

Equality of Access for Canadians to New Medication

One to two children in every classroom in Canada has Attention Deficit Hyperactivity Disorder (ADHD). But ADHD, the most common mental health disorder in childhood,¹ not only affects the young but is a lifespan issue that continues into adulthood for the majority. In total, about 4.4% of adults demonstrate persistent childhood-onset ADHD with significant impairment and comorbidity.

Untreated or under-treated ADHD is associated with long-term impairments in academic achievement, social functioning, self-esteem and employment stability.²³⁴⁵⁶⁷ Adult ADHD is a common and costly workplace condition, resulting in lost work performance and productivity.⁸

Medication can not solve all the difficulties of people with ADHD but is an important part of a multimodal treatment approach. Despite this, long-acting or extended release (XR) medications, the clinically-recommended first line (i.e. preferred, standard or first choice) treatment for ADHD,⁹¹⁰¹¹ are not covered by all Canadian public and private medical insurance plans. Ultimately, this impacts the most vulnerable parts of our population - the economically-disadvantaged. Although ADHD is disproportionately diagnosed among children from underpriviledged populations in advantaged countries,¹² in many provinces only families that can afford to buy the medication (or who have private health insurance) can currently take advantage of long-acting medications.¹³

The Centre for ADHD Advocacy, Canada (CADDAC) rejects this two-tier situation that discriminates against economically-disadvantaged families. We demand equality of access for all Canadians to the newer, long-acting medications, recommended by expert groups worldwide⁹¹⁰¹¹ as the most therapeutically and socially effective treatment for people with ADHD.

Although some may argue that long-acting medication is simply more convenient and is economically not justifiable, this is simply not true in the case of ADHD. There are a number of important issues that must be taken into account when making value-for-money comparisons between short-acting medication (the traditional drug therapy of choice) and long-acting medications.

Long-acting medications result in improved performances at school and in the workplace and promote better overall health and economic by:

- improving adherence,
- reducing stigmatization,
- facilitating parental control,
- eliminating the therapeutic gap inherent in multi-day dosing schedules,
- ➤ and reducing abuse/diversion.

In order for immediate release medication (taken two to three times a day) to work effectively, the patient must remember and take all doses. Immediate release medication three times a day has been documented – in tightly-controlled study conditions – to be therapeutically equivalent to long-acting medication once a day. But the reality is that in real-world conditions, multiple dosing presents significant problems for people with ADHD.¹⁴ Adherence to medication schedules is a well-reported issue for ADHD patients. Single daily dosing is associated

with greater compliance for all types of medication¹⁵ and is one of the main reasons why the medical experts behind the Canadian, US and UK practice guidelines all recommend long-acting medication as first-line treatment.

The administration of additional doses during the day, required with a multiple dosage treatment schedule, can leave school-aged children – and even adults - open to stigmatization by peers. The high heritability of ADHD means there is a significant likelihood that one of the parents of a child with ADHD will also have ADHD or another psychiatric disorder. There is significant risk that some parents will forget to give the additional immediate-release doses of medication to the child every four to six hours.¹⁶

Some schools and daycares refuse to administer medication, resulting in a forced therapeutic gap. On the other hand, is it not strange that school staff are forbidden to give a student routine non prescription medication such as Tylenol, but are sanctioned to store and administer a controlled substance?

The three to four hour coverage provided by short-acting stimulant medication results in periods of sub-optimal or non-existent coverage during the day, when the symptoms may come back or even be exacerbated. A child may consequently demonstrate a very uneven clinical course, where symptoms are controlled for two to three hours in the morning but then performance deteriorates in school until the second dose. Symptoms reemerge until another dose, putting the student at risk of missing learning opportunities and long-term academic underachievement.

The growing problem of abuse of ADHD medications is receiving increasing public and media attention. By its nature, short-acting medication for ADHD is more open to abuse than the newer, extended release preparations. In a United States survey of middle-class adolescents and young adults, 11% surveyed reported that they sold their stimulant medication and 22% had misused it.¹⁷ A Canadian survey of high school children from the Atlantic provinces revealed that 26% of adolescents report having diverted their ADHD medications one or more times.¹⁸

The route of administration of a stimulant has a strong affect on its abuse potential. Drugs that are rapidly absorbed and achieve higher blood levels can produce an euphoric effect. This effect is easier to obtain by crushing short acting tablets and snorting or injecting them. Longer acting tablets and capsules are not easily put into a form that can be snorted or injected, and thus have a less abuse potential.¹⁹ The XR medications have a more consistent and sustained mechanism of action that allows for slow release in the bloodstream and provides coverage of up to 12 hours.

Extended release medications are not for everyone; immediate release medication is indicated for the minority who have problems tolerating long-acting medication. Nevertheless, making first line treatments available on a equitable basis to all Canadians would not only benefit the health and well-being of children and adults suffering from ADHD, it is an investment in education and in the economy.

