

A Cross-Canada Scan of Methadone Maintenance Treatment Policy Developments

**A Report Prepared for the
Canadian Executive Council on Addictions**

By

**Janine Luce, MA, Centre for Addiction and Mental Health
Carol Strike, PhD, University of Toronto**

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Two changes were made in this version from the original January 2011 document:

- In the Acknowledgements section, *Senior Scientist and Senior Science Advisor, Office of Research and Surveillance, Health Canada* was added to Bruna Brands' title.
- On page 17, the sentence *In Saskatchewan, MMT clients are required to be connected to counsellor, either a methadone counsellor or an outpatient addictions counsellor* was changed to *In Saskatchewan, MMT clients are encouraged to be connected to counsellor, either a methadone counsellor or an outpatient addictions counsellor*.

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Executive Summary

The Canadian Executive Council on Addictions (CECA) commissioned this report in response to concerns about how to address the rising demand for opioid dependence treatment across Canada. CECA requested an assessment of the content of existing federal, provincial and territorial system reviews of methadone maintenance treatment (MMT) and opioid dependence treatment. This scan was conducted using a variety of methods, including document reviews, scientific literature review, and key informant interviews.

All provinces deliver MMT services through a variety of models, including government funded comprehensive MMT programs (these can be integrated into a number of different settings), private clinics, family practice, and prison. Only one territory provides MMT and it only provides it through a family practice setting. MMT is not provided through the National Native Alcohol and Drug Abuse Program. All federal correctional facilities provide MMT.

This scan confirmed CECA's observation that there has been an increase in demand for opioid dependence treatment across Canada, including in First Nation communities and the federal correctional system. This increased demand has been addressed in a number of ways: by the increase of private (often for profit) clinics and family practitioners who prescribe methadone; increasing resources to government-funded MMT programs; developing new MMT programs that are integrated into other health facilities; adjusting the model of MMT service delivery to accommodate more clients into a given program (e.g., removing mandatory counselling); and addressing the prevention of prescription opioid misuse as a means of reducing demand for MMT services. While buprenorphine is an alternative to methadone, it is not widely used because of its prohibitive cost.

In most provinces, there are two parallel streams of MMT provision— provincially funded clinics and fee-for-service MMT provided through individual or group practices. These two streams operate in isolation from one another; there are few if any relationships between the physicians in fee-for-service practices and the MMT clinics connected to the provincial addiction system. Increasingly, there are efforts in jurisdictions to bring these two systems together, through local or provincial coordination. Provinces vary significantly in their development of the components of a methadone system; whether they have guidelines and MMT policies from medical regulatory bodies, a quality assurance system, service planning, and sources of data. Many provinces and First Nation communities in Canada are engaged in developing mental health and addiction strategies and/or strategies to address prescription opioid misuse specifically. Treatment needs of those who are dependent on prescription opioids are being addressed as part of these processes.

This scan identified the lack of physicians who can prescribe methadone as a significant barrier to addressing the demand for MMT. Provinces are tackling this particular issue by increasing access to training, targeted recruitment of physicians, designing alternate models of MMT delivery, providing financial incentives, funding support positions for physicians and providing specialist consultation services to support those working in general practice.

Across Canada MMT funding schemes vary considerably. The fragmentation of the system is related to the different funding streams for MMT. The system of payment for MMT is consistently described as confusing and lacking in clarity and transparency. In both the Ontario and BC reviews of MMT systems, the issue of payment was a key area of concern. In both cases there have been concerns that private practices and pharmacies were reimbursed for activities that did not reflect best practice or current policies. Both reviews also raised the concern that there was no clear funding mechanism to provide psychosocial supports to patients on MMT.

In 2002, Health Canada published a best practice document for MMT services in Canada. Each province recognized that this model of MMT service was the ideal for patient outcomes in the long-term. As a result of the demand for MMT services and the extensive waitlists, however, MMT clinics across the country are examining options for adjusting the best practice model of service delivery. Some provinces have begun to examine the model of delivering MMT in primary care, especially for those patients who are stabilized. There is a recognition that not all clients on MMT require the level of intensive services that is recommended in the best practices. As well, informants described the need for low threshold programs designed for clients who are not ready or willing to be abstinent from all substances. Most provinces recognize the need for more than one model of treatment. This is in part a result of the changing demographics of those requiring MMT and the maturing of MMT programs.

The stigma of addiction is very prevalent and affects every level of the addiction treatment system. As a substitution treatment, MMT is judged to be less effective and often morally wrong as compared to abstinence-based treatment. The common perception that methadone just substitutes one drug for another drug is pervasive and impacts everything from clients choosing to go on methadone, to physicians seeking exemptions, to governments and regulatory bodies establishing policies and funding for MMT.

A substantial body of evidence exists in the scientific literature to show that both methadone and buprenorphine are more effective in treating opioid dependence than no treatment or psychosocial treatments alone. New evidence also suggests that methadone is as effective in treating prescription opioid dependence (e.g., oxycodone) as it is in heroin dependence. A recent study from Ireland compared methadone outcomes (i.e., retention, drug use, mental health systems and physical health complaints) and concluded that patients will improve in any service model (e.g.,

community setting, general practice, health board). Both methadone and buprenorphine are cost-beneficial in terms of reduced drug use and crime, and considerably more cost-effective than no treatment and in-patient treatment modalities.

There are five main messages that can be gleaned from this scan:

1. A continuum of MMT service delivery (low threshold, intensive and primary care) is needed to serve an increasingly diverse population struggling with opioid dependence.
2. A coordinated MMT system is needed to ensure that clients are matched with the appropriate intensity of treatment.
3. A consistent, transparent funding system for all elements of MMT including prescribing, dispensing, drug costs, travel costs, and funding for psychosocial supports and case management is necessary.
4. The lack of availability of buprenorphine is a 'lost opportunity' to provide an alternative to methadone for patients.
5. The stigma of addiction is still very prevalent and affects every level of the addiction treatment system.

Background

The Canadian Executive Council on Addictions (CECA) commissioned this report in response to concerns about how to address the rising demand for opioid dependence treatment across Canada. Increasing demand for treatment is linked with the rise of the harmful use of prescription opioids. Methadone maintenance treatment (MMT) is the gold standard treatment for opioid dependence, especially with respect to heroin addiction; less research has been conducted on the effectiveness of MMT for prescription opioid dependence. In the past few years, buprenorphine has been introduced into the Canadian addiction treatment system. Rising demand, increasing prescription opioid dependence and the introduction of buprenorphine combined with the varying levels of experience among the provinces/territories, prompted a desire by CECA to examine how these changes are being addressed across Canada.

For this scan, CECA requested an assessment of the content of existing federal, provincial and territorial system reviews of methadone maintenance treatment and opioid dependence treatment to answer the following questions:

- What is the most effective – and cost-effective way – of meeting increased demand for opioid dependence therapy?
- What is the model for service delivery that increases access to treatment quickly, retains people in treatment as appropriate, and offers the best hope of long-term efficacy?
- Are there alternatives to MMT that should be actively pursued by jurisdictions with responsibility for addiction services?

The objective of the scan was to focus on the system of MMT delivery in a particular jurisdiction and efforts made to address problems related to access to opioid dependence treatment.

Methods

This scan was conducted using a variety of methods, including document reviews, a scientific literature review, and key informant interviews.

The documents reviewed have included reports on MMT system reviews in British Columbia and Ontario as well as provincial program evaluations from Nova Scotia, Manitoba and Prince Edward Island. Provincial guidelines for MMT were reviewed as

well as the Health Canada best practice guidelines. (See Appendix 2 for a list of documents reviewed.)^{*}

The scientific literature on methadone maintenance and buprenorphine was reviewed, especially that which addressed cost-effectiveness, effectiveness of various service delivery models, and alternatives to methadone. (See Appendix 4 for a list of references.)

Key informant interviews were conducted in each province as well as with a representative from a national Aboriginal addictions organization and Correctional Services Canada. Key informants were identified by the authors' own contacts as well as referrals from members of CECA. Each key informant interview was recorded with the permission of the informant and detailed notes of content relevant to the project were taken. As well as these interviews, information was solicited from other contacts to supplement information from the key informant interviews. (See Appendix 1 for a list of key and other informants.)

Summary of provincial systems[†]

In British Columbia, there are four main models of MMT: family physicians, multidisciplinary models, private clinics and prison. Most of the service delivery outside of the greater Vancouver area is through family physicians who provide MMT as part of their private practice. In the large urban centres multidisciplinary clinics are common, especially community health clinics that provide MMT along with other medical and health promotion services. In some cases clinics specialize in providing care to a particular population, such as the Sheway program in Vancouver's downtown eastside that provides primary care, including MMT, to pregnant and parenting women. Another variation on the multidisciplinary model is where MMT is integrated into existing mental health and addiction services. The third model of MMT in BC is private clinics. These are clinics that are exclusively for MMT and usually run for profit. There is a concentration of these types of clinics in the Lower Mainland. In addition to these three models of MMT service, MMT is also offered in provincial prisons. BC is the only province in Canada to offer initiation of MMT in provincial prisons. The prison system also provides MMT to inmates who enter the institution already on methadone. By the end of 2009 there were 11,033 patients enrolled in MMT and 390 physicians with exemptions to prescribe, although only 218 of those had active caseloads.

