BRITISH COLUMBIA

June 01, 2016

null
null
null, BC null

Dear :

In order to for the supplement for alcohol and drug counselling services, please have the attached Authorization Agreement (HR3028) completed.

Please return this authorization agreement by .

It is important that you provide the updated information by the above noted date or your eligibility to receive this supplement may be affected.

If you have any questions, please contact the Ministry of Social Development and Social Innovation at the number below.

Sincerely,

HR3622 (15/11/09)

Enclosures: [HR3028]

Ministry of Social Development and Social Innovation

ALCOHOL AND DRUG FEE AUTHORIZATION AGREEMENT

SR Number :

The collection, use and disclosure of personal information is subject to the provisions of the *Freedom of Information and Protection of Privacy Act*.

Date Signed (YYYY MM DD)

I, _____ authorize the Ministry of Social Development and Social Innovation
(CLIENT NAME)

to automatically deduct $ _____ for my month support allowance with the cheque for

_____ and continuing until further notice.
(MONTH/YEAR)

Please automatically submit $ _____ from my monthly support allowance to the following clinic (to pay for my alcohol and drug clinic fees):

CLINIC NAME	
CLINIC ADDRESS	
CLINIC CONTACT	CLINIC PHONE

Your Alcohol and Drug Supplement will be $ _____. The maximum amount for this supplement is $500 within 12 consecutive months. Any additional funds required for the actual cost of clinic fees will be drawn from your monthly support allowance.

Please advise your worker immediately if you stop participating in your treatment program or if you change clinics. Even if there are no changes, you will need to provide confirmation once a year of your continuing participation in treatment from the clinic you are involved with.

CLIENT SIGNATURE	CLIENT NAME (PLEASE PRINT)	DATE SIGNED (YYYY MM DD)

TO BE COMPLETED BY MINISTRY OF SOCIAL DEVELOPMENT AND SOCIAL INNOVATION	
CASE #	OFFICE CODE
EAW NAME	CASELOAD #

Supplement for Alcohol & Drug Treatment

Overview

A supplement for alcohol and drug treatment is available to eligible recipients of income assistance or disability assistance and their dependent children to provide payment for alcohol and drug counselling services.

Policy

Expand All | Collapse
All

Eligibility

Effective: December 1, 2003

Alcohol and drug counselling in BC is provided through the Mental Health and Addictions Branch of the Ministry of Health (MOH). This program funds both residential and non-residential services throughout the province. Counselling services are free to the public, and may be used by the ministry's recipients on a self-referral basis.

In addition to the MOH-funded services, a number of non-governmental organizations provide counselling services on a fee-for-service basis. The expenses for this counselling service may be approved as a pre-training preparation service for recipients of *income assistance* and *disability assistance* and their *dependent children*, provided that all of the following apply:

- government-funded counselling services are not available in the recipient's community
- the service is non-residential
- the recipient has an alcohol or drug dependency that constitutes a barrier to entering the workforce
- the ministry is of the opinion that the service to be provided will enhance the recipient's employability
- a referral to Employment Program of British Columbia will be made upon completion of the counselling service

[For maximum rate, see Rate Table: Health Supplements and Programs – Supplement for Alcohol and Drug Treatment.]

Methadone Program

Effective: December 1, 2008

Supplement for alcohol and drug treatment of up to $500 per 12-month period can be used to cover the cost of counselling services provided by a methadone program, assuming that all of the eligibility criteria for this supplement are met.

Transportation to Alcohol and Drug Treatment

Effective: December 1, 2008

Supplement for alcohol and drug treatment cannot be used to cover a recipient's transportation costs to and from counselling appointments for alcohol and drug treatment. This supplement is available only for the cost of alcohol and drug counselling services.

Procedures

Expand All | Collapse All

Issuing Supplements for Alcohol and Drug Treatment

Effective: December 1, 2003

Payment for these counselling services can be made direct to the agency upon billing or direct to the recipient with a receipt.

[For more information on methods of payment, see Related Links – Individual Case Management.]

Related Information

Expand All | Collapse All

Acts and Regulations

Definitions

Resources

Rate Tables

- All Rate Tables
- Health Supplements and Programs

Related Links

- Individual Case Management

Contacts

- Supplement for Alcohol and Drug Treatment

Health Supplements & Programs Rate Table

Updated: April 1, 2010

The asterisk indicates the most recent rate table changes

Supplement	Item	Maximum Amount
Dental	Additional amount that children and adults with the persons with disabilities designation who require anaesthetic in a hospital or private facility may be eligible for	*$1,000 of basic dental treatment per calendar year
Diet supplements	Restricted sodium diet	$10 per calendar month
	Diabetes	$35 per calendar month (April 1/07)
	Kidney dialysis (when not eligible for kidney dialysis service through Ministry of Health)	$30 per calendar month
	High protein diet	$40 per calendar month, plus $30 towards the purchase of a blender
	Gluten-free diet	$40 per calendar month
	Dysphagia	$40 per calendar month, plus $30 towards the purchase of a blender
	*Ketogenic diet	*$40 per month
	*Phenylalanine diet	*$40 per month
	Cystic fibrosis	$50 per calendar month
Medical transportation supplement	Travel allowance related to vehicle transportation	$0.20 per kilometre
	Allowance for exceptional cases where circumstances warrant a meal allowance	$4 per meal
Monthly Nutritional Supplement	Dietary items	*Up to $165 per calendar month
	Vitamins or minerals	*Up to $40 per calendar month
	Clients receiving less than this amount through appeal awards under Schedule C may apply for the monthly nutritional supplement	*$205 per calendar month
Natal supplement	Single pregnancy or birth	$45 per calendar month

Supplement	Item	Maximum Amount
	Multiple pregnancy or birth	$90 per calendar month
Optical services	Eye exam provided by an optometrist	$44.83
	Eye exam provided by an ophthalmologist	$48.90
Extended Medical Therapies	Medical Services Plan rate for extensions to acupuncture (April 22, 2008), chiropractic, massage therapy, naturopathy (April 22, 2008), podiatry and physiotherapy services	$23 per visit
Supplement for alcohol and drug treatment	Per eligible recipient	$500 per calendar year

Alcohol and Drug Counselling Services

Legal Authority

GAIN Act:	Section 2(1)
GAIN Regulations:	Schedule 12(d)&(g)

General Interpretation

Authority is provided to pay for alcohol and drug counselling services to eligible clients as a pre-training preparation service.

Policy

Alcohol and drug counselling in British Columbia is provided through the Alcohol and Drug Programs Branch, Ministry of Health. This program funds both residential and non-residential services throughout the province. Counselling services are free to the public, and may be used by the Ministry's clients on a self-referral basis.

In addition to services available through the Alcohol and Drug program, there are a number of organizations who are not Alcohol and Drug supported, but who provide counselling services on a fee-for-service basis. The expenses for this counselling service may be approved as a pre-training preparation service provided:

- government funded counselling services in the client's community are not available;
- the service is non-residential;
- the client has an alcohol or drug dependency which constitutes a barrier to entering the work force;
- the Ministry is of the opinion that the service to be provided will enhance the client's employability;
- a referral to the Ministry of Skills, Training and Labour employment and training programs will be made upon completion of the counselling service;
- the complete course of counselling will cost no more than $500.00;
- the benefit is issued no more than once in 12 consecutive months.

Procedures:

- obtain Area Manager approval
- payment for these counselling services can be made direct to the agency upon billing; or direct to the client with a receipt
- use allowance code 39 for payment
- enter resource code L on the FIM screen

When the client is no longer participating in the program, the appropriate rehab. resource close code should be entered on the client file; use resource code R if the client completes the program, S if the program is incomplete and T if there has been an interruption in the client's participation in the program.

Exceptions to full Authority:

Area Manager's approval is necessary to issue this benefit.

Page 011 to/à Page 075

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College of Physicians and Surgeons of British Columbia

Methadone Maintenance Program: Clinical Practice Guideline

February 2014

CONTENTS

Maintenance and Monitoring 14

PREFACE

The College of Physicians and Surgeons of British Columbia, with the clinical advice of the College's Methadone Maintenance Committee (MMC), administers the Methadone Maintenance Program in British Columbia under the authority of the Health Professions Act (HPA) and the Bylaws under the HPA, and in accordance with Health Canada's Drug Strategy and Controlled Substances Program.

Methadone Maintenance Program (MMP)

The objective of the Methadone Maintenance Program (MMP) is to assist physicians in safely and effectively prescribing methadone for opioid dependence.

The MMP assists physicians in the following ways:

- developing guidelines for safe and effective prescribing of methadone for opioid dependence
- providing education including workshops on prescribing methadone for opioid dependence
- facilitating preceptorships for physicians who wish to prescribe methadone for opioid dependence
- conducting peer practice assessments (PPAs) of the physicians who are authorized to prescribe methadone
- maintaining a central registry of methadone prescribers and registered patients
- making recommendations to the federal Ministry of Health regarding physicians' authorizations

Methadone Maintenance Program: Clinical Practice Guideline

This guideline addresses the prescribing of methadone for the treatment for opioid dependence—physicians prescribing methadone for analgesia (both for palliative and chronic non-cancer pain) should refer to the handbook *Recommendations for the Use of Methadone for Pain*.

These clinical guidelines are evidence-based, represent the expert opinion of the Methadone Maintenance Committee, and are intended for physicians in British Columbia who are prescribing methadone for opioid dependence.

Physicians should exercise careful clinical judgment when considering whether it is appropriate to deviate from these guidelines. Any deviations should be documented in patients' medical records, together with the rationale for those decisions.

INTRODUCTION

1. The History of Methadone

Methadone was discovered in 1938 by two German scientists, Max Bockmühl and Gustav Ehrhart, and was patented in September 1941. Bockmühl and Ehrhart were attempting to find a gastrointestinal tract antispasmodic and analgesic which would be structurally dissimilar to morphine, non-addictive, and would escape the strict legal controls placed on opioids at that time. In 1947, Harris Isbell and his colleagues, who had been experimenting extensively with methadone, discovered that methadone was beneficial in the treatment of opiate-dependent patients.[1]

Several studies from the United Kingdom in the 1940s described methadone's efficacy in reducing heroin withdrawal symptoms. Ingeborg Paulus and Dr. Robert Halliday, working with the Narcotic Addiction Foundation in Vancouver, established the first methadone maintenance treatment program in the world and published their findings in the *Canadian Medical Association Journal* in 1967.[2] In the United States, Dr. Vincent Dole and Dr. Marie Nyswander confirmed the feasibility of using methadone as a maintenance medication for heroin dependence.[3] Since then, many other studies have shown the effectiveness of using methadone as a maintenance medication for opioid dependence. These studies demonstrate a three- to four-fold increase in death rates in patients discontinuing methadone maintenance treatment.[4,5] In addition to physical, mental and social health benefits, studies have consistently shown that risk of blood-borne pathogen transmission is significantly reduced by participation in methadone maintenance treatment, even in patients failing total abstinence from illicit substances.[6]

2. Authorization to Prescribe Methadone

Methadone is a controlled drug and physicians who wish to prescribe methadone in Canada require authorization in the form of an exemption from the federal minister of health, in accordance with section 56 of the *Controlled Drugs and Substances Act*. Physicians must apply to the Methadone Maintenance Program at the College of Physicians and Surgeons of British Columbia for this exemption.

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[1] Isbell H, Wikler A, Eddy NB, Wilson JL, Moran CF. Tolerance and addiction liability of 6-dimethylamino-4-4-diphenyl-hyptanone-3 (methadon). J Am Med Assoc. 1947 Dec 6;135(14):888–94.
[2] Paulus I, Halliday R. Rehabilitation and the narcotic addict: results of a comparative methadone withdrawal program. Can Med Assoc J. 1967 Mar 18;96(11):655-9.
[3] Dole VP, Nyswander ME. A medical treatment for diacetylmorphine (heroin) addiction: a clinical trial with methadone hydrochloride J Am Med Assoc. 1965;193:646-50.
[4] Bell J and Zador D. A risk-benefit analysis of methadone maintenance treatment. Drug Saf, 2000 Mar; 22(3):179-90.
[5] Humeniuk R, Ali R, White J, Hall W, Farrell M. Proceedings of expert workshop on the induction and stabilisation of patients onto methadone. Monograph 39. Adelaide: Commonwealth Department of Health and Aged Care; 2000.
[6] Leshner AI. Science-based views of drug addiction and treatment. JAMA. 1999;282(14):1314–16.

The College then recommends and forwards physicians' names to Health Canada to be considered for approval.

The words "exemption" and "authorization" both refer to the exemption which is granted under section 56 of the *Controlled Drugs and Substances Act* and which authorizes a physician to prescribe methadone.

Physicians can apply for one of three types of authorizations to prescribe methadone for opioid dependence: full, temporary or hospitalist.

2.1 Full Authorization

The College will recommend a full authorization to Health Canada only after the following requirements have been satisfactorily fulfilled:

- attendance at the Methadone 101 Workshop sponsored by the College
- a completed Application for Authorization to Prescribe Methadone in the Treatment of Opioid Dependence
- familiarization with the *Methadone Maintenance Program: Clinical Practice Guideline*
- a preceptorship satisfactory to the MMP
- an acceptable review of your prescription profile from the PharmaNet database
- an interview with a member of the registrar staff
- an agreement to undertake a minimum of 12 hours of continuing medical education (CME) in addiction medicine each year
- an agreement to provide after-hours contact information regarding your methadone maintenance patients
- an agreement to undergo a practice assessment of your methadone maintenance practice within the first year

Contact the Methadone Maintenance Program for a list of approved preceptors.

The initial authorization is provisional and granted for one year. Continued support for this authorization is contingent upon satisfactory peer practice assessments and acceptable reviews of the prescriber's PharmaNet practitioner prescription profile. (The Renewal/Cancellation of Methadone Authorization form and the Physician's Contact Information form are available on the College website under the BC Methadone Program page.)

2.2 Temporary Authorization

A temporary authorization to prescribe methadone for up to 60 days can be obtained in the following circumstances:

- locum replacement of another authorized physician (advance notice required)
- continuation of methadone prescribing for patients in hospital when no other authorized physician is available

A completed application for either a Temporary Authorization to Prescribe Methadone as a Locum in a Clinic or Correctional Centre or a Temporary Authorization to Prescribe Methadone in a Hospital is required.

Physicians with temporary authorizations may **not** initiate patients on methadone treatment for opioid dependence and should exercise caution and consider consulting more experienced prescribers if increasing doses.

2.3 Hospitalist Authorization

Physicians caring for methadone patients in a hospital setting may apply for a hospitalist methadone authorization after satisfactorily fulfilling the following requirements:

- attendance at the Methadone 101/Hospitalist Workshop sponsored by the College
- a completed Application for Authorization to Prescribe Methadone as a Hospitalist
- familiarization with the *Methadone Maintenance Program: Clinical Practice Guideline*
- familiarization with the recommended key articles on methadone for analgesia
- familiarization with the *Recommendations for the Use of Methadone for Pain*
- an interview with a member of the registrar staff
- an acceptable review of your prescription profile from the PharmaNet database

This authorization includes a full authorization to prescribe methadone for analgesia and a limited authorization to prescribe methadone for opioid dependence, which does not include registering patients in the Methadone Maintenance Program unless their continuity of care with a community methadone prescriber is arranged prior to their discharge. Please also refer to Hospitalized Patients.

3. Pharmacology of Methadone

Methadone is a long-acting synthetic opioid which as an oral formulation is effective in treating opioid dependence. It is primarily a mu (μ) opioid receptor agonist and when administered in an adequate dose, it will prevent opioid withdrawal, reduce opioid craving and block the euphoric effects of opioids such as heroin.

3.1 Absorption

- Oral methadone is 80–95% bioavailable compared to only 30% for oral morphine.
- Methadone is rapidly absorbed following oral administration and serum levels are detectable 30 minutes post dose.

3.2 Duration of Action/Metabolism

- The time to peak plasma concentration and peak clinical effect is four hours (range of two to six hours).
- The plasma half-life averages 24 to 36 hours at steady state, but ranges from four to 90 hours.
- As a result of its long half-life, methadone may accumulate, leading to sedation and respiratory depression
- **It takes four to five days for methadone plasma levels to reach steady state after each dose change.**
- Methadone metabolism is primarily a function of liver enzyme activity involving cytochrome P450 isoforms. There are many substances that interact by inducing, inhibiting or acting as a substrate for these enzymes. This can result in clinically significant drug interactions. Genetic, physiologic and environmental factors can also act on these enzymes, leading to a high degree of variation of individual methadone responsiveness.
- Methadone is primarily excreted as an inactive metabolite (10% as unchanged methadone) primarily in urine and feces. Compromised renal function does not preclude the use of methadone, and the dosage does not need to be adjusted for patients on dialysis.
- Elimination half-life is approximately 22 hours, but ranges from five hours to 130 hours.

