

Drug Coverage Decision for B.C. PharmaCare

About PharmaCare

B.C. PharmaCare is a government-funded drug plan. It helps British Columbians with the cost of eligible prescription drugs and specific medical supplies.

Details of Drug Reviewed

Drug	Propranolol hydrochloride
Brand Name	Hemangiol™
Dosage Form(s)	3.75 mg/ml Oral Solution
Manufacturer	Pierre-Fabre Dermo-Cosmétique Canada Inc.
Submission Type	New Submission
Use Reviewed	Hemangiol is indicated for the treatment of proliferating infantile hemangioma requiring systemic therapy.
Common Drug Review (CDR)	Yes, CDR recommended: to Reimburse with clinical criteria and/or conditions. Visit the CDR website for more details: www.cadth.ca/node/88649 .
Drug Benefit Council (DBC)	DBC met on March 6, 2017. DBC considered various inputs including: the final reviews completed by the Common Drug Review (CDR) on February 21, 2017, which included clinical and pharmacoeconomic evidence review material and the recommendations from the Canadian Drug Expert Committee (CDEC). The DBC also considered CDR Patient Input, Clinical Practice Reviews from two specialists, and a Budget Impact Assessment. No Patient Input Questionnaire responses were received from patients, caregivers, or Patient Groups.
Drug Coverage Decision	Limited Coverage Benefit Access the Hemangiol criteria from www.gov.bc.ca/pharmacarespecialauthority
Date	January 29, 2019
Reason(s)	Drug coverage decision is consistent with the DBC recommendation. <ul style="list-style-type: none"> Based on the available evidence, propranolol solution is more effective than placebo in resolution of hemangiomas. Prior to availability of Hemangiol, compounded propranolol solution was used in the treatment of proliferating infantile hemangioma, but commercially available product is preferred as it reduces risks that may be associated with compounding. The Ministry participated in the pan-Canadian Pharmaceutical Alliance negotiations with the manufacturer which were able to address the concerns identified by the CDEC and DBC with respect to the cost-effectiveness and value for money.
Other Information	None

The Drug Review Process in B.C.

A manufacturer submits a request to the Ministry of Health (Ministry).

An independent group called the [Drug Benefit Council \(DBC\)](#) gives advice to the Ministry. The DBC looks at:

- whether the drug is safe and effective
- advice from a national group called the [Common Drug Review \(CDR\)](#)
- what the drug costs and whether it is a good value for the people of B.C.
- ethical considerations involved with covering or not covering the drug
- input from physicians, patients, caregivers, patient groups and drug submission sponsors

The Ministry makes PharmaCare coverage decisions by taking into account:

- the existing PharmaCare policies, programs and resources
- the evidence-informed advice of the DBC
- the drugs already covered by PharmaCare that are used to treat similar medical conditions
- the overall cost of covering the drug

Visit the [The Drug Review Process in B.C. - Overview](#) and [Ministry of Health - PharmaCare](#) for more information.

This document is intended for information only.

It does not take the place of advice from a physician or other qualified health care provider.

Drug Benefit Council (DBC) Recommendation and Reasons for Recommendation

FINAL

**Propranolol (Hemangirol™)
Pierre-Fabre Dermo-Cosmetique Canada Inc.**

Description:

Drug review of **propranolol (Hemangirol™)** for the following Health Canada approved indications:

For the treatment of proliferating infantile hemangioma (IH) requiring systemic therapy.

In their review, the DBC considered the following: the final reviews completed by the Common Drug Review (CDR) on February 21, 2017, which included clinical and pharmacoeconomic evidence review material and the recommendations from the Canadian Drug Expert Committee (CDEC). The DBC also considered CDR Patient Input, Clinical Practice Reviews from two specialists, and a Budget Impact Assessment. No Patient Input Questionnaire responses were received from patients, caregivers, or Patient Groups.

Dosage Forms:

Hemangirol™ is available as propranolol 3.75 mg/mL oral solution.

Recommendations:

1. The Drug Benefit Council (DBC) recommends that **propranolol (Hemangirol™)** not be listed at the submitted price.

Reasons for the Recommendation:

1. Summary

- One randomized, double-blind, placebo-controlled trial demonstrated that propranolol-treated patients were statistically significantly more likely to achieve complete or near complete resolution of the target hemangioma at 24 weeks than placebo-treated patients, when assessed by blinded centralized reviewers.
- No randomized controlled trials (RCTs) studying the efficacy of compounded oral propranolol in treatment of IH were identified, nor were any comparative analyses assessing propranolol (Hemangirol™) and compounded oral propranolol.
- The cost of compounded oral propranolol, the current first-line treatment option for IH requiring systemic therapy, is approximately 10% of the cost of propranolol (Hemangirol™) oral solution.

2. Clinical Efficacy

- The DBC considered the CDR clinical review report, which included one adaptive, phase II/III, randomized, double-blind, placebo-controlled trial (Study 201) conducted to evaluate the efficacy and safety of propranolol oral solution in patients with IH requiring systemic therapy.
- Study 201 demonstrated that propranolol-treated patients were statistically significantly more likely to achieve complete or near complete resolution of the target hemangioma at 24 weeks than placebo-treated patients when assessed by blinded centralized reviewers. Efficacy results were similar when stratified by age group (35 to 90 days or > 90 days) and hemangioma location (facial or non-facial).
- Study 201 did not include patients with life- or function-threatening hemangioma or with ulcerated hemangioma with pain and/or lack of response to simple wound care measures, and no controlled studies were identified that did include the patients, as it would be unethical to randomize such patients in a placebo-controlled trial. Observational data from the manufacturer's compassionate use program, and the experience of the clinical experts consulted by both the DBC and by CADTH, supported the effectiveness of propranolol in these patients.
- For detailed information on the systematic review of propranolol (Hemangirol™) please see the CDEC Final Recommendation at: <https://www.cadth.ca/propranolol-oral-solution>.

3. Safety

- The overall proportion of patients who experienced at least one adverse event was greater in the propranolol group compared with the placebo group at 24 weeks. Nasopharyngitis, diarrhea, pyrexia, teething, bronchitis, upper respiratory tract infection, cough, vomiting, and gastroenteritis were reported in at least 10% of propranolol-treated patients.
- The proportion of patients who experienced at least one serious adverse event was similar in the propranolol and placebo groups.

DBC Meeting – March 6, 2017

DBC Recommendation and Reasons for Recommendations

- Withdrawals due to adverse events were more commonly reported in the placebo group compared with the propranolol group.
- For detailed information on the safety and tolerability of Hemangiol™, please see the CDEC Final Recommendation at the links above.

4. Economic Considerations

- Compounded oral propranolol is the current first-line treatment option for IH requiring systemic therapy. The cost of compounded oral propranolol in BC, including compound fees, is approximately 10% of the cost of propranolol (Hemangiol™) oral solution.

5. Of Note

- The CDR was not able to identify any RCTs studying the efficacy of compounded oral propranolol in treatment of IH, nor were there any comparative analyses assessing propranolol (Hemangiol™) and compounded oral propranolol.
- The DBC did not receive any input from patients, caregivers or patient groups. CADTH received responses from one Patient Group, which provided the information that IH is the most common cause of vascular tumors in children. Current standards of therapy (including surgery, corticosteroids and compounded propranolol) have an unsatisfactory success rate as hemangiomas often grow back, requiring repeated treatments. Treatments can be painful and can lead to scarring and disfigurement. The psychological effects of IH (depression, isolation, anxiety, and social disability) can often be worse and last longer than the physical effects.