^{*} References in the text that appear as names refer to the documents in Appendix 2, those that appear as numbers refer to documents in Appendix 4.

[†] Appendix 3 contains a cross-jurisdictional chart comparing a number of MMT system elements.

BC recently released a report summarizing two reviews of the MMT system in the province (Reist). This report outlined a number of issues facing the system; the lack of access to MMT in rural and remote areas, the decrease in patient retention in MMT, the lack of clarity on the responsibility for the provision of psychosocial supports, and the lack of coordination of MMT services in the province. The BC report and those we interviewed highlighted the complexity of the reimbursement rules and schedules. BC is also engaged in research on other alternatives to methadone for substitution treatment. The NAOMI and SALOME trials are described later in this report.

In Alberta, there are four models of service delivery – provincially funded clinics, private group practice, family practice and prison. Across Alberta, there are eight MMT clinics. Two of these clinics are provincially funded and provide a full range of counselling and support services. Six of the clinics are operated as group practices and vary in the range of services they provide. MMT is also provided by individual physicians in a primary care setting and in provincial prisons. Alberta MMT guidelines recommend that patients attend a clinic for MMT initiation and stabilization and then move onto a physician in a primary care setting for maintenance. This rarely happens because of the lack of physicians in primary care who can prescribe. The clinics, as a result have very little capacity to take on new patients and have waiting lists. Access issues are especially problematic in the northern areas of the province where there are many individuals who have migrated to Alberta from other provinces to work and are seeking MMT. In Alberta MMT is offered in provincial prisons to those who come into the institution already on methadone. In 2009 there were approximately 2,000 patients in MMT in Alberta. There are approximately 80 physicians who have exemptions, but only about 20 with a general exemption who can initiate patients.

In Saskatchewan there are three provincially funded MMT clinics, one of which is located within a community health centre, as well as physicians who provide MMT through their family practice and in prison settings. To get into MMT, patients must be referred to a methadone-prescribing physician. Referrals usually come through addiction outpatient counsellors or general practitioners. The MMT physician does the medical assessment and prescribing and refers the patient to a methadone counsellor if available, or an outpatient addiction program for counselling. The three main MMT clinics have two counsellors each with very large caseloads (approximately 150 clients per counsellor). One clinic has stopped keeping a waiting list and now only serves priority populations (pregnant women and those who are HIV positive). There are waiting lists at the other two clinics. Provincial funding for counselling services has recently increased to attempt to meet the demand for this service. MMT is available in provincial prisons to those who enter the institution already on methadone, but not for initiation of MMT from within the institution. There are 2,136 people on MMT in Saskatchewan and approximately 30 prescribing physicians for addictions.

In Manitoba there are two provincially funded MMT programs run by the Addictions Foundation of Manitoba: one in Winnipeg and one in Brandon. There are also two

private clinics in Winnipeg, and several physicians connected to the Addictions Foundation of Manitoba (AFM) clinics who also have their own private practices where they prescribe methadone. There is a physician in Thompson who has recently completed training and is working towards getting an exemption to provide MMT. In all there are 15 physicians with exemptions providing care to approximately 820 MMT clients in the province. The Winnipeg AFM program has a significant waitlist, with approximately 380 clients in the program and a waitlist of 146; the wait for service is 6-12 months. Travel is also a significant issue as most of the resources are in Winnipeg or Brandon. MMT is available in provincial prisons for those who enter the institution already on methadone, but not for initiation. AFM has recently received funding to increase their hours of service per day which will allow a small increase in service but is not expected to significantly affect the waitlist.

In Ontario a variety of models exist for MMT service delivery. The most common model is a private group practice, similar to private clinics in BC. More than half of patients in Ontario receive service through this model. There are also three MMT clinics that are provincially funded, and one that is offered within a community health centre. There is also a clinic in Toronto that is municipally supported as it is integrated with a needle exchange program. The Centre for Addiction and Mental Health (CAMH), a specialized hospital for addiction and mental health, has an addiction medicine service that provides methadone and buprenorphine treatment. As well there are individual physicians who provide MMT either as part of their general practice or exclusively. MMT is also offered in provincial prisons for those who enter the institution already on methadone. There are currently 29,743 patients enrolled in MMT in Ontario and 309 physicians with exemptions. The largest single provider in Ontario is the Ontario Addiction Treatment Centre, a for-profit network of clinics serving over 7,500 patients with just under 40 affiliated physicians.

In 2006, the Ontario provincial government established a Methadone Maintenance Practices Task Force to provide advice on issues of access, best practices, payment models, quality assurance and community engagement. Their report, released in 2007, had 26 recommendations (Hart). The task force focused its recommendations on ways to provide access across Ontario to a comprehensive range of integrated services, including integrating MMT into primary care group practices, the use of telemedicine and expanding the role of nurse practitioners. The need to have best practices guidelines for physicians, pharmacists, nurses and counsellors was also highlighted in the report. In 2007, the Ontario Ministry of Health and Long-Term Care provided three years of funding to several provincial organizations to address some of the recommendations in the task force report including: new best practice guidelines for case managers, nurses and pharmacists; new initiatives addressing physician recruitment, training and support; and awareness campaigns to address the stigma of MMT.

In Québec, MMT is delivered in hospitals, private clinics, addiction treatment programs and by individual prescribers. The province is divided into 16 health regions. Each region has an addiction treatment centre but six do not offer MMT. The vast majority of patients on MMT are in the Montréal area. Waitlists for treatment are between three months and a year. Priorities identified by the Service d'Appui pour la Méthadone include improving access to MMT, expanding the diversity of treatments, ensuring practitioners are following guidelines and best practices and documenting the number of individuals in Québec who are opioid dependent. Through the Centre de Recherche et d'Aide pour Narcomanes, Québec is the only province to publish a report describing substitution treatment in each region, including where MMT is delivered, how many physicians prescribe, how many patients are enrolled, waitlist and numbers of referrals, etc. In 2008 there were 2,533 patients enrolled in MMT in Québec, with the majority (1,827) in Montréal. There are approximately 230 physicians with exemptions to provide MMT in Québec.

In New Brunswick there are four provincially funded MMT clinics in the southern part of the province. These clinics provide comprehensive services including prescribing, and support services such as counselling. As well, one infectious disease specialist provides MMT and primary care. This MMT practice is supported by a provincially funded nurse practitioner. In addition, two physicians operate their own MMT clinics; each with high caseloads. Another physician operates an MMT clinic in a community health centre. MMT is also offered in provincial prisons for those who enter the institution already on methadone. In one of the First Nation communities linked to the provincially funded MMT clinic in Fredericton, the province funds a nurse practitioner at the MMT program in this community. Access to MMT in northern part of the province is limited. There are approximately 1,423 patients at the four provincially funded programs. As well, 300-500 patients are served by private clinics. There are approximately 42 physicians with exemptions to provide MMT in New Brunswick.

In Nova Scotia MMT is available in three of the nine health districts. There are two MMT clinics in the Halifax area, one in Sydney and a recently opened clinic in Truro. These clinics receive provincial funding through their regional health authorities. MMT is also provided in private clinics and in individual physician offices. MMT is available only for those who enter the institution already on methadone in the provincial prisons. Travel is a problem outside of the greater Halifax area, however there is a 'methadone bus' that assists clients with travel to the clinics in Halifax and Dartmouth. There are approximately 1,000 people on methadone in Nova Scotia and approximately 35 prescribing physicians. Access to services is an issue especially outside of the Halifax region. The other main issue is the increase in availability of diverted prescription opioids, which is an issue that has been identified across Canada. (1)

There is one provincially funded MMT program in Prince Edward Island. The Addiction Services clinic offers prescribing, group therapy and counsellors and currently has approximately 160 clients and a long waitlist, from three to six months. There are also a

few community physicians who prescribe methadone, and it is available in the provincial prison. In other parts of the province there is some support through outpatient addiction programs for counselling and urine screening. The majority of clients across the Island travel to Charlottetown for their prescribing, which means that travel is often a barrier to treatment.

In Newfoundland and Labrador MMT services are only available on the island of Newfoundland; there are no MMT services in Labrador. There is a MMT clinic in St. John's that is funded by the regional health authority and offers prescribing, dispensing and support services. There are also individual physicians in St. John's and in Grand Falls/Windsor who prescribe methadone. In the western area of the province there is a methadone nurse who provides linkages between the clinic in St. John's and local counselling services. MMT is available in the provincial prison for those who have entered the institution already on methadone. There are approximately 700 people on MMT in the province and approximately six physicians with exemptions to prescribe. At the clinic in St. John's every patient is linked with a counsellor for case management, although formal counselling is not required. The waitlist for the clinic in St. John's is about one year and the other two physicians in St. John's are not taking new referrals. In 2004, Newfoundland and Labrador was experiencing a crisis related to the abuse of prescription opioids and established a provincial task force on Oxycontin™. The report from the task force included several recommendations related to MMT (Newfoundland and Labrador). The clinic in St. John's was opened in response to this report. As well, the province set up a Methadone Advisory Committee that developed physician guidelines. There are also standards developed for pharmacists. The committee also established Methadone Working Groups in each region of the province. Currently the provincial committee is examining how to address wait times for MMT and physician recruitment.

MMT is not available in either Nunavut or the Northwest Territories. In the Yukon, MMT is available in Whitehorse and is funded by the territorial government. As part of their general practice, two physicians prescribe to approximately 32 patients. One pharmacy in Whitehorse dispenses methadone. Concern has been raised by addiction professionals that the program does not have adequate follow-up or counselling.