A list of medications metabolized by cytochrome P450 3A4 is available here.

3.3 Tolerance

- Cross-tolerance between methadone and other opioids is unpredictable.
- Tolerance to the various effects of methadone develops at different rates. Tolerance to the euphoric effects of methadone develops quickly and may be interpreted by patients as being due to an inadequate dose. Tolerance to respiratory depression is less rapid in onset and tolerance to the autonomic side effects is the slowest.
- Tolerance is lost in as little as three days.
- Methadone is potentially lethal and the risk of toxicity is increased by concomitant ingestion of alcohol and sedative-hypnotics such as benzodiazepines and Z drugs.

ADMISSION TO THE METHADONE MAINTENANCE PROGRAM

1. Criteria for Admission to the Methadone Maintenance Program

All patients being prescribed methadone for maintenance (opioid dependence) must be registered in the Methadone Maintenance Program (MMP) which is administered by the College of Physicians and Surgeons of British Columbia by agreement with the British Columbia provincial government. After an authorized methadone prescriber has assessed a patient as an appropriate candidate for methadone maintenance treatment (MMT) and has formulated a treatment plan with that patient, the patient should be registered with the Methadone Maintenance Program before MMT is initiated (unless the MMT is initiated in hospital, when the registration may be deferred until their discharge to the community).

For admission to the program the patient must meet the following inclusion criteria:

- meet DSM-IV-TR criteria for opioid dependence (the MMC opted to continue using DSM-IV-TR criteria due to the large body of literature supporting clinical outcomes using these criteria)
- have experienced adverse consequences in multiple life realms
- have undergone a documented and comprehensive evaluation to determine the risks and benefits of methadone and other treatment options
- have documented initial goals of treatment
- be informed of all other treatment options for opioid dependence so that their decision to start MMT is based on valid informed consent

These forms are available for your use:

- MMP Patient Assessment Form
- Methadone Maintenance Treatment Agreement and Consent
- Patient Registration
- Patient Transfer
- Family Physician Notification

Methadone prescribers should not hesitate to seek a second opinion when dealing with difficult management problems such as patients with chronic pain, adolescents, pregnant patients and patients with polydrug dependence. See Special Populations for more information.

2. DSM-IV-TR Diagnostic Definition of Opioid Use Disorder

Opioid dependence, as a type of substance dependence, is defined as follows:

A **maladaptive pattern of substance use**, leading to clinically significant impairment or distress, as **manifested by** three (or more) of the following, occurring at any time in the same 12-month period:

1. Tolerance, as defined by either of the following:
    a. A need for markedly increased amounts of the substance to achieve intoxication or desired effect
    or
    b. Markedly diminished effect with continued use of the same amount of the substance
2. Withdrawal, as manifested by either of the following:
    a. the characteristic withdrawal syndrome for the substance (refer to criteria A and B of the criteria sets for withdrawal from the specific substances)
    or
    b. the same (or a closely related) substance is taken to relieve or avoid withdrawal symptoms
3. The substance is often taken in larger amounts or over a longer period than was intended
4. There is a persistent desire or unsuccessful efforts to cut down or control substance use
5. A great deal of time is spent in activities necessary to obtain the substance (e.g., visiting multiple doctors or driving long distances), use the substance (e.g., chain-smoking), or recover from its effects
6. Important social, occupational, or recreational activities are given up or reduced because of substance use
7. The substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance (e.g., current cocaine use despite recognition of cocaine-induced depression, or continued drinking despite recognition that an ulcer was made worse by alcohol consumption)

3. Treatment Considerations

It is recommended that MMT be part of a spectrum of treatment focused on improving health and social outcomes. Because the majority of MMT patients are polysubstance dependent, it is important for physicians prescribing methadone to be aware of, and familiar with, a broad range of other treatment resources. The problematic use of one substance places the individual at risk of having problems with others. It is current expert opinion that MMT is compatible with abstinence-based treatment programs. In addition, lifestyle modification is an essential aspect of substance use disorders.

3.1 Detoxification

Detoxification, or withdrawal management, refers to the management of substance withdrawal in order to reduce severity of symptoms. Most MMT patients are also dependent on other substances, and these dependencies must be individually addressed in order to achieve long-term stability. In-patient or outpatient detoxification for other psychoactive substances such as alcohol, sedative-hypnotics or stimulants should be offered concurrently.

3.2 Outpatient and Day Treatment Programs

Most health authorities, community substance use services, employee assistance programs and private service providers offer a range of outpatient and day treatment programs. Physicians prescribing methadone must be familiar with outpatient programs in their community and build relationships with other care providers. Successful treatment for opioid and other addictions is based on counselling and individual or group programs, together with regular brief interventions by physicians.

3.3 Residential and Support Recovery Programs

Residential and support recovery programs vary in structure, length and mandate. Physicians practising addiction medicine must be familiar with the philosophy, entrance criteria and treatment objectives of a variety of residential programs. Many programs accept patients in the MMP and offer patients with addictions a substantial opportunity for behaviour change and long-term abstinence. These programs offer safe, supportive housing as well as aftercare for patients who have completed detoxification or who are on MMT.

3.4 Alternative Pharmacotherapies

Health Canada approved Suboxone for the treatment of opioid dependence in adults in 2008. Suboxone combines buprenorphine, a partial mu-receptor agonist which is an effective therapy for opioid dependence, and naloxone, an opioid antagonist whose inclusion is intended to limit intravenous misuse and the potential for diversion. The naloxone component of Suboxone has limited sublingual and oral bioavailability and is inactive when Suboxone is taken as prescribed.

Suboxone is contraindicated in pregnancy; however, physicians may contact Health Canada's Special Access Programme to obtain authorization for the buprenorphine-only product.

Suboxone may only be prescribed under the following circumstances:

- the physician must have an authorization to prescribe methadone for opioid dependence (this includes hospitalists)
- physicians must have completed an accredited Suboxone training program, i.e. Schering-Plough Canada's online education module at www.suboxonecme.ca, or the American Association of Addiction Medicine (ASAM) Buprenorphine and Office Based Treatment of Opioid Dependence program
- Suboxone must be prescribed on a controlled prescription form (also known as a duplicate prescription pad)

Note: Patients meeting specific criteria may receive PharmaCare coverage. Physicians may apply for coverage by completing the Collaborative Prescribing Agreement for Suboxone (http://www.health.gov.bc.ca/pharmacare/pdf/cpa-buprenorphine.pdf).

3.5 Mutual Support Groups

Mutual Support groups such as Narcotics Anonymous, Methadone Anonymous, Alcoholics Anonymous, SMART and 16-Steps, are generally very accessible and can provide continuing support and promote accountability.

3.6 Mental Health Services

The comorbidity of substance dependence and mood, thought and anxiety disorders, such as post-traumatic stress disorder is as high as 50%.

Physicians practising addiction medicine must be familiar with the identification and management of common mental illness and be aware of treatment resources in their community. It is the current standard of care that mental health and addiction be treated concurrently. For more information, see Mental Health – Concurrent Disorders.

ASSESSMENT FOR INITIATION

The methadone treating physician is responsible for patient selection, dose determination, and monitoring and documenting progress.

Newer technologies including telemedicine may reduce the barriers to access to care; however, this technology should not reduce the level of clinical care as outlined in these guidelines. Initial assessments and induction of patients must involve a face-to-face encounter and clinical examination.

The Methadone Maintenance Program provides the following forms for your use:

- MMP Patient Assessment Form
- Methadone Maintenance Treatment Agreement and Consent
- Patient Registration
- Patient Transfer
- Family Physician Notification

1. Assessment Checklist

Assessment of substance-dependent patients must include the following:

1. a complete medical history, including a chronological substance-use history, confirming the diagnosis with documentation of opioid dependence, other substance dependence, and process addictions diagnoses
2. a family history including addictions history
3. a biopsychosocial assessment with relevant information regarding the patient's current and past social situation, including supports and stressors
4. a complete physical examination with special attention to signs of opioid withdrawal, needle tracks, abscesses, jaundice and hepatosplenomegaly
5. urine drug test (UDT)
6. a laboratory assessment which includes the following:
    - CBC
    - liver function panel
    - HIV, hepatitis A, B and C serology
    - syphilis serology
    - TB testing, when appropriate
    - pregnancy test, on all women of child-bearing age
    - EKG if indicated
7. documented communication with the patient's prior methadone prescriber and family physician
8. documented review of the PharmaNet prescription profile

9. documented treatment goals and plans, with a signed treatment agreement

2. Treatment Goals and Plans

Treatment goals are objective outcomes that the patient and physician expect will result from methadone maintenance treatment. Treatment plans describe the steps required to achieve the goals.

Once a goal has been defined, a brief outline of the plan for achieving that goal should be documented to help direct patient care. The following table represents examples of treatment plans and goals.

Table 1: Treatment goal and plans example

GOAL	PLAN
Stop illicit substance use Barriers are unsafe housing, drug-dealing partner and lack of non-chemical coping skills. (Recognizing 20% of patients will never reach total abstinence from illicit opioids, documented reduction is also a reasonable goal)	• review weekly and adjust methadone dose as necessary • refer patient to counsellor and social worker regarding safe housing and access to a women's shelter • monthly treatment team meeting to review progress • document reduction in illicit opioid use
Address health concerns Patient is HIV positive, has multiple skin infections and recurrent cellulitis, as well as untreated mental illness	• HIV work-up and consider referral to immunodeficiency specialist • contact street nurse re: daily change of dressings and antibiotic administration • refer to community mental health service with referral letter

3. Problematic Alcohol Use

1. Problematic alcohol use is the most common problematic substance use disorder.
2. Comorbidity – up to 40% of methadone-maintained populations will meet criteria for problematic alcohol use at any one time. It is critical that all patients be screened for problem drinking at initiation and intermittently.

3. There is evidence that between 5% and 50% of patients[7,8,9] enrolled in MMT will meet criteria for alcohol misuse disorder at any one time. Additionally, alcohol misusing methadone maintained patients demonstrate poor MMT outcomes and experience higher morbidity and mortality rates than non-alcohol abusing methadone maintained patients.
4. Screening, diagnosis and management protocol is available at the following link: http://www.bcguidelines.ca/alphabetical.html#problem_drinking

4. Process (Behavioural) Addictions

Process addictions commonly occur with substance use disorders and share the common characteristics:

- cravings
- loss of control
- compulsive use
- use despite consequences

Examples of process addictions include, but are not limited to, the following areas:

- gambling
- sexual behaviours such as use of pornography, Internet or sex trade workers
- compulsive shopping, spending, or shoplifting
- eating disorders
- compulsive exercise or work behaviours

Given the connection between process addictions and substance use disorders, screening of patients for process addictions at the initial evaluation and on an intermittent basis is recommended. Evaluation for process addictions should be incorporated into a yearly review, or used in the evaluation of recurrent relapse or failure to progress through the stages of recovery.

The following clinical screening tools are useful in assessing process addictions:

1. Gambling
    - South Oaks Gambling Screen
    - Canadian Problem Gambling Index

[7] Nava F, Manzato E, Leonardi C, Lucchini A. Opioid maintenance therapy suppresses alcohol intake in heroin addicts with alcohol dependence: Preliminary results of an open randomized study. Progress in Neuro-Psychopharmacology & Biological Psychiatry 32 (2008) 1867-1872.
[8] Srivastava A, Kahan M, Ross S. The effect of methadone maintenance treatment on alcohol consumption: A systemic review. Journal of Substance Abuse Treatment 34 (2008) 215-223.
[9] Rengade C, Kahn J, Schwan R. Misuse of Alcohol among Methadone Patients. The American Journal on Addictions, 18: 162-166, 2009.

- Gamblers Anonymous 20 Questions

2. Sexual addiction
    - Sexual Addiction Screening Test (SAST)

MAINTENANCE AND MONITORING

1. Methadone Dosing

As of February 2014, methadone for opioid dependence will be dispensed in a new formulation called Methadose, with a strength of 10 mg/ml.

1.1 Initiation (Induction)

Methadone for opioid dependence should initially be prescribed for ingestion under supervision ("daily witnessed ingestion" or "DWI") at the pharmacy. There is no clear relationship between the amount of opioid used and the dose of methadone that will be required for initiation.

The following factors will affect the amount of the initial dose required:

- amount, concentration and purity of opioid used
- accuracy of the medical and drug use history
- variation in rates of methadone metabolism
- variation in opioid cross-tolerance to methadone

Equi-analgesic tables for converting opioid-using patients to methadone are unreliable. Such tables are **not** recommended for initiating patients onto methadone maintenance. Methadone blood levels will continue to rise for up to four to five days after starting or increasing a dose due to its long half-life. At day three (48 hours after the first dose), an individual's methadone blood level will be 87.5% of steady-state dose.

Table 2: Initiation doses

Level of tolerance	Recommended daily starting dose
Non-tolerant or opioid-naive This category includes patients not currently using opioids but who are at risk of relapse.	5–10 mg/day
Unknown tolerance This category includes patients known to be using other sedative drugs or alcohol.	10–20 mg/day

Level of tolerance	Recommended daily starting dose
Known tolerance	20–30 mg/day

During initiation, patients should be seen frequently (at least weekly) and doses should not be adjusted if patients have not been seen. It is important to start with a safe initial dose which does not exceed the maximum recommended starting dose of 30 mg/day.

Most deaths occur during initiation due to too rapid dose escalation. Initiation outside of the above recommended ranges may result in patient deaths which have been associated with starting doses as low as 30 mg.

1.2 Titration

Methadone can cause fatal respiratory depression because of its long half-life and the consequent risk of drug accumulation. The dosage must therefore be titrated carefully.

Risk factors for methadone toxicity include the following:

- use of other central nervous system (CNS) depressants, e.g. benzodiazepines and alcohol
- lack of tolerance, i.e. recent detox, discharge from jail or treatment centre
- use of medications that affect methadone metabolism
- respiratory illness
- decompensated liver disease
- advanced biological age

Note the following:

- dose increases should be no more than 5–10 mg at a time
- the interval between dose adjustments should never be less than five days, but may need to be longer due to the above risk factors
- patients should be seen frequently (at least weekly) during titration phase

If physicians wish to accelerate treatment, a daily clinical reassessment of the patient at three to four hours post-ingestion (peak methadone blood level) for the first three to five days after initiation or dose adjustment is required. Prescribers should not allow weekends to interrupt this process and should select a start date accordingly.

1.3 Stabilization

An effective maintenance dose:

- eliminates withdrawal symptoms for more than 24 hours
- blocks the euphoric effects of opioids
- reduces or eliminates drug craving
- does not induce excess sedation

An adequate dose should be prescribed. Those who receive a dose of 40 mg a day or less are five times more likely to drop out of treatment prematurely than patients who receive a dose of 60 mg or more.[10]

Once a daily dose of 80 mg is reached further dose increases should be made with caution, not exceeding 10 mg every five to seven days but more slowly in the presence of the risk factors noted above.

Most patients will achieve stability on maintenance doses of 60 to 120 mg daily.

Methadone doses must always be individualized and based on clinical response.

1.4 Split Doses

Split doses may be used in symptomatic patients who are pregnant or who demonstrate rapid metabolism. Less than 5% of patients are rapid metabolisers and this should be documented with peak and trough methadone levels. Another common cause of rapid metabolism is use of concurrent medications which induce cytochrome P450 3A4 enzymes.

