

Methadone Maintenance Treatment in British Columbia, 1996-2008

Analysis and Recommendations

May 2010



**University
of Victoria**

Centre for Addictions
Research BC

This paper is submitted to the Ministry of Healthy Living and Sport as part of a project to review methadone maintenance treatment in British Columbia. The views expressed in this report are those of the author and do not necessarily reflect the views of the authors of the background papers on which this report depends or the position of the Ministry.

Author:

Dan Reist, Assistant Director (Knowledge Exchange) and a senior policy analyst with the Centre for Addictions Research of BC, University of Victoria

©Ministry of Healthy Living and Sport, 2010

Contents

Summary	1
Background	2
Methodology	3
Period of Rapid Growth.....	3
Current Models.....	5
Family Physicians	5
Multidisciplinary Models	5
Private Clinics.....	6
Challenges and Issues	7
System Capacity and Access	7
Licensing Requirements.....	8
Quality Assurance and Public Perception.....	9
Client Retention	11
Daily Dose	12
Starting Dose and Titration	12
Take-Home Doses.....	13
Dose Tapering	14
Revolving Door	14
Morbidity and Mortality.....	14
Caseload and Provider Experience	15
Stigma and Professional Attitudes.....	15
Treatment Adherence	16
Funding and Administrative Mechanisms.....	16
Discussion	18
Recommendations.....	21
Responsibility, Accountability and Coordination.....	22
Monitoring and Reporting.....	22
Multidisciplinary Workforce Development	22
Coordinated Funding Strategy	22
Works Cited.....	23

Abbreviations

An attempt has been made to restrict the use of acronyms and abbreviations in this document. The following have been used in order to facilitate flow because of repeated use in the text:

CPBC – College of Pharmacists of British Columbia

CPSBC – College of Physicians & Surgeons of British Columbia

MMP – Methadone Maintenance Program (a particular program administered by the College of Physicians and Surgeons of British Columbia to assist physicians in safely and effectively prescribing methadone for opioid dependency)

MMT – methadone maintenance treatment (any and all services and supports delivered as part of a program of methadone maintenance treatment and the system that support such delivery)

Summary

Standard pharmacotherapy for opioid dependence in British Columbia involves oral solution methadone, a long-acting synthetic opioid agonist. As opioid dependence is commonly recognized as a chronic disease, the philosophy behind methadone substitution treatment is meant to be maintenance-oriented rather than abstinence-oriented. Treatment is provided by specially-licensed physicians and, in most cases, is dispensed and consumed at community pharmacies under direct supervision.

The College of Physicians and Surgeons of British Columbia was given responsibility for administering the Methadone Maintenance Program in 1996. The College publishes guidelines for methadone maintenance treatment, provides training for physicians, and manages the process by which physicians can apply for authorization to prescribe methadone.

Expansion in the accessibility of methadone treatment was a key objective of the program in 1996. The number of active prescribing physicians has risen from 238 in 1996 to 327 in 2006, and the number of dispensing pharmacies has increased from 131 to 482 during the same period. The number of clients in the program has likewise risen from 2,827 to 9,601.

Nonetheless, significant challenges remain. Despite improvements in system capacity, methadone provision is unevenly distributed, and access in rural and remote communities is limited. Client retention in treatment is a key indicator of effectiveness, but retention has been declining in recent years. The characteristics of the clients entering treatment has been associated with client retention, however, the demographic shifts for which we have data (increased age, treated co-morbidity and prior treatment attempts) are all associated with greater, rather than decreased, retention.

The data suggests that decreasing rates of compliance with prescribing guidelines and a failure to adequately address client concerns may be contributing to the negative trend in client retention.

When developing the system, it is important to recognize that effective methadone maintenance treatment is a multidisciplinary effort with at least three components: methadone prescribing, methadone dispensing and the provision of psychosocial services and supports (e.g., counselling services and supports related to housing, employment, mental health, or life skills). Attention must be given to the capacity for each of the components and for their coordination within a system that is easy for clients to navigate. Currently the program lacks clarity around responsibility for the third component and has no mechanism to ensure coordination. There is no comprehensive strategy for workforce development to ensure quality service and integration across all components. The current collection of funding mechanisms restricts access for some clients and undermines accountability within the system.

The four recommendations included at the end of this report suggest that government should consider:

- a means of coordinating the MMT system in BC and address the current gaps related to responsibility and accountability across components of the system
- how best to monitor and report on MMT
- working together and with the health authorities, CPSBC, CPBC, and the professional training institutions to develop and implement workforce development strategies to support a coordinated multidisciplinary approach to MMT

- a coordinated approach to MMT funding that ensures value for money is being achieved, fiscal irregularities or abuses are addressed and a multidisciplinary system is supported

Background

Opioid dependence is a chronic maladaptive pattern of heroin or other opioid use, often associated with co-morbid psychiatric disorders, elevated risk of infection and transmission of infectious diseases such as HIV/AIDS and hepatitis C and premature mortality. Systematic reviews have identified methadone maintenance treatment (MMT)¹ as the most effective form of treatment for opioid dependence in terms of treatment retention and decreases in the use of illicit opioids (Amato, Davoli, Perucci, Ferri, Faggiano, & Mattick, 2005; Mattick, Kimber, Breen, & Davoli, 2007; Mattick, Breen, Kimber, & Davoli, 2009). Observational studies have further shown decreased risk of overdose death, infectious-disease transmission and criminal activity (Ward, Hall, & Mattick, 1999).

Historically, MMT had its beginnings in the province of British Columbia. Ingeborg Paulus and Robert Halliday established the world's first methadone maintenance treatment program in Vancouver in 1959 (Paulus & Halliday, 1967). Methadone was then introduced as formal treatment for opioid addiction following the pioneering studies by Dole and Nyswander in

New York in the early sixties (1965). Numerous studies since have established the efficacy of using methadone as a maintenance medication for opioid dependence. Discontinuation of MMT is associated with a three- to four-fold increase in death rates (Bell & Zador, 2000).

During the early decades of MMT in Canada, administration and regulation of methadone prescription was held at the federal level, and the program experienced stages of expansion and contraction in response to policy shifts at both the federal and provincial levels (Fischer, 2000). Amid growing demand for treatment and mounting evidence of the merits of methadone treatment in the 1980s and early 1990s, the federal government transferred administrative jurisdiction over methadone treatment regulation to the provinces.

The College of Physicians and Surgeons of British Columbia (CPSBC) was given responsibility for administering the Methadone Maintenance Program (MMP) in 1996. The College developed a training program for physicians seeking authorization to prescribe methadone and a brief guide to administering MMT. This guide included guidelines on starting dose, titration, and maintenance dosing. The College subsequently published a handbook with more complete guidelines in 2005 and these have been further revised and up-dated (CPSBC, 2009).

Standard pharmacotherapy for opioid dependence in British Columbia involves oral solution methadone, a long-acting synthetic opioid agonist. Methadone prescribing is done by specially-licensed physicians and, in most cases, is dispensed and consumed at community pharmacies under direct supervision. In 2004, the College of Pharmacists of British Columbia (CPBC) assumed responsibility for setting standards and monitoring dispensing practice and subsequently published a guide for

¹ MMT is used throughout this report to refer to any and all services and supports delivered as part of a program of methadone maintenance treatment and to the system that supports such delivery. MMT is to be distinguished from MMP (the Methadone Maintenance Program) which refers to a particular program administered by the College of Physicians and Surgeons of British Columbia to assist physicians in safely and effectively prescribing methadone for opioid dependency.

pharmacists dispensing methadone (CPBC, 2007).

In recognition of opioid dependence as a chronic disease, methadone treatment is recommended as a maintenance therapy with clients remaining in long-term treatment. While methadone can be used to stabilize an individual to facilitate withdrawal of opioid drugs, clients are not encouraged to withdraw prematurely because of the high risk of relapse. The ineffectiveness and added risks of tapering off methadone early (prior to completion of at least two years of treatment) is recognized in the literature (Caplehorn, Dalton, Cluff, & Petrenas, 1994) and is reflected in the CPSBC handbook. Penalization of patients who relapse into illicit opioid use during maintenance treatment or voluntary withdrawal is discouraged.

Since 1996, the MMP has experienced rapid growth, and BC has again become a leader in providing methadone treatment. Nonetheless, the system continues to face challenges related to capacity and operations, public and professional confidence in the program has been undermined by reports of misconduct and poor practices, and the experience of patients has resulted in numerous complaints. In light of these and other factors, the Ministry of Healthy Living and Sport initiated a series of reviews of MMT in 2008 and 2009.

Methodology

The present paper is based on an analysis of the findings from two background studies. Virtually everything in this paper is anchored in or derived from one or both of the background reports. While they are cited extensively throughout this paper, the explicit citations undoubtedly understate the dependence

between this document and these foundational reports.

The focus of the current paper is to identify factors that impact treatment outcomes and client satisfaction with methadone maintenance treatment in BC and to offer a series of priority recommendations for immediate improvement.

One of the background reports was based on an original qualitative study that collected perspectives from a wide range of stakeholders including clients, services providers and system managers representing a variety of settings, professions and responsibilities (Parkes, 2009). This rich collection of material was analysed, for the present report, relative to its significance related to system functioning or design. While the design of the study does not permit quantitative analysis or conclusions about the representativeness of the views expressed, the reported views were common across stakeholder groups or within a particular stakeholder group. For the purposes of this report, the significance of this data is in identifying perceptions that impact how the MMP is experienced rather than in making definitive statements about “what is.”