MMT in the Federal Correctional System

Across Canada, MMT is available in the federal correctional system for both those who enter the institution on methadone and those who want to initiate MMT during incarceration. The model of service is multidisciplinary, including prescribing, dispensing, monitoring and psychosocial programming. Correctional Services Canada (CSC) has developed psychosocial modules specific to opioid substitution treatment, these modules are not mandatory, but are highly encouraged for those offenders receiving MMT. Offenders not able to participate in group sessions are offered individual counselling. Most inmates receiving MMT in federal prisons were receiving

MMT in the community prior to incarceration. Inmates seeking initiation usually wait approximately two weeks; CSC methadone policy states that the maximum waiting time for an offender to be initiated onto MMT is 45 days. High-priority offenders, including those who are pregnant and/or HIV positive, have no wait times to initiate MMT. In August 2010 there were 759 offenders on MMT in the federal correctional system.

MMT and First Nations Communities

MMT is not part of the National Native Alcohol and Drug Abuse Program, the federal government funded addiction programs for First Nation and Inuit peoples. In some provinces First Nation communities gain access to MMT through private clinics that are established 'at the doorstep' of the reserve. In Ontario, access to MMT for these communities has greatly increased because of these private clinics. However, there are concerns about the treatment approaches adopted by these private clinics and also the lack of community engagement with reserve communities.

In some provinces, partnerships with provincial health services have led to the establishment of some MMT service on reserves. In New Brunswick, the Ministry of Health has begun to pilot test MMT programs on reserves. This pilot program includes a provincially funded nurse practitioner and prescribing provided by a physician who also practices in a provincially funded clinic. There are also a few examples of specific MMT programs for First Nations people off reserve, (e.g., Mi'kmaq Native Friendship Centre in Halifax). Methadone is covered under the Non-insured Health Benefits program operated by the federal government. However, travel costs are a significant problem. Across Canada, many clients have to travel long distances to access MMT. Medical travel budgets are administered by the community and cannot cover the significant daily costs for travel for methadone. As well, there are concerns that methadone does not address the root problem of addiction. Concerns have also been raised that MMT is not provided in a culturally appropriate manner.

Specific Issues from Findings

How have MMT systems addressed increased demand for service?

Key informants unanimously confirmed CECA's observation that there has been an increase in demand for opioid dependence treatment across Canada, including in First Nation communities and the federal correctional system. This increase has been significant regardless of how long the province has been offering MMT. In BC and Ontario where MMT has been available for a long time, the increases are staggering. In BC in 1996, there were 2,827 individuals in the MMT program, as discussed above by the end of 2009 that has increased to 11,033. Ontario has seen an even more dramatic increase, from approximately 700 people in 1996 to 29,743 by October 2010. Other

provinces also report increases: for example in Saskatchewan there were approximately 200 people on MMT in 1997 and there are 2,136 so far in 2010. Several provinces do not keep a central registry of patients on MMT so accurate numbers of patients were not available. However, informants consistently described the increase in demand for MMT as 'dramatic'. Another indicator of the increase in demand is the size of waiting lists for MMT services. In some provinces, the waitlists are extensive and some individual or group physician practices have stopped taking new patients. Wait times for MMT in Manitoba are 6-12 months, in Newfoundland and Labrador one year, in PEI up to six months and approximately one month in most other provinces. In rural or remote areas of each province, the access is very poor or non-existent.

More providers in primary care or group practices

In some provinces, the regulatory bodies for physicians have actively recruited new physicians to prescribe MMT. For example, in Saskatchewan, the College has organized recruitment meetings for physicians who may be interested in seeking an exemption. In BC and Ontario, the increase in demand has been addressed mainly by physicians who have expanded their individual or group caseloads. In BC although the number of people on MMT increased fourfold, the number of physicians who actively prescribe has hardly increased. In Ontario, the number of physicians has also increased but at a much slower rate than the number of patients. Since 2007 when the task force report was published the number of physicians has increased from 258 to 309 (a 20% increase), but in the same timeframe the number of patients has increased from 16,406 to 29,743 (an 80% increase) (Hart).

To increase the number of physicians who prescribe MMT, other provinces have initiated connections with family practitioners. In Alberta, the College is looking at strategies to encourage physicians to apply for methadone exemptions, possibly through primary care networks. New Brunswick has also begun discussions with the College of Family Physicians to move clients that are stable and motivated from clinics into family practices. They have identified the need to overcome stigma from physicians regarding MMT. Towards this goal, representatives from the government have attended several meetings of the College of Family Practice to provide information about methadone and encourage physicians to consider applying for an exemption.

In the past, physicians in Manitoba needed to travel to Toronto or Vancouver to receive MMT training. To increase the number of prescribers, Manitoba now provides training within the province. It is targeting physicians in the northern area of the province with training and support for applying for an exemption to prescribe methadone and is making efforts to identify and train family-based physicians who can provide MMT for patients in their home community.

CAMH provides the required training for physicians seeking exemptions in Ontario. This training was developed in conjunction with the College of Physicians and Surgeons of

Ontario (CPSO) in 1996. Recently, the CPSO has worked with CAMH and the Ontario College of Family Physicians to improve training and supports to physicians in an effort to increase recruitment. With funding from the provincial government, new training modules (including one on prescribing opioids), a mentorship program and a telephone consultation service were developed.

Another way some provinces have increased access to physicians is through telemedicine. According to the task force report in Ontario, 15% of the telemedicine usage is for MMT provision. The Ontario Telemedicine Network has capped the number of MMT consultations to ensure that it can continue to support other specialties and specialists (Hart). In BC, the government recently introduced a billing code for telemedicine although uptake has been small. Correctional Services Canada has started using telemedicine and in Ontario is using video conferencing for providing MMT care to remote institutions where a physician is not available.

Increase funding for provincially funded MMT programs

Provincial governments have increased funding for MMT services by funding new programs, increasing the hours of existing programs and increasing the availability of psychosocial supports. In Saskatchewan, the funding for methadone counsellors was increased a few years ago; however waitlists have continued to be an issue. In Newfoundland and Labrador since the Oxycontin™ task force report was published in 2005, the province has funded a clinic in St. John's. In Nova Scotia, Capital Health opened a third MMT clinic in Truro a couple of months ago, with a capacity between 10 and 30 clients. In Manitoba, provincial funding has allowed the Addictions Foundation of Manitoba (AFM) in Winnipeg to increase their MMT services from eight to twelve hours per day with increased nurse and physician time, although because of the demand it not expected to significantly affect the waitlist.

Another way provinces tried to increase access is through funding to add nurse practitioners to MMT clinics and/or private practices. As described above, in New Brunswick, a nurse practitioner has been funded to support an MMT prescriber in a private practice. As well, the New Brunswick government partnered with a First Nations community to provide a nurse practitioner and access to a physician for MMT. In Newfoundland and Labrador, there are no physicians prescribing methadone in the western part of the province but Western Health has funded a nurse practitioner to be the link for methadone clients between the MMT clinic in St. John's and local access to counselling and monitoring. In Ontario, the task force recommended that the province support amendments to provincial regulations that would allow prescribing and administration of MMT by nurse practitioners for opioid dependency where MMT provision is lacking, e.g., in rural and remote areas of the province. This recommendation has not been acted upon. BC is also looking into how to use nurse practitioners to improve access to MMT in rural communities.

Integrate MMT into other health facilities

To improve access, attempts have been made to integrate methadone prescribers into existing programs and/or agencies e.g., mental health and addictions programs or community health centres. For example, in Kelowna, British Columbia, the local community mental health and addiction program added a methadone prescribing physician to their program. In Fredericton, New Brunswick a physician connected to the provincially funded MMT clinic also sees patients at the community health centre. Integrating methadone prescribers into existing agencies reduces the administrative burden for the physician and provides additional supports for patients. To provide multi-disciplinary care, this model was recommended by the Ontario task force report (Hart). As well, the task force recommended that all new primary care family health teams (FHT) and community health centres (CHC) be funded to provide MMT. The number of FHT and CHCs in Ontario has expanded since the task force report but there has been no specific designated or required funding for MMT in these new programs.

Adjust the model of MMT service

With the exception of Ontario, Nova Scotia and British Columbia, the primary model of service delivery for provincially funded MMT clinics is a comprehensive addiction treatment program. This usually includes a screening for intake, a medical and psychosocial assessment, prescribing, counselling (either individual or group therapy) and monitoring. Most models use community pharmacies, but in some cases the dispensing is done onsite at the clinic. Although this model follows best practices in terms of providing a comprehensive service, comprehensive programs are resource intensive and usually unable to meet demand. MMT offered through primary care or group practices are only limited by the amount of time the prescriber allocates to MMT. To increase access within comprehensive programs some provinces have changed their policies from mandatory to voluntary counselling. In New Brunswick, the four provincially funded clinics have made counselling optional rather than mandatory. The rationale was that because the professionals in the clinic interact regularly with clients, through prescribing, screening, and dispensing, formal counselling wasn't necessary. For many clients the brief interactions were sufficient.

