

- Title** Use of Intrathecal Pumps in the management of chronic non-cancer pain: efficacy, safety, clinical indications, organizational aspects and costs
- Agency** INESSS, Institut national d'excellence en santé et en services sociaux
2535 boul. Laurier, 5^{ème} étage, Québec, QC G1V 4M3;
Tel: 418 643-1339, Fax: 418 646-8349, inesss@inesss.qc.ca, www.inesss.qc.ca
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Aim

According to the most recent data, 18.9% of Canadians and 15.7% of Quebecers suffer from chronic pain. Chronic non-cancer pain (CNCP) includes neuropathic pain, known to be the most refractory to conventional medical management (CMM). The use of intrathecal pumps in refractory CNCP treatment leads to considerable costs for Québec's health institutions and professionals want additional resources for neuromodulation. In this context, the MSSS mandated INESSS to assess the evidence on the efficacy, safety and costs associated with the use of intrathecal pumps for the management of CNCP with a view to providing better practice guidelines, especially on patient selection, clinical interventions and post-implantation follow-up of intrathecal pumps across the province.

Conclusions and results

In accordance with the evidence of low quality, INESSS has concluded that intrathecal administration of medication is effective for relieving CNCP that is nociceptive, mixed or neuropathic. In line with the analyzed data, treatment with intrathecal pumps would allow reduce pain by more than 50% in at least 40% of patients with CNCP. However, some patients abandon treatment because of insufficient pain relief or side effects associated with the medication. No deaths have been associated with the use of intrathecal pumps, but device-related complications have been observed. Therefore, the optimal operation of a neuromodulation service that implants intrathecal pumps is based on some conditions, which are discussed in this report.

The economic analysis tends to show a cost/effectiveness in favour of the use of intrathecal pumps to administer medication compared to CMM. However, growing pressure will be exerted on the annual budget required both to treat new cases and to follow up implanted patients.

Methods

A review of all the health technology assessment reports on the topic was performed, and the report that was both the most recent and of good quality was selected as the reference for our analysis. This reference report was updated following a systematic review of the relevant literature. Meetings were held with Québec clinical specialists to clearly identify the current use of the different devices in Québec. To perform the cost analysis, institutions' annual financial reports (costs of hospital services) and others medical and administrative databases were consulted.

Further research/reviews required

Additional studies are required to better explore the effectiveness of the use of intrathecal pumps for CNCP and identify both the financial impacts of neuromodulation on Québec's health system and its general effects on society.

Written by

Alvine Fansi and Christine Lobè, INESSS, Canada