The other background study was a quantitative analysis of a series of linked population level administrative databases (Nosyk, Sun, Sizto, Marsh, & Anis, 2009). This study documented several trends related to MMT in BC for the period 1996-2007. While the data does not prove a causal connection between trends, the patterns suggest interesting possible correlations especially as these are supported in the MMT literature.

Period of Rapid Growth

Expansion in the accessibility of MMT was a key objective of the Methadone Maintenance

Program when it was formed in 1996. The large literature supporting the effectiveness and cost-effectiveness of MMT (Barnett & Hui, 2000; Zaric, Barnett, & Brandeau, 2000; Zarkin, Dunlap, Hicks, & Mamo, 2005; Connock, et al., 2007) and the high societal costs of untreated use (Wall, Rehm, & Fischer, 2001) suggests that making MMT treatment available to all those in need should be the critical priority in terms of maximizing public health and safety benefits.

The number of clients in MMT rose from 2,827 in 1996 when the CPSBC assumed administration of the program to 9,601 in 2006 (Figure 1). The annual number of new clients in MMT rose sharply after 1996 and peaked in 1999 at 2,053. Since 2003 the number of new clients has stabilized between 1,200 and 1,450 new patients per calendar year (Figure 1).

Related to this rapid increase in client numbers is the increase in service availability. The number of active prescribing physicians rose from 238 in 1996 to 327 in 2006.² Over the same period the number of dispensing pharmacies increased from 131 to 482 (Figure 2).

However, the vast majority of methadone-prescribing physicians have served clients based primarily in the Vancouver Coastal and Fraser health regions, and the majority of the increase in availability of prescribing physicians has been realized in these regions. In contrast, the number of prescribing physicians serving clients in each of the rural health authorities has been roughly constant. To some extent, this reflects the restricted access to primary care generally in rural and remote communities, but stakeholders noted that this has impacted marginalized populations of health care users, such as people with substance dependence and some

Figure 1: Number of clients prescribed methadone 1996-2006 (Nosyk, Sun, Sizto, Marsh, & Anis, 2009)

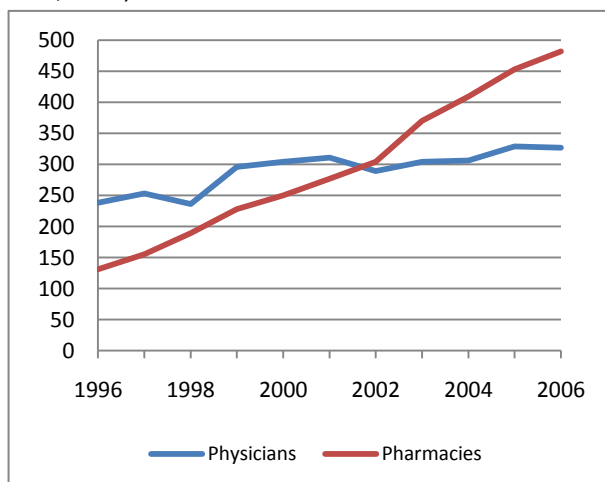


Aboriginal British Columbians, more seriously than the general population (Parkes, 2009).

Dispensing pharmacies are more commonplace than they used to be. Nonetheless, in some rural and remote communities methadone is still not readily available.

During this period of rapid growth, significant changes in client demographics have occurred. The mean age of methadone clients increased from 37 in 1996 to 40 in 2006. The percentage of female clients declined over the period from

Figure 2: Prescribing physicians and dispensing pharmacies, 1996-2006 (Nosyk, Sun, Sizto, Marsh, & Anis, 2009)



² These figures are calculated from prescriber ID data in the methadone dispensation records in PharmaNet.

41% to 36%. From 2002 to 2006 there has been a noticeable increase in the level of treated comorbidity, assessed by examining prescription drug dispensation during the six month prior to MMT. The proportion of clients initiating MMT for the first time dropped from 82.4% in 1996 to 39.4% in 2006 as greater numbers of clients who had previous histories of MMT returned to treatment (Nosyk, Sun, Sizto, Marsh, & Anis, 2009).

The review could not establish whether there have been changes in the levels of social support, drug use severity or the use of other drugs, as these influencing factors are not tracked in provincial health administration databases. Whether or not there have been changes in these factors, service providers report that MMT clients tend to be “challenging, complex patients,” “tough to deal with,” “chaotic and unstable” (Parkes, 2009). The majority in urban centres like the Downtown Eastside of Vancouver were reported to be on welfare or homeless. By contrast, some providers in rural regions report that the majority of their methadone clients are stable and employed (Parkes).

Current Models

MMT services in BC are provided through a complex patchwork of system components. Official policy seeks to embrace this diversity and weave it together to form an integrated and evidence-based system of care (Reist, et al., 2004). The complexity, relative to MMT, can be organized around three models that reflect a tension within the program.

Family Physicians

The model common to most jurisdictions (Fischer, Cape, Daniel, & Gliksman, 2002; Matheson, Pitcairn, Bond, van Teijlingen, & Ryan, 2003) is to provide MMT through family

physicians or general practitioners. This model has potential to maximize access, integrate MMT clients within mainstream health care services and ensure comprehensive medical care. Some stakeholders suggest that these goals were, in fact, fundamental to the original intent in setting up the MMP. Some clients appreciate that the model provides anonymity and the ability to be away from the congregation dynamic of some MMT clinics (Parkes, 2009). In fact, other studies have shown that MMT provided through general practice is more cost-effective, less stigmatizing and leads to improved care for physical health (Lewis & Bellis, 2001). However, in BC where addiction services are mostly provided outside of the medical system, the model has, according to some health authority managers, led to a “virtual disconnect” between methadone services and the wider addictions system of care (Parkes, 2009).

In practice, MMT is often “not integrated in a meaningful way into family medicine” either. In fact there are reports of “whole medical communities dead set against methadone.” Prescribing physicians in rural areas can feel pressured to take on more MMT clients than they can actually integrate into their practice because other physicians in the area refuse to provide MMT. Sometimes MMT becomes a separate “second job” for the physician, with prescribing services delivered independently of the regular office-based family practice (Parkes, 2009).

Multidisciplinary Models

The other model is to integrate methadone prescribing with multidisciplinary wrap around services designed to meet the complex needs of clients. Research suggests that multidisciplinary treatment may increase retention and thus improve outcomes and that group practices (often incorporated into multidisciplinary models) also have an advantage in terms of

patient retention (Strike, Gnam, Urbanoski, Fischer, Marsh, & Millson, 2005). The extent of integration and the scope of services within the bundle varies according to setting and program design.

The community health clinics developed by some health authorities as “one-stop shops” for primary care are one version of this model. In these clinics MMT is just one of several health and social services provided by physicians, nurses, psychologists, counsellors, social workers and other professionals. The attempt is to integrate methadone prescribing within standard primary care and to integrate MMT clients within the larger community. There have been reports of under-capacity and poor service at some clinics, but some stakeholders regarded this as an ideal model for MMT (Parkes, 2009). The model is designed to retain features of the general practice model while building in advantages of multidisciplinary and group practice approaches.

Another version of the multidisciplinary model is illustrated by the Sheway program in the Downtown Eastside of Vancouver. Here the goal is to provide comprehensive health services to a particular population (i.e., pregnant and parenting women). As in the community health clinics, methadone prescribing is integrated into primary care and supported by other services, but the entire suite of services is designed to meet the needs of a particular population of interest. As a result the services can be selectively tailored to the needs of that population.

Yet another version of the integrated model is seen in the attempt by some health authorities to nurture integration between MMT and other mental health and addiction services. For example, in Kelowna prescribing physicians work through a local mental health and addiction outreach clinic that provides a wide range of support services designed specifically to help people with mental health or substance use-

related problems. Quarterly dinner meetings provide opportunity for multidisciplinary dialogue and the development of collegial relationships. This version focuses on building a comprehensive approach to problems related to substance use but provides less integration with primary care and is focused more on meeting the complex needs of a particular client group than on integrating them within the community.

All of these models seek to integrate methadone prescribing with other health or social services provided by non-medical professionals and may also include peer support. The particular collection of services varies, and each offers certain strengths and weaknesses. Individuals requiring MMT services often have complex health and social needs, and the degree to which any particular program meets those needs varies with both program and client. How to design a system to meet client needs is the fundamental challenge for MMT.

Private Clinics

The definition of a private clinic in this report is a clinic that provides methadone treatment exclusively (or almost exclusively) and which is run for profit by one or more owners, who may or may not be prescribing physicians. The major difference between this model and physicians prescribing methadone in their private office-based practices is that the clinics provide only MMT, rather than comprehensive primary care services.

While private clinics have engendered a lot of discussion, they are not, in fact a separate model. Many of them are a variation of the third version of the multidisciplinary model described above. That is, they attempt to create a mechanism by which clients can benefit from multidisciplinary services within a context in which only physician services are directly funded. They also reflect attempts to moderate the challenges, cited above, of incorporating MMT into family practice.

MMT clinics have an established history in British Columbia of providing services to less “stable” clients who were difficult to manage in a family practice (Fischer, 2000). In the 1980s the clinics tended to be operated by government while the physicians were seen as “private,” and many of the concerns now raised about the private clinics were then raised about the private physicians (Alexander, Beyerstein, & MacInnes, 1987). Private clinics developed in response to demand for service and access to the various funding mechanisms. Reasons for the concentration of private clinics in some areas of the Lower Mainland are complex but may have more to do with history than design. In the constantly changing government commitment to MMT through the 1970s, 1980s and early 1990s, both clients and providers had to adapt and private clinics emerged in that process. By the time renewed commitment to promote MMT emerged in the mid 1990s, the clinics were already a established model in certain concentrated areas and the need to integrate MMT into family practice may have seemed less urgent in those areas.

