



Title	Novel Antipsychotics for Patients With Attention-Deficit Hyperactivity Disorder: A Systematic Review
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Aim

- To assess evidence regarding the efficacy and safety of using the novel antipsychotic drugs (olanzapine, risperidone, and quetiapine) to treat children and adolescents with attention-deficit/hyperactivity disorder (ADHD)
- To assess the financial implications, in terms of the Canadian healthcare system, of adopting these drugs for treating ADHD.

Conclusions and results

A formal quantitative meta-analysis could not be performed due to lack of data. The literature review identified no randomized controlled trials or comparative trials assessing efficacy and/or safety. Five noncomparative studies described 54 ADHD patients. Nine secondary evidence studies were found involving 59 patients: these included studies that either reported data from patients who had ADHD as a secondary indication, or did not clearly present separate results for patients having only ADHD.

- *Efficacy:* As the studies considering the use of risperidone and olanzapine (either alone or as an add-on therapy with methylphenidate) are not controlled or comparative, no conclusions can be drawn concerning their efficacy for treating children and adolescents with ADHD. No published data regarding the use of quetiapine for this indication were identified.
- *Safety:* In the studies reviewed, the most common adverse drug reaction reported was sedation, which usually dissipated either on its own or after a dose reduction. Extrapyramidal effects were reported in 4% of the patients studied. Also, many children gained weight.
- *Cost:* According to this analysis, adopting these newer drugs would require a substantial increase in drug expenditures by the Canadian healthcare system without good evidence of clear benefits.

Methods

Clinical efficacy, safety, and cost issues were evaluated using a structured approach. First, pharmacological treatment of ADHD was summarized using a qualitative review of the literature based on the principles of critical appraisal and evidence-based medicine. Second, acceptable standard therapies and regimens were identified, and the efficacy and safety of novel antipsychotics was compared with those of standard therapies. Third, a model was developed for estimating the cost impact in Canada of using novel antipsychotics in place of standard therapies to treat ADHD. Rather than a full economic evaluation, however, the only resource examined was the cost of medication.

Further research/reviews required

When further clinical data become available, formal pharmacoeconomic analyses may be warranted to clarify the overall balance between costs and outcomes, especially for risperidone.