

Therapeutic Trends

Attention Deficit Hyperactivity Disorder

Insight and Outlook from IMS Health

WHAT IS ADHD?

Attention deficit hyperactivity disorder (ADHD) is one of the most common neurobehavioural disorders affecting school-aged children, with a prevalence of 3% to 7% in the general population^{1,2} or about 4% to 12% in school-aged children.³ It is a condition whereby children are seen to be unable to control their behaviour and/or attention. Principal characteristics of ADHD are:

- inattention,
- hyperactivity and
- impulsivity.

These are typically present during pre-school or elementary grades. In many cases, the disorder persists through adolescence and into adulthood.¹

In 2006, there were 1.97 million prescriptions dispensed in Canada for drugs used to treat ADHD (these drugs are also used for other indications). There was wide provincial variation in the number of defined daily doses (DDD) dispensed per 1,000 population. Nova Scotia, at eight DDDs per 1,000 population, had the highest number of DDDs. Other provinces with high DDD rates were:

- Manitoba,
- Quebec and
- Saskatchewan.

Alberta was the only province to show a decrease (-8%) from 2005 to 2006.

Methylphenidate (this includes both the brand and generic; regular release and sustained release) continued to be the most popular molecule in most provinces, accounting for 70% of all prescriptions dispensed in Canada in 2006, followed by dextroamphetamine, with 19% of prescriptions (Figure 1).

In comparing provincial trends, Alberta had the highest utilization of dextroamphetamine—its use

was about equal to that of methylphenidate—and this trend was similar in British Columbia, but was not duplicated in any other Canadian province (Figure 2).

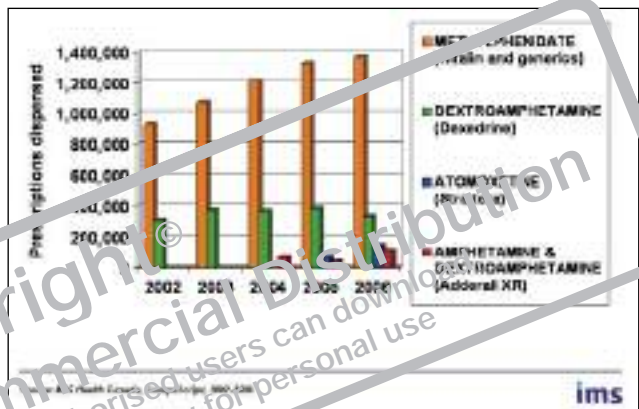


Figure 1. ADHD medications: Estimated prescriptions dispensed in Canadian retail pharmacies.

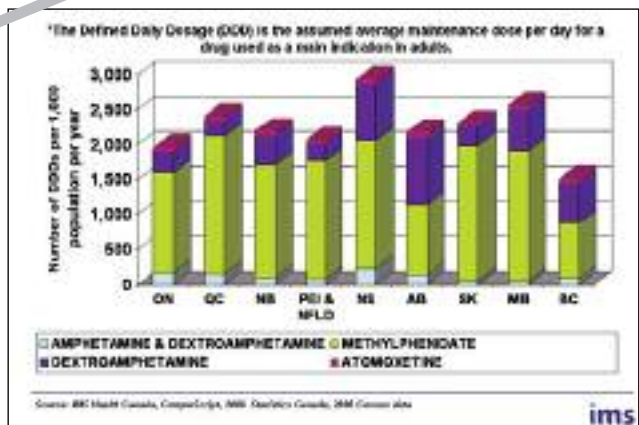


Figure 2. Number of defined daily doses (DDD) per 1,000 population for each attention deficit hyperactivity disorder (ADHD) molecule by province, 2006.

ADHD is one of the most common neurobehavioural disorders affecting school-aged children.

CALCULATING THE DDD

To describe the population use of prescribed ADHD medications, we used the DDD per 1,000 population per day, as developed by the World Health Organization (WHO). The DDD is defined as the assumed average maintenance dose, per day, for a drug used as a main indication in adults. The rate of the number of DDDs dispensed to the population per day or per year is calculated to measure the “therapeutic intensity” in the population. The advantage of this approach is the elimination of problems associated with prescribed items (such as the variation of the amount prescribed, the difference in formulations) and gross ingredient costs (price variation over time and price difference between products). To calculate the DDDs per 1,000 population per day, the

following method was used: the annual amount prescribed to the population was determined by multiplying the total number of tablets (or other solid dosage forms, such as capsules) dispensed by the strength of each tablet. These quantities were then summed for each molecule.

The total DDD for each molecule is then divided by the WHO anatomical therapeutic chemical/DDD index for that molecule. Ultimately, the overall DDD is then divided by the population (in thousands) and then divided by 365 to express the DDDs per 1,000 population per day.

CPM

Based on an article authored by IMS Health Canada's Brian Carter and Christine Albino, which was first presented at the 2007 Canadian Agency for Drugs and Technologies in Health Invitational Symposium.

References

1. National Institute of Mental Health: Attention Deficit Hyperactivity Disorder. Available at: <http://www.nimh.nih.gov/publicat/adhd.cfm>.
2. Rappley MD: Clinical Practice. Attention Deficit-Hyperactivity Disorder. *N Engl J Med* 2005; 352(2):165-73.
3. Goldman LS, Genel M, Bezman RJ, et al: Diagnosis and Treatment of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents. Council on Scientific Affairs, American Medical Association. *JAMA* 1998; 279(14):1100-7.

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Source: IMS Health Canada CompuScript, Statistics Canada and World Health Organization.

Announcement

New Appointments within Pangaea



Joseph Knott, CEO of the Pangaea Group of Companies, is pleased to announce two new appointments within the organization.

Thomas Knott

For the past year, Tom Knott has been heading up a new Division of the Pangaea Group, based in London, England, focused on licensing and acquisitions. Tom will be returning to Toronto in August as Vice-President of The Pangaea Group of Companies, where his expertise within the Retail Pharmacy environment, Consumer products and packaged goods, will assist the Group in providing customized solutions to our clients.



Kristen Knott

As Vice-President Trade & Logistics Inc., Kristen will lead this Pangaea division and focus on existing clients and expanding the divisions' offerings. The division manages \$1.3 billion dollars in Prescription, over the counter and HBA sales in the Canadian marketplace. Kristen was recently awarded with the CAPDM 2007 Most Distinguished Member of the year award.

Pangaea Trade & Logistics offers Trade Relations, Trade Marketing and Logistics Consulting to Pharmaceutical/Biotech companies in Canada. The group includes two experienced pharmacists as well as seasoned industry executives.