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PROJECT REPORT

Facilitating medical withdrawal from opiates in rural Ontario

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ABSTRACT

Context: The abuse of oxycodone in Northwestern Ontario, Canada, has escalated at alarming rates raising concerns that opiate use has reached epidemic proportions, particularly among the First Nations communities. The authors were involved in establishing Ontario's first rural inpatient medical withdrawal unit to serve patients seeking abstinence.

Issues: The development of the medical withdrawal support services (MWSS) required creative and adaptive strategies to respond to the geographical, cultural and institutional circumstances.

Lessons learned: Key factors to support program efficacy and successful outcomes for clients during the inaugural eight months of operation are interprofessional and collaborative approaches with a cultural awareness.

Key words: addiction, Canada, First Nation, medical withdrawal.

Context

The changing face of narcotic abuse

Canadian patterns of opioid abuse are changing: the abuse of pharmaceutical opioids has seen an extraordinary rise while heroin abuse has decreased[1]. Urban centres saw a 25% fall in heroin use between 2001 and 2005[1,2]. Between 2000 and 2004, the Centre for Addiction and Mental Health reported admission to the detoxification program for controlled-release oxycodone increased from 3.8% to 55.4%[3]. OxyContin™, the newer long-acting narcotic, was

fraudulently marketed as opioid medication that was effective in managing pain with the benefit of a low dependence liability (addictive properties)[3]. The long-acting mechanism of this medication could easily be circumvented by crushing the pill and subsequently chewing, snorting, smoking or injecting the drug, which further increased the dependence liability[4]. The euphoric effects of OxyContin™ that exist even when used at therapeutic doses are enhanced with these alternative routes of administration and are comparable to heroin[5]. Between 1991 and 2004, the prescribing of OxyContin™ increased by 850% in Ontario, with a doubling of opioid-related mortality[6]. The use of OxyContin™ created new markets for illicit drug consumption by patients who developed an iatrogenic dependence and by individuals seeking its euphoric effects.

Rural communities and remote First Nations communities have been hit particularly hard by the increase in this narcotic abuse. Regional chiefs in Northwestern Ontario have declared prescription drug abuse to be an epidemic, a crisis and even a state of emergency, with some remote communities incurring an addiction rate of 70% of their adult population[5]. A regional maternity program noted that in 2009, 17% of newborns were exposed to narcotics in utero[7].

In two surveys investigating the severity of problems as reported by Aboriginal Canadians, 73% reported alcohol as a problem, 44% reported family violence, 59% reported drug abuse, 35% reported suicide, 72% reported anxiety, 70% reported violence and 51% reported child abuse[8]. Substance abuse is proposed to be a 'coping strategy for poverty, unemployment, poor health, low educational levels, low or absent community economic development, and negative residential school experiences' and is associated with complex historical situations and socio-economic factors[8]. Aboriginal Canadians face higher rates of mortality than non-Aboriginal Canadians. The number of deaths due to overdose is estimated to be two-to-five times higher for First Nations people[9]. First Nations people experience high rates of unemployment, poverty, histories of physical and sexual abuse, and overcrowded homes, which contribute to the complexities of supporting healthy changes at an individual level[10,11].

Often an individual's continued use of narcotics, beyond the desire for a euphoric effect, is avoidance of the severe discomfort, or anticipated discomfort, of withdrawal effects. Withdrawal management is vitally important. While Oxcontin may initially be abused for the euphoric effects of the drug, the associated costs quickly add up. In Northwestern Ontario, at the time of writing, a single 80 mg OxyContin™ cost $80 to $800 depending on the geographical location of the community. People seeking help to quit using opioid drugs frequently disclose that they have sold all their furniture; the cupboards are bare of food; they have dealt drugs themselves; and they may have stolen, lost their job or not been able to provide adequate child care. Patients who are seeking assistance to quit using opioid drugs have often already tapered their opioid consumption to the point of avoiding withdrawals, rather than seeking the positive effects.

Communities and health professionals across Northwestern Ontario are increasingly attempting to find solutions to help patients meet their goals of overcoming their dependence on opioids and lead healthier, more satisfying lives. The Sioux Lookout Meno Ya Win Health Centre (SLMHC) provides health care to the residents in 32 communities in Northwestern Ontario, including 28,000 First Nations patients in a geographical area of 385,000 km². The SLMHC initiated the first rural inpatient medical withdrawal support service (MWSS) program in the province. The MWSS attempts to incorporate interpersonal, physical, emotional, experiential and contextual factors attending to cross-cultural safety models.