Improve related health care and prevention services

In most jurisdictions across the country, the increase in demand for MMT has been linked to the rise in harmful prescription opioid use. Some provinces have begun to look upstream for solutions to the growing need for MMT. In Manitoba, the Department of Healthy Living initiated an educational initiative for the public about opioids to reduce demand for MMT as well as providing training on the prescribing of opioids for physicians, including how to intervene in the case of dependency. New Brunswick is examining the issue of chronic pain management in hopes of preventing the abuse of

opioids and therefore demand for MMT. Some of the issues they have identified include the need for a coordinated system of pain management in the province and ways to provide physicians tools other than prescribing to address chronic pain needs of their patients. Nova Scotia developed a provincial chronic pain management strategy in 2006 which included self-management strategies and education for primary care. As well several provincial regulatory bodies are conducting trainings for physicians and pharmacists on the recently released *Canadian Guidelines for the Safe and Effective Use of Prescription Opioids for Chronic Non-Cancer Pain*.

A note about pharmacies

When asked about access to community pharmacies for clients on methadone, informants commented that this was not nearly as much of a problem as access to prescribing or psychosocial supports. Only in rural and remote areas where general access to pharmacies is lacking, was provision of dispensing for MMT a concern. This was primarily attributed to the establishment of fees for MMT dispensing services that pharmacy colleges had negotiated with the provincial ministry of health. In several provinces, key informants spoke of the importance of support provided to community pharmacies with case management. This support usually came from staff at provincially funded MMT clinics. In some cases, even this support was not enough to keep pharmacists providing methadone. In Saskatchewan for example, one of the provincially funded clinics decided to incorporate dispensing into their MMT program after the community pharmacies stopped providing methadone because of difficulties with clients.

Alternatives to methadone

Buprenorphine

Buprenorphine is a new pharmacological treatment for opioid dependence. It was approved for use in Canada in the fall of 2007. Buprenorphine differs from methadone in a variety of ways. It is dispensed as a sublingual tablet that dissolves under the tongue or in the cheek, rather than as a liquid; it has a longer half-life which allows for less than daily dosing and it is less likely to cause lethal overdose (3).

Across the country buprenorphine is not well utilized for opioid dependence. Even in provinces where buprenorphine is paid for by the drug benefit program, such as Alberta, Saskatchewan and in federal corrections, the use of this medication has been very low. For example, out of 759 offenders in the federal correctional system only four are on Suboxone™. The low usage of buprenorphine was linked by those interviewed to its cost and the recommendation of the Common Drug Review that buprenorphine only be used when a patient is unable to tolerate methadone (4). Most provinces have restricted coverage for buprenorphine to patients who are allergic to methadone or cannot

tolerate methadone for medical reasons. Many practitioners hesitate to use it because they lack experience with the drug.

Most provinces require buprenorphine prescribers to complete the online Schering-Plough Suboxone™ Education Program. This program provides continuing medical education credits. The majority of provinces also require physicians who want to prescribe buprenorphine to have a methadone exemption from Health Canada. According to the product monograph, Suboxone™ should only be prescribed by physicians who have experience in substitution treatment and have completed an accredited Suboxone™ education program. (5) Informants in several jurisdictions (BC, MB, ON) told us that medical professionals in MMT programs would like to be able to prescribe buprenorphine much more, but the policy and financial restrictions make it impossible.

Heroin assisted treatment

In 2008 the results of a three-year randomized control trial on prescription heroin treatment were released. The NAOMI study included 251 participants in Vancouver and Montréal. The finding showed that heroin assisted treatment was effective at treating hard-to-treat individuals, achieving high retention rates, and reduced illegal activity and illicit heroin use (6). (See page 23 for information from the research literature on heroin assisted treatment.)

Issues of coordination

A methadone system?

In 1996, when the federal government devolved responsibility for MMT to the provinces, most health ministries entered into agreements with the regulatory colleges to manage the MMT program. The regulatory bodies for physicians in the provinces are primarily responsible for MMT: their role is to set regulations for acquiring a methadone exemption, develop guidelines and monitor practices. Similarly, most pharmacist colleges across Canada are responsible for the development of guidelines and policies for dispensing and monitoring pharmacy practices. Most provision of MMT is by private group practice or individual family practice which, along with pharmacy services, are paid for by provincial health budgets. All provinces also directly fund MMT clinics out of addiction funding in their respective health ministries. This funding is primarily for nursing, counselling and other supports provided by the program.

This arrangement has essentially established two parallel streams of MMT provision in most provinces – provincially funded clinics and fee-for-service MMT provided through individual or group practices. These two systems operate in isolation from one another; there are few if any relationships between the physicians in the community and the

MMT clinics connected to the provincial addiction system. Some informants described how the relationship between the provincial health ministry's mental health and addiction department and the college can be difficult because the college is not accountable to that department in the ministry. There is little or no knowledge of each other's activities and there are no mechanisms to bring them together. The only exception to this system is in the province of Saskatchewan, where the model of delivery of MMT requires that clients be referred to a prescribing physician from a methadone counsellor, an addictions outpatient program or a general practitioner. This 'gate keeping' function of the addiction system ensures that prescribers and addictions counsellors are connected in local communities. In Ontario, the provincial government funds approximately 30 methadone case managers in the province, to provide counselling and case management support to individuals in MMT including those who receive their MMT from private group practices. The province also provides funding for these case managers to meet at least once per year, at the methadone prescribers conference sponsored by the College of Physicians and Surgeons of Ontario.

In some cases these two systems have come together to improve services in both the 'private' and 'public' clinics at the local level. For example, in New Brunswick the provincially funded clinic in Miramichi worked with private clinic to ensure there was no double doctoring between them. In Alberta, the Edmonton health zone is working to bring together the prescribers from both the provincially funded and private clinics.

In Newfoundland and Labrador, the Oxycontin™ task force report recommended better provincial coordination for MMT services. A provincial Methadone Advisory Committee was established including representatives from each health authority, physicians, pharmacists, nurses and the Department of Health. This Methadone Advisory Committee continues to plan and address issues within the MMT system in Newfoundland and Labrador. Both the Ontario and BC MMT reviews recommended better provincial coordination and accountability for MMT services. In BC, the government has said it is committed to taking the lead in determining how to establish a coordinated system of MMT delivery. In Ontario, the report recommended that the provincial government identify a single point of authority and accountability for MMT within the Ministry of Health as well as establish a provincial advisory panel. These recommendations have not yet been acted upon in Ontario.

There are a number of issues within First Nation communities that also impact coordination, such as the lack of MMT provided in National Native Alcohol and Drug Abuse Program (NNADAP) and the jurisdictional issues between federal and provincial health services. As was described above there is no MMT offered through NNADAP. Many First Nation communities across the country have been struggling with the rise in harmful use of prescription opioids and the lack of treatment options available to First Nations communities. In New Brunswick, First Nations health directors and NNADAP programs have begun to discuss how to address the significant need for opioid addiction treatment. There are also issues that stem from the fact that First Nation communities'

health services are the responsibility of the federal government, not the province. There is little or no connection between federal addiction programs for First Nations and provincial health systems, which is a problem for planning. In British Columbia, this gap has been identified and a new model for First Nations health services has been established. In 2007, the *Tripartite First Nations Health Plan* was signed by The First Nations Leadership Council, and the provincial and federal governments. This plan provides the foundation for developing a new system of health services for First Nation people in BC (7).

Impact on quality assurance

The level of quality assurance provided by the colleges of physicians and pharmacists for MMT across the country varies tremendously. In some provinces, the colleges effectively operate on an honour system and do not monitor methadone prescribers at all. In other provinces, such as Ontario, there is an established system of practice reviews for every prescriber in the province. Similarly, there are some provinces that have not developed their own methadone maintenance guidelines (e.g., Nova Scotia, PEI), nor have a centralized patient registry (e.g., Manitoba, Nova Scotia, PEI, Newfoundland and Labrador) or prescription tracking system to ensure that patients are not accessing methadone from more than one source. Many of the informants spoke about their concerns that the individual and/or group methadone practices are not held accountable to the best practice model of MMT or even to their own provincial guidelines. This concern about group practices quality of service was raised in the Ontario task force report. One of the ways that this concern has been addressed is to increase the frequency of practice reviews conducted by the College of Physicians and Surgeons of Ontario, although this change has been controversial in Ontario. Other provinces identified the need to bring physicians together by the college to engage in continuing medical education, to connect with other prescribers, talk about issues and connect with support services. In Ontario, the College holds an annual conference for methadone prescribers that reviews guidelines, new research and clinical practice.

Another way that the colleges ensure quality in MMT service delivery is related to the requirements to receive a methadone exemption. Again, these policies vary greatly between provinces. In most provinces some training and/or preceptorship is required in order to be eligible for an exemption. However, in several provinces, there is no training offered within that province and physicians either are required to seek training out of province (usually in Ontario or BC) or are simply not required to take any training.

