Case Report

A buprenorphine–naloxone induction in the North

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INTRODUCTION

Canada's opioid crisis is an ongoing public health emergency, in which rural general practitioners have an important role to play by providing addictions care to our rural and remote populations. Since 2016, 13,900 deaths in Canada have been attributed to opioids.[1] Although the magnitude of the crisis is centred in urban areas, remote regions of Canada are not spared from opioid-related harm. National practice guidelines for opioid use disorder were published in 2018, which recommended buprenorphine–naloxone as a first-line treatment.[2] Buprenorphine–naloxone is particularly ideal for a rural generalist's practice, as it has a superior safety profile to methadone, which allows for more flexible dosing and dispensing.[2,3] Clinical tools are available to support prescribing buprenorphine–naloxone in primary care, including a recent Canadian guideline.[4] Although buprenorphine–naloxone is a safe and effective first-line treatment for opioid use disorder, there are unique logistical factors that must be considered for buprenorphine–naloxone induction and maintenance in remote settings in Canada. Our case details the first-known buprenorphine–naloxone induction at a small regional centre in the Northwest Territories. It illustrates the impact of remote geography on clinical decisions, ensuring adequate medication supply, and the importance of engaging pharmacy and nursing colleagues in delivering addictions care.

CASE REPORT

A 50-year-old female patient presented to a remote nursing station for anxiety follow-up during a physician's community visit. Past medical history included acute hepatitis secondary to acetaminophen toxicity, smoking, anxiety and remote breast cancer. During this visit, she disclosed and requested help with her 'Tylenol #3 addiction'. The patient reported using 20–40 tablets daily and spent most of her time acquiring tablets from other community members and purchasing them online. She denied other substance use or intravenous (IV) drug use. She was diagnosed with opioid use disorder, and options for treatment were discussed. The patient agreed to start buprenorphine–naloxone.

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As this patient was from a small northern community, with all medications dispensed by nursing station nurses who were unfamiliar with buprenorphine, a short stay at the regional hospital (2 h by road) was planned to facilitate a buprenorphine–naloxone induction.

As planned the patient presented to the regional hospital emergency department in moderate opiate withdrawal, 24 h since her last dose of codeine. Her Clinical Opiate Withdrawal Score (COWS) was 14, and she received an initial 4-mg dose of buprenorphine–naloxone. There were no signs of precipitated withdrawal. Two hours later, her COWS was 12 and she received another 4 mg. After another 2 h, her COWS was still 12 and she received a third dose of 4 mg, for a total of 12 mg, the maximum recommended dose for day 1.[4] Overnight, she experienced ongoing anxiety and difficulty sleeping and was given clonidine 0.1 mg and trazodone 50 mg to help manage her ongoing withdrawal symptoms.

On day 2, the patient reported ongoing cravings and so her daily dose was increased to 16 mg. On day 3, she felt better and had no withdrawal symptoms, and was stabilised on a maintenance dose of 16 mg daily. We communicated her discharge plan directly with the nursing station staff, provided brief education about the importance of daily dispensing and spoke with the regional pharmacy to ensure an adequate buprenorphine–naloxone supply at the nursing station. The patient received daily witnessed dosing at the nursing station for the first 4 weeks. This was transitioned to 5 days of witnessed dosing for 8 weeks, and then 3 days of witnessed dosing with 4 days of carries (e.g., carry-home supply) per week. Point-of-care urine drug testing was not available to guide real-time clinical decisions, however urine samples were sent to a provincial laboratory for drug testing.

Over 1 year later, the patient remains stable on a dose of 16 mg buprenorphine–naloxone daily. Her liver function has improved, and she is interested in becoming a community advocate for opioid awareness.

DISCUSSION

Our case demonstrates unique logistical factors that must be considered when initiating buprenorphine–naloxone in a remote area of Canada, the most significant of which relate to medication access. Even if there is a pharmacy in the community, buprenorphine–naloxone may not be regularly stocked, and business hours may be limited. Nurses at remote health centres may also be unfamiliar with opioid use disorder management. In our case, there was no pharmacy in the community and all medications were dispensed by the nursing station during limited hours.

We also needed to take an adapted approach to maintenance therapy. Significant nursing buy-in is required for ongoing maintenance therapy as nursing stations are usually closed on the weekends. Our patient lived a 1-h walk away from the health centre and did not drive. We increased the number of weekly carries faster than the usual recommendations because it was not feasible to use a strict daily dispensing schedule given the nursing and patient limitations. Due to the excellent safety profile of buprenorphine, providers could consider even more liberal dispensing if a patient's remote location prohibits regular pharmacy or clinic attendance.

To illustrate a failure to consider logistical factors, we provide another case example. A 40-year-old male was started on buprenorphine–naloxone in jail and was stable on a maintenance dose for several months. After being released, he arrived home to his remote community by plane on a Friday afternoon. He had received his last dose of buprenorphine–naloxone on Thursday in jail. Unfortunately, arrangements were not made to ensure that buprenorphine would be available in his home community. Because the next pharmacy shipment via plane was not until the following Wednesday (a 6-day gap in supply), he was prescribed morphine and clonidine in the interim to manage his withdrawal symptoms. This was a particularly high-risk situation given the significant risk of overdose upon release from incarceration,[5] and may have been prevented through improved discharge planning.

CONCLUSION

Overall, we hope to have highlighted some important considerations for providing opioid use disorder treatment with buprenorphine–naloxone in remote settings in Canada. We stress the importance of communication with allied

healthcare providers, and to ensure a reliable supply and dispensing of medication for patients, which is even more critical to consider in the context of COVID-19. As rural healthcare providers become more familiar with buprenorphine–naloxone, we anticipate increased efficiency and streamlined local processes for managing opioid use disorder in remote communities. Further opportunities to increase access to addictions care may arise with newer products such as long-acting injectable or implantable buprenorphine as it may minimise issues with medication supply.[6] By considering these logistical factors, we can make a significant difference to our remote communities by prescribing life-saving, effective and safe treatment for patients with opioid use disorder.

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