Issues

Health Canada observed that 'the reality of substance abuse may illustrate the most convincingly, the need for a convergence of the four components of well-being – physical, emotional, spiritual and mental – in ensuring the health of a

community and a person. In Aboriginal tradition, the health and well-being of an individual flows, in large part, from the health and social make-up of the community'[8]. Accordingly, to effectively support the First Nations clients who attend MWSS, the structure has been adapted to address the pharmacological effects of drugs and withdrawal as well as the psychological, cultural and social dimensions of health and well-being. To achieve this, service provision requires an interprofessional, culturally appropriate approach.

The MWSS was developed with the medical management of symptoms being one component of the service, which will be discussed in more depth. At the same time, drawing on genuine cross-cultural models, the values enacted by the organization must be responsive to the espoused values of the patients and communities[12]. Intercultural health practices are enhanced through the development of trusting relationships and multi-directional knowledge exchange[12]. A significant indicator of the success of MWSS to establish trusting and responsive relationships is the number of people who call after discharge to share their successes and struggles or to request advice, and who refer their friends and family to the program.

Community-based Aboriginal treatment programs are enhanced by attending to community development and applying sociocultural theories of addiction[13]. Relapse prevention strategies are designed in consideration of the needs of the patients and an understanding of the social, cultural and geographical living environment. They include establishing a healthy daily routine, improving healthy eating habits and daily exercise, effectively communicating and dealing with emotions, building self-esteem and respectful relationships, managing finances, practising relaxation skills, and identifying ways to be leaders in their community. Individual counselling, group work and activities integrate a First Nations focus, including education about the medicine wheel, beadwork, legends, animal guides and cedar bark art.

The options for medical management of withdrawal symptoms are varied. The Institute of Medicine identified three stages of substance abuse treatment:

1. Detoxification (withdrawal management)
2. Active treatment and rehabilitation (counselling, residential treatment)
3. Relapse prevention (maintenance with naltrexone, buprenorphine or methadone, ongoing counselling and care)[14].

Inpatient versus outpatient detoxification

A 2010 (n=68) randomized controlled trial of urban outpatient versus inpatient opioid detoxification found that a greater percentage of people successfully completed inpatient detoxification, although the difference was not significant[15,16]. An advantage of inpatient detoxification is that it can be achieved more quickly, co-morbid conditions can be monitored and the patient is isolated from risky environments. However, outpatient treatment is typically more readily available[17,18].

Pharmacological treatment

Long acting morphine (MS Contin™, Kadian™): One of the concerns facing physicians when prescribing opiates is the need to balance effective pain management while minimizing the potential for abuse. Two long-acting morphine preparations that do not lend themselves to being diverted (for snorting or injecting) due to their chemical properties are MS Contin (twice a day) and Kadian™ (once a day). These preparations are commonly used as opioid replacement by primary care physicians in our region; while the provincial recommendation is that methadone maintenance should be the standard of care, it is rarely available in rural and remote areas[19].

In Northwestern Ontario, many physicians initially use these preparations in the short term for harm reduction and substitution, then for gradual dose reduction and tapering for outpatient management of oxycodone dependence, with marginal results. Patients are generally offered one or two attempts of outpatient substitution and tapering management. If unsuccessful, they are offered outpatient withdrawal

symptom management, referral to a non-medical withdrawal unit or inpatient medical withdrawal.

Symptom management: The mainstays of outpatient management are clonidine, ibuprofen and loperamide. Symptom management protocols involve regular, sometimes daily, follow-ups at a physician's office or nursing station.

Methadone: Methadone maintenance is available in many urban centres as a substitution treatment for opiate dependence. There is an extensive body of research available in regards to methadone maintenance and medical literature generally refers to it as standard care, particularly for heroin addiction[20]. Our regional centre has documented that 48% of pregnant illicit narcotic users followed a binge pattern of use, quite distinct from the daily intravenous heroin user portrayed in the literature[7]. Methadone is often not available in rural communities due to its licensing requirements for physician prescription. Some communities have tele-medicine methadone clinics, which may fill a need for maintenance treatment but may not be integrated into other health services and counselling. For remote community members, the additional disadvantages include daily dosing schedule, risk of overdose and the need for physicians to meet certain prescribing requirements.

Accommodation in Sioux Lookout for patients from northern First Nations communities who attend methadone treatment are presently funded by the federal Non-Insured Health Benefits for up to three months. Following that, the patients are either discharged home without continued access to methadone or need to relocate to a community that provides methadone maintenance, thereby leaving their home community. Methadone has a lengthy withdrawal period with symptoms lasting for several months and the tapering process can take months or years.