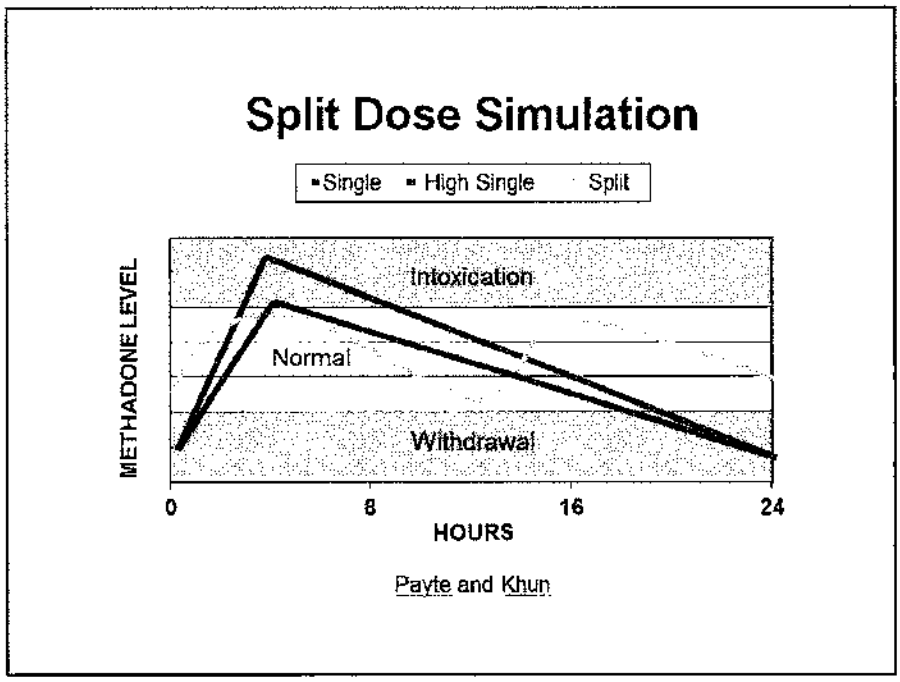
A list of medications metabolized by cytochrome P450 3A4 is available here.

- Rapid metabolizers generally experience symptoms of opioid withdrawal within 12 hours even with dose escalation; methadone dose increases results in sedation with no alleviation of withdrawal symptoms.
- Split doses should not be provided in the absence of laboratory evidence of rapid metabolism because of the difficulty of ensuring twice daily witnessed ingestion and the risk of diversion of the second dose.

[10] Ball JC, Ross A. The effectiveness of methadone maintenance treatment: patients, programs, services, and outcomes. New York: Springer-Verlag; 1991.

- Rapid metabolism is confirmed by measuring serum trough (prior to ingestion) and peak (four hours post-ingestion) methadone levels. A peak to trough ratio greater than 2:1 is consistent with rapid metabolism.
- Split dose transition: day 1 = 100% of original daily dose and 50% of the original daily dose to take in 12 hours; day 2 = 50% of original daily dose every 12 hours.

Figure 1: Split dose simulation



1.5 Missed Doses

Tolerance is rapidly lost when methadone ingestion is interrupted or discontinued. Pharmacists are required to notify physicians of missed doses but physicians must document review of PharmaNet profiles.

Suggested Protocol for Managing Missed Doses

a. **One or two days missed**
No change in dose is required as long as there is no other reason to withhold methadone. The reasons for the missed doses should be discussed and documented at the next visit

b. **Three or four consecutive days missed**
Methadone should be held until the patient has been reassessed by a physician. The remainder of the prescriptions should be cancelled. Loss of tolerance may occur in as little as three days, and the usual dose may be excessive.
    - dose of 30 mg or less – continue same dose
    - dose greater than 30 mg – restart at 50% of the usual dose, but the reduced dose should be no less than the initial dose of 30 mg unless there is sedative-hypnotic or alcohol use
    - after tolerance to the reduced dose is demonstrated, the dose can be rapidly increased (a maximum of 10 mg per day). A slower dose escalation is suggested for patients with an unstable clinical picture or with concurrent sedative or hypnotics use. During this rapid re-titration, the patient should be reassessed at least every two days until a stable dose has been re-established.

c. **Five or more consecutive days missed**
Restart at a maximum of 30 mg of methadone, then titrate with frequent re-evaluation until stable.

The reasons for the missed doses should be discussed and documented in the clinical records. The treatment plan may need to be updated.

1.6 Dosing Precautions

1.6.1 Side Effects of Methadone

In addition to profound sedation, respiratory depression and coma other side effects are:

- bradycardia and hypotension
- constipation
- perspiration
- endocrine effects/depressed libido
- xerostomia (dry mouth)
- sleep disturbance
- dysphoria
- dyspepsia
- opioid-induced edema
- pruritus

Any of these side effects may occur during chronic opioid therapy but often diminish with time. Prescription medications may be required to treat these symptoms.

1.6.2 Toxicity

Patients at risk for methadone toxicity include those who concurrently use alcohol, sedative-hypnotics (including benzodiazepines), stimulants, or medications that interfere with methadone metabolism. An overdose can result from sudden cessation of a drug that induces methadone metabolism. There have been reports of torsades de pointes cardiac arrhythmia in patients taking high dose methadone. It is recommended that patients who have cardiac disease, who are taking medications that prolong the QT interval or have metabolic concerns known to cause QT interval prolongation, should have an electrocardiogram (ECG) reviewed prior to starting methadone. The ECG should be repeated as clinically indicated. In patients with no other risk factors for cardiac arrhythmia, an ECG should be done if the dose of methadone exceeds 150 mg and repeated when the patients' clinical status changes.

A list of drugs associated with QT interval prolongation is available here.

QTc intervals greater than 450 msecs should prompt review of methadone doses for other potential causes including medications which prolong QTc. Physicians should discuss the clinical implications with their patient and consider dose reduction and/or cardiology consultation.

1.6.3 Fatal Overdoses

Fatal overdoses most often occur during initiation or dose escalation or resulting from changes in prescribed medications or illicit substance use. It is essential that constant communication occurs between treating physicians to ensure that prescribed medication changes are made safely.

Fatal overdoses of methadone often occur in individuals who have acquired methadone from other individuals for whom it was prescribed. Therefore, it is important for the physician to be aware of the risk of diversion of prescribed methadone and to take responsibility for ensuring that the methadone they prescribe as **carries** is actually being taken by the patient.

Fatal overdoses are also often associated with concurrent use of:

- sedative-hypnotics such as benzodiazepines
- alcohol
- cocaine

Prescribing physicians should be aware of factors such as the long half-life of methadone, variable rates of methadone metabolism and variation in patients' tolerance levels that can potentially lead to overdose. During the induction phase, patients are likely to continue to use illicit drugs. Physicians should closely monitor patients during induction and caution patients about the risk of overdose if certain illicit drugs are continued.

Physicians must document review of PharmaNet profiles on a regular basis.

2. Urine Drug Testing (UDT)

Urine drug testing is the standard of care in methadone programs, because it provides an essential tool for the interpretation of clinical status. UDT answers three questions:

- Is the patient taking the prescribed medications?
- Is the patient taking other drugs/substances?
- Is the patient taking steps to conceal use?

2.1 When and Why to Order UDT

UDT must be obtained at the initial assessment as it provides information about current drug use, which is essential in the treatment planning process. The absence of opioids in the urine does not preclude admission to the MMP. For example, an opioid-dependent patient who is currently abstinent but assessed to be at high risk of relapse and having a negative UDT, may be a good candidate for the MMP. UDT should be performed at least monthly until the patient is stable.

Patients who take methadone as DWI may be monitored with UDT as clinically indicated.

Patients receiving carries should have random UDT on a regular basis and refusal to comply with UDT should result in reassessment and possible return to DWI as a safety precaution.

2.2 Method of Collection

The BC Methadone Program provides guidelines for urine collection.

2.3 Urine Toxicology

Either point of care (POC) or laboratory testing is appropriate and the decision on which to use would be an assessment of advantages and disadvantages of your practice. It may be helpful to discuss with your local laboratory service. Point of care UDT for methadone maintenance can be billed to Medical Services Plan (MSP) under fee code P15039 and covers seven substances:

- amphetamines
- benzodiazepines
- cocaine metabolites
- opiates
- oxycodone

- buprenorphine
- methadone metabolites

Laboratory UDT will typically detect the following substances, but you should check with your local laboratory service:

- amphetamines (e.g. amphetamine, dextro and methamphetamine, MDMA (Ecstasy))
- benzodiazepines (e.g. diazepam, oxazepam, temazepam, triazolam)
- cocaine metabolite (e.g. benzoylecgonine)
- methadone metabolite (e.g. EDDP)
- opiates (e.g. heroin metabolite, morphine, codeine)

Common options include:

- "confirm – if positive"
- oxycodone
- buprenorphine
- cannabinoids
- fentanyl

The standard amphetamine screen does not detect methylphenidate (Ritalin).

The standard benzodiazepine screen does not reliably detect clonazepam or lorazepam and will not detect the Z drugs (zopiclone, zolpidem, zaleplon).

The standard *opiate* screen does not detect synthetic *opioids* such as oxycodone, hydrocodone, meperidine fentanyl—these tests must be ordered individually. Avoid ordering "opioids" or using trade names.

Hydromorphone may produce positive opiate screen in high doses and it is currently not available as a POC test.

Buprenorphine needs to be specifically requested.

Urine toxicology for alcohol is unreliable due to the rapid rate of metabolism, but ethyl glucuronide (EtG) can detect alcohol use for one to two days.

Confirmatory testing (GC/MS) is expensive and should only be ordered if the result will alter management. It is also expensive to order uncommon substances and before doing so consider consultation with a laboratory physician.

Testing for adulterants and sample dilution is not routinely performed: most laboratories will automatically test for creatinine, but only if a specimen appears clear and colourless. Creatinine levels between 0.18 and 1.8 mmol/L suggest dilution, and levels less than 0.18 mmol/L suggest substitution.

Relevant information is available in the Ministry of Health Guidelines and Protocols Advisory Committee document titled *Methadone Maintenance Therapy (MMT) Program: Urine Drug Testing of Patients*.

3. Carry Privileges

Patients starting MMT must ingest methadone in the pharmacy under the supervision of a pharmacist (i.e. DWI). Patients who are biopsychosocially stable and who demonstrate appropriate UDT may be granted carries.

A "carry" refers to patients receiving doses of methadone to be taken home for self-administration. The initial dose of a carry prescription is always witnessed.

The decision to initiate carries can only be made by the physician. The reasons for granting carry privileges must be documented. Physicians must ensure that carries are safe for both patients and the public. A discussion around safe storage of methadone must occur. Unsafe storage and diversion may result in lethal consequences.

3.1 Criteria for Initiating Methadone Carries

3.1.1 Biopsychosocial Stability

- Patients should be established on a stable methadone dose for at least four weeks.
- Patients should have demonstrated social, cognitive and emotional stability as confirmed by attending all scheduled appointments, no missed doses, improved social relationships or returning to work or school.
- Patients medical records should document the interpretation of appropriate UDTs for a minimum of 12 weeks.

3.1.2 Safe Methadone Storage

- Physicians who prescribe methadone as carries are responsible to make patients aware that this medication can be very dangerous especially to opioid-naive people and children.
- Methadone should be stored in locked containers or cabinets.
- Carries should **not** be provided if safe storage cannot be ensured.

3.2 Carry Schedule

There is evidence that the effectiveness of MMT can be enhanced by allowing carry privileges. Progressive carry privileges should be dependent on the patient's increasing stability; reduction or discontinuation of carry privileges should occur with evidence of instability. Criteria for assessing stability should be transparent and consistent.

Carry schedules should start with a one-day carry, progressing to additional carry days every month or two months. The first dose should always be witnessed in the pharmacy on the day the prescription is picked up. Most stable patients are established on a twice-weekly witnessed ingestion. This is a reasonable balance between safety and patient inconvenience.

Patients receiving carries must be seen at least monthly and provide unscheduled (random) UDTs.

3.3 Exceptions to Carry Guidelines

Exceptions may be granted at the discretion of the prescribing physician. Exceptions should only be initiated as a trial and be reviewed to ensure benefits outweigh risks to the patient and to the public. The reason for any exception to the carry guidelines must be documented.

3.4 Prescriptions for Carries

Methadone prescriptions must include the total methadone dose, the daily methadone dose, the first and last dates of the prescription, and, if carries are allowed, the number of days the patient is required to attend the pharmacy each week for witnessed ingestions.

3.5 Reassessment of Carry Privileges

Patients who demonstrate instability **must** be reassessed. Signs of instability include:

- evidence of non-prescribed psychoactive substance use
- missed appointments with physicians, counsellors or support groups
- missed methadone doses
- requests for increasing a previously stable methadone dose
- reports of lost, spilled, stolen or vomited methadone
- non-attendance for random UDT

These last two points may indicate diversion. Physicians are responsible to their patient and the public to take appropriate steps to minimize the possibility of diversion of all prescription opioids including methadone.

When there is evidence of instability the physician may reduce the number of carries per week or return to daily witnessed ingestion depending on the extent and duration of instability. Carry privileges may gradually be reinstated once patients demonstrate evidence of stability.

4. Counselling

Many methadone patients struggle with a number of challenges, such as poverty, lack of education, exposure to violence, poor nutrition, serious physical or mental health problems and involvement with the criminal justice system. These problems are not addressed with the provision of methadone alone.

Methadone programs that do little more than provide a methadone prescription are inadequate; methadone programs are expected to incorporate a comprehensive biopsychosocial and spiritual approach to treatment.

When counselling is integrated into methadone maintenance programs, there are significant reductions in drug use.[11] It is important for methadone prescribers not to adopt the perception that counselling is a task to be taken on exclusively by other staff or caregivers. All MMT physicians share this significant responsibility as part of their overall mission to facilitate treatment and, ultimately, recovery.

4.1 The Methadone Prescriber's Role

In order to assist the patient in meeting treatment goals, methadone prescribers **must** establish trusting, therapeutic relationships with their patients. Physicians need to create non-judgmental, collaborative environments in which patients feel safe to discuss their concerns. If positive relationships do not develop, the methadone maintenance program will have minimal benefit.

Once constructive relationships have been established, physicians must work with patients to identify aspects of each patient's life that could be changed or modified to benefit the patient. These treatment goals should be identified collaboratively between the patient and the physician. Many appropriate treatment goals are not necessarily focused on drug-using behaviour. For example, patients may wish to move to better or safer housing, improve their general health, enrol in training programs, learn better communication skills, learn relaxation techniques or improve the quality of their personal relationships.

Newer technologies including telemedicine may reduce the barriers to access to care; however, this technology should not reduce the level of clinical care as outlined in these guidelines. Initial assessments and induction of patients must involve a face-to-face encounter and clinical examination.

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[11] McLellan AT, Arndt IO, Metzger DS, Woody GE, O'Brien CP. The effects of psychosocial services in substance abuse treatment. JAMA. 1993 Apr 21;269(15):1953–9.

After goals have been identified, methadone prescribers should work with patients to develop treatment plans to meet these goals. This progress should be monitored and outcomes documented.

Depending on each patient's circumstances, physicians may opt to work in collaboration with counsellors, or may refer patients to independent counselling agencies or self-help groups such as Alcoholics Anonymous (AA) or Narcotics Anonymous (NA) and Self-Management and Recovery Training (SMART). Many other specialized resources may be available to aid methadone patients. Physicians are expected to familiarize themselves with the full spectrum of services available to their patient population through their local health authorities, and are encouraged to refer their MMT patients to appropriate community treatment programs, support groups and counsellors (see also Community Substance Use Services). Whatever resources are chosen, physicians should be aware of the issues each patient is attempting to address and what progress has been made. This information should be incorporated into the patient's treatment plan.

Regardless of where the patient is engaged in counselling, the physician should communicate with the counsellor (with the patient's consent), document and play an active role in the process.

The most important element of treatment is ensuring that the patient is engaged in the treatment, rather than the particular therapeutic model employed or the details of the treatment.

4.2 Brief Interventions

Methadone prescribers can effectively use frequent brief interventions to instill motivation in patients who lack self-motivation. Substance-dependent patients are often described as lacking motivation to change, especially if that change requires some self-organization.

Effective therapeutic relationships are best provided where the same clinicians are consistently available to the patient.

The following are examples of positive brief interventions that address different barriers to change in patients' lives:

1. Building a therapeutic relationship
    - Demonstrate sustained interest and concern for patients' progress.
    - Schedule regular visits and ensure that two-way communication exists.
2. Education
    - Provide factual drug information and information on post-acute withdrawal syndrome.
    - Educate patients regarding the symptoms of impending relapse, such as exhaustion, complacency, impatience, dishonesty, self-pity, frustration, and depression.
    - Discuss behaviours such as denying, minimizing, rationalizing, intellectualizing and compartmentalizing.

3. Goal planning
    - Consider all areas of patients' lives, not just substance use issues.
    - Prepare and document plans on how to avoid drug using situations.
    - Identify and help remove impediments to change, such as the need for childcare or transportation.
    - Remind patients that it is better to reach a modest goal than to aim for, but fail to reach, a more ambitious target. Coach patients to take small steps on the road to recovery.
4. Promoting self-awareness and positive behaviours
    - Identify internal and external triggers for relapse.
    - Avoid dwelling on failures. Help patients take pride in and build on their successes.
    - Encourage harm-reduction behaviour.
    - Encourage the development of self-esteem, which is the primary ingredient necessary for any successful therapy.