Some efforts to review MMT system

Many of the provinces across Canada are engaging in reviews and projects that aim to improve the addictions systems. In Alberta, Ontario and Newfoundland and Labrador, the ministries of health are developing provincial mental health and addiction strategies. Newfoundland and Labrador has a Mental Health and Addictions Framework

and is in process of developing a provincial strategy. Methadone Maintenance Treatment has been identified as an issue for consideration within this strategy. In November 2010, British Columbia released *Healthy Minds, Healthy People, a Ten-Year Plan to Address Mental Health and Substance Use in British Columbia* (8). Their plan promises to improve B.C.'s MMT system including prescribing, dispensing and the provision of psychosocial supports. The plan has also established indicators against which to measure progress: "By 2015, 90 percent of methadone prescribers will adhere to optimal dose guidelines and 60 per cent of people started on methadone maintenance treatment will be retained at 12 months" (p. 33). These indicators reflect the concerns raised in the BC review on the decrease in patient retention in treatment. BC, PEI and Ontario proposals for the federal Drug Treatment Funding Program include an initiative related to MMT. In BC part of their proposal is to increase knowledge exchange and linkages in addictions across the province, which will include MMT programs. PEI is planning to do a system review (although the review only includes Addiction Services not community physicians). Ontario has proposed to develop an MMT interdisciplinary best practice guide.

Some provinces (e.g., Ontario, Newfoundland and Labrador) have begun to tackle the issue of harmful prescription opioid abuse by developing a narcotics strategy or establishing provincial committees tasked with addressing the problem (e.g., Manitoba). In both provinces, treatment needs of those who are dependent on prescription opioids are being addressed as part of the process. In Nova Scotia, the Capital Health authority is taking the lead in developing papers on cost pressures of meeting demand for MMT and the need for a provincial strategy to address harmful prescription opioid use. The issue of the cost of MMT has also prompted a review by the government of New Brunswick. Their review of the system will examine all the related costs including those outside of the health care system, and establish ways to bring public and private providers together to share data and have similar systems of checks and balances.

NNADAP has been undergoing a broad renewal process. It recently released a draft renewed framework for addiction services on reserve (9). This framework includes a section on pharmacological approaches to treatment. The framework calls for training for health care professionals as well as addiction workers on the use of pharmacotherapy in the treatment of addiction; the importance of team-based approaches and long-term partnerships between health care providers, communities and addiction workers; treatment centre access to physicians with expertise in addiction medicine; and strategies for addressing stigma. First Nations organizations in individual provinces have also examined the issue of the harmful use of prescription opioids and the role of the addiction treatment system in addressing this problem.

In Ontario, the Chiefs of Ontario in collaboration with the First Nations and Inuit Health Ontario Region have developed a draft prescription drug abuse strategy. This strategy outlines four key areas for addressing prescription drug abuse in First Nation communities: health promotion, healthy relationships, reducing the supply, and

continuum of care. The strategy describes the current situation in Ontario with respect to prescription drug abuse and provides approaches and actions that communities can choose from and adapt to meet their specific needs. (10)

Lack of prescribers

Difficulty recruiting physicians

Across the country, provinces have had difficulty recruiting new physicians to prescribe methadone. Informants gave several examples of efforts to connect with physicians and encourage them to seek an exemption to be able to prescribe methadone. They also gave several reasons why this has been so difficult.

Multiple sectors have attempted to address this problem, including the colleges, ministries of health, and addictions providers. In Alberta, for example, the College of Physicians and Surgeons developed guidelines based on a model of MMT that allowed for two types of prescribers: prescribers who initiate patients onto MMT (who require more training etc) and prescribers who see stabilized patients within their family practice (who require less stringent training). This model was designed to encourage more family physicians to get involved in MMT; however this approach has met with limited success. In Saskatchewan, the College of Physicians and Surgeons has encouraged physicians who refer patients to methadone clinics to get a second level prescriber exemption to manage their own patients' MMT. Manitoba has begun offering local MMT training so that physicians do not have to travel out of province. It is hoped that this will make it easier to attract physicians willing to apply for an exemption. Nova Scotia, Newfoundland and Labrador, and Prince Edward Island do not have MMT training within their province and physicians must travel to Toronto. Following the task force report release in Ontario, the College of Physicians and Surgeons was to increase recruitment and has worked with the Ontario College of Family Physicians to develop a mentoring program to support new physicians entering MMT. New Brunswick and Alberta have also targeted family physicians for recruitment. The issue of physician recruitment is a priority for the Newfoundland and Labrador Methadone Advisory Committee because of the fragility of the system, with only six physicians and over 700 patients, losing one physician could cause a collapse of the system. As part of the strategy to recruit and retain physicians, Newfoundland and Labrador pays for physicians to receive the appropriate training.

In some provinces, the lack of MMT specific fee code has been identified as a barrier to recruiting physicians. Appointments for MMT take longer than the average physician visit and some physicians feel that the compensation is inadequate. Those provinces that do have specific fee codes still have difficulty recruiting physicians. The stigma of addiction and its perceived association with injection drug use and homelessness is another barrier to recruiting physicians. MMT clients are perceived to be very complex

and difficult to work with, and physicians feel they have limited support. The monitoring of the MMT program also presents barriers to physician involvement. Several informants reported that physicians were concerned about the extra monitoring and scrutiny and expressed fears of “getting into trouble with the college”.

Support for MMT physicians

A number of provinces have developed ways to provide support to prescribing physicians. In Saskatchewan, MMT clients are encouraged to be connected to counsellor, either a methadone counsellor or an outpatient addictions counsellor. These counsellors provide critical support to the patients and reduce the workload for the physicians. In New Brunswick, the province has funded nurse practitioners in some private clinics to support physicians who prescribe methadone.

Several provinces suggested that the integration of MMT in community health centres or mental health and addiction programs works well because of the administrative support for physicians and clients. In these models, physicians provide a clinic once or twice a week and maintain their own practice as well. In Ontario, the Ontario Addiction Treatment Centres (OATC) had adopted a modified version of this model. OATC recruits physicians to work in private group practices that also provide on-site counselling, case management and dispensing services. OATC believes that physicians are attracted to this model because they can come into the clinic for a few hours a week to provide prescribing services, while maintaining their own practices. Many of the provincially funded MMT clinics and the Correctional Services Canada MMT program have part-time physicians who split their time between several sites or between the MMT clinic and their own family practice.

Lack of addiction medicine specialist advice

One of the barriers to recruiting physicians is the lack of specialist consultation services to support those working in general practice. Many provinces identified this as an issue. Outside of the Vancouver region in BC, access to specialist support is very difficult. Physicians who require consultation have difficulty getting psychiatric assessments completed and there are little or no addictions medicine specialists available for consultations. In Manitoba, there are less than a handful of addiction medicine specialists at the AFM and the withdrawal management program who provide consultations to the whole province.

In Ontario, CAMH provides a telephone addiction consultation service. After the methadone task force report, the Ontario Ministry of Health and Long Term Care funded the expansion of this service to include addiction medicine and support to physicians and other health care professionals for MMT. MMT professionals can call the phone line for a consultation with an addictions specialist. The Correctional Service Canada (CSC) program has a designated consultant specialist who provides support to physicians

delivering MMT in prisons. For quality improvement, the specialist also completes medical reviews with physicians. CSC has a system of mentoring new MMT physicians, linking them with the methadone regional coordinator and another institutional physician.

Funding

How MMT is funded

MMT funding varies considerably across Canada. The fragmentation of the system is related to the different funding streams used to support MMT. As mentioned above, in most cases physicians who prescribe methadone are paid through fee-for-service billing from the province's general health budget. Very few provinces have a specific billing code for MMT. The codes used are usually a general assessment code or a general mental health/addiction code. Some provinces (BC and Ontario) also have billing codes for point-of-care urine testing that are used by MMT providers.

There are also MMT programs funded by health ministries through the addiction treatment budget. This funding is generally only for psychosocial supports and administration. As well, provinces also pay for medications usually for seniors, those on low income or disability support. In provinces with drug benefit programs, most pharmacies are reimbursed for dispensing, witnessing the dose taken by the patient and for the costs of the medication itself. These fees are negotiated through the contract between the colleges and the ministries in each province. Those patients not eligible for provincial drug benefit programs either pay out of their own pocket or through private insurance plans and it is unknown what portion of patients pay by these means.

Across Canada the system of payment for MMT is consistently described as confusing and lacking in clarity and transparency. Billing codes available to MMT physicians are complex and inconsistent. In both the Ontario and BC reviews of MMT systems, the issue of payment was a key area of concern. The report on the BC review emphasized the fragmented nature of the funding system, drawing from multiple ministries and levels of government. The review also discussed the lack of consistent funding for psychosocial supports as compared to the prescribing and dispensing of methadone. This fragmentation of funding also contributes to confusion about who is responsible for the MMT program in the province and the lack of accountability within that program. In Ontario, the task force report discussed the limitations of the fee-for-service model of payment for comprehensive MMT services. They described this model as a "fee for physician payment" because it does not support interdisciplinary teams for MMT service delivery (Hart, p. 66). The report recommended a blended model of payment which would include a salary or capitation, along with fee-for-service incentives. The system of payment for MMT also contributes to the disconnect between the addiction system and the primary care system because they are different funding streams within health

ministries and there is no central coordination of payment or service planning. Payment models are important because the provision of financial incentives is one way to attract physicians to providing MMT. The extra long appointments required, the monitoring and administrative overhead make providing MMT more costly than other services in a general practice. Providing adequate compensation is critical to getting physicians to take on MMT.