Suboxone™: Suboxone™ is a 4:1 combination of buprenorphine (a weak partial opioid agonist) and naloxone (an opioid antagonist) supplied as a sublingual wafer[21]. At first glance this combination may seem contradictory, but the naloxone component is poorly absorbed when the medication is taken sublingually. Alternate routes of administration of naloxone combination will engender significant absorption and narcotic withdrawal, thereby lowering its abuse and diversion potential. The opioid component, buprenorphine, is a weak opioid agonist with a high affinity for the mu opioid receptor. If buprenorphine is used alone, it will displace other opioids for the mu receptor, potentially precipitating withdrawal[21,22]. Since it has weak opioid properties, there is not a euphoric effect. Suboxone™ can be used to taper from opiates in 5–10 days and the withdrawal effects typically resolve within 2–3 days[15,23]. It may also be used for medical maintenance. Suboxone™ can be administered in alternate day dosing for relapse prevention and has a lower overdose potential due to a lower opioid activity level (partial agonist) than methadone (full agonist) and has fewer prescribing limitations placed on physicians[22,24].

The sublingual use of Suboxone™ allows for narcotic substitution, weaning or maintenance with a low potential for abuse and diversion. Studies in healthy individual have shown that intranasal administration of naloxone has low (4%) bioavailability[25]. Studies of opioid dependent individuals demonstrate that intranasal naloxone precipitates withdrawal[26] and intravenous naloxone precipitates opioid withdrawal[27]. Because the parenteral (injection or intranasal) use of Suboxone™ will precipitate withdrawal and will not produce an opioid high (high mu receptor affinity with low opioid effect of buprenorphine accompanied by the receptor antagonism of nalaxone), the potential for abuse is minimal[28].

Sioux Lookout Meno Ya Win inpatient medical withdrawal support services

The MWSS consists of a five-bed inpatient unit, which has been fully subscribed since inception in December of 2011. The length of stay is typically 14-21 days for opioid (primarily oxycodone and morphine) withdrawal (>21 days for methadone), and seven days for alcohol withdrawal. Although Suboxone™ is conducive to a shorter withdrawal duration, it was decided to offer a slower Suboxone™ tapering process. However, given the complex circumstances that contribute to drug use among First Nations populations

combined with the barriers of access to services in Northwestern Ontario, it was decided that a longer admission would support post-discharge abstinence. Barriers to abstinence include a scarcity of addiction-related treatment services available for residents of remote communities, long waitlists for addiction treatment centres, infrequent availability of mental health services, easy availability of drugs, high prevalence of drug use, complex interpersonal circumstance, few opportunities for a variety of leisure activities in the community and a large geographic region.

The MWSS is a secure, non-smoking, caffeine-free space where patients can safely withdrawal from drugs and/or alcohol with the support of a multidisciplinary team. The focus extends beyond addictions to address concurrent mental health issues. The central team includes physicians, nurses, counsellors, an activation worker and occupational therapists. The program benefits from the support of many other hospital services including the dietician, traditional healers, a laboratory service, physiotherapists and a smoking cessation counsellor. All patients are referred to physical therapy, which is an essential complement for patients who require management of chronic pain. Nicotine replacement therapy is offered to patients who smoke. Patients may also access the Traditional Healing, Medicine, Foods and Support Program. This program offers unique services, including traditional menus, elders-in-residence, traditional healers, ceremonial practices, medical interpreters and 'mashkiki' (traditional medicines)[12].

Opioid protocols for withdrawal from drugs and/or alcohol and symptom management protocols were developed locally. Patients are encouraged to refrain from drug use for at least 12 hours before admission, although it is not a prerequisite. The Clinical Opiate Withdrawal Scale (COWS) developed by the Centre for Addiction and Mental Health (CAMH) in Toronto is used to determine daily Suboxone dosing[29]. Patients are encouraged to stay 3 days after they have tapered to a zero dose of suboxone to allow time for the medications to be completely out of their system before going home. This constitutes 'successful completion' for the program. Between December 2011 and June 2012, all patients except two successfully completed the program; for those who left, it was in relation to interpersonal stressors that existed prior to admission. Suboxone™ is increasingly continued in outpatient maintenance therapy as community-based maintenance programs are established.

Patients sign a code of conduct prior to admission agreeing to participate in unit activities, to be respectful of other patients' privacy and to not be disruptive to other patients. The MWSS created its own code of conduct requiring staff to support one another in their professional roles. Daily activities include educational groups to address issues such as relapse prevention, yoga, harm minimization, and active leisure activities that are designed to provide patients with the opportunity to set goals and plan for discharge. The program is designed to promote 'bimaa dizi win', which is defined as 'living in a good way' and gives patients an opportunity to envision themselves living a drug free life[12]. At discharge, patients' goals are reviewed and information on loss of tolerance to previous narcotic doses is provided.