The Canadian Paediatric Society, in its November 2009 position statement¹² on extended-release medications for children and adolescents with attention-deficit hyperactivity disorder was the latest Canadian medical organization to call on industry, government and private health insurance companies to work together to make these medications more accessible across the country to facilitate compliance, minimize stigma and prevent missed opportunities for focused learning.²⁰

The long-term economic and social benefits of equalizing access to long-term medication are substantial for society, as well as for families and individuals, and can be measured in terms of increased work productivity and academic achievement, decreases in learning issues, reduction in stigmatization, comorbidities and driving problems.

Above all, it would ensure more equitable access for all Canadians to the first choice treatment for ADHD as recommended worldwide in numerous medical expert consensus documents including the Canadian ADHD Practice Guidelines,⁹ the National Institute for Health and Clinical Excellence (NICE), UK Clinical Guideline on ADHD,¹⁰ the American Academy of Child and Adolescent Psychiatry Practice Parameters on ADHD.¹¹



- 1 Polanczky G, De Lima MS, Horta BL, Biderman J, Rohde LA. The worldwide prevalence of ADHD: a systematic review and metaregression analysis. Am J Psychiatry 2007; 164 (6): 942-948
- 2 Barkley R. Attention-Deficit Hyperactivity Disorder. A Handbook for Diagnosis and Treatment, 2nd ed. New York: Guilford Press, 1998.
- 3 Barkley RA, et al. The adolescent outcome of hyperactive children diagnosed by research criteria: I. An 8-year prospective follow-up study JAACAP. 1990;29:546–557.
- 4 Biederman J, et al. A prospective 4-year follow-up study of attention-deficit hyperactivity and related disorders. Arch Gen Psychiatry. 1996;53:437–446.
- 5 Weiss G, et al. Psychiatric status of hyperactives as adults: a controlled prospective 15-year follow-up of 63 hyperactive children. J Am Acad Child Psychiatry. 1985;24:211–220.
- 6 Satterfield JH, Schell A. A prospective study of hyperactive boys with conduct problems and normal boys: adolescent and adult criminality. JAACAP. 1997;36:1726–1735.
- 7 Biederman J, et al. Psychoactive substance use disorders in adults with attention deficit hyperactivity disorder (ADHD): effects of ADHD and psychiatric comorbidity. Am J Psychiatry. 1995;152:1652–1658.
- 8 Kessler RC et al. The prevalence and effects of adult attention deficit/hyperactivity disorder on work performance in a nationally representative sample of workers. J Occup Environ Med. 2005 Jun;47(6):565-72
- 9 Canadian ADHD Practice Guidelines, CADDRA, 2008
- 10 NICE Clinical Guideline 72 Attentional Deficit Hyperactivity Disorder, National Institute for Health and Clinical Excellence, UK, 2008
- 11 AACAP Practice Parameters, J. Am. Acad. Child Adolesc. Psychiatry, 46:7, July 2007.
- 12 M Feldman, S Bélanger. Extended-release medications for children and adolescents with attention-deficit hyperactivity disorder. Position Statement, Canadian Paediatric Society. Paediatr Child Health Vol 14 No 9 November 2009
- 13 Hosenbocus S, Chahal R.J. A Review of Long-Acting Medications for ADHD in Canada. Can Acad Child Adolesc Psychiatry. 2009 November; 18(4): 331-339.
- 14 Capone NM, McDonnell T, Buse J, Kochhar A. Persistence with common pharmacologic treatments for ADHD. Program and abstracts of the 17th Annual International Conference of Children and Adults with Attention Deficit/Hyperactivity Disorder; October 27-29, 2005; Dallas, Texas. Poster Presentation.
- 15 Claxton A, Cramer J, Pierce C. A systematic review of the associations between dose regimens and medication compliance. Clinical Therapeutics. Vol. 23, Issue 8, August 2001, Pages 1296-1310.
- 16 Cascade E, Kalali A, Weisler R. Short-acting versus Long-acting Medications for the Treatment of ADHD. Psychiatry 2008;5(8):24-27.
- 17 Wilens TE, Gignac M, Swezey A, Monuteaux MC, Biederman J. Characteristics of adolescents and young adults with ADHD who divert or misuse their prescribed medications. J Am Acad Child Adolesc Psychiatry 2006;45:408-14.
- 18 Poulin C. From attention-deficit/hyperactivity disorder to medical stimulant use to the diversion of prescribed stimulants to nonmedical stimulant use: Connecting the dots. Addiction 2007;102:740-51.
- 19 Spencer T J et al. PET Study Examining Pharmacokinetics, Detection and Likeability, and Dopamine Transporter Receptor Occupancy of Short- and Long-Acting Oral Methylphenidate. Am J Psychiatry 163:44A, March 2006.
- 20 "Your Attention Please": A Call to Improve Access to Care for ADHD Patients. A Policy Paper by BC's Physicians. February 2009.