4.3 Transtheoretical Model of Change

The process of change has been conceptualized by J.O. Prochaska and C.C. DiClemente as a series of stages through which individuals may move cyclically until permanent change has occurred. These stages are as follows:

- pre-contemplation
- contemplation
- preparation
- action
- maintenance
- relapse

Motivational interventions must match the patient's stage of change. Patients will quickly become frustrated when the intervention offered is out of step with their own view of the problem. For example, if a patient has only just started to weigh the pros and cons of whether or not a particular issue is a problem (the contemplation stage), recommending a particular solution (action stage) will only elicit resistance and be counterproductive.

The table titled Appropriate Motivational Strategies for Each Stage of Change suggests several interventions for each stage of change.

4.4 Community Substance Use Services

All publicly funded treatment facilities located throughout British Columbia fall under the jurisdiction of the health authorities. The range of options for treatment of substance dependence includes outpatient counselling services, detoxification, intensive residential treatment, support recovery and other forms of

supportive housing. Many of these ancillary treatment options are available to patients on methadone. Methadone treatment is much more successful in preventing drug-related harm, reducing drug use and fostering long-term recovery from substance dependence when counselling is included as part of the treatment. Methadone prescribers and clinics are strongly urged to take advantage of the resources available to their patients and to refer appropriate MMT patients to community treatment facilities, support groups and counsellors for additional support.

5. Documentation of Benefits

Not every opioid-dependent patient will benefit from MMT. Like any other medical treatment, there are risks and benefits associated with this treatment. Methadone prescribers must clearly document the benefits derived from MMT in each patient's chart, and also develop and record a treatment plan outlining how further benefits (goals) are to be achieved. Documenting the benefits of MMT is the standard of care of MMT. In addition to recording the dose of methadone provided at each visit, reference to parameters of benefit and current treatment plans should be recorded.

5.1 Categories of Benefits

The benefits of methadone maintenance treatment fall into seven categories. Methadone prescribers may find the following list useful for assessing their patients' progress, and for formulating and monitoring treatment plans:

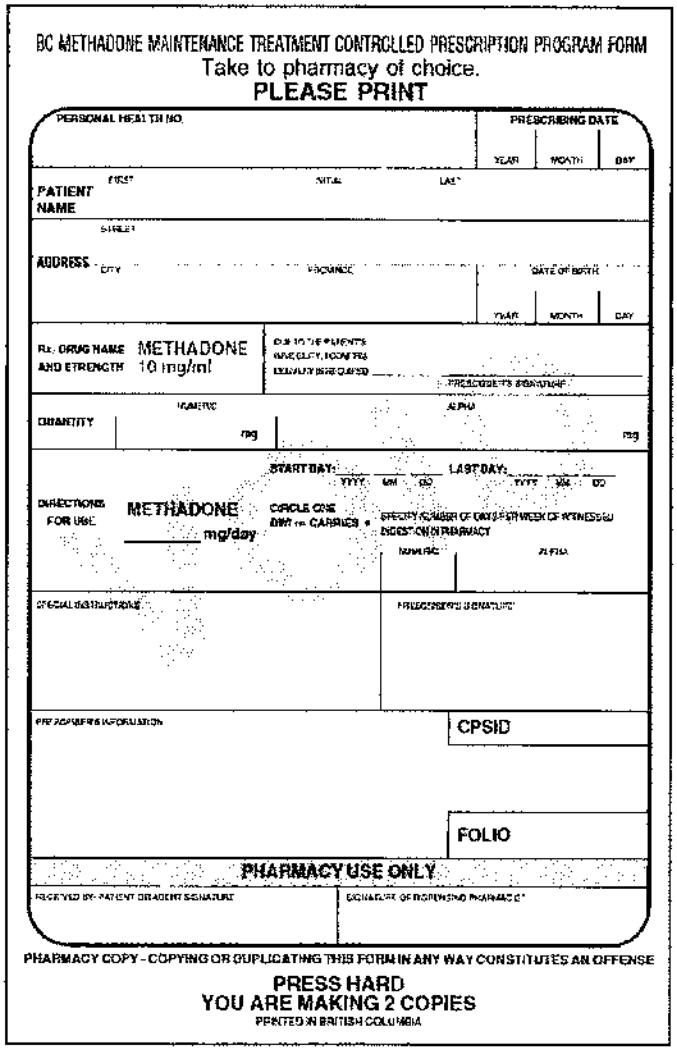
1. reduction or cessation of opioids use, particularly intravenous
2. reduction or cessation of other psychoactive substance use
3. improved mental and physical health
    - decreased incidence of concomitant infections such as endocarditis, osteomyelitis, and cellulitis, with consequently reduced need for hospitalization
    - decreased emergency room visits for drug-related complications
    - improved mental health outcomes
    - improved hepatitis C (HCV) and HIV clinical parameters
    - improved engagement with primary care
    - improved nutrition and weight gain
    - improved pregnancy outcomes
4. decreased involvement with the criminal justice system
5. improved living situations – end-stage opioid dependence often results in homelessness or unsafe living conditions; methadone maintenance patients should be encouraged to seek drug-free accommodation, as this is essential for successful recovery; improved living situations might include an environment with sober friends, or safe long-term, drug-free housing as well as other forms of supportive housing
6. improved social and personal relationships
7. improved vocational and employment opportunities

8. patients who attain improved medical and social stability are much more likely to connect with social agencies to gain access to financial support; they are also more likely to be considered for educational and training programs which may be necessary for eventual employment

6. Prescriptions for Methadone Maintenance

1. Methadone maintenance prescriptions must be written only on designated methadone maintenance controlled prescription forms (see figure 2). **Note that these prescriptions will be considered void if the preprinted text is altered. It is permissible to mark an "x" in the home delivery box if you do not want to authorize home delivery.**

Figure 2: Methadone maintenance controlled prescription form


BC METHADONE MAINTENANCE TREATMENT CONTROLLED PRESCRIPTION PROGRAM FORM
Take to pharmacy of choice.
PLEASE PRINT
PERSONAL HEALTH NO.
PRESCRIBING DATE
YEAR MONTH DAY
PATIENT NAME
FIRST INITIAL LAST
ADDRESS
STREET
CITY
PROVINCE
DATE OF BIRTH
YEAR MONTH DAY
Rx: DRUG NAME AND STRENGTH METHADONE 10 mg/ml
DOSE IS THE PATIENT'S MAXIMUM DAILY DOSE UNLESS OTHERWISE INDICATED
PRESCRIBER'S SIGNATURE
QUANTITY
NUMERIC
mg
ALPHA
mg
START DAY: YYYY MM DD
LAST DAY: YYYY MM DD
DIRECTIONS FOR USE METHADONE mg/day
CIRCLE ONE DAILY or CARRIES
SPECIFY NUMBER OF DAYS PER WEEK OF WITNESSED DOSE ON PREMISES
NUMERIC
ALPHA
SPECIAL INSTRUCTIONS
PRESCRIBER'S SIGNATURE
PRESCRIBER'S INFORMATION
CPSID
FOLIO
PHARMACY USE ONLY
RECEIVED BY - PATIENT OR AGENT SIGNATURE
SIGNATURE OF DISPENSING PHARMACIST
PHARMACY COPY - COPYING OR DUPLICATING THIS FORM IN ANY WAY CONSTITUTES AN OFFENSE
PRESS HARD
YOU ARE MAKING 2 COPIES
PRINTED IN BRITISH COLUMBIA

2. The regular controlled prescription form is to be used for all prescriptions for methadone for analgesia, as well as prescriptions for formulations of methadone other than Methadose (such as Metadol tablets) being prescribed for MMP patients for reasons such as travel.
3. As of February 2014, the standard concentration of methadone for maintenance purposes is 10 mg/ml.
4. The methadone maintenance controlled prescription form must specify the following:
    a. daily dosage in mg, with inclusive start and stop dates
    b. if the patient is restricted to daily witnessed ingestion (DWI) in pharmacy or if carry privileges are allowed
        i. if carry privileges are allowed, physicians must specify the number of witnessed ingestions
        ii. if specific dates are not indicated by the physician on the methadone maintenance controlled prescription form, the days for witnessed ingestion are set to maximize the number of days between witnessed ingestions by the College of Pharmacists of British Columbia
5. If any change occurs prior to the completion of a current prescription, a new prescription must be issued and include instructions to cancel the previously issued prescription.
6. Physicians' copies of the controlled prescription forms must be retained by the physician and must be identical to the copies issued to the patients.
7. Prescriptions for methadone may only be faxed under extenuating circumstances and should be communicated to the pharmacist. In these exceptional cases, the original prescription must be sent to the pharmacy by the next business day.
8. The use of previously signed blank prescription forms is unacceptable.
9. Optimal methadone prescribing occurs when good communication exists between physicians other health-care providers and pharmacists. Physicians must provide a contact number for the use of other health-care providers involved in the care of their registered MMP patients.

DISCONTINUATION OF METHADONE MAINTENANCE TREATMENT

There is compelling evidence that patients who remain in long-term MMT continue to derive benefit. There is also evidence that the majority of patients who discontinue MMT relapse to non-medical opioid use within one year.

Methadone maintenance treatment may, however, be discontinued for a variety of reasons:

- treatment goals have been achieved and patient wishes to withdraw
- treatment goals not achieved but patient wishes to withdraw anyway
- involuntary dismissal from care

When MMT is discontinued, please submit a Patient Cessation of Treatment form providing information, if possible, about the reasons for discontinuation of treatment.

1. Discontinuation in Stable Patients: Treatment Goals Achieved

Optimum benefits from MMT are not realized for at least a year. Generally, patients who have been on the Methadone Maintenance Program (MMP) for two or three years will have better outcomes when tapered off methadone than those who start the tapering process before two years of treatment.

In order to reduce the risk of relapse, patients should be encouraged to stay in MMT, although the decision whether or not to discontinue methadone ultimately lies with the patient. The following goals are associated with a reduced risk of relapse while engaged in MMT and following discontinuation:

- long-term abstinence from opioids and other psychoactive drugs
- development of non-chemical coping skills
- stable housing
- stable mental and physical health
- development of supportive relationships with non-drug users
- stable source of income

Patients who continue to benefit from methadone and do not wish to be tapered from methadone should not be pressured to do so.

Literature suggests that the maximum weekly reduction of methadone should be no more than 5% of the total dose in order to minimize withdrawal symptoms and the risk of relapse. Patients frequently request more rapid tapering, and it is important that physicians explain the dangers of rapid tapering. Tapering should be undertaken as a trial. Patients who feel at risk or relapse to opioids or decompensate in other aspects of their lives during or after tapering should be offered re-entry to MMT and re-stabilized. Patients should not be penalized for unsuccessful tapering from MMT.

2. Discontinuation in Unstable Patients: Treatment Goals Not Achieved

Some patients choose to taper methadone despite its benefits even though they are not yet fully stable. In this case, tapering will place patients at high risk for relapse. The physician and counselling team should explore the patient's motivation for tapering and provide alternative treatment options, including Suboxone. Physicians may recommend continuation in MMT, but if patients still insist on withdrawing from methadone, the patient and physician should prepare a plan for a trial of tapering, taking into consideration the relevant risks. Patients who relapse to non-medical opioids, become unstable, or alter their decision to taper at any time should be encouraged to re-engage MMT and return to a stabilizing dose.

3. Involuntary Dismissal

Patients not demonstrating objective benefits from MMT should have their treatment plans re-evaluated and be offered all reasonable interventions, including transfer to another methadone treatment provider. Should they still continue to fail to demonstrate objective benefits and all interventions have failed, they should be tapered from MMT and offered alternative treatment. Discontinuation of methadone should not result in disruption of patients' use of available primary care or mental health services.

Patients who are in violation of significant sections of their contracts should be tapered off methadone at a reasonable schedule. However, if patients are verbally abusive or threaten clinic staff with violence, this schedule can be accelerated at the discretion of the prescriber. If a physician feels unsafe while treating a patient, the physician can provide the patient with a two-week DWI prescription and discontinue the physician-patient relationship.

4. Transfer of Care

The patient or the physician may decide that the responsibility for prescribing methadone should be transferred to another methadone prescriber. The patient must therefore be registered with the new

prescriber, who is responsible for completing the transfer form and submitting it to the Methadone Maintenance Program.

The physician assuming care of the patient is responsible for contacting the previous MMT prescriber in order to obtain appropriate clinical information and verify drug dosage and transfer date. Mutual agreement regarding the transfer date is critically important to ensure that a double dose is not given. It is not sufficient to communicate with the previous prescriber merely by leaving messages or contacting the physician after MMT has begun. The patient's new physician may not prescribe methadone until the completed form is submitted and approved by the BC Methadone Program at the College.

Patients who have recently been released from correctional facilities will have been transferred to the correctional facility physician and need to be transferred back to their previous community prescribers. If there is any uncertainty about a patient's registration status, physicians are encouraged to contact the BC Methadone Program so that previous methadone prescribers, if any, can be contacted to facilitate continuity of care. A review of the PharmaNet profile can also provide information on previous methadone prescribers.

In all cases, the new methadone prescriber must perform an updated comprehensive biopsychosocial assessment and physical examination with appropriate laboratory investigations and create a treatment plan that takes into account all the previous MMT physician's treatment concerns. If, for example, collateral information about a patient's inappropriate or threatening behaviour as the reason for transfer is not conveyed by the previous physician or included in the new prescriber's treatment plan, it is likely that the new prescriber will be subjected to the same behaviour pattern.

SPECIAL POPULATIONS

1. Introduction

All patients, whether from special populations or in non-community based settings, should receive a comprehensive initial assessment.

This section will deal with the following populations:

- adolescent patients
- women of child-bearing potential
- pregnant women
- non-injecting opioid-dependent patients
- patients with comorbid conditions
- hospitalized patients
- provincial and federal corrections patients
- patients who wish to travel

2. Adolescent Patients

Adolescent patients requesting methadone maintenance treatment (MMT) need careful assessment, as they may have had short-term exposure to opioids without sustaining significant adverse consequences. These patients often still have intact support systems and consideration should be given to referral for abstinence-based treatment programs in which detoxification is followed by intensive in-patient or outpatient therapy. Mutual self-help groups provide good support for these patients.

Some adolescent patients do meet criteria for late-stage dependence, are experiencing significant adverse consequences, have inadequate support systems and have relapsed after previous abstinence-based treatments. These patients may benefit from Suboxone or MMT, but they require rigorous assessment and a detailed treatment plan which is frequently reviewed. Supportive counselling must be a condition for continued Suboxone or MMT.

Only physicians who work with counsellors and have some experience in dealing with substance-dependent youth should agree to accept these patients.

Adolescent patients should be maintained on Suboxone or MMT only if the benefits of treatment can be clearly documented.

3. Women of Child-Bearing Potential

Women seeking treatment for opioid dependence may have a number of predisposing psychosocial risk factors for drug use and have experienced multiple adverse consequences. Their histories may include disrupted family lives, physical violence, incarceration, sexual assault, sex trade work, child custody issues, unstable housing, mental health issues (such as mood and personality disorders), and physical health issues (such as HIV, hepatitis C virus or STIs). Physicians should be aware that the different causes of addiction, patterns of use and reasons for relapse are often gender-specific. Clinicians can offer more effective treatment by being conversant in the identification and treatment of these issues as they apply to women.

Knowledge of other community resources (for example, PEERS, a rehabilitation program for sex trade workers, based in Vancouver and Victoria) is also essential in treating women with opioid dependence. Many other resources in BC can be found on Red Book Online, an online directory of services for the lower mainland. Treating opioid-dependent women with respect and compassion is fundamental to their recovery.

Opioid dependent women commonly experience menstrual irregularity and amenorrhea. For many women, this will be regulated and ovulation will start once they are stabilized on methadone. All women of child-bearing age should have a pregnancy test at the initial triage visit and periodically thereafter.

Birth control should be offered to all women upon initiation of methadone. When stable non-pregnant women suddenly feel the need to increase their methadone dose, consider the possibility of pregnancy. Depo-Provera and progesterone-impregnated intrauterine devices (IUDs) are the least expensive and the most reliable option in this often unstable population. Oral contraceptives can be taken daily with methadone to reduce missed doses. Pharmacists will sometimes allow patients to store their OCPs at the pharmacy. The availability of free condoms in the office will also encourage women patients to practise safe sex (these are obtainable from health authorities and public health departments).