Balancing financial incentives with quality assurance

The reviews of the MMT systems in Ontario and British Columbia both identified payment as a significant issue affecting services. In Ontario, the task force reported on the very controversial practice of requiring more urine drug screens than recommended in the best practices in order to provide additional revenue for some MMT providers. They reported that some physicians preferred to do at least two urine tests per week, and sometimes more. This practice was justified by physicians for a number of reasons: it provided income for the service provider and it was also intended to provide motivation for the patient to not use other drugs. However, much of the urine screening did not follow best practice recommendations and patients found too frequent urine screens intrusive. The task force observed that the focus on the urine screening could stand in the way of an effective therapeutic relationship between patient and physician (Hart, p 58). Following the reports release, Ontario changed the policy for point of care tests, placing a cap on the number of tests that can be performed.

In the British Columbia review, the issue of fees for dispensing was raised with regard to problems with some pharmacies. There were reports of problematic practices such as pressuring patients to request daily witnessed ingestion even when not required and using coercive practices (such as financial incentives) to get patients to use a particular pharmacy. These practices in part stemmed from the financial incentives available to pharmacies for providing methadone, including a dispensing fee and a dose witnessing fee. This issue was resolved by the Ministry implementing a new Frequency of Dispensing policy under PharmaCare in 2009, which limits the number of dispensing fees a pharmacy can claim per patient per day. The College of Pharmacists of BC is continuing to work on this issue through regulation and oversight.

These two examples illustrate the problem of building in financial incentives into the provision of MMT without accompanying quality assurance and monitoring. MMT involves many individual, reimbursable services: prescribing, dispensing, laboratory fees, addiction treatment, primary care visits, etc. Individual regulatory colleges have responsibility for oversight and quality assurance of some elements of the system, although this varies significantly from province to province. In Ontario, the College of Physicians and Surgeons conducts practice reviews of all MMT prescribers every at least every three years. In some provinces, there is no monitoring or quality oversight of prescribing physicians.

MMT Best Practices

Comprehensive best practice model for MMT

In 2002, Health Canada published a best practice document for MMT services in Canada (Health Canada). The model described in this guide has become the foundation upon which many provincially and federally funded MMT programs are based. Provinces and the Correctional Service of Canada describe their funded MMT clinics as following best practices because they provide integrated comprehensive MMT services, including support services such as psychosocial supports, counselling or case management. According to Health Canada, best practice in MMT includes a focus on engagement and retention for maintenance; a patient-centred approach and comprehensive integrated services. The best practices outline specific program policies related to admission, dosing, length of treatment, urine toxicology screening and tapering. They also describe the ideal treatment team and program environment.

Each province recognized that this model of MMT service was the ideal for patient outcomes in the long-term. They described the benefit of a maintenance philosophy, the need to address the individual's addiction through counselling, and the importance of assisting clients with issues related to the social determinants of health such as income, housing, children's aid, probation and parole, and other medical issues. Informants gave examples of the benefits of this type of model for client outcomes, such as improvement in family situations, engagement in education and training and less criminal activity. Several provinces (Manitoba, PEI and Nova Scotia) have conducted outcome evaluations of their provincial MMT clinics that show improvement in these and other areas such as reduced drug use.

Some provinces have also begun to examine the model of delivering MMT in primary care, especially for those patients who are stabilized. There is a recognition that not all clients on MMT require the level of intensive services that is recommended in the best practices. Some provinces are exploring the possibility of moving clients who are stable and only require minimal monitoring to family physicians in the community. This is the model of MMT outlined in the Alberta MMT Guidelines, however, it has not been followed because of the lack of physicians in the community who are willing to accept stabilized MMT clients. Informants emphasized the importance of ensuring that counselling is provided to clients when MMT is provided in primary care. In all provinces, physicians also provide MMT outside of the provincially funded addiction treatment system in either individual or group practices. These practices are expected to follow the provincial MMT guidelines in provinces where they exist but are not required to follow the Health Canada best practices. As discussed above there is inconsistent monitoring of physician MMT practices across the country and in several provinces there have been concerns raised about the quality of the service they are providing.

As a result of the demand for MMT services and the extensive waitlists, MMT clinics across the country are examining options for adjusting the best practice model of service delivery. As mentioned above, some provinces, such as New Brunswick, have relaxed requirements for counselling as part of their service. In Saskatchewan, the provincially funded MMT clinics have begun to refer patients who are more stable to outpatient addiction programs for counselling or check-ins as necessary. Several provinces reported struggling with the idea of changing the model to be less comprehensive in an effort to provide access to more individuals. Many worried that a less comprehensive model would not address psychosocial issues that influence outcomes. Provinces that are reviewing their methadone program in an effort to address issues of access were interested in looking at the economic and outcome analysis of both 'public' and 'private' MMT clinics.

Informants also described the need for low threshold programs designed for clients who are not ready or willing to be abstinent from all substances. Based on a harm reduction model, these programs are believed to be the initial gateway into treatment and reduce some drug related harms for clients and the surrounding community. In some provinces, these clinics are provincially funded (such as Direction 180 in Nova Scotia) and in others they are 'private' group practices that focus on a specific population.

Most provinces recognize the need for more than one model of treatment. This in part is a result of the changing demographics of those requiring MMT and the maturing of MMT programs. With the rise of the harmful use of prescription opioids, the MMT population has become more heterogeneous. As well, as programs mature and clients are retained in treatment for longer periods of time, their need for intensive levels of service is reduced. Not all patients require the same level of treatment intensity. The tiered model of addiction treatment presented in the National Treatment Strategy is helpful in thinking about the kinds of models needed for MMT that will be able to provide treatment for different levels of intensity and for different levels of severity of opioid dependence (11).

Across Canada various models of MMT provision already exist. The issue is that systems of MMT are not coordinated to ensure that clients can access or transfer to a program with the required level of intensity. There are generally three models of MMT each reflecting different levels of intensity.

- low threshold – no required counselling, fewer consequences if using other substances, no carries, street involved, least harm. Emphasis on public health, infectious diseases prevention, etc. (Halifax's Direction 180, Toronto's The Works)
- intensive program – comprehensive model, required counselling, urine drug monitoring, specialized MMT program. Emphasis on integrated medical and psychosocial services. (Vancouver's Sheway Program)

- primary care – stabilized patients who are no longer using any substances (working etc), no required counselling and infrequent monitoring integrated into primary care with community pharmacies.

A Brief Look at the Scientific Literature

The WHO lists methadone and buprenorphine as essential medications and identifies opioid substitution treatment with methadone or buprenorphine as a priority HIV intervention (12). Both methadone and buprenorphine treatment are effective to reduce opioid use, improve health and social functioning and reduce criminal behaviour.

A substantial body of evidence exists to show that both methadone and buprenorphine are more effective in treating opioid dependence than no treatment or psychosocial treatments alone. Compared with methadone, buprenorphine has a longer duration of action, has a lower risk of overdose, and has fewer withdrawal symptoms (13). Adding psycho-social treatment can further improve outcomes in terms of opioid abstinence (14). There is less concern about overdose for those taking buprenorphine (even when it is taken with other opioids) than with other therapies such as methadone (15). However, when methadone is prescribed at optimal doses, it is more effective than buprenorphine in terms of treatment retention, reduction/suppression of heroin use, and cost (15, 16). Methadone and buprenorphine both reduce premature mortality (17).

Concerns have been raised about the effectiveness of methadone and buprenorphine for the treatment of prescription opioid dependence because research pertains mostly to the treatment of heroin dependence. New evidence suggests that methadone is as effective in treating prescription opioid dependence (e.g., oxycodone) as it is in heroin dependence (16). Gowing and colleagues caution that the benefits derived from methadone and buprenorphine treatment may not be sustained once treatment is stopped, particularly among patients who are involuntarily discharged from treatment (19).

Methadone treatment systems vary across the world with varied emphases on specialty addiction clinics, methadone clinics, community health centre settings, general practice settings and correctional settings. Finding the 'best' service model is difficult because few studies assess practice setting and those studies that do exist reflect the diversity in practice settings and system designs. Existing evidence shows varied results across studies; some studies show better results associated with general practice settings and others with specialty/group settings (e.g., Gossop, Marsden, Stewart, Lehmann, Strang 1999; Lewis and Bellis, 2001; and Strike et al 2005) (20, 21, 22). A recent study from Ireland compared methadone outcomes (i.e., retention, drug use, mental health systems and physical health complaints) and concluded that patients will improve in any of these service models (e.g., community setting, general practice, health board). The

reduction in heroin use among patients receiving treatment in general practice settings was better than in the other settings but the differences were modest. Instead of stating that one type of setting is better than the other, Comisky and Cox (23) contend that service delivery model choices (when more than one option is available) need to be made in relation to patient characteristics at intake – pattern and length of drug use, and health needs.

Prison-based methadone maintenance can reduce heroin use, injection drug use, and injection-related risk behaviour in prison settings, and re-incarceration rates (24, 25). However, optimal methadone doses and provision of treatment for the duration of sentence are essential; adding psychosocial care may improve outcomes in prison settings (25). Disruption of methadone maintenance treatment upon entry or discharge from prison is associated with negative outcomes including injection-risk behaviours and increased risk of overdose. Consequently, continuity of treatment from setting to setting is essential (25).

Both methadone and buprenorphine are cost-beneficial in terms of reduced drug use and crime, and considerably more cost-effective than no treatment and in-patient treatment modalities (15, 26, 27). Methadone has been shown to be more cost-effective in terms of improved survival than other medical interventions such as bypass surgery, medical treatment for hypertension, hemodialysis and zidovudine (AZT) (28). An Australian comparison of the cost-effectiveness of buprenorphine versus methadone showed that methadone was both more effective and less costly than buprenorphine (29). The majority of the cost differences are attributable to the substantially higher cost of buprenorphine and the increased staffing costs associated with the supervision of initial dosing. If buprenorphine is more frequently prescribed, volume discounts from manufacturers and greater experience with dosing could reduce the cost difference between the two medications (29).