Some private clinics have done a good job of using existing funding sources to provide a range of MMT-related service to clients. The clinics have allowed some physicians to address the need for MMT in their communities without the challenges of integrating the complex services needed within their family practice. In some areas, if it were not for private clinics, there would be minimal access to MMT.

On the other hand, a lack of regulation, accountability and transparency, together with a complex funding situation, has led to many perceived (and no doubt some very real) abuses of the system. Many of the issues that are raised about private clinics relate to funding mechanisms, the lack of quality assurance, or other systemic challenges. While it has been

argued that private clinics are more susceptible to abuses in these areas, none of the problems are unique to the private clinics nor do private clinics necessarily exhibit more problems. Because these issues are systemic rather than characteristic of a specific model (or instance of the model), they are discussed separately in the next section.

Challenges and Issues

Despite a 50-year history of using methadone to treat opioid dependency in British Columbia, we still face many challenges in delivering safe, effective and efficient services to all individuals who desire treatment. Many of these challenges are interconnected. The following discussion seeks to identify some of the key points and tensions to be addressed by policy.

System Capacity and Access

As noted above, system capacity has significantly increased since 1996, both in terms of prescribing physicians and dispensing pharmacies. The number of MMT clients has likewise increased from less than 3,000 to almost 10,000 by 2006.

As one might expect then, stakeholders report that access to MMT services has improved throughout BC in recent years. They credit CPSBC as well as the College of Pharmacists of British Columbia (CPBC) for taking on the challenge and expanding the program in very difficult and sometimes actively hostile circumstances (Parkes, 2009). Access to prescribing physicians is “very good” in some areas and “availability is improving” in other areas. Compared to other mental health and addiction services, methadone was described by some stakeholders as having relatively good access (Parkes, 2009).

Despite these positive developments, methadone provision is unevenly distributed across the province, and need often exceeds capacity. Many communities do not have a prescribing physician, and physicians in some areas have to restrict their MMT caseloads so as not to overwhelm their family practices. (Parkes, 2009).

Getting an accurate measure of the relationship of capacity to need is problematical. While we can analyse the number of methadone maintenance patients per 1,000 population for each local health area (Nosyk, Sun, Sizto, Marsh, & Anis, 2009), the significance of this data is difficult to assess in the absence of accurate estimates of the number of opioid users by local health area. Some experts have offered estimates of between 16,000 and 20,000 illegal opioid users in BC (Parkes, 2009). Estimates suggest that only 30% of Canada's non-medical opioid using population will be enrolled in MMT at any given time (Fischer, et al., 2005). Based on these estimates, it appears that BC's MMP is reaching well over the Canadian average. To what degree the wide variation in MMT enrolment between regions (and between local health areas within regions) is a reflection of unequal distribution of the opioid using population is unclear.

What is clear is that system capacity in rural and remote communities is limited (Nosyk, Sun, Sizto, Marsh, & Anis, 2009, p. 15). Some stakeholders view MMT as a "specialty" and suggest access will necessarily be limited in rural areas (Parkes, 2009). Within this conceptualization, providing prescribing services through urban based physicians might seem quite appropriate. However, delivering anything close to a comprehensive package of optimized MMT³ is made more difficult when

the prescribing physician is not local. Providing such services would require more careful attention to system design and service delivery than is currently the norm.

Access is about more than system capacity measured in terms of the number of prescribing physicians and dispensing pharmacies. Some providers attempt to keep their methadone prescribing "under the radar", partly for fear of community backlash but also "afraid of an avalanche" of new and complex clients. While such tactics may be necessary for the provider, they make it difficult for people in need of MMT to find and access services. Stakeholders drew attention to a wide range of factors, from lack of transportation to stigma and discrimination, that negatively impact on access (Parkes, 2009).

Access is also influenced by the level of awareness and understanding about appropriate and effective treatment. A lack of understanding about MMT restricts help seeking and reduces treatment adherence. It results in clients requesting premature tapering or ineffective doses as well as in professionals and other caregivers recommending or encouraging inappropriate strategies. Comments by stakeholders make clear the need for consistent and extensive education of both clients and all health and social service providers who work with clients on methadone.

Licensing Requirements

Methadone is only available in Canada when prescribed by a physician who has been granted an exemption under the *Controlled Drugs and*

Study) to provide a rigorous control for testing heroin assisted treatment. The study involved 251 participants at sites in Vancouver and Montreal. Despite the fact that all participants had extensive histories of opioid use and had not benefited from past addiction treatment attempts (including MMT), the 12-month retention rate in the optimized MMT arm of the study was 54%, well above the retention rate for the provincial MMP (NAOMI, 2008).

³ Optimized MMT was defined within the North American Opiate Medication Initiative (NAOMI

Substances Act. In BC responsibility for regulating prescribing practices and recommending physicians for exemption rests with the CPSBC. The College has developed guidelines and a handbook for physicians prescribing methadone to treat opioid dependence (see Table 1 for summary of dosing guidelines) and requires physicians to attend a training program prior to being granted the needed exemption.

Some methadone prescribing physicians report that CPSBC is providing responsible oversight and informative training. Even the audit and review process was seen by some physicians as positive and collegial. Not surprisingly, however, opinions vary and a number of complaints have been levelled at the College. Some physicians felt the program was over-regulated, making service delivery overly demanding and restricting the ability to attract more physicians or to retain clients (Parkes, 2009).

The literature suggests a need for careful balance. Without adequate controls, drugs diverted from maintenance prescribing can increase deaths among non-patients. Overly stringent controls can result in fewer dependent individuals entering and staying in treatment, thus increasing their risk of overdose. But if the barriers filter out clients who are less committed to treatment, lowering them may reduce the effectiveness of the program (Best, et al., 2001). Getting the balance right will always be a challenge, but ensuring structures for addressing this tension are clear and transparent would contribute to better understanding and possibly to better outcomes.

Quality Assurance and Public Perception

The issue of service quality has been repeatedly raised as a concern relative to MMT. Clients and professionals alike complained about the lack of

clear minimum standards of care, about controlling and punitive practices and about other perceived abuses within the system. Most frustrating for complainants is the inability to see their complaints addressed and resolved.

As noted above, CPSBC has developed guidelines and physician prescribing practice is monitored and subject to audit. A spokesperson for the College said, “nothing gets more scrutiny” and described the MMP as a “vanguard of prescriber correctness in Canada” (Parkes, 2009). Likewise CPBC has published a guide for pharmacist and monitors dispensing practices relative to methadone.

Nonetheless, systemic problems related to the practice at some pharmacies and clinics have resulted in clients and providers across the Lower Mainland reporting a loss of faith in the MMP. Reported problems at clinics range from the failure to provide continuity of care to clients when clinics would close “overnight” to overly punitive practices used to control client behaviour. Commonly cited problematic pharmacy practices related to daily witnessed ingestion (either failure to witness ingestion on deliveries or pressuring clients to request daily witnessed ingestion even when not prescribed by the physician) to the provision of financial and material incentives or coercive practices to make clients use a particular pharmacy. Some clients report a keen sense of unfairness, of being taken advantage of. They believe that the services they received as “addicts” or people with substance use problems were being held to a “lesser standard of care” than health services designed for other groups of patients (Parkes, 2009).

While there are guidelines for methadone prescribing, many of the quality assurance problems emerge because there are no official practice standards for some of the other

services involved in MMT. For example, counselling is not a regulated profession in British Columbia. So while counselling is recognized as an important service, and “counselling by a physician” is listed in the services covered by the methadone treatment fee paid to physicians, there is no universally agreed upon standard for training or scope of practice related to counselling by physicians or other professionals. The CPSBC’s *Methadone Maintenance Handbook* suggests physicians should be involved in counselling and provides considerable guidance in this regard (2009, pp. 21-3). The reality, however, is that few physicians have the time and expertise needed to provide the support many MMT clients require. Currently there is a lack of clarity on how these support services can realistically be provided.

Essentially, a comprehensive approach to MMT involves three service components delivered by qualified professionals: methadone prescribing, methadone dispensing and various psychosocial supports, including counselling. Since 1996, the CPSBC has set guidelines and monitored practice relative to prescribing. Since 2004, CPBC has taken responsibility for setting standards and monitoring dispensing practice. While complaints have been raised about particular physicians and pharmacists, and about the lack of transparency in the processes for handling complaints, there is at least clarity about responsibility. The same cannot be said for the third component. Not only is there a lack of clarity as to how to provide the services, but even less clarity about responsibility for monitoring the services provided.⁴

⁴ E.g., while “counselling by a physician” is covered by the methadone treatment fee, the services of counsellors and other professionals employed by physicians or clinics are not monitored or regulated by CPSBC.

The Colleges have been criticized on how they monitor practices. Some physicians felt CPSBC was overly concerned with preventing diversion and minimizing the potential for methadone related deaths. Minimizing deaths and preventing diversion are universally accepted concerns (Cairns, 2000). But, it needs to be recognized that over-protecting in this direction may lead to ineffective prescribing practices that fail to save lives (Best, et al., 2001). Several of the factors related to ineffective prescribing practices are discussed below. It is not clear how the current process of monitoring prescribing practices takes these factors into account or holds prescribers accountable for overly restrictive practices.