Methadone-maintained women contemplating pregnancy must be encouraged to remain in MMT.

4. Pregnant Women

4.1 Introduction

The quality and nature of the initial encounter is crucial when providing prenatal care for pregnant women who use opioids. By providing non-judgmental care, physicians support these women's self-

determination and increase the chances of engaging in treatment.[12] The most effective care for pregnant women with substance use problems involves a collaborative approach by physicians, midwives, nurses and social workers, in hospital and the community.[13]

Opioid use is a powerful self-medication for blocking intrusive thoughts, avoiding feelings and achieving sleep. Many women who use substances have a history of physical, sexual or emotional trauma.[14] Physicians should be aware of and address issues of power (for example, loss of carries) with this knowledge in mind. Women may present late in pregnancy due to additional barriers such as fear of losing their children. Some women may be uncertain of dates due to their chaotic lifestyle or menstrual irregularities.

MMT is the treatment of choice throughout pregnancy and the postpartum period for opioid-dependent women.[15,16] Women who are engaged in MMT experience better pregnancy and birth outcomes than those who continue to use non-medical opioids. Pregnancy complications due to illicit opioid use include intrauterine growth restriction (IUGR), low birth weight and premature labour (due to opioid withdrawal), and risk of hepatitis C and HIV with needle use.[17,18] Methadone has been shown to be beneficial in the reduction of maternal relapse, particularly when a comprehensive system of support is in place.[19]

Suboxone is contraindicated in pregnancy however, physicians may contact Health Canada's Special Access Programme to obtain authorization for the buprenorphine-only product.

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[12] Motz M, Leslie M, Pepler D, Moore JTE, Freeman PA. Breaking the cycle: measures of progress 1995–2005. JFAS int. 2006; Suppl 4;e22.
[13] National Treatment Agency for Substance Misuse. Engaging and retaining clients in drug treatment. London: National Health Service; 2004.
[14] Haskell L. First stage trauma treatment: a guide for mental health professionals working with women. Toronto: Centre for Addiction and Mental Health; 2003.
[15] Jones HE, Martin PR, Heil SH, Kaltenbach K, Selby P, Coyle MG, et al. Treatment of opioid-dependent pregnant women: clinical and research issues. J Subst Abuse Treat; 2008 Oct; 35(3)245–59.
[16] Winklbaur B, Jung E, Fischer G. Opioid dependence and pregnancy. Curr Opin Psychiatry. 2008;21(3):255–9.
[17] Centre for Addiction and Mental Health. Exposure to psychotropic medications and other substances during pregnancy and lactation: a handbook for health care providers. Toronto: Centre for Addiction and Mental Health and Motherisk; 2008.
[18] The PRIMA (Pregnancy-Related Issues in the Management of Addictions) Project [Internet]. Ordean A, Midmer D, Graves L, Payne S, Hunt G, the PRIMA Group. Toronto: Department of Family and Community Medicine, University of Toronto; 2008. Opiates [updated June 2008; cited 2009 Mar 5]. Available from: http://www.addictionpregnancy.ca/opiates.html.
[19] Jones HE, Martin PR, Heil SH, Kaltenbach K, Selby P, Coyle MG, et al. Treatment of opioid-dependent pregnant women: clinical and research issues. J Subst Abuse Treat; 2008 Oct; 35(3)245–59.

4.2 Guiding Principles

1. **Respect is key:** Guilt and shame about substance use, fear of being judged and of having children removed are major barriers to care. A respectful approach acknowledges that change is a process and meets women at their stages of change.[20,21]

2. **Informed choice:** All women who are pregnant and using substances are informed by their health-care providers of their choices and rights at all steps of the care process. Side effects of methadone treatment are described and discussed.

3. **Working from strengths:** Strengths and protective factors of each woman, her family and community are recognized and enhanced.[22]

4. **Reducing harms:** Helping women reduce the harms associated with substance use, such as facilitating access to general medical care, addressing homelessness, and providing other supports will improve outcomes for women and children.

5. **Addressing violence:** Understanding the impact of violence against women, including the high incidence of post-traumatic stress disorder (PTSD).

6. **Culturally sensitive care:** Understanding cultural, racial and religious differences in the provision of methadone care.

7. **Respecting all goals for change** in substance use along the continuum from reducing use to abstinence, using early intervention strategies, medical and psychological treatment and follow-up supports.

8. **Teamwork:** All care team members, including the patient, share the decision making, development, implementation and monitoring of a single service plan.

9. **Preserving the mother-infant bond:** Supporting measures such as hospital rooming-in and breastfeeding.

Pregnancy provides a "window of opportunity" to motivate substance-using women to make changes in their lives.

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[20] Rollnick S, Miller WR, Butler CC. Motivational interviewing in health care. New York: Guilford Press; 2008.
[21] Prochaska JO, Norcross J, DiClemente C. Changing for good. New York: Avon Books; 1994
[22] Weaver SM. Shame reduction: a model for training child welfare workers on best practices with mothers who use substances. In: Poole N, Greaves L, editors. Highs and lows: Canadian perspectives on women and substance use. Toronto: Centre for Addiction and Mental Health; 2007, p. 283–8.

4.3 Management

Acute withdrawal in pregnancy increases the risk of preterm labour or miscarriage. Rapid uptake into treatment, active ongoing support and practical measures to encourage attendance are all approaches that research suggests improves engagement[23] and continued access to care. Methadone initiation is most efficient in an in-patient setting; however, outpatient initiation is practical and appropriate when in-patient treatment is not an option.

4.3.1 Initial Assessment

- Complete medical history, including substance use history, obstetric history and assessment of the patient's risk factors for exposure to infectious diseases
- Assessment for mental health comorbidities
- Assessment of personal safety, nutritional and housing needs
- Complete physical and fetal examination, including measurement of fetal heart rate for baseline (if the patient is more than 14 weeks pregnant)
- Completed Part 1 of the BCPHP British Columbia Antenatal Record
- Appropriate laboratory testing, including prenatal blood work, hepatitis C serology and liver function tests
- Ultrasound to estimate gestational age of the fetus
- UDT to confirm opioid use, and to provide information about other drug use which is essential in the treatment planning process—an opioid negative UDT does not preclude admission if the assessment confirms that MMT is appropriate

4.3.2 Prenatal Management

- An effective dose of methadone is one that prevents withdrawal symptoms and reduces cravings for 24 hours.
- An adequate methadone dose will protect the fetus from repeated withdrawal.
- Recent studies have shown that higher doses of methadone do not correlate with the occurrence or severity of neonatal abstinence syndrome (NAS).[24]
- Higher doses of methadone are often needed as pregnancy advances due to increased blood volume, especially in the third trimester.[25]
- Split methadone doses may be needed to deal with increased hepatic metabolism and to prevent day-to-day withdrawal symptoms.[26]

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[23] National Treatment Agency for Substance Misuse. Engaging and retaining clients in drug treatment. London: National Health Service; 2004.
[24] Berghella V, Lim PJ, Hill MK, Cherpes J, Chennat J, Kaltenbach K. Maternal methadone dose and neonatal withdrawal. Am J Obstet Gynecol. 2003;189(2):312–7.
[25] New South Wales Department of Health. National clinical guidelines for the management of drug use during pregnancy, birth and the early development years of the newborn. North Sydney (Australia): NSW Department of Health; 2006.

- Carry doses should only be provided to stable patients. Indicators of stability include negative random UDTs, safe and supportive drug-free housing, safe methadone storage facilities, and appropriate relapse prevention plans.

4.3.3 Third Trimester

- The planning around hospital admissions for birth should be coordinated as early as possible between the maternity care teams, the methadone prescriber and the patient.
- If a dosage increase is needed, it can be done in steps of 5 mg to 10 mg per week as an outpatient. Physicians can consider split doses in pregnant women who experience early withdrawal due to changes in methadone metabolism, to keep the total amount of the dose down and to even out blood levels over a 24-hour period. For example, two-thirds of the dose can be taken as DWI in the morning, with the remaining one-third dispensed as carries for the evening. Note that split dosing can increase the risk of diversion.

4.3.4 Intrapartum

- Methadone is not used as pain control. Regular methadone dosage should be continued and not considered as part of the pain management plan.
- Regular labour and delivery pain medication can be used. Epidural anesthesia is the preferred analgesic method due to altered pain perception in this population. Nitrous oxide may be useful in the second stage. Opioid analgesics may be used but the dose may need to be increased due to tolerance and the patient must be monitored for somnolence and respiratory depression.
- When methadone-maintained women present in labour, methadone can be given in a decreased volume of fluid (by arrangement with the pharmacy).
- If oral fluids are contraindicated, methadone should be replaced with parenteral opioids.
- Mixed agonist/antagonists are contraindicated as they will precipitate acute withdrawal.
- Sensitivity is needed during intrapartum and postpartum pain management. Many women who use substances have experienced sexual trauma and PTSD. Vaginal exams or the pain of childbirth can trigger symptoms which in turn may cause intensification of labour pain.

4.3.5 Postpartum

- Postpartum maternal methadone requirements usually drop due to a decrease in blood volume and changes in metabolism. Consequently, the dose may need to be decreased over a few days or weeks. A split dose will generally no longer be required.
- Daily witnessed ingestion of methadone for unstable patients is recommended. It may be difficult for new mothers to go to the pharmacy daily, therefore the risks versus the benefits of granting carry privileges must be carefully considered.

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[26] Jones HE, Martin PR, Heil SH, Kaltenbach K, Selby P, Coyle MG, et al. Treatment of opioid-dependent pregnant women: clinical and research issues. J Subst Abuse Treat; 2008 Oct; 35(3)245–59.

- Continuation of methadone is a joint decision between the patient and her physician. Stability is the goal, and if patients choose to withdraw from methadone, they should be informed of the risk of relapse and offered relapse prevention strategies.

4.3.6 Breastfeeding and Methadone

- Breastfeeding is compatible with MMT, regardless of the maternal dose.[27,28]
- Breastfeeding is contraindicated in active substance abuse and in HIV-positive patients.
- Studies to date evaluating the effect of breastfeeding on HCV transmission indicate that breastfeeding does not appreciably increase the risk of transmitting HCV to a neonate.

4.3.7 Urine Drug Testing (UDT)

- UDT is always collected at the initial visit to confirm opioid use. Results also provide information about other drug use. This information is essential in the treatment planning process.
- Pregnant patients should provide UDTs at the same frequency as other MMT patients depending on stability.
- A positive UDT or self-reported drug use is not an indication for an involuntary taper or withdrawal from methadone and should never preclude medical care. Even with continued use of illicit drugs, continued contact with health-care providers improves pregnancy outcomes and builds trust. Unstable patients must remain on daily witnessed ingestion.
- Carries are a privilege and should only be granted to stable patients (e.g. negative UDTs, safe housing, and relapse prevention plans in place). Carry privileges are not recommended for pregnant women who do not provide random UDT.

4.3.8 Prenatal Methadone Withdrawal Management

- The standard of care for pregnant opioid-dependent women is MMT throughout pregnancy and postpartum. However, some patients insist on detoxification from all drugs during pregnancy. Patients insisting on withdrawal or tapering should be informed that the risk of relapse with dose reduction or discontinuation of methadone in pregnancy is high and no less than in other patients.
- The patients who are most likely to be successful in withdrawal during pregnancy and to remain drug free are those who have had prolonged stability on methadone, have had drug treatment including relapse prevention and are socially stable.

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[27] Jansson LM, Choo R, Velez ML, Harrow C, Schroeder JR, Shakleya DM, Huestis MA. Methadone maintenance and breastfeeding in the neonatal period. Pediatrics. 2008;121(1):106–14.
[28] Wilbourne P, Wallerstedt C, Dorato V, Curet LB. Clinical management of methadone dependence during pregnancy. J Perinat Neonatal Nurs. 2001;14(4):26–45.

4.3.9 Neonatal Abstinence Syndrome (NAS)

- Some infants exposed to opioids during pregnancy undergo withdrawal. If withdrawal occurs, the onset of symptoms depends on the half-life of the substance used and when the last dose was taken.
- The occurrence and severity of NAS does not correlate with higher maternal methadone dose.
- NAS is always a diagnosis of exclusion. When NAS is suspected, other diagnoses such as hypoglycemia, hypocalcemia and sepsis should be ruled out first.
- Infants of mothers who used prescription drugs during pregnancy, especially benzodiazepines, barbiturates and antipsychotics, as well as alcohol and nicotine, may have neonatal withdrawal symptoms for a longer duration.
- Rooming-in with the infant, frequent skin-to-skin contact and cuddling is encouraged. This increased contact results in a demonstrated reduction in the need to treat opioid-exposed infants.[29]

4.3.10 Child Protection

Pregnancy is an ideal time to assess a mother's social situation and to engage her in positive planning for a healthy pregnancy and a healthy baby. Planning should be a coordinated effort, involving the health-care team and patient, as well as supportive family members, community support agencies, and child protection and social workers.

- Once patients have consented to the exchange of information, all necessary health-care providers, including physicians and community-based resources, are encouraged to participate in an integrated process to coordinate care. Advance care planning should result in additional supports for the patient and allow her to play a key role in planning for her and her newborn's care after birth.
- The provincial Ministry for Children and Family Development (MCFD) can be involved in a supportive role during pregnancy with the patient's consent, and this partnership leads to the best outcomes for the infant.
- There is no legal obligation to report any concerns regarding a pregnant woman's care to child protection authorities, including methadone use in pregnancy; however, each patient should be informed that if there are protection concerns, a report will have to be made once the child is born.
- The BC Representative for Children and Youth may also be contacted to support children, youth and families who need help in dealing with the child-serving system. It advocates for vulnerable children and youth up to the age of 18 and is particularly concerned with children in government care.

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[29] Abrahams RR, Kelly SA, Payne S, Thiessen PN, Mackintosh J, Janssen PA. Rooming-in compared with standard care for newborns of mothers using methadone or heroin. Can Fam Physician. 2007;53:1723–30.

- The MCFD provides child protection services under provincial child welfare legislation, the *Child, Family and Community Service Act (CFCSA)*.
- Section 13 of the *CFCSA* describes the circumstances when a child needs to be protected.
- Section 14 of the *CFCSA* describes the health-care professional's duty to report the need for protection. Note that the actual determination of whether an infant is at risk for harm, neglect or abuse can only be done by appropriately authorized individuals.
- Access to medical records for the purpose of assessing the infant's safety by these persons must be in accordance with statutory and legal authority.

5. Patients with Comorbid Conditions

Opioid dependent patients must be screened for specific comorbidities given the prevalence in this patient population. **A specific treatment plan needs to be documented in the physician's overall treatment strategy for these conditions.**

5.1 Hepatitis C

Over 80% of people who inject illicit drugs are hepatitis C positive.[30] All patients considered for MMT must be tested for hepatitis A, B and C, and serum transaminase levels. Periodic retesting for hepatitis C is indicated when risk-taking behaviours continue.

Flow sheets such as the Liver Function Record should be used to track liver enzymes and help determine when referral for definitive hepatitis C treatment is indicated.

5.1.1 Management issues

Hepatitis C management should focus on the following areas:

1. Lifestyle
    - emphasize abstinence from alcohol
    - discuss appropriate diet
    - advise use of condoms in non-monogamous sexual encounters
2. Immunization
    - vaccinate for hepatitis A and B, and provide other relevant vaccinations
3. Treatment
    - initiate treatment or refer to a physician with expertise in hepatitis C treatment when indicated

[30] Patrick DM, Tyndall MW, Cornelisse PGA, Li K, Sherlock CH, Rekart ML, et al. Incidence of hepatitis C virus infection among injection drug users during an outbreak of HIV infection. CMAJ. 2001;165:889–95.

5.2 HIV/AIDS

People who inject illicit drugs are at high risk for contracting HIV and MMT is among the best ways to prevent HIV transmission in this population. Some MMT patients will be HIV positive on entry into treatment or may acquire HIV during treatment, if they continue to engage in other high-risk behaviours.

Among other potential benefits of MMT, stabilization on methadone may make it easier for HIV-positive opioid-dependent patients to comply with HIV treatment regimens. Priority access to MMT should be provided whenever possible for HIV-positive patients because of the individual and public health consequences of untreated HIV infection, especially in the intravenous drug-using population.