In addition to methadone and buprenorphine, in other countries prescription opiates such as heroin, codeine, and slow-release morphine are also used for opiate substitution treatment. Of these, heroin assisted treatment has been the most commonly studied (30, 31). HAT is used as an alternate treatment for individuals who have repeatedly tried but not responded to methadone maintenance treatment. Since the 1920s, prescribed heroin has been used in the United Kingdom as a “last resort” form of treatment (32). HAT shares the same treatment goals with methadone and buprenorphine – improvement in health and social function, reduced illicit drug use, decreased criminal behaviour, retention in treatment. Studies of HAT show that it is as effective as methadone in terms of reduced illicit drug use, reduced injection risk behaviours, reduced criminal activity, greater housing stability, and improved physical and mental health (33-40). HAT is not approved for the treatment of heroin addiction in Canada. The NAOMI trial ran from March 2005 to July 2008. A second trial, the Vancouver-based Study to Assess Longer-term Opiate Medication Effectiveness (SALOME), will compare

the outcomes for patients randomized to receive prescription heroin or hydromorphone (41).

Main Messages

Methadone maintenance treatment systems in Canada are incredibly complex, fractured and under resourced. Two parallel systems providing the same services with very different approaches, funding, and delivery exist across Canada. Five main messages can be gleaned from this scan.

A. A continuum of MMT

In 2002, Health Canada published the Best Practices for MMT. This document has become the standard by which programs measure their service delivery model. Since that time, however, MMT service delivery has changed and evolved. New demands have been made on the system, in particular the increase in harmful use of prescription opioids and the need for treatment for a new population. As well, as clients enter MMT and remain in treatment for years, their needs change. Varied intensity of MMT is needed to reflect to changing needs of patients. As jurisdictions struggle to keep up with the need for MMT, they have begun to re-evaluate the model of MMT espoused in the Best Practices. Many provinces are debating whether to provide a scaled back model that they consider to be less than optimal (that doesn't necessarily include counselling) and increase access or continue to offer the full complement of services according to best practices and serve fewer clients. The current reality of opioid dependence in Canada is that more than one model of MMT service delivery is needed to serve an increasingly diverse population struggling with opioid dependence. As discussed above, at least three models are needed to adequately address these differing needs of individuals. Informants described the needs in terms of three categories of service: low threshold, intensive treatment and primary care.

Harm reduction MMT services are also known as low threshold programs, where clients are not required to participate in counselling, have less stringent monitoring and may continue to use other substances without being dismissed from the program. The intensive treatment model described in the current Best Practices, includes frequent monitoring, participation in counselling and abstinence from other substances. MMT integrated into primary care provides maintenance to stable and motivated individuals who have ceased using other substances, require minimal monitoring and no counselling, may be working or have moved on to other productive activities. These three models of MMT services are needed in each province to provide appropriate levels of intensity of service for the needs of individuals.

B. System coordination

Providing these three models of service, however, is not sufficient if the system is not coordinated. Coordination is needed to ensure that the clients are matched with the appropriate intensity of treatment. Current MMT systems are fractured and completely uncoordinated, to the extent that those in the provincial addiction programs and those who deliver MMT through individual or group private practices have little or no connection with each other. Several provinces expressed the need for combined waitlists and information sharing. The Ontario and BC reviews both called for provincial coordination of the MMT system. This coordination is also critical to ensure that all MMT providers are held to the same standards and monitored for quality assurance. Provincial coordination is also needed to provide in-province initial and ongoing addiction medicine training for MMT prescribers and other professionals (nurses, counsellors, specialists).

C. Coordinated payment system

One of the most complex areas of MMT is the reimbursement scheme. There are several models of funding, through several departments of ministries of health as well as funding from other ministries (social services, corrections). Physician billing is particularly complex and there is a lack of transparency in terms of what codes can be used for MMT. There is also lack of consistency of physician payment across the country, some provinces have specific billing codes for MMT but most do not. Daily dispensing means significant costs both to the health care system and possibly to the patient. The payment system was a point of discussion in both the BC and Ontario reviews and some provinces are beginning to look at the costs of MMT to the entire health care system, not just through addiction funding. An important element of establishing a coordinated system of MMT in each province also involves a thorough review of the payment models used. Development of a consistent, transparent funding system for all elements of MMT including prescribing, dispensing, drug costs, travel costs, and funding for psychosocial supports and case management is necessary.

D. Increase uptake of buprenorphine in Canada

There has been minimal uptake of buprenorphine in Canada. Most provinces do not cover Suboxone™ on their drug formularies and the cost is prohibitive to patients. The current policy from the Common Drug Review recommends that Suboxone™ should only be used for the treatment of opioid dependence in cases where “methadone is contraindicated” (4). The committee also recommended that only physicians with a methadone exemption prescribe Suboxone™. Consequently, buprenorphine is not widely prescribed. Several provinces also noted that their medical professionals lacked experience with this medication and were hesitant to use it. As well, there are no national guidelines for the use of buprenorphine in opioid dependence treatment.

Québec has provincial buprenorphine guidelines and Ontario is in the process of developing guidelines for buprenorphine.

Buprenorphine has been available in several other countries for some time and we can learn from their experience of addressing demand for opioid dependence treatment. In the US buprenorphine and buprenorphine/naloxone combination has been approved for treatment of opioid dependence. Restrictions on the use of this treatment included mandatory physician training and limits on the number of patients each physician could treat (42). Between 2001 and 2006, more than 12,000 physicians have received the compulsory training and 9,500 physicians were licensed to prescribe buprenorphine. By the end of 2005, approximately 105,000 patients in the US had received treatment with buprenorphine, and of these only 10-15% were transitioned from methadone treatment. In France, buprenorphine has been available for the treatment of opioid dependence since 1996. The number of patients prescribed buprenorphine rose sharply after its introduction, and by 2002 more than 70,000 patients had received treatment with buprenorphine. France's approach has been the most liberal one, allowing patients who are stable up to four weeks of medication. Most notably, the number of heroin deaths dropped significantly after the introduction of buprenorphine, from 565 in 1995 to 143 in 1999 (43).

Lessons from other countries show the importance of buprenorphine in addressing the demand for opioid dependence treatment. Some informants we spoke to emphasized that the lack of availability of buprenorphine was a 'lost opportunity' not just for substitution treatment but also for withdrawal management as well.

E. Stigma

Although some progress has been made to reduce the stigma of mental illness, the stigma of addiction is still very prevalent. This affects every level of the addiction treatment system. As a substitution treatment, MMT is also judged to be less effective and often morally wrong as compared to abstinence-based treatments. The common perception that methadone just substitutes one drug for another drug is pervasive and impacts everything from clients choosing to go on methadone, to physicians seeking exemptions, to governments and regulatory bodies establishing policies and funding for MMT. Many provinces acknowledged that stigma significantly impacts their ability to recruit physicians and pharmacists to provide MMT. Education and awareness for both professionals and the public is critical to addressing these fears and perceptions. Education should focus on how MMT works, its clinical effectiveness and its impact on community outcomes such as crime rates.

Recommendations for CECA

This report has provided information about MMT systems in each province, in First Nation communities and the federal correctional system. It has described efforts by these jurisdictions to address the increasing demand for MMT, and issues related to funding, quality assurance, and system design. This review has identified a number of specific areas where CECA could contribute to improving the systems of MMT provision across Canada.

- It is clear that buprenorphine is underutilized in Canada for the treatment of opioid dependence. CECA should play a role in advocating for policy changes that would facilitate the increased uptake of buprenorphine for the treatment of opioid dependence.
- Opioid dependence treatment has significantly changed since Health Canada published the Best Practices in MMT in 2002. CECA should work with Health Canada and other national partners to update and expand the Best Practice document to include other models of MMT (e.g., low threshold and primary care)
- There are no national guidelines for the use of buprenorphine in the treatment of opioid dependence. Currently, only Québec has provincial buprenorphine guidelines. CECA should work with Health Canada to develop national guidelines for the use of buprenorphine in the treatment of opioid dependence.
- Over the course of conducting this scan informants expressed significant interest in learning about how MMT is provided in other jurisdictions. Provinces are at different stages in developing their MMT systems but also share a number of the same challenges. CECA should convene a national MMT conference bringing together regulatory colleges, government ministries, regional health authorities, private providers, clients and addiction providers.

