

**Barriers to Opioid Deprescription in Rural Newfoundland and Labrador: Findings from Pilot Interviews with Rural Family Physicians**

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## **Abstract**

*Background:* Medical doctors in Canada have a lack of education and understanding on how to safely prescribe opioids. Rural areas and Aboriginal populations have been identified as being at greater risk for opioid misuse. The purpose of this pilot project is to investigate barriers to rural physicians deprescribing opioids for noncancer pain in rural NL to better understand this under-researched topic. *Methods:* Semi-structured interviews were conducted over the phone and audio recorded. The audio recordings were transcribed using Microsoft Word then thematically analysed. The themes were discussed with another team member to reach a consensus. *Results:* Three broad themes were identified including system related, provider related and patient related barriers with sub-themes under each. *Interpretation:* These preliminary results identified many barriers including lack of resources in rural areas, lack of provider education and lack of patient understanding of the mechanisms of opioid prescriptions that fit into three broad categories. Barriers not previously identified in the literature were acknowledged including lack of pain management resources in rural communities as well as patient misunderstanding opioid medication pharmacology. These results are preliminary and further research is required.

## **Introduction**

Opioids are a class of drugs primarily prescribed as a pain reliever that can also cause an addictive and deleterious sense of well-being or euphoria (Canadian Center on Substance Abuse, 2015). With the second highest per capita rate of opioid prescription in the world (Gomes et al., 2014), Canada's situation ballooned into crisis in 2016 when British Columbia declared opioid misuse a public health emergency (BC Center for Disease Control, 2017) due to rising opioid-related deaths in the province. One approach to bring opioid use under control is deprescription, defined as an organized method of discontinuing a drug (Sivagnanam, 2016). Indeed, deprescription has been endorsed by organizations like the National Advisory for Prescription Drug Misuse (Bhambhani et al., 2006) to control misuse of opioids, yet very little is known about the barriers physicians face deprescribing, especially in rural areas. Evidence suggests that areas with greater rural population have the largest amount of prescription opioid users (Keyes, Cerdà, Brady, Havens & Galea, 2014), a particularly important fact for the Canadian province of Newfoundland and Labrador (NL), where 41% of the population were living rurally (Statistics Canada, 2011) and there was an 84.7% increase in high dose opioid prescriptions from 2006 to 2011, the largest increase in Canada (Dell et al., 2012).

Research indicates that physicians lack comfort and training with respect to opioids (Jamison, Sheehan, Matthews, Scanlan & Ross, 2014; Turk, Brody, & Okifuji, 1994; Upshur, Luckmann & Savageau, 2006) and studies looking at methadone and benzodiazepines suggest physicians consider the length of time the patient had been on the therapy, return or symptoms and consequently, higher burden of care, as main barriers to deprescription (Bourgeois et al., 2014). Unfortunately, these studies do not offer much insight into the barriers to opioid deprescription and none with respect to rural settings, which come with unique contextual considerations, such as the stronger possibility of knowing patients within the community outside of the doctor patient relationship, as well as lack of access to other health services such as pain specialists and mental health services (Elliot & Westra, 2009).

The purpose of this project is to investigate barriers to rural physicians deprescribing opioids for noncancer pain in rural NL to better understand this under-researched topic. However, for this pilot is to obtain two interviews to get preliminary feedback on feasibility to recruit participants, feasibility to conduct the interview including duration of the study, feasibility and relevance of the interview guide to explore the barriers to deprescribing opioids for noncancer and finally feasibility to conduct analysis.

**Research Question:** What are the barriers to deprescribing opioids for noncancer pain in rural NL identified by rural physicians?

## **Methodology**

*Operational definitions of 'rural':* areas with low population density, separated by a distance from areas of high density (Canadian Rural Revitalization Foundation, 2015). For this study defined by a rural postal code (Canada Post, 2015).