Patients are offered support by phone once they are discharged. They are also contacted post-discharge for follow-up program evaluation interviews that occur at 2 weeks, 3 months and 6 months post-discharge. The interviews are designed to obtain client feedback regarding the program design and implementation, to evaluate progression on goals that were set prior to discharge, and to provide ongoing encouragement and support. The goals that are set are typically to abstain from the primary drug of concern, but may involve harm minimization for other drugs or alcohol, and extend to other aspects of the person's life such as spending more time with children, exercising, engaging in community events and maintaining employment. Some examples of goals and reasons for making a change are:

> *To have a better life for kids.*
>
> *I want to live a clean life. I want to live a happy life.*
>
> *To get back in touch with the land, hunting, and traditional lifestyle.*

Spend money on food.

Go to family treatment with my daughter.

Begin an N.A. group.

Get back to exercising.

Ideally an admission is coordinated so the discharge date will coincide with admission dates to longer term treatment centres. If patients are not attending residential treatment they are encouraged to access supports within their communities post-discharge. If two opiod-dependent patients are partners (ie spouses), they are admitted successively, with one entering the program immediately following the discharge of the other. Patients living in Sioux Lookout can be referred to SLMHC Community Counselling and Addiction Services for outpatient counseling.

Recognizing that recovery leads beyond withdrawal management, a life skills initiative for outpatients is under development and local vocational and life skills agencies have been invited to work in partnership. Hospital facilities will be placed at the disposal of these organizations in the hope of encouraging personal development alongside addiction treatment.

The pregnant patient: Approximately 48% of pregnant women in the SLMHC area who use OxyContin™ were found to 'binge': they used narcotics several times a month at times when narcotics were available in their community. Only 30% of pregnant women who used illicit narcotics were self-described as daily users[10].

Pregnancy can be a motivating factor to encourage parents to quit using opiate drugs. Ontario provincial guidelines indicate methadone as the standard of care due largely to the availability of research with methadone and pregnancy[30]. While the national obstetrician and gynaecology association guidelines concur, they also allow for other long-acting narcotics when required[31]. The treatment approach developed in our pre-natal clinic is presently to switch the patient to MS Contin and initiate a slow taper in the second and third trimester to achieve the lowest maternal drug use level at delivery.

Neonates exposed to non-tapering methadone maintenance have predictably high rates of Neonatal Abstinence Syndrome with much longer lengths of stay postpartum[32]. Suboxone™ is presently contraindicated during pregnancy due to the theoretical risk of uterine withdrawal from the Naloxone component.

Babies exposed to opiate drugs in utero appear to develop normally and narcotics are not teratogenic, while alcohol is[33,34]. A 1996 study estimated 10% of the children born regionally were diagnosed with Fetal Alcohol Syndrome (FAS)[35], with additional cases of fetal alcohol effects anticipated. For this reason, the MWSS ensures that education groups include a focus on the importance of not switching from opiates to alcohol.

Lessons learned

Substance abuse on the scale being seen in Northwestern Ontario tears at the fabric of communities. Families and communities suffer. There is a need for more treatment programs similar to MWSS on a regional and more distributed level. The MWSS at SLMHC is a beginning step to improving access to addiction-related services and may provide an example for other rural communities who are interested in undertaking this type of venture. Undoubtedly, for people who request treatment programs, including residential programs and maintenance treatment (stages two and three of the Institute of Medicine [IOM] framework), increased availability, timely access and a more efficient application process is needed. Adapting national standards to the regional and local cultural, geographic and practical context can be accomplished in a rural area with a committed interdisciplinary team approach.

Another initial development of our service is the beginning of partnerships between hospital personnel and provincial

addiction treatment programs. Perhaps even more critical are the developing multidisciplinary relationships between hospital-based services and community partners. There are emerging opportunities to provide life-skills training within the hospital setting to add another necessary dimension to inpatient addiction management.

Conclusion

Beyond withdrawal management, patients should be able to access all three stages of addictions treatment in a culturally safe environment close to home. Treatment programs with a community focus should be developed in remote First Nations communities for effective healing of the individual and community. It is important that treatment options continue to develop and that evaluation and research help us determine best practices for rural and remote populations. Our patients tell us that they want to be better parents, get jobs or go back to school. We need to look more broadly at addictions treatment and healing to make these visions a possibility.

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