5.2.1 Management Issues

HIV management should focus on the following areas:

1. Education
    - provide education on sexual contact precautions and needle sharing
2. Immunization
    - immunize for hepatitis A and B
    - immunize for tetanus toxoid, pneumococcal vaccine and influenza vaccine
3. Testing and monitoring
    - consider testing for tuberculosis and syphilis
    - monitor CD4 counts and viral load
4. Treatment and referral
    - refer to an infectious disease specialist for assessment and treatment plan
    - many HIV medications interact with methadone—dose adjustments may be required

5.3 Mental Health Issues – Concurrent Disorders

Lifetime prevalence for another Axis I co-occurring disorder in substance dependent patients is at least 30%. Depression, anxiety, bipolar disorder, eating disorders and process addictions (compulsive gambling, sexual and internet behaviours, etc.) are common, as are Axis II disorders.

Identifying and providing treatment for patients with mental illness improves MMT outcomes, such as reducing substance use and improving treatment retention.[31]

[31] King VL and Brooner RK (1999). Assessment and treatment of comorbid psychiatric disorders. In: Strain EC, Stitzer ML editors. Methadone treatment for opioid dependence. Baltimore: Johns Hopkins University Press. p. 141–65.

5.3.1 Management Issues

The initial assessment should always include screening questions for comorbid mental illnesses. Past psychiatric treatment, a family history of mental illness and drug-free periods are all important considerations when assessing for mental illness independent of substance use.

It may be difficult to determine whether a psychiatric disorder is primary or secondary to substance use. Alcohol, for example, may cause symptoms which present as mental illness (such as bipolar or depression) or may interfere with the management of an underlying mental illness. The distinction may be clearer, as in the case of a rapidly resolving psychotic state, on cessation of cocaine use. In order to differentiate primary from secondary psychiatric disorders, a skilled assessment is required that takes into account symptom progression during substance use and periods of abstinence.

Substance dependent patients also have a significantly higher incidence of mental, physical and sexual abuse. Identifying and providing focused counselling may be beneficial in assisting recovery.

Although referral for further assessment and treatment is still a considerable challenge, concurrent disorder clinics and in-patient treatment options are increasingly available. Health Canada's *Best Practices – Concurrent Mental Health and Substances Use Disorders* further outlines guiding principles for the treatment of concurrent disorders.

5.4 Polysubstance Comorbidity

The benefits of MMT are reduced in the setting of continued psychoactive substance use. Polysubstance misuse (both prescription and illicit) is the norm among opioid-dependent patients. All patients require a comprehensive assessment that includes a detailed inventory of drug use and an individualized treatment plan.

5.4.1 Management Issues

Stimulants

Patients may meet criteria for opioid dependence when the drug of choice is a stimulant. Failure to recognize stimulant-use disorders will undermine methadone treatment outcomes. A trial of methadone treatment may be appropriate but a stimulant management plan must be in place from the outset. Methadone treatment should only be continued long-term if objective benefits can be documented.

Alcohol

Alcohol use poses unique concerns in methadone maintenance patients. The risk of overdose is increased, given the synergistic respiratory depressant effect alcohol has with methadone. In addition, alcohol interferes with the metabolism of methadone. In its early stages, problem drinking has the potential to induce hepatic enzymes which can accelerate methadone metabolism. At later stages, liver failure can precipitously reduce a patient's tolerance to methadone. These complicated interactions

underscore the need for physicians to appropriately screen and monitor for alcohol use disorders and provide intervention and treatment.

Sedative-Hypnotics Including Benzodiazepines and Z Drugs

Comorbid sedative-hypnotic use poses another set of unique challenges. Like alcohol, these drugs have a synergistic respiratory depressant effect when used with methadone and may increase the risk of fatal overdose. Multidoctoring for sedative-hypnotics is common. It is the responsibility of the methadone prescriber to review PharmaNet profiles regularly. All psychoactive substances act through a final common end pathway in the brain and therefore sedative-hypnotics are relatively contraindicated in patients with addiction disorders.

Marijuana

Continuing use of a psychoactive substance such as marijuana can undermine treatment focused on developing non-chemical coping strategies. While there is controversy as to whether marijuana causes an "amotivational syndrome," there is evidence that psychosis, anxiety and mood disorders, and permanent cognitive changes can occur secondary to chronic marijuana use.

Physicians considering the provision of support for medical marijuana exemption should review the College's guideline *Marijuana for Medical Purposes*.

Tobacco

Tobacco consumption rates are comparatively high for those with addictions to opioids, which means tobacco-related disease and associated mortality are significant long-term risks to their health. Physicians with MMT patients are encouraged to

- inquire about their tobacco use and advise them to quit
- assist in an attempt to quit (and, if appropriate, offer medication support from the BC Smoking Cessation Program), and
- arrange for follow-up (the QuitNow BC referral program is available to offer behavioural support).

6. Hospitalized Patients

Methadone maintenance patients are commonly hospitalized. These patients will have to have their methadone prescribed by a physician who has one of the following:

- a full authorization to prescribe methadone for opioid dependence
- a temporary authorization to prescribe methadone
- a hospitalist authorization, which is a hybrid of a full exemption to prescribe methadone for analgesia and a limited authorization to prescribe methadone for opioid dependence, for in-hospital use only

Physicians prescribing methadone for hospitalized patients are expected to adjust the dose as clinically indicated. Physicians with temporary or hospitalist methadone authorizations may write short bridging methadone prescriptions for patients discharged from hospital, after which patients should return to their community prescriber.

Hospital-based physicians are encouraged to obtain hospitalist authorizations to prescribe methadone. These are granted after physicians attend the College-sponsored Hospitalist Workshop (held in conjunction with the Methadone 101 Workshop) and undergo a brief interview with the deputy registrar.

The role of the hospital-based physician is to:

- determine if methadone continuation is appropriate
- determine the dose and frequency of administration
- reassess and adjust the dose as clinically indicated
- facilitate transfer of care to the community physician on discharge

The Hospitalist Workshop is offered once or twice a year to educate physicians on the management of hospitalized patients for both opioid dependence and analgesia.

Management of hospitalized methadone patients should include:

- appropriate patient assessment, including confirmation of current and last dose
- assessment of current substance use, medications and medical conditions affecting methadone pharmacokinetics
- contact with the community methadone prescriber
- pain management
- informing community physicians about discharge information

7. Provincial and Federal Corrections Facilities

7.1 Provincial Corrections Facilities

There are nine adult correctional and three youth custody centres in British Columbia, with over 25,000 admissions per year. Health-care services are provided in each centre. All centres but one, a remote camp with limited access to health-care services on weekends, provide for continuation of methadone and Suboxone. All medical information is confidential and restricted to health-care providers only.

Transfer forms are completed upon admission. PharmaNet profiles are reviewed and patients sign a standard BC Corrections methadone patient agreement. BC Corrections advises community physicians by fax when their patients are in custody. An admission UDT is provided by all inmates. Frequency of

subsequent testing is individualized and included as part of the treatment plan. Only physicians working within correctional and youth custody facilities are able to prescribe methadone for inmates. All physicians working in BC Corrections have current methadone authorization. Methadone doses are individualized and administered by nurses using daily witnessed ingestion protocol. Drug counselling, education and mutual help meetings are available in most centres and participation is strongly encouraged.

When released, MMP patients are transferred back to a community prescriber. The health-care staff or the inmate makes an appointment with the community prescriber. To facilitate transfer of care a short-term DWI prescription is faxed to a pharmacy chosen by the inmate. Many inmates are released without notice immediately following their court appearances. In these cases, arrangements for methadone prescriptions and follow-up appointments are exclusively the responsibility of the patient.

7.1.1 Initiation of Methadone Maintenance Treatment

Initiation of methadone maintenance in provincial correctional facilities is increasing. High volume and short periods of incarceration (generally under 30 days) preclude initiation of many inmates. Inmates are selected according to criteria outlined in this guideline, but with the additional criteria of being medically stable and being incarcerated for substantial periods of time.

7.1.2 Drug Treatment Court of Vancouver

The Drug Treatment Court of Vancouver is a voluntary alternative to incarceration available to some offenders charged with drug-related offences. Once accepted into the program, patients receive intensive substance dependence treatment as well as medical and mental health care. Both methadone initiation and continuation feature prominently in this program.

7.2 Federal Corrections Facilities

Federal correctional institutions house inmates serving sentences of two years or more, with most sentences exceeding three years. Correctional Service Canada offers a comprehensive methadone maintenance treatment program with extensive mental health, substance dependence, medical and risk-behaviour assessment. Patients are screened regarding need and suitability for this treatment program. Methadone initiation is available whenever appropriate, and all inmates already enrolled in the Methadone Maintenance Program and receiving Suboxone are continued on maintenance. Extensive counselling is available and strongly encouraged.

8. Patients Who Wish to Travel

Long-term MMT limits patients' ability to travel. If patients receiving MMT wish to travel for a period of time that exceeds their regular carry period, patient and public safety should not be compromised. **Physicians should not authorize carries for patients who are unstable even if patients are planning to**

travel unless a documented risk-benefit assessment outlines the reasons for granting the carry for travel.

Physicians who are concerned about prescribing carries for travel should confirm travel plans when possible. Physicians may assist with arrangements for DWI at pharmacies in other locations but this is not always possible. Physicians may also assist by faxing prescriptions or liaising with the destination pharmacist although they cannot guarantee the dispensing which will not be covered by PharmaCare.

Physicians who agree to provide methadone carries for travel may offer patients the option of a prescription for Metadol tablets instead of solution. Metadol tablets are not covered by PharmaCare for opioid dependence and should be prescribed on the regular controlled prescription form and not the methadone prescription pad.

METHADONE AND PAIN

The authorization to prescribe methadone for analgesia is separate from the authorization to prescribe methadone for opioid dependence.

Physicians wishing to obtain an exemption under section 56 of the *Controlled Drugs and Substances Act* for an authorization to prescribe methadone for analgesic purposes must follow the BC Methadone Program application process.

Required readings for physicians who prescribe methadone for pain include the Canadian Guideline for Safe and Effective Use of Opioids for Chronic Non-Cancer Pain, developed by the National Opioid Use Guideline Group (NOUGG). This guideline has been adopted by the College of Physicians and Surgeons of British Columbia.

Bell, Sharon Headquarters SDSI:EX

From: Tupper, Kenneth HLTH:EX
Sent: Thursday, March 31, 2016 10:43 AM
To: Harrington, Molly SDSI:EX; Ross, Ian SDSI:EX; Glynn, Keva HLTH:EX; O'Briain, Warren W HLTH:EX; Ty, Marie HLTH:EX; Power, Stephanie A HLTH:EX; Moneo, Mitch HLTH:EX; Perkin, Kathleen M HLTH:EX; Wong, Michelle HLTH:EX; Veillette, Kelly HLTH:EX; Borowko, Whitney SDSI:EX; Bryan, Frances HLTH:EX; Gurney, Taro SDSI:EX
Subject: FW: OST review final draft
Attachments: OAT and Psychosocial Interventions Review Mar 31 2016 draft.pdf; OAT and Psychosocial Interventions Review Mar 31 2016 draft.docx; ATT00001.txt

Hi all - we have received the attached document (in both PDF and Word format) from the consultants with the Network for Excellence in Substance Dependence and Related Harms, providing a review of the literature on Opioid Substitution Treatment counselling and payment and recommendations for government, for discussion in our meeting this afternoon. We'll bring a few hard copies to the meeting.

Just a reminder that the meeting is in the Galiano room, in the basement of 1515 Blanshard Street.

Here is the proposed agenda:

1:00-1:10 - welcome and introductions
1:10-1:40 p.m. Presentation of findings & recommendations (consultant team - Cheyenne Johnson & Dr. Keith Ahamad)
1:40-2:30 p.m. Discussion (all participants)
2:30-3:00 p.m. MoH & MSDSI in camera discussion (Cheyenne and Keith leave)

Thanks!

Kenneth Tupper, Ph.D.
Director, Problematic Substance Use Prevention
British Columbia Ministry of Health
ph: 250-952-3207
email: kenneth.tupper@gov.bc.ca

-----Original Message-----
From: Cheyenne Johnson [mailto:cheyenne.johnson@cfenet.ubc.ca]
Sent: Thursday, March 31, 2016 9:46 AM
To: Tupper, Kenneth HLTH:EX
Cc: Perkin, Kathleen M HLTH:EX; Keith Ahamad; Emily Wagner
Subject: Fwd: final draft

Hi Kenneth,

Please see attached report for today's discussion.

Best,
Cheyenne

Psychosocial Treatment Interventions and Payment Methods for Opioid Agonist Treatment: Review and Recommendations

Contents

Patient Psychosocial Treatment Intervention and Payment Methods for Opioid Agonist Treatment: Review and Recommendations

Executive Summary

The BC Ministry of Health commissioned the Network for Excellence in Substance Dependence and Related Harms ("the Network") to undertake two related projects, the findings of which are presented in this report. The first objective was to summarize best practice evidence on how counselling and psychosocial treatment interventions affects health and social outcomes for individuals receiving opioid agonist treatment (OAT), and to provide recommendations to the Ministry for consideration on how to improve the provincial OAT system with respect to provision of such services. Provincial and national recommendations for inclusion of psychosocial treatment interventions in OAT were considered.

To address this question, the Network conducted a systematic review and identified peer-reviewed articles, including two Cochrane Collaboration meta-analyses that have considered this question. Results from the studies reviewed suggest that when included in OAT, counselling and psychosocial treatment interventions do not lead to additional improvement in treatment retention, treatment compliance, or opioid abstinence rates compared to the standard OAT medical management approach, and as such, should not be considered as necessary components of OAT.

The second objective was to conduct an environmental scan of service and payment models for OAT in other jurisdictions, and provide evidence-based recommendations for funding mechanisms that could be applied in BC to maximize retention and minimize barriers to OAT. A national and international environmental scan of payment models for OAT was undertaken using a variety of methods, including document reviews, a scientific literature review, and informal consultation and interviews. An informal survey of 20 private clinics within BC also was conducted to understand patient user fees. The documents reviewed included OAT system reviews and indicator reports for British Columbia, as well as provincial program evaluations from Nova Scotia, Manitoba and Prince Edward Island. Provincial guidelines for OAT were reviewed as well as the Health Canada best practice guidelines. A resource list is included in the Appendix (A1).

The scan confirmed that although most provinces recognize the need for more than one model of treatment, no province has established a true continuum of care options that reflects the diversity of the patient population, and/or different levels of treatment intensity that may be required for different individuals and over time. As is the case with BC, service delivery across Canada is fragmented with little communication or collaboration between physician practices and publicly funded programs providing OAT.

Summary of Recommendations

Four key recommendations are made, each with a number of additional proposed actions. The recommendations are as follows:

A. Summary of Evidence in the Role of Psychosocial Treatment Interventions in OAT

	Recommendation	For more information see pages...
1	Evidence-based OAT service components should be clearly defined in program regulations and clinical practice guidelines.	10, 15
2	Based on research evidence, counselling and psychosocial treatment interventions are not necessary components of OAT and do not contribute to better health outcomes.	11, 15

B. Summary of Evidence of Payment Models for OAT Prescribing and Physician Care

	Recommendation	For more information see page...
With regard to OAT service models:		
1	The current capacity of publicly funded OT providers should be optimized, thereby reducing demand for the more expensive private clinic sector.	31
2	Barriers preventing primary care physicians from providing OAT should be eliminated.	31
With regard to OAT funding models:		
3	Based on the research evidence that psychosocial treatment interventions are not necessary components of OAT and do not contribute to better outcomes, these services should not be directly or indirectly publicly funded as part of OAT.	32

Glossary of Terms

Medical Management: medically focussed unstructured, informal counselling, includes, but is not limited to, health and wellness checks, support and advice, creating a treatment plan, fostering medication adherence, supporting compliance with treatment, optimizing dosing, and providing referrals to appropriate health and social services.

Psychosocial treatment interventions: structured and/or manualized counselling that incorporates principles of psychoanalytic therapy, cognitive behavioural therapy, interpersonal therapy, dialectic behavioural therapy; contingency management, biofeedback, hypnotherapy/subliminal, twelve step facilitation, family/group counselling.

> **Counselling:** structured, manualized, or theory-based behavioural counselling that incorporates principles of, for example, psychoanalytic therapy, cognitive behavioural therapy, interpersonal therapy, dialectic behavioural therapy. Counselling is considered a type of psychosocial treatment intervention.

Psychosocial supports: community services, social services, housing, income assistance programs, vocational training, life skills, legal services, etc.

Note on Preferred Terminology

Opioid use disorder (OUD) is the preferred terminology and is used throughout this document. This represents a deliberate shift away from the use of opioid addiction or opioid dependence.