One of the primary benefits of MMT is the well-documented decreased risk of mortality for individuals in treatment. Previous studies have shown that the risk of death for a client of any age in MMT is some nine times higher than the general population, but three times lower than that of untreated users (Caplehorn, Dalton, Cluff, & Petrenas, 1994). Mortality of female injection drug users has been found to be at least twice as high as that of males (Spittal, et al., 2006). The substantial benefits of keeping a client in treatment need to be balanced against the risks of increased mortality among individuals in treatment and the general public.

Within treatment, methadone-related deaths occur most commonly in the early stabilization period, in periods of transition, or among certain individuals who continue to use other substances, particularly central nervous system depressants such as opioids, benzodiazepines or alcohol (Latowsky, 2006). Monitoring should focus on compliance with guidelines in a way that minimizes the identified risks while maximizing client retention.

Evidence of some pharmacies offering cash or other incentives to MMT clients has brought considerable public attention to dispensing

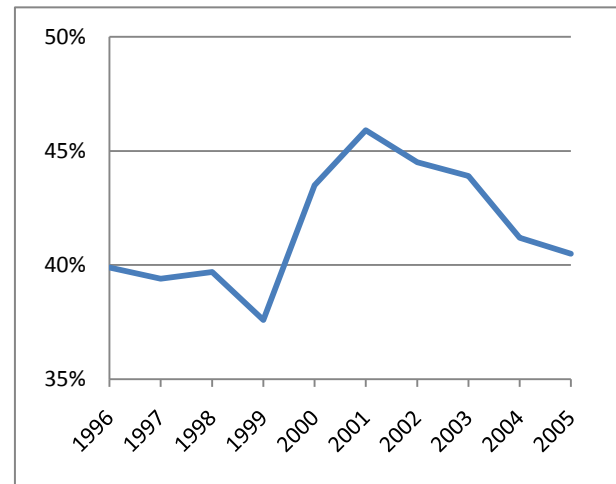
practices, and some physicians have argued that this has interfered with effective treatment for some clients (Parkes, 2009). On the one hand, the incentives may improve client retention, leading to a net benefit. On the other hand, if the money is used to purchase other drugs, it could have a negative impact on the long-term wellbeing of the client and undermine public support for MMT (Nosyk & Anis, 2009). CPBC has struggled to address this and other issues fairly and within its capacity and mandate.

Improving the quality of services and building public trust in the program is critical to the success of MMT services. The issues will only be resolved by ensuring clarity about the responsibilities for delivering and monitoring each component, developing transparent and responsive systems for addressing challenges and putting in place a coordinating mechanism to ensure the components work well together while continuing to maximize access to MMT.

Client Retention

Retention of clients in treatment is among the most commonly used measures of effectiveness for methadone and other forms of opioid substitution treatment (Amato, Davoli, Perucci, Ferri, Faggiano, & Mattick, 2005). Being retained in treatment has been associated with decreases in illegal activity, better health and lower levels of mortality (Caplehorn, Dalton, Cluff, & Petrenas, 1994). A National Institute of Drug Abuse review found that the overall mean retention in MMT at one year was 39.8%, with a range of 25-60% (NIDA, 1995). Studies have suggested that longer duration of exposure in treatment is associated with improved post-treatment outcomes such as reduced opioid use and criminal activity and improved social productivity (Dolan, Shearer, White, Zhou, Kaldor, & Wodak, 2005; Hubbard, Craddock, & Anderson, 2003; Lowinson, Payte, Salsitz,

Figure 3: 12-month retention in MMT 1996-2005
(Nosyk, Sun, Sizto, Marsh, & Anis, 2009)



Joseph, Marion, & Dole, 1997; Zhang, Friedmann, & Gerstein, 2003).

In BC, just under forty percent of treatment episodes initiated in 1996 lasted at least 12 months. This rate of retention increased to 45.9% in 2001 but since then has been declining to a low of 40.5% in 2005 (Figure 3).⁵ While this rate is close to the average reported in North America (NIDA, 1995) it is significantly below rates reported in Ontario over a similar period (Strike, Gnam, Urbanoski, Fischer, Marsh, & Millson, 2005) and the rate reported for the optimized MMT arm of the North American Opiate Medication Initiative (NAOMI, 2008).⁶ The latter case, in particular, illustrates the potential for improvement even with a cohort of the most challenging clients.

⁵ This declining rate of retention is particularly troubling in that other current demographic trends (e.g., age and levels of treated co-morbidity) are associated with increased retention.

⁶ Different methodologies in calculating episode length make direct comparisons problematic. See Anderson and Warren (2004) for an earlier assessment of client retention in the BC MMP.

Treatment retention by prescribing physician varies considerably. In 2005, more than one third of prescribing physicians had 12-month retention rates below 30%. By contrast, 13% of prescribers had exceptional performance with more than 60% of methadone treatment episodes lasting longer than 12 months.

Methadone maintenance is an effective form of treatment for opioid dependence even among individuals who have been unsuccessful in the past. A number of factors are correlated with better treatment outcomes. These include age, levels of treated co-morbidity, daily doses, better treatment adherence, availability of psycho-social support services and more experienced physicians (Peles, Schreiber, & Adelson, 2006).

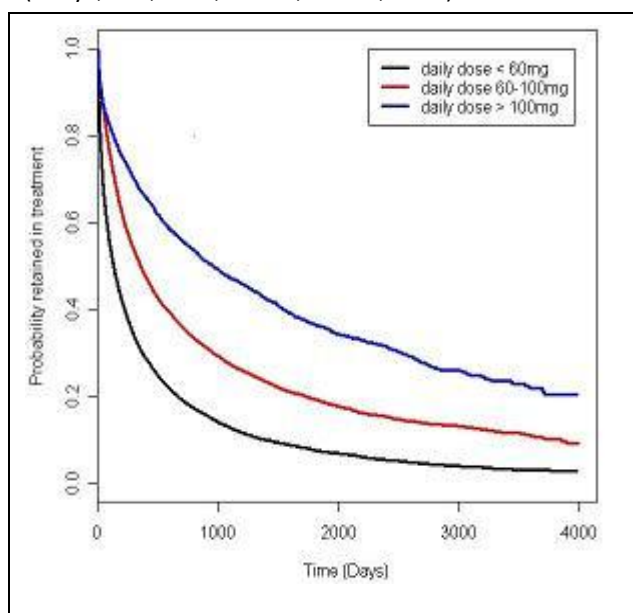
Daily Dose

A Cochrane review of MMT in experimental settings found that treatment regimens with daily doses of at least 60mg are associated with better retention, less heroin use during treatment and lower withdrawal symptoms (Faggiano, Vigna-Taglianti, Versino, & Lemma, 2003). Analysis of BC data (Nosyk, et al., 2009) suggests that higher mean doses have led to longer retention in treatment.

Figure 4 displays the probability of remaining in treatment over time given the mean daily dose prescribed during the treatment episode. Episodes with daily doses over 100mg had the highest probability of being retained in treatment at every time point. Episodes with daily dose below 60mg discontinued earliest.

Compliance with minimum effective dose guidelines (defined as >60mg per day) has been falling in BC since 2000 (Figure 5) mirroring the decline in treatment retention over this period. Just over half of physicians who were primary prescribers for five or more treatment episodes complied with minimum effective dose guidelines in at least 70% of their cases. About

Figure 4: Effect of daily dose on treatment retention (Nosyk, Sun, Sizto, Marsh, & Anis, 2009)

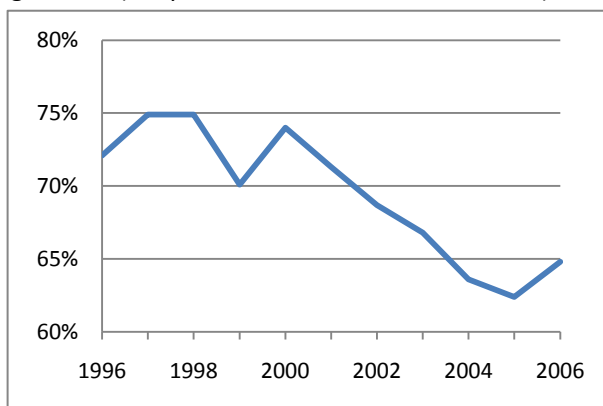


one third of prescribing physicians adhered to the guideline in 50-70% of treatment episodes, but almost 15% had compliance rates of <50%. The maintenance dose is individual-specific and requires patient input. Not all patients require a daily dose of >60 mg, and some patients may request sub-optimal doses for a variety of reasons. Nonetheless, physicians should be encouraging optimal dosage, and evidence suggests that for most patients this will involve achieving a daily dose >60mg.

Starting Dose and Titration

Mortality in the first several weeks after

Figure 5: Compliance with minimum effective dose guideline (Nosyk, Sun, Sizto, Marsh, & Anis, 2009)



initiation of treatment and methadone-related deaths among non-patients have raised concerns regarding compliance with guidelines on starting doses, the rate of dose titration and prescription of take-home, or carry doses in the early stages of treatment (Drummer, Opekin, Syrjanen, & Cordner, 1992; Cairns, 2000; Caplehorn & Drummer, 1999). The risk of fatal methadone overdose during the first two weeks of treatment is estimated to be 6.7 times higher than that of heroin-dependent patients not in treatment, and 98 times higher than that of patients who have been stabilized on maintenance doses of methadone (Caplehorn & Drummer, 1999).

