

Recommendations and Reasons

Committee to Evaluate Drugs (CED)

Product:

VARENICLINE (Champix®)
0.5mg and 1mg tablets

Class of drugs:

smoking cessation aid

Indication:

smoking cessation

Manufacturer:

Pfizer Canada Inc.

Date of CED Review:

September 2007, May 2008, and
February 2010

CED Recommendation

The CED recommended varenicline (Champix®) be funded for the treatment of smoking cessation in the context of a broader government non-smoking strategy.

Executive Officer Decision

Based on the CED's recommendation and an agreement with the manufacturer to address utilization, the Executive Officer decided to fund varenicline (Champix®) on the Ontario Drug Benefit Formulary as a Limited Use Benefit. This decision supports the Smoke-Free Ontario strategy.

Status

Funded as a Limited Use Benefit on the Ontario Drug Benefit Formulary

Varenicline

Highlights of Recommendation:

- ♦ Varenicline is an oral medication used to help people quit smoking. The CED reviewed varenicline on three occasions, most recently in February 2010.
- ♦ Good quality clinical studies have shown that varenicline, when combined with regular counselling, is efficacious in the treatment of smoking cessation.
- ♦ The committee discussed the safety of varenicline and the reports of potential psychiatric and cardiovascular adverse effects that have been associated with the drug. The CED noted that although safety concerns should continue to be closely monitored, a placebo controlled study published in 2010 evaluating varenicline in smokers with stable cardiovascular disease as well as a 2009 observational study assessing the risk of depression and suicidal behaviour with varenicline provided some data on safety.
- ♦ The daily cost of varenicline is approximately \$3.60 per day. According to the manufacturer's analysis, varenicline provides good value for money. This conclusion, however, was based on a number of assumptions.
- ♦ There is evidence to suggest that covering the costs of smoking cessation treatments for smokers increases the proportion of smokers attempting to quit, using smoking cessation treatments, and succeeding in quitting.
- ♦ **Overall, the CED found that clinical trial evidence supports the efficacy of varenicline in the treatment of smoking cessation. While concerns persist about the drug's safety, particularly with regard to psychiatric and cardiovascular adverse events, results from two studies have provided some reassurance in this regard. The committee also noted that providing public funding for smoking cessation aids may increase quitting success rates. For these reasons, the CED recommended that varenicline be funded as part of the government's broader non-smoking strategy.**

Background:

Smoking is the primary cause of preventable disease and death in Canada. One study estimated that more than 45,000 Canadians die each year of smoking-related causes. This includes people who smoke and people who are exposed to second-hand smoke.

Smoking harms every organ in the body and causes many different types of cancer, as well as cardiovascular and respiratory diseases. Quitting smoking significantly decreases the risk of lung and other cancers, heart attack, stroke, and chronic lung diseases.

Treatment options to help patients quit smoking include drugs and behaviour support, such as counselling. Drug treatments include bupropion, varenicline, and nicotine replacement therapy (e.g. nicotine patch and nicotine gum). All drug treatment options are most effective when used in combination with counselling and behaviour support strategies.

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Detailed Discussion:

- ◆ The CED reviewed varenicline in September 2007, May 2008, and February 2010. Key information considered by the CED throughout these evaluations included:
 - Findings from the Common Drug Review and the recommendations from the Canadian Expert Drug Advisory Committee (currently, the Canadian Drug Expert Committee), including a review of eight randomized controlled studies that compared varenicline with placebo or bupropion. (Please see: http://www.cadth.ca/media/cdr/complete/cdr_complete_Champix_August-16-07.pdf)
 - A randomized controlled study comparing the efficacy and safety of varenicline with placebo for the treatment of smoking cessation in patients with stable cardiovascular disease (Rigotti et al. *Circulation* 2010).
 - An UK-based observational study (Gunnell et al. *BMJ* 2009) comparing varenicline with nicotine replacement therapy and bupropion with respect to risk of suicide and suicidal behaviour.
 - A 2009 systematic review (Reda et al. *Cochrane Database Syst Rev.* 2009 Apr 15;(2):CD004305) examining the impact of healthcare financing of smoking cessation treatments.
- ◆ With respect to efficacy, the CED found that varenicline, in conjunction with smoking cessation counselling, has been shown to result in higher rates of abstinence from smoking when compared with counselling alone or bupropion plus counselling.
- ◆ However, the committee noted that long-term data on the efficacy and safety of varenicline were lacking. Likewise, there were limited clinical trial data on the efficacy and safety of varenicline in patients with psychiatric illness, pulmonary, or cardiovascular disease.
- ◆ The committee discussed the safety of varenicline and reports of potential psychiatric and cardiovascular adverse effects that have been associated with the drug. In particular, the CED reviewed an observational study (Gunnell et al. *BMJ* 2009), which found no increased risk of depression or suicidal thoughts in patients who used varenicline compared with those who used bupropion or nicotine replacement therapy. The study by Rigotti et al. conducted in smokers with stable cardiovascular disease also provided some data on cardiovascular safety.
- ◆ The average daily cost of varenicline is \$3.60 per day. The daily cost of bupropion is \$0.97 per day and that of various nicotine replacement therapies ranges from \$2.90 to \$6.30 per day. A cost-effective analysis from the manufacturer showed varenicline provides superior value for money when compared to bupropion, nicotine replacement therapy or counselling. The committee identified several limitations with the manufacturer's economic analysis and noted that additional benefits and cost savings provided by varenicline over bupropion or nicotine replacement therapy are small.
- ◆ The committee took into consideration a Cochrane systematic review, which found that providing full financial benefits (covering all the costs of smoking cessation treatment) to smokers, when compared to no financial benefits, increased the proportion of patients quitting smoking, quit attempts, and utilization of drug treatments by smokers. The committee noted that reimbursing smoking cessation treatments through public means may produce similar positive outcomes.
- ◆ **Overall, the CED found that clinical trial evidence supports the efficacy of varenicline in the treatment of smoking cessation. While concerns persist about the drug's safety, particularly with regard to psychiatric and cardiovascular adverse events, results from two studies have provided some reassurance in this regard. The committee also noted that providing public funding for smoking cessation aids may increase quitting success rates. For these reasons, the CED recommended that varenicline be funded as part of the government's broader non-smoking strategy.**

Limited Use Benefit:

Varenicline (Champix®) is funded as a Limited Use Benefit on the Ontario Drug Benefit Formulary. The Limited Use criteria can be found at:

http://www.health.gov.on.ca/english/providers/program/drugs/odbf_eformulary.html



Ministry of
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