Opioid Agonist Treatment (OAT) is the preferred terminology and is used throughout this document. This represents a deliberate shift away from the use of Opioid Substitution Treatment (OST) to refer to methadone, buprenorphine, and/or buprenorphine/naloxone maintenance treatment for opioid use disorder.

Background

Overview of Opioid Agonist Therapy Program in British Columbia

Opioid Use Disorder

Opioid use disorder is a chronic, recurrent medical illness often associated with co-morbid mental illness, transmission of infectious diseases (i.e., HIV/AIDS, hepatitis C), and premature mortality.[1] Opioid agonist therapy (OAT) is widely regarded as both a highly effective treatment for opioid use disorder and an evidence-based harm reduction intervention to prevent disease transmission and other harms related to opioid use. Numerous studies have demonstrated that opioid agonist therapy effectively reduces injection-related risks, opioid overdose deaths, and criminal activity, and increases the social functioning and quality of life of patients.[2-4] Furthermore, OAT programs have been shown to be safe and cost-effective[5,6].

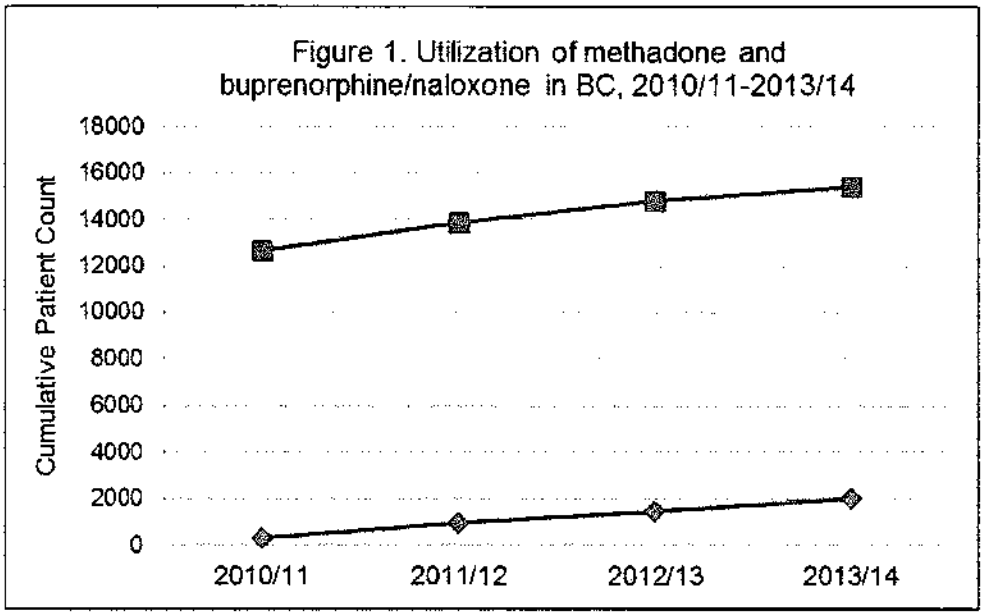
Pharmaceutical Treatment

There are currently two first-line pharmaceutical options available in BC for the treatment of opioid use disorder, methadone and buprenorphine/naloxone (e.g., Suboxone®). Methadone and buprenorphine are listed on the World Health Organization's Model List of Essential Medicines due to the robust evidence base for their effectiveness in treating opioid use disorder.[7]

Methadone is a long-acting synthetic opioid that acts as a mu (μ) opioid receptor agonist. In BC, it is administered as an oral solution (i.e., Methadose®). When administered at a therapeutic dosage, methadone prevents opioid withdrawal, reduces opioid craving, blocks the euphoric effects of other opioids, and reduces mortality.[8-10] Methadone has been shown to be significantly more effective than non-pharmacological outpatient treatment approaches in terms of treatment retention and suppression of heroin use.[11] Methadone maintenance treatment has also been shown to reduce injection risk behaviours and the overall risk of hepatitis C and HIV infection among individuals who inject drugs.[4,12,13] Methadone administered at higher doses (e.g., between 60–120 mg/day or higher) is more effective than lower doses in terms of treatment retention and reducing heroin and cocaine use during treatment.[14,15]

Buprenorphine/naloxone was added to the provincial formulary in 2010, and has emerged as viable alternative to methadone for treating opioid use disorder in British Columbia. Buprenorphine/naloxone is a combined formulation of buprenorphine, a partial mu-receptor agonist, and naloxone, an opioid antagonist, which is administered as a sublingual tablet. Buprenorphine acts to prevent opioid withdrawal and craving, while the inclusion of naloxone is intended to deter non-medical injection and diversion. When buprenorphine/naloxone is taken as directed in sublingual form, its naloxone component has negligible bioavailability and the therapeutic effect of buprenorphine predominates.[16] However, if diverted for injection use via subcutaneous, intramuscular, or intravenous routes, sufficient naloxone is absorbed to induce some withdrawal symptoms in active opioid users.[17] Research evidence clearly supports the role of buprenorphine/naloxone as a first-line treatment option for opioid use disorder. Clinical trials and systematic reviews consistently demonstrate that buprenorphine/naloxone offers comparable treatment outcomes, with fewer side effects and drug interactions, lower risks of diversion (i.e., use by individuals who do not have a prescription), and significant safety advantages in comparison to methadone.[18] Buprenorphine/naloxone also demonstrates significant efficacy and favorable safety and tolerability in specific populations, including youth and prescription opioid-

dependent individuals.[19] Compared to methadone, buprenorphine/naloxone remains underutilized in BC (Figure 1).



Adapted from: BC Opioid Substitution Treatment System, Performance Measures 2013/2014, Office of the Provincial Health Officer, British Columbia Ministry of Health, July 2015.

Opioid Agonist Treatment Prescribing Privileges

Methadone is classified as a controlled drug in accordance with section 56 of the *Controlled Drugs and Substances Act*, requiring physicians to be authorized to prescribe the medication via a federal exemption from Health Canada. British Columbia has benefited from a well-established methadone maintenance program for the treatment of opioid use disorder, which is stewarded by an appointed panel of the College of Physicians and Surgeons of BC.[20]

Prescribing privileges for buprenorphine/naloxone are also under the purview of the College of Physicians and Surgeons of British Columbia.[20] Currently, physicians require a methadone exemption from Health Canada and documentation of training before they can prescribe buprenorphine/naloxone. It is expected that the requirement to hold a Health Canada exemption will be eliminated in coming months, allowing all prescribers in BC to provide buprenorphine/naloxone to eligible patients.

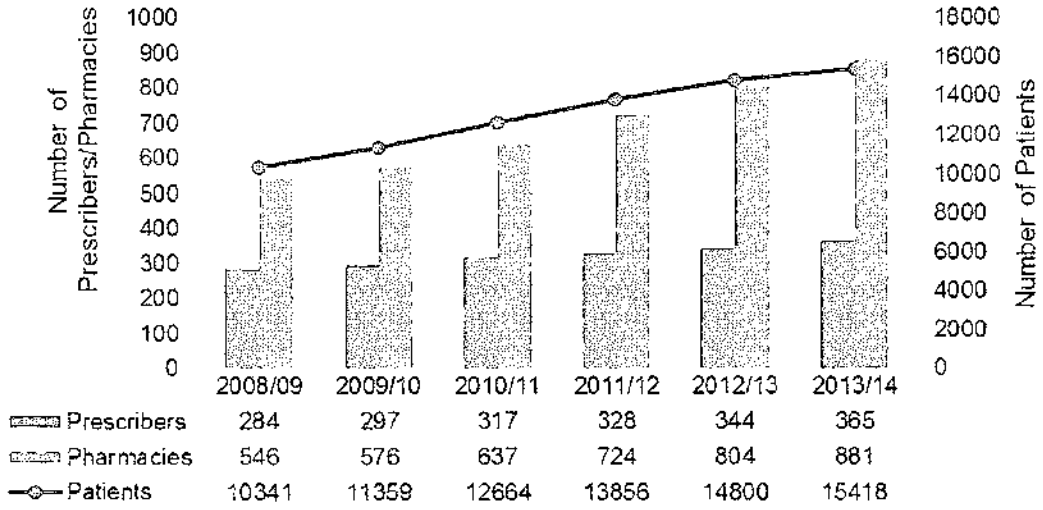
Pharmacists in BC must also undergo training and certification in order to dispense opioid agonist treatments for maintenance purposes, as per requirements of the BC College of Pharmacists. Pharmacists have an essential role in the OAT program due to restrictions on methadone, which necessitate frequent dispensation and witnessed ingestion of doses. Buprenorphine/naloxone may also require witnessed ingestion by pharmacists, but only during initial stages of treatment. Due to the favourable safety profile of buprenorphine/naloxone, patients can graduate to "take-home" or carry doses much earlier than methadone, at the discretion of the treating physician.

Treatment Utilization and Growth

In fiscal year 2013/14, the provincial OAT program included 16,668 patients, a 6% increase from the previous year and a 61% increase from 2008/09. Although the number of BC physicians able to

prescribe OAT has increased in recent years, with a total of 365 physicians prescribers reported in 2013/14, these numbers remain critically low in terms of demand for treatment, particularly outside of the Lower Mainland. In contrast, the number of pharmacies and pharmacists dispensing methadone or buprenorphine for maintenance purposes has steadily increased since 2008/09, with 881 dispensing pharmacies reported in 2013/14 (Figure 2).

Figure 2. Number of OAT Patients, Physician Prescribers, and Dispensing Pharmacies in British Columbia, 2008/09 - 2013/14



Adapted from: BC Opioid Substitution Treatment System, Performance Measures 2013/2014, Office of the Provincial Health Officer, British Columbia Ministry of Health, July 2015; and Methadone Maintenance Payment Program Review, Medical Beneficiary and Pharmaceutical Services Division, British Columbia Ministry of Health, January 2015.

Retention in treatment and optimal dosing are used by the Ministry of Health to assess overall performance of the OAT program. In 2013/14, surveillance data indicated that approximately 36% of new OAT patients remained in treatment after 12 months. By comparison, 12-month OAT retention rates in Ontario and New Brunswick are reported at 55% and 57% respectively. Dosing level is an important factor in retaining patients in treatment, as the probability of a patient staying in treatment is highest for patients maintained on a dose of at least 100 mg of methadone per day. In 2013/14, approximately 50% of patients enrolled in methadone-based OAT received a stabilization dose of more than 60 mg of methadone daily, the lower limit of what is defined as an optimal daily dose for methadone maintenance. Of note, these targets fall short of the goals set in British Columbia's *Healthy Minds, Healthy People: A Ten-Year Plan to Address Mental Health and Substance Use in British Columbia* for 60% of new patients starting OAT to be retained in the program at 12 months and 90% of methadone prescribers to adhere to optimal dose guidelines.

Section One: Evidence for Participation in Psychosocial Treatment Interventions in OAT

Background

Psychosocial treatment interventions such as counselling are routinely offered in combination with methadone and buprenorphine/naloxone treatment for opioid use disorder. Traditionally, it has been believed that addiction counselling, over and above regular physician-led chronic disease care and medication management provided in OAT, is important to optimize retention, abstinence and other patient health outcomes. As such, additional counselling and/or other psychosocial treatment interventions currently is considered to be the standard of care.

British Columbia includes physician counselling of patients as part of the Medical Service Plan (MSP) fee item for OAT (e.g., T00039 Methadone or buprenorphine/naloxone treatment). It has been reported that some providers, especially those associated with private for-profit clinics, require patients to participate in counselling as part of the treatment regime even when it is not desired.

It is important to note that in this context, counselling and psychosocial treatment interventions are distinguished from the standard clinical management approach expected of all physicians when caring for patients with complex and/or chronic health conditions. Medical management continues to be an integral component of OAT (i.e., performing regular health and wellness checks, creating a treatment plan, providing support and advice, fostering medication adherence, optimizing dosing and compliance, and giving referrals to appropriate health and social services).

Concerns have been expressed that this practice may be inconsistent with current research, and so the Ministry commissioned the Network to conduct a systematic review of the scientific literature regarding the effectiveness of counselling and psychosocial treatment interventions as a component of OAT, and based on those findings, to make recommendations with respect to OAT practice and program regulations.

Current Practice

The absence of evidence-based clinical practice guidance, professional standards, training and funding mechanisms for delivery of OAT counselling and psychosocial treatment interventions in British Columbia are noted. Sections pertaining to Psychosocial Treatment Interventions in the Clinical Practice Guidelines for the Methadone Maintenance Program are vague, poorly defined, and require significant revisions to align with the latest research evidence. For example, the MMT Guidelines do not explicitly identify or recommend specific counselling techniques or psychosocial treatment interventions, or describe how to best implement these tools in practice. Guidance on Psychosocial Treatment Interventions is summarized here (please refer to Appendix A3 for full excerpt):[20]

- Establishing a therapeutic relationship of trust;
- Encouraging open discussion and exploration of areas of patient's life that can be changed or modified to support health;
- Identifying barriers and facilitators to achieving treatment goals, discussing and revisiting goals at subsequent clinical visits;

- Working in unison with a counsellor, referring patients to an independent counsellor, self-help groups (e.g., NA, SMART), or to other specialized services; and
- Ongoing assessment and documentation of progress and change to best match treatment approach to individual patient needs.

Despite the lack of evidence-based practice guidance and dedicated funding mechanisms to support counselling in OAT practice, all participants in the provincial OAT program are required to sign a Methadone Maintenance Program Treatment Agreement and Consent (Appendix A2) on enrollment that states the following:

> *"Patients attending a clinic for methadone are expected to be receiving more than just methadone. I agree to attend counselling at the clinic or from an alcohol and drug service provider. I am also willing to involve myself in a support group which will aid my recovery."*

With exception of BC, Ontario, and Nova Scotia, most provinces provide addiction services via an integrated model that incorporates psychosocial services. However, a review of existing provincial OAT clinical practice guidelines suggest that the majority do not have clear recommendations for inclusion and operationalization of psychosocial treatment interventions in OAT. Often, practice guidelines reference the Health Canada Best Practices for Methadone Maintenance Treatment document (2002), which describes OAT counselling as follows (emphasis added):

> *When they are ready to do so, clients/patients should have access to evidence-based approaches to counselling to address issues of concern to them.* ***These services should be provided on an as-needed, rather than mandatory, basis.*** *In OAT practice, the term "counselling" encompasses a wide range of activities which may include, among others:*
> - *crisis intervention;*
> - *case management, including referrals to and liaison with other agencies;*
> - *individual, one-on-one counselling;*
> - *group counselling;*
> - *couples or family counselling;*
> - *vocational counselling;*
> - *substance use counselling;*
> - *pre- and post-test HIV counselling, and counselling related to other medical conditions;*
> - *health and other education programs;*
> - *brief, supportive contacts; and*
> - *long-term intensive support.*

It is noted that New Brunswick recently revised OAT program guidance on counselling to align with the scientific evidence:

"Counselling: In the past, the provision of a formal counselling process to patients under treatment was considered essential to moving them towards an optimum health status. In some cases, such was considered a mandatory condition of ongoing treatment. In contrast, large reviews have questioned the benefit of counselling in terms of overall results. For that reason, they argue that the lack of availability of counselling in some situations should not preclude the commencement of Opioid Substitution Therapy (OST).

From a physician's point of view, it appears critical to realize that substance abuse is likely only one of numerous problems facing the patient. For that reason, it should never be treated in isolation, but viewed in the context of other aspects of the patient's life, for which they may need some assistance. The physician will then have to determine what resources are available to provide any additional help for which the patient may find some benefit."

Specific clinical practice guidance on counselling in OAT from all Canadian provinces is included in Appendix A3.

Review Methodology

To address the question of whether counselling or psychosocial treatment interventions provide additional benefits to OAT and improved patient outcomes, the Network conducted a systematic review and identified peer-reviewed articles, including two Cochrane Collaboration meta-analyses that have previously considered this question.

In conducting this review, the following academic databases were searched: PubMed, Web of Science, the Cochrane Database of Systematic Reviews, and Evidence Based Medicine Reviews. Primary outcomes of interest included retention in treatment, opioid use, and continuous abstinence. Secondary outcomes of interest included compliance with treatment, mental health outcomes, HIV- and hepatitis C-related care outcomes, and where appropriate, outcomes of pregnancy.