*Participants:* Two primary care physicians with at least one year of active practice in rural NL who have experience working with patients that are on opioid medications.

*Study Setting:* Goose Bay, a rural town in Labrador with a population of 8,109 (Statistics Canada, 2016).

*Recruitment:* Emails were sent to potential participants after consulting with Dr. Everett Versteeg, the other primary investigator, on the project for recommendations for pilot interviews.

Upon first contact, we forwarded the consent form disclosing all considerations of the project and their rights as a participant. After receiving their signature, we contacted them to schedule an interview time.

*Methodological Approach:* A medical student conducted semi-structured telephone interviews with the participants at a pre-arranged, mutually convenient time. For sample interview questions and script see Appendix A. The medical student was trained for semi-structured by the research team.

*Data Collection:* Interviews were conducted by phone at the Health Science Center and audio recorded, with another member of the research team present to assist with any technical difficulties and probe for further information. The medical student also took note of any issue during the interview, any comments arise by participants during the interview regarding the questions and recorded the duration of the interviews.

*Analysis:* The audio recording was transcribed into Microsoft Word, then thematically analysed by highlighting key points in a printed copy of the transcript. Key words and important themes were individually analysed from each interview and the highlighted sections were compared between the two transcripts for similarities. Thematic analysis was chosen because the data is qualitative. Time was given to reflect on the interview and the highlighted process was repeated to ensure no themes were missed. Once the analysis was complete, the themes were discussed with a second team member who had also considered the interview data to reach a consensus on the themes.

## Results

After analyzing the data, a consensus was formed on three major broad themes and several sub-themes under each broad theme. The themes and subthemes of the barriers to opioid deprescription in Goose Bay along with participant quotes included:

### 1. System-related Barriers

- a. Lack of formal resources such as suboxone or methadone or pain clinics  
*“Having pain clinics for people with back pain, those are most prominent in my practice anyway, and having the pain clinic would be a real boom for those patients. That’s an impossible trip for most people who live here. Despite there being some reimbursement that happens, the up-front cost is prohibitory.”*
- b. Lack of specialty training in opioid deprescription  
*“If there were some sort of interdisciplinary course or training program that pharmacists, pharmacy techs, nurses, mental health workers and everybody could take and engage in at the hospital, I think that would really improve education”*
- c. Lack of interdisciplinary teams to support doctors guiding patient through deprescription  
*“I think an interdisciplinary approach is necessary because it’s not a practical or realistic solution for physicians to be providing and doing direct observed therapy.”*

### 2. Provider-related Barriers

- a. Lack of formal training in pain management and opioid prescription  
*“I don’t have that many patients on opioids, and I feel a bit like I don’t have a good toolbox for assessing patients as I am tapering them off. I don’t have a standardized approach to it, I don’t really know what to expect and how to overcome these hurdles they are going to run into as they are weaning off their opioids.”*

### 3. Patient-related Barriers

- a. Fearing they cannot cope with their pain without opioids
- b. Patient misunderstanding of how opioids work and how discontinuing them will affect their pain  
*“If they were to stop or discontinue their medicine over the course of a little while, their expectation is that they may go into fairly significant withdrawals and don’t have their safety blanket to temporize them. There is a probably some truth to that but the reality of it is the pain, if they are taking the medicine for the pain, is likely worse in the long run from the secondary effects of opioid hyperalgesia than it would be if they weren’t taking it.”*

In addition to the three major themes regarding barriers to opioid deprescription, participants were asked an extra question about how the interview guide and process could be improved. Both participants stated that the interview guide as well as the consent form were straightforward and easy to understand. However, they stated that sending the interview questions to the interviewee prior to the interview would be beneficial to allow time for the participant to reflect on their thoughts as well as collect any relevant data from their patient base.

## **Interpretation**

This pilot study showed the approach is feasible for participants recruitment and the interview guide is relevant to explore the barriers to deprescribing opioids for noncancer. The study suggests sending the interview guide to the participants before the interview would help form thoughtful points for discussion before the interview occurred.