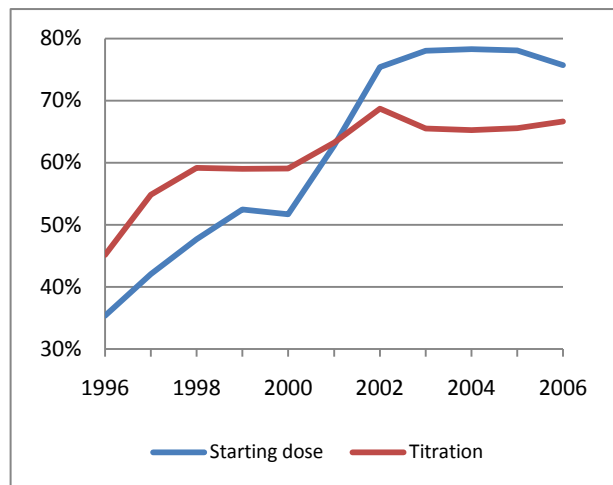
Minimizing the risk of fatal methadone overdose is a major concern for the CPSBC. Compliance with the starting dose guideline was quite low (35.4%) in 1996 when the College assumed responsibility for the MMP. Following their involvement, compliance steadily improved to 78% in 2003 and has stabilized at about this rate since then (Figure 6).

Dose titration is an important indicator of individualized care. Daily doses are meant to be adjusted to the point at which the patient's withdrawal symptoms are relieved, without producing sedation. Compliance with dose titration guidelines has improved, though less dramatically than for starting dose (Figure 6).

Take-Home Doses

Carries, or take-home doses, are recommended only after 12 weeks of stability in treatment, and are usually to be no more than 4 days. Compliance with these carry guidelines has improved from under 40% in 1996 to 60% in 2006 (Figure 7), however the majority of this increased compliance has been realized in only Vancouver Coastal Health and Fraser Health. Within Northern Health, carry guideline compliance was higher in Prince George, the only urban

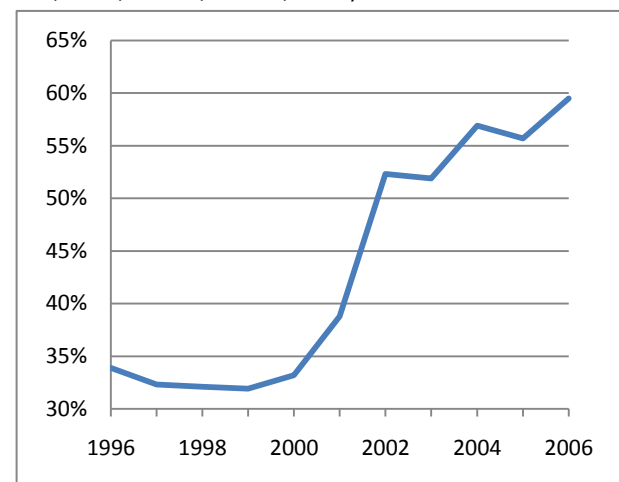
Figure 6: Compliance with starting dose and titration guidelines (Nosyk, Sun, Sizto, Marsh, & Anis, 2009)



centre in the region. Similar patterns for urban versus rural areas were observed in Interior Health and Vancouver Island Health Authority.

According to rural prescribers, clients in rural regions still have limited access to dispensing pharmacies. Rural pharmacies are more likely to have more restricted hours of operation and be further from clients. Travel times of up to 1.5 hours to get to the pharmacy for methadone have been reported (Parkes, 2009). These access barriers require exceptions in order to retain clients, and rural providers seek to compensate through a more liberal carry schedule.

Figure 7: Compliance with carry guidelines (Nosyk, Sun, Sizto, Marsh, & Anis, 2009)



Dose Tapering

Given widespread agreement on the benefits of a maintenance-oriented approach to the treatment of opioid dependence, the evidence base for methadone dose tapering for those wishing to achieve abstinence is relatively small. A small cohort study (Senay, Dorus, Goldburg, & Thornton, 1977) found that those on a 3% per week taper were more likely to complete their tapers than those on a taper of 10% per week. More recent evidence suggests that successful completion of tapers is rare, and that most patients either relapse or request to discontinue the taper (Calsyn, Malcy, & Saxon, 2006). A high proportion of treatment episodes in BC had at least an attempted taper (46.0%) and many of these tapers (74.7%) were initiated within one year of treatment episode initiation. Many attempted tapers reverted to maintenance doses. In the majority of cases, guidelines on the *rate* of dose tapering were followed.

This compliance rate, however, has been falling since 2001, mirroring the fall in compliance with the minimum effective maintenance dose guideline. In general, the dose tapering rate has been exceeded more frequently in Vancouver Coastal throughout the study period. Evidence of early initiation of tapers is suggestive of opioid-detoxification, or abstinence-oriented treatment, which is discouraged based on firm evidence of higher rates of relapse into regular drug use and higher mortality. While this evidence is recognized by the CPSBC and supported by the recommended guidelines, it clearly needs to be emphasized in physician training sessions and in the monitoring of prescribing practices.

Revolving Door

Stakeholders sometimes express frustration over the “revolving door” through which clients repeatedly cycle in and out of treatment. As noted above, retention in treatment is an important indicator of treatment effectiveness,

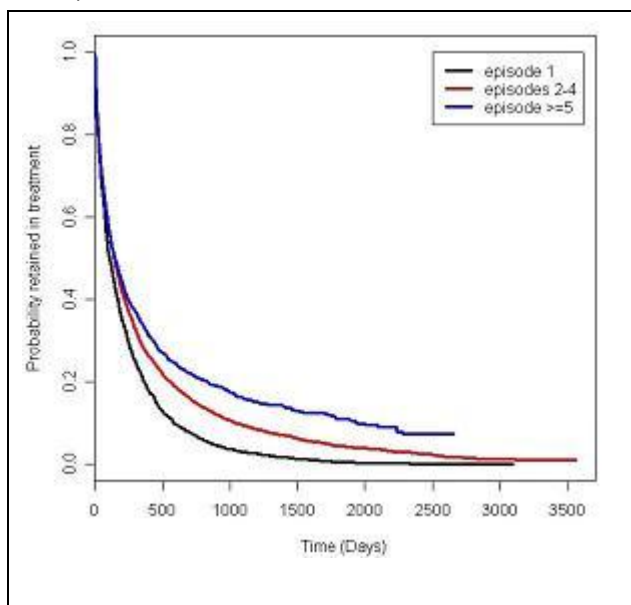
and risk of mortality is increased during periods of transition. Therefore, effort should be made to maximize retention and discourage clients from choosing to leave the program, particularly within the first two years.

But the “revolving door” need not be seen as purely negative. Relapse is common in all forms of treatment for substance dependence, as many people who have tried to quit smoking tobacco know. Some clients may enter MMT without full commitment to long-term maintenance but in order to deal with more immediate withdrawal symptoms in the short term. However, among clients with multiple treatment episodes, later MMT attempts were significantly longer than their first attempt (Figure 8; Nosyk, et al., 2009). Compared to individuals’ first treatment episode, subsequent episodes were progressively longer, ranging from 13% longer (second episode) to 21% longer (sixth or higher episode).

Morbidity and Mortality

From 1996 to 2005 the rates of hospitalization for MMT clients increased from 6.7 to 25.7 per

Figure 8: Time to discontinuation stratified by treatment episode for clients with 4 or more treatment episodes (Nosyk, Sun, Sizto, Marsh, & Anis, 2009)



100 person years in treatment. Similarly, the rate of mortality within one month of MMT discontinuation increased from 0.4 deaths per 100 person years in treatment in 1996 to 1.3 in 2006. These increases likely reflect a progression in illness severity or comorbidity in the client population over time (Nosyk, Sun, Sizto, Marsh, & Anis, 2009). However, these rates should continue to be tracked and analysed against trends in compliance with good practice.

Caseload and Provider Experience

Some stakeholders suggest the original vision for the MMP was for widespread provision through local family physicians. This was envisioned as maximizing access and spreading the load across a broad base of providers. If this was the vision, it has not been realized. Prescribing physicians in rural or remote areas complain about feeling pressured to take on new clients, even though their workload is at capacity. Some rural physicians report limiting access in order to manage workload and be able to provide quality services to their existing clients (Parkes, 2009). Even in urban areas, MMT services are often concentrated in methadone clinics or specialized practices rather than being distributed across family practice.

Yet provider caseload has a complex relationship with MMT outcomes. Physicians with the largest patient loads (more than 182 MMT patients) retained clients in treatment for shorter periods on average than those with moderate patient loads (56-182 patients). But then, so did those with low patient loads (less than 55 MMT patients). However, those with relatively high patient loads (89-182 MMT patients) tended to retain clients the longest on average (Nosyk, Sun, Sizto, Marsh, & Anis, 2009).

This data may suggest the importance of provider experience in addition to reasonable caseloads. On the other hand it may reflect a variety of systemic issues such as the ability to provide meaningful supports in addition to methadone prescribing that may correlate with caseload in current models. Further research is needed before clear guidance relative to caseload can be formulated.

Stigma and Professional Attitudes

Comments from methadone clients continue to indicate that many experience the health care system as fragmented. If they are stabilized on methadone they are often afraid to access emergency care or acute care for fear of having their access to methadone disrupted. They report that medical staff “treat you different” when they discover you are on methadone. Clients often experience the program as punitive and shaming rather than therapeutic even when the professional may be trying to follow guidelines designed to protect the client (e.g., reducing the dose for a client who is using other depressants). Clients speak of wanting to be treated “as a human” and are appreciative of professionals who take an interest in them individually and are prepared to balance risk and benefit on a case-by-case basis. They often express the need for more information, to be included in decision making and have a chance to understand and explore their options (Parkes, 2009).

