Clin Psychiatry*. 69(8):1217-22.
- ¹⁸ Rowe R, Maughan B, Goodman R.(2004). Childhood psychiatric disorder and unintentional injury: findings from a national cohort study. *J Pediatr Psychol*.29(2):119-30
- ¹⁹ Wehmeier PM, Schacht A, Barkley RA (2010) Social and emotional impairment in children and adolescents with ADHD and the impact on quality of life. *J Adolesc Health*. 46(3):209-17.
- ²⁰ Canadian ADHD Practice Guidelines, third edition, Canadian ADHD Resource Alliance (CADDRA), 2011
- ²¹ Matza LS, Paramore C, Prasad M. A review of the economic burden of ADHD. *Cost Effectiveness and Resource Allocation* 2005, 3:5.
- ²² Jitendra AK, Dupaul GJ, Someki F, Tresco KE.(2008). Enhancing academic achievement for children with Attention-Deficit Hyperactivity Disorder: evidence from school-based intervention research. *Dev Disabil Res Rev.* 14(4):325-30.
- ²³ The MTA Cooperative Group. A 14-month randomized clinical trial of treatment strategies for attention-deficit/hyperactivity disorder. Multimodal Treatment Study of Children with ADHD. *Arch Gen Psychiatry* 1999;56:1073-86
- ²⁴ Advokat C. (2010). What are the cognitive effects of stimulant medications? Emphasis on adults with attention-deficit/hyperactivity disorder (ADHD). *Neurosci Biobehav Rev* Apr 8. [Epub ahead of print]
- ²⁵ Scheffler RM et al. Positive association between attention-deficit/hyperactivity disorder medication use and academic achievement during elementary school. *Pediatrics* 2009;123(5):1273-9.
- ²⁶ Alloway T, Elliott J, Holmes J. The Prevalence of AD(H)D-Like Symptoms in a Community Sample. *Journal of Attention Disorders* Online, doi:10.1177/1087054709356197.
- ²⁷ Rucklidge JJ.(2010). Gender differences in attention-deficit/hyperactivity disorder. *Psychiatr Clin North Am.* 33(2):357-73.
- ²⁸ Tannock R, Martinussen R. Reconceptualizing ADHD. (2001) Educational Leadership; 59(3)
- ²⁹ Mirande A. Effectiveness of a School-Based Multicomponent Program for the Treatment of Children with ADHD. *J Learn Disabl* 2002; 35(6):547-563.
- ³⁰ Rowe K, Pollard J, Rowe K, 2005. Literacy, behaviour and auditory processing: Does teacher professional development make a difference? *Australian Council for Educational Research*.
- ³¹ Tymms P, Merrell C. The impact of screening and advice on inattentive, hyperactive and impulsive children. *European Journal of Special Needs Education 2006; 21(3):321-337*