Several interesting themes that may be elucidated in future interviews, namely system, provider, and patient-related barriers. System related barriers are the lack of resources available in Goose Bay when compared to an urban center such as St. John's. Specific resources include having a methadone or suboxone clinic as well as pain clinics which provide alternate therapies to control pain without opioids available in the community. The interviewees expressed fear of discontinuing opioids as a patient barrier. Having this resource available for patients, could help alleviate this fear knowing they will have a medication or alternate therapy to support them through the weaning process. This is in contradiction to the current literature on barriers to opioid prescription. Overarching issues present in the literature include a lack of formal training in opioid prescription as well as working with a patient population that includes older, male, low socioeconomic status and Aboriginal patients were identified as barriers (Holliday et al., 2015). However, working in a community lacking other pain management resources was not identified. Addressing this lack of resources could address the resource related barrier as well as a patient fear barrier.

With respect to provider-related barriers, lack of formal education in pain management and opioid prescription was identified specifically during medical school training. Not only is there a provider related barrier with regards to lack of education, but it is amplified by the lack of resources available to help support these gaps. This is especially relevant for the rural physician who must see a wide variety of conditions, making it impossible to be an expert in everything they see. Prior research agrees that providing resources is helpful. For example, Srivastava et al. found that a pocket guide is beneficial to physicians as a reference in appointments, and similarly, participants in a study by Albert and colleagues (2011) noted that a prescriber toolkit was the most helpful tool available to them as part of their community based opioid prevention education. The use of telemonitoring in rural Ontario was used to allow pain specialists in bigger city centers to teach rural family doctors insights into pain management (Dubin et al., 2015). The doctors participating in this study reported feeling better equipped to deal with chronic pain patients and an increased sense of community with fellow doctors (Dubin et al., 2015).

Patient-related barriers included the patient's fear of discontinuing opioids and coping with their pain without them, as well as a misunderstanding of how deprescription of opioids will affect

their pain. Patient demographics have been recognized as increasing the potential risk of opioid misuse in the literature as mentioned previously (Holliday et al., 2015). However, patient fears and misunderstanding of opioid medications has not been quoted as a barrier thus far. Although opioid hyperalgesia (a phenomenon occurring when chronic opioid use leads to increased sensitivity to noxious stimuli) is a well documented phenomenon, it has not been documented as a physician perceived barrier to prescribing or deprescribing opioids (Lee et al., 2011). Given the difficulty of explaining this concept to patient's, having a health professional that was comparable to a diabetes educator but who had knowledge of opioid medications would help have these conversations with their patients was identified as being beneficial.

Limitations of this study include a small sample size, and that both physicians interviewed practice in the same community. Despite these limitations, the results of this pilot study demonstrate the feasibility of the recruitment, data collection and analyses. This pilot study also provided some early findings to be explored further in the qualitative study.

### **Conclusion**

This pilot study suggests feasibility of the study. It also suggests some modifications in the process of the interview including sending the questionnaire before the interview. The results presented here are preliminary and may evolve with further interviews; however, these results will form a useful basis as research continues.

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## **Appendix A – Interview Questions and Script**

Hi, my name is Cassandra MacLean and I am a medical student conducting research on barriers to opioid deprescription in rural Newfoundland and Labrador. I would like to ask you a few questions on this topic and the process should take about 30 minutes.

1. How long have you been in rural practice? How long have you been prescribing opioids to patients?
2. In your experience, what have been the biggest barriers when discontinuing opioid therapy with your patients? Please explain.
3. Are there any supports or resources available to you with respect to opioid deprescription? Please explain.
4. Are there any barriers you see as specific to rural practice or Newfoundland/Labrador? Please explain.
5. Do you have anything else to add or any questions for me?

Thank you for your input and your time. I will forward my results of this study when they are complete.