What clients say they want and often do not get from the system are mostly things already emphasized in the *Methadone Maintenance Handbook* (CPSBC, 2009) and, therefore, which should be common practice. Comments from some health professionals, however, support the impression that MMT is still misunderstood by many people working in health care. Addiction still carries a stigma in our health system that results in MMT clients being treated differently than other patients. The CPSBC

reports attempting to change this by providing more training on MMT to medical students, but clearly a comprehensive strategy is needed to increase knowledge and change attitudes within the health care system and beyond.

Treatment Adherence

Poor adherence to treatment has the most profound effect on treatment retention. Patients who miss 10-30% of prescribed doses discontinue treatment nearly 2.5 times sooner, while those missing over 30% of prescribed doses discontinue nearly 7 times sooner than those missing <10% of prescribed doses (Nosyk, Sun, Sizto, Marsh, & Anis, 2009).

There are, no doubt, many factors that contribute to poor treatment adherence on the part of clients. One of the factors most commonly mentioned by clients relates to the restrictions MMT places on their ability to live a normal life. Clients often experience methadone treatment as controlling almost every aspect of their lives: whether they can get a job, where they can travel, the outline of their daily routine. This experience of being controlled was exacerbated when clients felt their service providers were punitive rather than supportive (Parkes, 2009).

The physical health impact of methadone is also a commonly reported concern for clients. Clients speak of troubling side effects, and they worry about the difficulty of tapering off methadone, which some regard as more difficult than withdrawing from heroin. Issues relating to the difficulties in accessing service as well as factors related to client motivation and goals, ambivalence about MMT and social circumstances also influence adherence (Parkes, 2009).

Since client adherence to treatment is essential to treatment success, it is critical that the system effectively engage clients in the treatment process. The system needs to eliminate unnecessary barriers. It is also

important that professionals actively support clients to understand the reasons for, and how to best manage, the unavoidable impacts and limitations imposed by effective MMT.

Funding and Administrative Mechanisms

The way that the methadone program receives funding in BC is complex. The main funding streams are:

- Medical Services Plan (MSP) payments to physicians
- MSP payments for the costs of urine drug screens for eligible clients
- PharmaCare payments for methadone dispensing, ingredient and interaction costs for eligible clients
- Ministry of Health Services contract with the CPSBC to administer the MMP
- Health Canada, First Nations and Inuit Health Branch, Non-Insured Health Benefits payments for methadone prescriptions for eligible clients
- Health Authority budgets for programs that include MMT counselling and support services
- Ministry of Housing and Social Development alcohol and drug treatment supplement for eligible clients
- User fees

When MMT was up-scaled in the 1990s, elements of the existing universal health care system were used to allow for extended access to methadone as quickly and efficiently as possible. By not requiring the development of a whole new set of financial arrangements, the program was able to respond rapidly to a growing demand for access, at least in some high-density urban areas such as the Downtown Eastside of Vancouver, to address the public health crises of HIV/AIDS, hepatitis C and drug overdose rates. The Ministry of Health expanded funding to cover physician costs through the existing MSP fee-for-service mechanism. This was viewed as the most

efficient way to create incentives for physicians to become licensed to prescribe methadone. Using PharmaCare allowed expansion of funding for methadone to people on income assistance, and MMT development was supported by the availability of the PharmaNet system which helped to shape the program's evolution.

In retrospect, some stakeholders feel that those early fiscal arrangements may now be distorting some aspects of the program in a variety of ways. Some people argue that the comprehensive system needed for effective MMT has never been fully implemented at least in part because of the fragmented and irregular funding and administrative structures (Parkes, 2009).

Even though the provision of psychosocial services and supports has long been recognized as important to effective MMT, the primary and stable funding sources focus on prescribing and dispensing. As a result, as in so many other areas of health care, the provision of these non-medical services within MMT has always been patchy.

Addiction treatment services in British Columbia have historically almost exclusively focused on the provision of psychosocial services and supports. However, these services have never been fully integrated into health care. In fact, at times responsibility for addiction services has rested with ministries other than health (e.g., Ministry of Labour and Consumer Affairs, Ministry for Children and Families). The instability has undermined attempts to develop provincial standards of care.

As a result, MMT clients are often left to navigate a system that is not only disconnected but often contradictory. Referral patterns between service components is often limited and services accessed in one component may

undermine those provided in another. For example, a person stabilized on methadone may be receiving advice from a counsellor suggesting they should try to "get off" methadone as soon as possible.

The multiplicity of separate funding streams, according to stakeholders, contributes to confusion about responsibility and a lack of accountability within the program. This is no doubt exacerbated by the lack of any mechanism to coordinate all of the components needed for effective MMT.

Views about the appropriateness of current funding mechanisms vary. Physicians are reimbursed via a special billing code that serves to entrench the unique status of MMT within physician services. The fee can be billed once per week for each patient registered in the program. The physician is not required to see the client in order to bill the fee, but the fee is to be inclusive of all MMT-related services. The accompanying guidelines go beyond defining the scope and applicability of the fee to stipulating matters of clinical practice (e.g., requiring "at least two visits per month with the patient after induction/stabilization"). Some physicians suggest the current fee is inadequate for physicians with few MMT patients particularly in rural settings, while others believe that the fee-for-service system has made MMT too lucrative. Depending on the model envisioned, some favour sessional fees whereas others suggest billing for MMT should be normalized in line with other chronic disease management protocols in which physicians are reimbursed for activities that directly improve a patient's treatment outcomes or the quality of care (Parkes, 2009).

As with prescribing fees, there are varying opinions about the adequacy of current dispensing fees (Parkes, 2009). The discrepancy

between PharmaCare reimbursement for most clients and that paid by Health Canada for on-reserve First Nations clients clearly needs to be addressed. Many times when issues are raised about the dispensing fee, the real concern is with ethical practice or quality of care and should be dealt with accordingly.

The funding for psychosocial supports is completely piecemeal. The MSP guidelines related to the methadone treatment fee imply that these services are to be covered by the weekly fee paid to physicians. The Ministry of Housing and Social Development, on the other hand, is prepared to pay up to \$500 per 12-month period for each eligible client to cover user fees ostensibly for services not paid for by MSP. All health authorities fund addiction treatment services but these are not often directly linked to other MMT services and sometimes may even undermine MMT (e.g., when counsellors encourage clients to get off methadone as quickly as possible). In addition some health authorities are now funding multidisciplinary clinics using sessional models for funding professional services including physician services.

BC needs to develop clear administrative and funding mechanisms that recognize and coordinate the different components that are required for effective MMT.

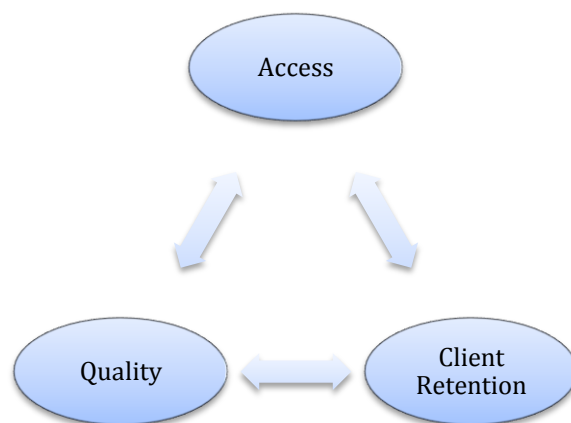
Discussion

MMT in BC is viewed by client and professional stakeholders alike as making a substantial contribution to reducing the harms related to illicit opioid use and opening a door to a more stable and better quality of life for people with opioid dependency. However, several ongoing challenges have been identified by stakeholders. There is clearly a need for creative and innovative solutions to address the various challenges.

Addressing the challenges involves attention to a multiplicity of interrelated issues. In particular, the triangle of access, retention and quality of care is an important conceptual or analytical device to understand these interrelationships.

System capacity and access to MMT has significantly improved since 1996 when the CPSBC was given administrative responsibility for the MMP, and the number of clients in the program has correspondingly increased.

Access to MMT is much more difficult in rural areas for a number of reasons, and even in some urban areas access can still be a problem. It is not clear exactly how much capacity is needed, and better surveillance systems are required to produce reasonable estimates of service needs at the local health area level. But issues of capacity are also intricately linked to questions about system design. In order to provide comparable access, a higher percentage of rural physicians may need to be licensed than would be true of their urban counterparts. While this might improve access, it may not maximize effectiveness since physicians with lower MMT caseloads have been less successful in retaining clients in treatment. In the absence of rural capacity urban-based physicians have been prescribing for rural-based clients. This increases access to prescribing services but may



accentuate a lack of integration with other supports.

When planning for capacity and access it is important to recognize that effective MMT is a multidisciplinary effort with at least three components: methadone prescribing, methadone dispensing and provision of psychosocial services and supports. Attention must be given to the capacity for each of the components and for their coordination within a system that is easy for clients to navigate.

One theme that is reflected both in the administrative data and in stakeholder comments relates to regional and client diversity. What works in one region or setting may have detrimental impact in another. As a result a one-size-fits-all approach is unlikely to meet the needs of all clients in all regions or even in a given region.

The issue of client retention on MMT in BC is complex and interconnected with other issues. In light of the fact that client retention is an important marker of program effectiveness, it is a concern that client retention in the MMP has been declining in recent years.