Appendix One - Informants

Key Informants

Kim Baldwin, Regional Director of Mental health and Addictions, Eastern Health, Newfoundland and Labrador

Shaun Black, Manager, Pharmacology and Research Services, Addiction Prevention and Treatment Services, Capital Health, Nova Scotia

River Chandler, Policy Analyst, Problematic Substance Use Prevention, Communicable Disease, Mental Health and Substance Use Branch, Ministry of Healthy Living and Sport, British Columbia

Jeffery Daiter, Executive Director, Ontario Addiction Treatment Centres

Susannah Fairburn, HIV/BBP/IDU Consultant, Disease Prevention Unit, Population Health Branch, Ministry of Health, Saskatchewan

Laura Goossen, Director, Winnipeg Region, Addictions Foundation of Manitoba

Wade Hillier, Associate Director, Practice assessment and Enhancement, Quality Management Division College of Physicians and Surgeons of Ontario

Jan Holland, Ontario Regional Methadone Coordinator, Correctional Services Canada

Carol Hopkins, Executive Director, National Native Addictions Partnership Foundation

Bill Nelles, Counsellor/Program Manager for a family practice, Qualicum, British Columbia

Darren O'Handley, Program Manager, Addiction Services Central, Prince Edward Island

Nicole Peters, MMT nurse, Addiction Services Central, Prince Edward Island

Ken Ross, Assistant Deputy Minister, Addiction, Mental Health and Primary Care Health Services, Department of Health, New Brunswick

Valerie Stevens, Director, Mental Health and Addictions, Health Authorities Division, Ministry of Health Services, British Columbia

Kenneth W. Tupper, Director, Problematic Substance Use Prevention, Ministry of Healthy Living and Sport, British Columbia

Clarence Weppler, Manager - Physician Prescribing Practices, College of Physicians and Surgeons of Alberta.

Kathy Willerth, Director Mental Health and Addictions, Ministry of Health, Saskatchewan

Other informants

Gillian Bailey, Atlantic Regional Medical Officer, First Nations and Inuit Health, Health Canada

Dr. Collingwood, College of Physicians and Surgeons of Newfoundland and Labrador

France Côté, Agente administrative, Centre de recherche et d'aide pour narcomanes, Québec

Darlene Couture, College of Physicians and Surgeons of New Brunswick

Norman Hatlevik, Territorial Director, Government of Nunavut

Dr. Lee, methadone prescriber, Winnipeg, Manitoba

Dr. Loewen, College of Physicians and Surgeons of Saskatchewan

Jill Mitchell, Alberta Health Services

Annie Pellerin, Health Consultant, Addiction, Mental Health and Primary Care Health Services, Department of Health, New Brunswick

Pierrette Savard, Conseillère au SA-TDO avec médicament de substitution, Québec

Sandy Schmidt and Krisztian Kalasz, Alcohol and Drug Services, Yukon Territorial Government

Marlene Villebrun, Mental Health Specialist-Addictions, Children and Family Services Division, Department of Health and Social Services, Government of the Northwest Territories

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Appendix Three - MMT Comparison Chart

Province/ Territory/ Population	Number of patients	Number of doctors with exemption	Requirements for exemptions	Provincial guidelines?	Service models	Waitlists	Payment models	On drug formulary? <small>(Note: formulary coverage may not extend to all residents of a province)</small>
Nova Scotia	Approx 1,000	29	No information on exemptions for treatment of addiction, only for treatment of pain.	None, only for using MMT for treatment of chronic pain.	Four provincially funded clinics (Halifax (2), Sydney and Truro), family practice, private clinics and prison.	Varies: 2 weeks in Halifax, longer in other areas of the province.	No specific MMT billing code.	Methadone – yes Buprenorphine - no
New Brunswick	1,423 in four provincially funded clinics, approx. 300-500 elsewhere.	42	No specific requirements from College, but hospitals and MMT clinics may have their own training requirements.	Yes (physicians and pharmacists)	4 provincially funded MMT programs (Moncton, Miramichi, Fredericton, St. John); family practice, CHC, prison and private clinic.	Varies from a few weeks to 4-5 months.	No specific MMT billing code.	Methadone – yes Buprenorphine - no
Newfoundland and Labrador	Approx. 700	4	Must complete a course (all four physicians in St. John’s have done the CAMH course.); period of mentorship.	Yes (physician and pharmacist)	One provincially funded MMT clinic and two family physicians who prescribe in St. John’s; one physician in Grand Falls/Windsor; and prison.	1 year for clinic in St. John’s. Other physicians in St. John’s are no longer taking referrals.	MMT specific billing code	Methadone - yes Buprenorphine - no
PEI	160 patients at Addiction Services Clinic; number in family practice is N/A.	Over 10	Successful completion of a MMT workshop/course recognized by the College (offered online). An ongoing association with an experienced MMT prescriber as a resource to the physician. Ongoing education relevant to MMT (fundamentals of addiction	None, only for using MMT for treatment of chronic pain.	One provincially funded MMT clinic (Addiction Services). Three physicians in family practice, and prison.	90 people on waitlist at Addiction Services, usually 3-6 month wait.	No specific MMT billing code.	Methadone - yes Buprenorphine - no

			medicine within 2 years, re-attendance of a MMT workshop/course within 5 years, minimum of 20 hours of formal Continuing Medical Education in some aspect of addiction medicine every 5 years).					
Quebec	2,533 (2008)	Approximately 230	One-day education session provided by L'institut nationale de santé publique du Québec.	Yes for MMT and for buprenorphine.	MMT is provided in addiction treatment centres, hospitals, regional health authorities, and family physicians.	Most waitlists are under 3 months, in Montréal and Laval it is 6-12 months.	N/A	Methadone – yes Buprenorphine - no
Ontario	29,743 (Oct 18, 2010)	309	One-day educational session provided by CAMH; complete a College approved two-day preceptorship; and within three years of getting exemption must complete Opioid Dependence Certificate at CAMH.	Yes for MMT (physicians, pharmacists, nurses and case management), buprenorphine guidelines in development.	Private clinics, provincially funded clinics (in addiction treatment centres, CHC, needle exchange program, CAMH), family practice, prison setting. Ontario Addiction Treatment Centre, a for-profit network of clinics serving over 7,500 patients with just under 40 affiliated physicians	Waitlists vary from none to 6 months	No specific MMT code for billing. Point of care urine billings capped.	Methadone – yes Buprenorphine - no
Manitoba	Estimated to be 820; AFM has 380, private clinics approximately 420	15	One to two days addiction and methadone training course. Four half days of clinical exposure.	Yes for MMT (for prescribing and management of MMT related care).	Two provincially funded clinics, two private clinics, family practice and prison setting.	Waitlist for provincially funded clinics is 6-12 months	No specific MMT billing code.	Methadone - yes Buprenorphine - no
Saskatchewan	Approximately 2,200	34	New physicians wishing to prescribe methadone need to acquire training at a recognized established clinic and at a College-approved training program.	Yes for MMT (Physicians, pharmacists and counsellors)	Family practice; prison and three provincially funded clinics. Also have 2 nd level prescriber, which is a physician whose exemption only allows them to maintain the dose for stable	Provincially funded clinics: One waiting list is closed; waiting lists at the other two	Yes – 2 for MMT, one for regular visit and a monthly stipend (\$40 for first three months;	Methadone – yes Buprenorphine - yes

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					patients in primary care.	clinics.	\$30 for second three months; \$20 for every additional month)	
Alberta	Approximately 2,000 patients in 2009.	80 physicians with exemptions, only 20 with general exemption who can initiate treatment.	Successful completion of a MMT workshop/course recognized by the College; interview with registrar; within 2 years recognized course on the fundamentals of addiction medicine; re-attendance of a MMT workshop/course within 5 years; minimum of 20 hours of formal CME in some aspect of addiction medicine every 5 years.	Yes for MMT (physicians and pharmacists).	Two provincially funded clinics (Edmonton and Calgary); six private clinics (Calgary, Medicine Hat, Lethbridge, Red Deer and two in Edmonton); family practice and prison. Also have 2 nd level prescriber, which is a physician whose exemption only allows them to maintain the dose for stable patients in primary care.	Clinics have no or limited capacity to take on new patients. Waitlists handled by individual MMT clinics. Edmonton AHS, in 2008 was 3 weeks	No specific MMT billing code.	Methadone – yes Buprenorphine - yes
British Columbia	11,033 as of December 31/09	390 have exemptions, 218 active caseloads	Attendance at the Methadone 101 Workshop sponsored by the College; approved preceptorship with a physician; a review of their prescription profile from the PharmaNet database; interview with a member of the College registrar staff; and agreement to undertake a minimum of 12 hours of continuing medical education (CME) in addiction medicine each year.	Yes for MMT (physicians and pharmacists).	Family practice; multidisciplinary models (including community health clinics and population specific clinics), private clinics and prison.	Waitlists are a problem outside of the lower mainland.	Special fee code for MMT/Bup. New point of care urine screen code. Patients under prov health care get 6 counselling session a year. Specific billing code for MMT in telemedicine.	Methadone – yes Buprenorphine - no
Nunavut	No MMT			N/A				
NWT	No MMT			N/A				
Yukon	Approximately 32	2		N/A	Family practices.		N/A	

First Nations	N/A	N/A	Physicians have to follow guidelines and rules for exemption from their province.		National Native Alcohol and Drug Abuse Program does not offer MMT. Some reserve communities have arrangements with provincial health departments to provide physician or nurse for MMT; some private practices establish program just outside of reserve; some addiction treatment programs off reserve offer MMT.	N/A	N/A	Methadone – yes Buprenorphine - no
Federal Corrections	August 2010 759 on methadone; four on Suboxone™	Unknown. All are contractors with CSC.	Must have exemption from Health Canada and follow guidelines for province in which they operate.	Yes for MMT/ buprenorphine.	Federal prisons offer MMT to inmates who are already on methadone or who want to initiate treatment in jail.	To initiate, between 2 weeks and 45 days.	N/A	Methadone – yes Buprenorphine - yes

N/A = not available

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