The data analysis has suggested that this decline in retention is related to a decline in compliance with minimum effective dose guidelines. Retention rates vary considerably by prescribing physician and may relate to experience and caseload as well as the prescriber's commitment to maintenance therapy as opposed to abstinence-oriented treatment. The frequency of early initiation of tapers in some areas suggests methadone is being used for opioid-detoxification which is not recommended based on clear evidence of higher rates of relapse and mortality.

Client retention is also profoundly influenced by adherence to treatment. The more often clients

miss prescribed doses, the more likely they are to discontinue treatment than those who establish and follow their daily dosing routine. There are many personal, medical, social and systemic factors that impact on adherence to treatment.

Many people in BC with opioid dependency have complex health and social needs involving physical and mental health issues, histories of violence, trauma and chronic pain, unemployment and homelessness. Sometimes the chaos in their lives simply makes the development of a routine difficult. On the other hand, complications or disruptions in the delivery system or difficulties in access can make the barriers to establishing a routine almost insurmountable. Failure to address the client's needs relative to chronic pain, trauma or concurrent mental disorders also undermines adherence and retention. At the same time, treatment professionals must recognize that individuals may choose MMT for different reasons, not all of which include a commitment to long-term maintenance (e.g., managing opioid withdrawal symptoms in the short-term when unable to acquire or afford heroin).

Improved retention in treatment can be achieved by increased compliance with dosing guidelines, addressing systemic barriers that unnecessarily complicate access and ensuring comprehensive assessment and multi-faceted responses to the complex needs of individual clients.

Providing a comprehensive response will require better integration and coordination of methadone prescribing with other primary health care, as well as mental health and social services, than has been the norm. It is unlikely that a single model for doing so will emerge that meets all needs. The system needs to be flexible enough to recognize that not all clients will need

the same dose, level of social support or supervision. Ideally, this comprehensive system would address the complexity of all problematic substance use, not just opioid dependence, and incorporate social, psychiatric and pharmacological treatments as appropriate.

Several challenges have emerged relative to quality of care experienced by clients accessing MMT services. The voices of clients suggest that MMT in BC is sometimes experienced as dehumanizing and less than optimal. Some of this relates to egregious practice by particular physicians, pharmacists and other service providers, but some results from systemic stigma within current health and social service systems. Recent exposure by the press and other media of problems within the MMT system, and the perceived lack of responsiveness from those in authority, have eroded confidence in the current administrative structures and led to a lack of faith in the MMT system among the public and other stakeholders.

These challenges are serious, and while they do not accurately reflect the entire system, they must be dealt with openly and transparently if the system is to be put on a solid foundation. The fragmentation of responsibility and the inadequacy of current accountability structures has, according to various stakeholders, contributed to the frustration of those wishing to lodge complaints and to the inability of those concerned to resolve those complaints (Parkes, 2009). The current system lacks clarity about responsibility for providing and monitoring the psychosocial services. It has no mechanism for system-wide planning and coordination or for the meaningful involvement of clients, families or other stakeholders in program planning and oversight.

Funding arrangements and policy have a significant influence on health systems and can influence the behaviour of health care

providers. Care must be taken to ensure they are constructed to ensure the best possible outcomes for clients, efficient operation of the system and appropriate accountability for public funds. The current funding mechanisms for MMT may have allowed the MMP to scale up quickly, but it has also left the program exposed to some strong criticisms related to fragmentation, the lack of transparency and accountability, failure to support best practice, marginalization within the health care system and contributing to stigma for clients. Even though some of the assumptions about the role of funding mechanisms in reported quality of care problems may be unfounded, the current patchwork does not promote a comprehensive approach and has left the system open to abuse and confusion. The funding mechanisms used to promote effective responses to other chronic conditions may provide useful models for MMT funding.

Four themes, in particular, cut across the triangle of access, retention and quality of care: diversity, flexibility, multidisciplinary and engagement.

MMT by its very nature requires a significant level of client (and family) engagement. Failure to involve clients and their advocates in system planning and design has no doubt contributed to a failure to address barriers adequately and to a less than optimal rate of client retention. Engaging clients both at the system level and in developing individual treatment plans will help reduce stigma and discrimination and improve the quality of treatment.

There is widespread agreement that effective MMT will require multidisciplinary involvement in client care. Complementarity across the system can be enhanced by expanding and adapting the practice guidelines developed for physicians to ensure they are inclusive of, and applicable to, other disciplines. Regular monitoring of adherence both at the individual

practitioner level and the system level will be critical.

Stakeholders were clear about the need for flexibility. This flexibility applies to the application of the guidelines where local or individual circumstances require careful adaptation in order to achieve the goals of the program. Flexibility also applies to the development of service delivery models. No one model will work in all communities or for all populations of MMT clients. For example, stabilized clients who have strong social supports may only need access to a prescribing physician and a dispensing pharmacy and can easily be accommodated in a family practice. Other clients may require significant help in building and participating in a supportive community that will sustain them in their efforts to take control of their lives. For these clients a specialized clinic like Sheway may be an ideal model. No matter what model is used, the goal of integrating clients into the larger community should always be a priority of the program.

The need for flexibility is acutely felt in rural communities. Technological advances in telehealth and telepharmacy should be explored as ways to expand access in rural communities, but currently they face a number of practical and systemic challenges. Developing shared-care models involving trained and experienced community-based health professionals may provide more immediate ways to address challenges related to access in rural communities.

Developing a program capable of responding to diversity means attention needs to be given to how gender, age and cultural differences impact MMT. This should not be interpreted to mean that specialized programs are always required. Instead, training and system design should take

into account these various needs and ensure the system and the professionals who work in it are able to respond appropriately to the diverse needs of individuals accessing services.

MMT has an important role to play in closing the large health gaps between the Aboriginal and non-Aboriginal populations of BC. Initiatives involving federal, provincial and First Nations governments have drawn attention to the need for Aboriginal participation in health care planning and implementation and resulted in increased investment in the First Nations Health Council. Health authorities are working collaboratively with First Nations to develop Aboriginal health plans. These are promising steps that may point the way to other collaborative models for delivering effective MMT throughout BC.

Recommendations

There is no silver bullet, no set of simple recommendations that will address all of the challenges related to MMT in BC. Rather, the task at hand is about creating a balance between a number of complex and competing interests and concerns within the context of health services in BC. In order to achieve such a balance, the province needs to consider policy direction that fosters a culture of collaboration and openness. This needs to embrace diversity and flexibility, build on the contribution from multiple disciplines and components and involve clients as well as service providers and several branches of government in treatment and system planning and evaluation.

The following recommendations seek only to identify important areas for consideration and point the direction toward improved MMT for British Columbia. The detailed task of balancing the issues will, of necessity, fall to those who administer the system.

Responsibility, Accountability and Coordination

Effective MMT involves the coordination and delivery of at least three components: methadone prescribing, methadone dispensing and the provision of psychosocial services and supports.

Currently government contracts with the CPSBC to administer the MMP. The College develops guidelines for the program that are published in a handbook (CPSBC, 2009), provides physician training, manages the process by which physicians can apply for authorization to prescribe methadone and reviews standards of practice for physicians who prescribe methadone.

The CPBC has developed and published a guide for pharmacies (CPBC, 2007) and reviews standards of conduct for pharmacists.

No agency currently has clear responsibility for setting standards or monitoring practice related to the provision of psychosocial services and supports. As a result, provision of these services is patchy at best, the quality is inconsistent and there is no mechanism for handling complaints or resolving issues.

Currently, there is no single policy centre for ensuring coordination, collaboration and communication between the three service components. The need to establish such a policy centre should be considered.

Recommendation 1: *Government should consider a means of coordinating the MMT system in BC and address the current gaps related to responsibility and accountability across components of the system.*

Monitoring and Reporting

The current review process identified several issues that impact the effectiveness of the MMT system. It also identified sources of information available, as well as limitations in the data, for

tracking system performance. A process for regularly reporting on the MMT system would support system managers in making decisions, assist in building a better understanding of the MMT system among all stakeholder and provide a better basis for responding to queries and addressing complaints.

Recommendation 2: *Government should consider how best to monitor and report on MMT.*

Multidisciplinary Workforce Development

Clients often receive conflicting information about MMT from the various health professionals with whom they interact. This can result in a reticence to access certain services resulting in poor health outcomes and expensive late-stage services. It also leads to confusion about effective MMT that impacts treatment adherence and client retention.

As already noted, effective MMT requires multiple components involving different skill sets. System efficiency requires both coordination and complementarity. The latter can be improved by developing a better understanding of MMT among all health professionals and providing consistent training for key professionals to increase awareness and confidence concerning the role of other professionals within the system.

Recommendation 3: *Government should consider working together and with the health authorities, CPSBC, CPBC and the professional training institutions to develop and implement workforce development strategies to support a coordinated multidisciplinary approach to MMT.*

Coordinated Funding Strategy

Much public and stakeholder attention to MMT is related to perceived fiscal irregularities or abuses. Understanding the issues is made more difficult by the complexity of the current funding arrangements and the lack of clarity

about accountability mechanisms related to fiscal arrangements and practice standards.

The current funding mechanisms tend to de-normalize MMT within health care services. Historically, this may have offered significant benefits to the program, but this should be carefully reviewed in light of current realities.

Recommendation 4: *Government should consider a coordinated approach to MMT funding that ensures value for money is being achieved, fiscal irregularities or abuses are addressed and a multidisciplinary system is supported.*

Works Cited

- Alexander, B., Beyerstein, B., & MacInnes, T. (1987). Methadone treatment in British Columbia: Bad medicine? *Canadian Medical Association Journal*, 136, pp. 25-7.
- Amato, L., Davoli, M., Perucci, C., Ferri, M., Faggiano, F., & Mattick, R. (2005). An overview of systematic reviews of the effectiveness of opiate maintenance therapies: Available evidence to inform clinical practice and research. *Journal of Substance Abuse Treatment*, 28, 321-9.
- Anderson, J., & Warren, L. (2004). Client retention in the British Columbia methadone program, 1996-1999. *Canadian Journal of Public Health*, 95 (2), 104-9.
- Barnett, P., & Hui, S. (2000). The cost-effectiveness of methadone maintenance. *Mt Sinai Journal of Medicine*, 67, 365-74.
- Bell, J., & Zador, D. (2000). A risk-benefit analysis of methadone maintenance treatment. *Drug Safety*, 22 (3), 179-90.
- Best, D., Man, L.-H., Zador, D., Darke, S., Bird, S., Strang, J., et al. (2001). Overdosing on opiates, Part 2. *Drug and Alcohol Findings* (5), pp. 4-18.
- Cairns, J. (2000). *Methadone-related deaths in Ontario*. Toronto: Ontario Coroner's Office.
- Calsyn, D., Malcy, J., & Saxon, A. (2006). Slow tapering from methadone maintenance in a program encouraging indefinite maintenance. *Journal of Substance Abuse Treatment*, 30, 159-63.
- Caplehorn, J., & Drummer, O. (1999). Mortality associated with New South Wales methadone programs in 1994: Lives lost and saved. *Medical Journal of Australia*, 170 (3), 104-9.
- Caplehorn, J., Dalton, M., Cluff, M., & Petrenas, A.-M. (1994). Retention in methadone maintenance and heroin addict's risk of death. *Addiction*, 89, 203-7.
- Connock, M., Juarez-Garcia, A., Jowett, S., Frew, E., Liu, Z., Taylor, R., et al. (2007). Methadone and buprenorphine for the management of opioid dependence: A systematic review and economic evaluation. *Health Technology Assessment*, 11 (9), 1-171, iii-iv.
- CPBC. (2007). *Pharmacy methadone maintenance guide*. Vancouver, BC: College of Pharmacists of British Columbia. Available at www.bcpharmacists.org/library/H-Resources/H-4_Pharmacy_Resources/5059-Methadone_Maintenance_Guide.pdf.
- CPSBC. (2009). *Methadone maintenance handbook*. Vancouver, BC: College of Physicians and Surgeons of British Columbia. Available at www.cpsbc.ca/files/u6/Methadone-Maintenance-Handbook-PUBLIC.pdf.
- Dolan, K., Shearer, J., White, B., Zhou, J., Kaldor, J., & Wodak, A. (2005). Four0year follow-up of imprisoned male heroin users and methadone treatment: Mortality, re-incarceration and hepatitis C infection. *Addiction*, 100, 820-8.

Dole, V., & Nyswander, M. (1965). A medical treatment for diacetylmorphine (heroin) addiction: A clinical trial with methadone hydrochloride. *Journal of the American Medical Association*, 193, 80-4.

Drummer, O., Opeskin, K., Syrjanen, M., & Cordner, S. (1992). Methadone toxicity causing death in ten subjects starting on a methadone maintenance program. *American Journal of Forensic Medicine and Pathology*, 13 (4), 346-50.

Faggiano, F., Vigna-Taglianti, F., Versino, E., & Lemma, P. (2003). Methadone maintenance at different dosages for opioid dependence. *Cochrane Database Systematic Review*, Issue 3. Art. No.: CD002208.

Fischer, B. (2000). Prescriptions, power and politics: The turbulent history of methadone maintenance in Canada. *Journal of Public Health Policy*, 21, 187-210.

Fischer, B., Cape, D., Daniel, N., & Gliksman, L. (2002). Methadone treatment in Ontario after the 1996 reforms: Results of a physician survey. *Ann. Med. Interne.*, 15 (7), 2S11-2S21.

Fischer, B., Rehm, J., Brissette, S., Brochu, S., Bruneau, J., El-Guebaly, N., et al. (2005). Illicit opioid use in Canada: Comparing social, health and drug use characteristics of untreated users in five cities (OPICAN study). *Journal of Urban Health*, 82 (2), 250-66.

Health Officers Council of British Columbia. (2005). *A public health approach to drug control in Canada: Discussion paper*. Victoria, BC: Health Officers Council of British Columbia.

Hubbard, R., Craddock, S., & Anderson, J. (2003). Overview of 5-year follow-up outcomes in the drug abuse treatment outcome studies (DATOS). *Substance Abuse Treatment*, 25 (3), 125-34.

Latowsky, M. (2006). Methadone death, dosage and torsade de pointes: Risk-benefit policy implications. *Journal of Psychoactive Drugs*, 38 (4), 513-9.

Lewis, D., & Bellis, M. (2001). General practice or drug clinic for methadone maintenance? A controlled comparison of treatment outcomes. *International Journal of Drug Policy*, 12, 81-89.

Lowinson, J., Payte, J., Salsitz, E., Joseph, H., Marion, I., & Dole, V. (1997). Methadone maintenance. In J. Lowinson, J. Payte, E. Salsitz, H. Joseph, I. Marion, & V. Dole (Eds.), *Substance abuse: A comprehensive text* (3rd ed., pp. 405-15). Baltimore: Williams & Wilkins.

Matheson, C., Pitcairn, J., Bond, C., van Teijlingen, E., & Ryan, M. (2003). General practice management of illicit drug users in Scotland: A national survey. *Research Reports Addiction*, 98 (1), 119-26.

Mattick, R., Breen, C., Kimber, J., & Davoli, M. (2009). Methadone maintenance therapy versus no opioid replacement therapy for opioid dependence. *Cochrane Database of Systematic Reviews*, Issue 3. Art. No.: CD002209.

Mattick, R., Kimber, J., Breen, C., & Davoli, M. (2007). Buprenorphine maintenance versus placebo or methadone maintenance for opioid dependence. *Cochrane Database of Systematic Reviews*, Issue 4. Art. No.: CD002207.

NAOMI. (2008). *Results show that North America's first heroin therapy study keeps patients in treatment, improves their health and reduces illegal activity*. Vancouver, BC: NAOMI Study. Press release issued 17 October 2008. Available at www.naomistudy.ca.

NIDA. (1995). *Methadone maintenance treatment: Translating research into policy*. Bethesda: National Institute on Drug Abuse.

Nosyk, B., & Anis, A. (2009). Medical profiteering: The economics of methadone dispensation. *Canadian Medical Association Journal*, 180 (11), 1093-94.

Nosyk, B., MacNab, Y., Sun, H., Fischer, B., Marsh, D., Schechter, M., et al. (2009). Proportional hazards frailty models for recurrent methadone maintenance treatment. *American Journal of Epidemiology*, 170 (6), 783-92.

Nosyk, B., Sun, H., Sizto, S., Marsh, D., & Anis, A. (2009). *An evaluation of methadone maintenance treatment in British Columbia: 1996-2007*. Vancouver: University of British Columbia.

Parkes, T. (2009). *British Columbia methadone maintenance treatment program: A qualitative systems review (1996-2008)*. Victoria: University of Victoria.

Paulus, I., & Halliday, R. (1967). Rehabilitation and the narcotic addict: results of a comparative methadone withdrawal program. *Canadian Medical Association Journal*, 96 (11), 655-9.

Peles, E., Schreiber, S., & Adelson, M. (2006). Factors predicting retention in treatment: 10-year experience of a methadone maintenance treatment (MMT) clinic in Israel. *Drug and Alcohol Dependence*, 82, 211-7.

Reist, D., Marlatt, G., Goldner, E., Parks, G., Fox, J., Kang, S., et al. (2004). *Every Door is the Right Door: A British Columbia planning framework to address problematic substance use and addiction*. Victoria, BC: British Columbia Ministry of Health Services.

Senay, E., Dorus, W., Goldburg, F., & Thornton, W. (1977). Withdrawal from methadone maintenance. *Archives of General Psychiatry*, 34, 361-7.

Spittal, P., Hogg, R., Li, K., Craib, K., Recsky, M., Johnston, C., et al. (2006). Drastic elevations in mortality among female injection drug users in a Canadian setting. *AIDS Care*, 18 (2), 101-8.

Strike, C., Gnam, W., Urbanoski, K., Fischer, B., Marsh, D., & Millson, M. (2005). Factors predicting 2-year retention in methadone maintenance treatment for opioid dependence. *Addictive Behaviours*, 30, 1025-8.

Wall, R., Rehm, J., & Fischer, B. (2001). The social cost of untreated opiate use. *Journal of Urban Health*, 77, 688-722.

Ward, J., Hall, W., & Mattick, R. (1999). Role of maintenance treatment in opioid dependence. *Lancet*, 353, 221-6.

Zaric, G., Barnett, P., & Brandeau, M. (2000). HIV transmission and the cost-effectiveness of methadone maintenance. *American Journal of Public Health*, 90, 1100-11.

Zarkin, G., Dunlap, A., Hicks, K., & Mamo, D. (2005). Benefits and costs of methadone treatment: Results from a lifetime simulation model. *Health Economics*, 14, 1133-50.

Zhang, Z., Friedmann, P., & Gerstein, D. (2003). Does retention matter? Treatment duration and improvement in drug use. *Addiction*, 98, 673-84.