Reference lists were reviewed for each article included to identify any additional studies missed in the literature search. Studies evaluating the impact of counselling and psychosocial treatment interventions in combination with opioid agonist treatment in the context of opioid detoxification (e.g., rapid taper approaches) were not included in this review. Only studies evaluating outpatient opioid agonist treatment programs were included in this review. Recommendations were made based on a systematic review and use of a traditional hierarchy of evidence, whereby meta-analysis of randomized clinical trials was given the most weight, followed by individual clinical trials, observational reports and expert opinion.

Summary of Literature Review Results

A recent Cochrane meta-analysis included 35 controlled clinical trials (n=4319 patients) evaluating 13 different psychosocial treatment interventions that were provided in conjunction with methadone (n=28), buprenorphine or buprenorphine/naloxone (n=6), or levo-α-acetylmethadol (n=1) maintenance treatments.[21] Along with analyzing the interventions as a whole group, the authors also subdivided the interventions into the following types: behavioural interventions (n=5), psychoanalytic-oriented interventions (n=3), counselling interventions (n=3), and other types (n=2). Primary outcomes were retention in treatment and abstinence from opioid use during treatment and at completion of the study. Compared to standard medical management (i.e. routine medication management and limited counselling as part of OAT prescribing), structured psychosocial programs did not provide additional benefits in terms of retention in treatment or abstinence from opioids. In terms of heterogeneity, among the 35 trials, the authors identified evidence of a positive effect of behavioral interventions when the studies were stratified by type of intervention: pooled results from studies of contingency management-based approaches showed a small but significant treatment effect on continuous weeks of abstinence. Further, the authors evaluated the impact of the interventions on compliance to psychosocial programs and change in psychiatric symptoms from pre- to post-treatment. No differences were found in the number of psychosocial sessions attended, change in psychiatric symptoms or distress as measured by

the Symptom Check List -90 scale, or change in depression as measured by the Beck Depression Inventory.

In addition, 25 additional studies that were not included in the 2011 Cochrane review, including several that had been published more recently, were examined. These studies evaluated a variety of psychosocial treatment interventions such as cognitive behavioural therapy, contingency management, enhanced medical management, web-and phone-based interventions, and structured counselling for their effects on treatment outcomes. Here, a small number of studies suggested a greater effect from structured psychosocial programs than treatment as usual on retaining patients in treatment or reducing opioid and other drug use.[22-29] However, four of the reviewed studies were conducted in China[25-28] where OAT programs may differ from Canadian systems and thus, research findings may not be applicable to the Canadian context. Perhaps more importantly, other study limitations of these positive studies include small sample sizes (e.g., n=52 total),[22] short study duration (e.g., 30 days),[23] and measurement of drug use by self-report only,[22,29] impacting the generalizability of these results.

Overall, when this newer evidence is reviewed in its entirety, it confirms earlier findings that structured interventions were not different from standard medical management in improving retention or abstinence from opioid and other illicit substances.[30-44] Moreover, patient compliance with OAT or attendance in psychosocial sessions[29,32,35,40] and patient satisfaction[41-43] were not improved with enhanced psychosocial programs, and there were no differences between groups in addiction severity, anxiety, or depression indices.[29,33,37,40]

While contingency management has been identified as a useful structured psychosocial treatment intervention in many studies of stimulant use disorders, it is noteworthy that a dedicated Cochrane Collaboration meta-analysis of 14 studies evaluating the effectiveness of contingency management and motivational interviewing-based interventions among pregnant women enrolled in outpatient illicit drug treatment (n=1298) reach similar conclusions.[45] Nine of these studies included subjects on methadone maintenance therapy, but data from these subjects were not analyzed separately from other studies. Compared to treatment as usual, the authors reported that psychosocial treatment interventions did not improve pre-term birth rates, low birth weight, or maternal toxicity at delivery, while two studies did show a decrease in length of neonatal hospital stay post-delivery in mothers provided with contingency management. Furthermore, no differences in treatment retention or abstinence were observed in the intervention groups compared to control subjects.

Although the majority of research to date has focused on methadone-based OAT, controlled studies suggest that inclusion of counselling in buprenorphine/naloxone-based OAT does not result in improved outcomes. For example, Fiellin et al. (2006) randomized 166 participants on buprenorphine/naloxone maintenance therapy to receive standard medical management or enhanced medical management delivered once per week. Sessions were delivered by trained nurses over a six-month period; both standard and enhanced medical management interventions were manual-guided, medically focused counselling techniques, but enhanced management consisted of 45-minute extended counselling sessions whereas standard management was administered within a standard 20-minute clinical visit.[46] The authors found no difference in frequency of illicit opioid use, continuous abstinence rates, or program retention between groups, and concluded that weekly brief medical management was an effective strategy for delivery of buprenorphine-based OAT in a primary care setting.[46] A similar study conducted by this research group found that the effectiveness of medical management and cognitive behavioral

therapy in reducing opioid use and facilitating abstinence did not differ significantly from that of medical management alone in the context of primary care buprenorphine-based OAT.[30]

With regards to impact on HIV-related outcomes and risk behaviours, three studies found that programs with structured, frequent counselling did not lead to improvements in these outcomes.[31,35,47] In these studies, the authors reported on HIV-relevant drug and sex risk behaviours, criminal activity, amount of money spent on drugs, and illegal income, using the AIDS Risk Assessment and the Addiction Severity Index. In addition, a study by Tetrault et al. (2012) reported no additional benefit of structured counselling on HIV-related outcomes, such as viral load, CD4 count, or antiretroviral medication adherence.[35] In contrast, a study conducted in China did find that structured counselling and contingency management had a beneficial impact on HIV and HCV incidence.[25]

Although participation in 12-step facilitated therapy (i.e., Narcotics Anonymous) or similar mutual support groups is often recommended, there have been no well-designed, controlled studies of the effectiveness of these groups in supporting treatment goals of individuals in OAT programs. While a small number of observational studies have reported associations between active participation in twelve-step programs and improved treatment outcomes among individuals with substance use disorders,[48-50] study design limitations and biases preclude formulation of any evidence-based recommendations from these findings. Although findings may not be generalizable to OAT, the effectiveness of twelve step facilitation (TSF) has been studied more rigorously in treatment of alcohol use disorder, where no experimental trial has unequivocally demonstrated the effectiveness of TSF in reducing alcohol use or alcohol-related problems.[51] Finally, it should be noted that the abstinence-based TSF recovery model is not always supportive of the use of opioid agonist medications for the treatment of opioid use disorder. Qualitative studies of OAT participant experiences with 12-step facilitation indicate that underlying philosophical conflicts, if present, can negatively impact participant engagement and disclosure, and is a deterrent to regular attendance.[52]

The effectiveness of mandated counselling or support group participation in OAT has also not been well studied. Several reviews of compulsory and/or coerced substance use treatment have concluded that overall, the evidence does not support that this approach leads to improved treatment, health or social outcomes, with some studies suggesting potential harms.[53-55] This overarching concept was confirmed in a recent trial that randomized 300 participants to compulsory versus optional attendance at NA meetings as a condition of receiving OAT. The authors found no difference in OAT retention or abstinence from opioids among those required versus those who were not required to attend meetings.[56]

In sum, the vast majority of controlled, clinical studies investigating the impact of counselling and/or structured psychosocial treatment interventions in conjunction with OAT have found no additional benefit over standard practices in OAT programs. These findings are similarly confirmed in the conclusions of systematic reviews and meta-analyses.[21,45,57] A summary of psychosocial treatment interventions included in this review is included in the Appendix (A4).

It is important to stress that with few exceptions, the reviewed studies did include basic medication management and health care provider interaction as the standard of care, as would be expected with any other serious chronic medical condition. As such, and given the high prevalence of concurrent social challenges, medical and mental health conditions in persons with opioid use disorder, careful assessment and monitoring of emotional and psychological health is always an important component in treating this disorder.

It is also important to emphasize that no high level reviews have examined the impact of health care provider supports for various psychosocial needs (e.g., housing support, vocational and skills training, social supports, financial assistance). Importantly, previous studies have demonstrated how housing and other survival needs may have a significant impact on OAT outcomes.[58-60] As such, rather than a benefit of addiction counselling *per se*, there is likely a benefit of opioid addiction care being offered in the context of interdisciplinary care teams that are equipped to address these needs, when possible.

Analysis

Results from these studies suggest that structured and unstructured psychosocial treatment interventions do not lead to additional improvement in treatment retention, treatment compliance, or opioid abstinence rates when provided with routine OAT. There was only weak evidence of additional benefits to including counselling services in conjunction with standard opioid agonist maintenance treatment. Controlled efficacy studies of more intensive psychosocial treatment interventions, such as contingency management, cognitive behavioural therapy and motivational interviewing in context of OAT have yielded similarly equivocal results.

Section One Recommendations

With regard to counselling and psychosocial treatment interventions as components of OAT:

1. **Evidence-based OAT service components should be clearly defined in program regulations and clinical practice guidelines.**

2. **Based on research evidence, counselling and psychosocial treatment interventions do not contribute to better health outcomes, and should not be necessary components of OAT.**

Research evidence indicates that counselling and psychosocial treatment interventions are no more effective than standard medical management in improving patient outcomes in the context of OAT. Overall, systematic reviews and meta-analyses of studies comparing psychosocial treatment interventions to standard medical management show that there is no difference in key health outcomes, including retention in treatment, abstinence from opioids, HIV risk behaviours and mental health measures. Accordingly, OAT program regulations and clinical practice guidelines should not include counselling or psychosocial treatment interventions as a mandatory component of OAT.

Opioid use disorder is a chronic, relapsing condition, and medical management is an evidence-based approach to chronic disease management. It is essential that the usual clinical medical management strategies expected of all prescribers when caring for patients with complex and/or chronic health conditions should continue to be an integral component of OAT (i.e., regular health and wellness checks, support and advice, fostering of medication adherence, optimizing dosing, and referrals to appropriate health and social services).

Proposals for Action:

- Evidence based OAT service components should be clearly defined in program regulations and clinical practice guidelines. OAT program regulations and clinical practice guidelines should not include counselling or psychosocial treatment interventions as a mandatory component of care.

- The use of the term "counselling" in the context of OAT should be clarified in MMT clinical practice guidelines, OAT program regulations and physician fee-for-service billing schedules, to refer to the usual clinical management approach expected of all physicians when caring for patients with complex and/or chronic health conditions (i.e., regular health and wellness checks, support and advice, fostering of medication adherence, optimizing dosing, and referrals to appropriate health and social services).

- Expectations and clinical guidance for medical management should be clearly articulated in provincial OAT program regulations and clinical practice guidelines.

- The following statement should be removed from the Provincial Methadone Maintenance Treatment Agreement: *"Patients attending a clinic for methadone are expected to be receiving more than just methadone. I agree to attend counselling at the clinic or from an alcohol and drug service provider. I am also willing to involve myself in a support group which will aid my recovery."*

Section Two: Environmental Scan of OAT Service and Payment Models

Background

In most Canadian provinces, there are two parallel streams of OAT provision -- provincially-funded substance use services and fee-for-service OAT through individual physician providers, group practices and private clinics. These two systems tend to operate in isolation from one another, and there are few if any relationships between prescribing physicians in the community and treatment facilities connected to the provincial addiction system. Funding delivery models vary considerably, although in all provinces, the myriad of funding streams and mechanisms used to support OAT appear to contribute to the general fragmentation and compartmentalization of the system.

Previous reports have consistently described the funding delivery model for OAT in Canada as complex, confusing, and lacking clarity and transparency. Funding models have also been criticized for not providing sufficient compensation for interdisciplinary teams involved in OAT service delivery. The lack of central coordination also impedes OAT service planning, including identified provincial priorities to optimize service delivery, reduce wait-lists, increase retention, improve patient and population health outcomes, and eliminate structural and systemic barriers to accessing treatment.

The Ministry commissioned the Network to conduct an environmental scan of service and payment models for OAT prescribing/physician care in other jurisdictions, and provide recommendations for funding mechanisms for OAT prescribing that could be applied in BC to maximize retention and minimize barriers to OAT. A particular focus of the environmental scan was to describe existing funding and service delivery models for counselling, psychosocial treatment interventions and supports in the context of OAT.

Scan Methodology

The environmental scan was conducted using a variety of methods, including document reviews, a scientific literature review, and informal consultation and interviews. In addition, an informal survey of 20 private clinics spanning the province was also conducted to determine the amount charged per patient and explanation for these fees.

The documents reviewed included OAT system reviews and indicator reports for British Columbia, as well as provincial program evaluations from Nova Scotia, Manitoba and Prince Edward Island. Provincial guidelines for OAT were reviewed as well as the Health Canada best practice guidelines. A resource list is included in the Appendix (A1).

Current Practice – Service Models in BC

In British Columbia, there are three main models of care where OAT-related medical services, including initial screening and assessment, medication induction, dose stabilization, and maintenance treatment, can be accessed: physicians in private practice holding methadone exemptions (i.e., participating in the

Methadone Maintenance Program[1] (MMP)), provincially funded mental health and substance use treatment programs, and private clinics. Prescribing physicians must hold a valid Health Canada exemption and must have met training and other requirements as outlined by the College of Physicians and Surgeons of BC in order to prescribe methadone and buprenorphine/naloxone and provide specific services related to OAT.

Independent Physicians with Methadone Licenses: A number of physicians across the province have opted to acquire methadone licenses and provide OAT within their usual office -ased practice or through a public substance treatment clinic or private clinic, both of which are detailed below. Physicians bill the Medical Service Plan, Fee Item T00039 Methadone or buprenorphine/naloxone treatment, which pays a weekly fee ($22.85/week) for every patient enrolled in the MMP. In this model, a physician may have a pre-existing and established therapeutic relationship with the patient, and so is able to tailor their OAT services to meet their specific needs and circumstances. However, access to OAT is limited, particularly in rural and remote areas, mostly due to fewer OAT prescribers than required to meet currently increasing demand for care. This shortage requires some patients and their families to travel long distances to receive treatment, or to turn to private methadone clinics to access treatment.

A major shortcoming of the independent physician prescriber model is lack of integration with other medical care services and supports. Few independent physician practices have formal connections with their local health authorities and, as independent businesses, are unlikely to afford other providers, such as registered nurses and social workers that could connect patients and their families with other health and social services. In addition, the traditional fee-for-service (FFS) model is increasingly observed to incentivize volume rather than quality and it is widely accepted as encouraging service demand-generation.

Publicly Funded Mental Health and Substance Treatment Programs: Health authorities either directly deliver or fund independent agencies to deliver substance use treatment services. Some programs provide OAT, although the relative proportion of all provincial OAT that is provided by these clinics compared to independent physicians with methadone licenses is not easily available, in part due to the likelihood of physicians associated with publicly funded clinics being paid on alternative funding arrangements and therefore not billing MSP Fees. In general, programs capable of offering OAT are more likely to be found in the larger urban areas. Publicly delivered or funded treatment programs also are more likely to be multidisciplinary, resulting in OAT being provided in combination with other medical and health services at no cost to patients and their families.

Some community treatment programs offer low threshold OAT programs that focus primarily on harm reduction and do not require patients to participate in counselling or to be abstinent as a condition of

[1] Physicians wishing to obtain an exemption under section 56 of the Controlled Drugs and Substances Act for an authorization to prescribe methadone for opioid dependence in the Methadone Maintenance Program (MMP) must apply to the College of Physicians and Surgeons of BC. The current requirements for obtaining an authorization to prescribe methadone for opioid dependence are: attendance at the Methadone 101 Workshop sponsored by the College • familiarization with the Methadone Maintenance Program: Clinical Practice Guideline • a preceptorship satisfactory to the Methadone Maintenance Program • an acceptable review of prescription profile from the PharmaNet database • an interview with a member of the registrar staff • an agreement to undertake a minimum of 12 hours of continuing medical education (CME) in addiction medicine each year • an agreement to provide after-hours contact information regarding methadone maintenance patients • an agreement to undergo a practice assessment of methadone maintenance practice within the first year

treatment. These programs often function over capacity and have lengthy wait lists (ranging from weeks to months). These programs typically also receive funding from the provincial government to also provide ancillary services such as addiction counselling and psychosocial supports.

Private for-profit Methadone Clinics: In recent years private for-profit methadone clinics have emerged, often associated with pharmacies dispensing methadone and mostly in high volume urban areas. There is a high concentration of these private clinics in the Lower Mainland, Vancouver's Downtown Eastside neighborhood, although more recently, they also have been established in larger cities in Interior Health and Northern Health. The private for-profit clinic business model is based primarily on revenue from MSP T00039 and MSP P15039 GP Point of Care (POC) FFS, with a percentage of each physician's MSP revenue charged as overhead, plus mandatory patient user fees, ostensibly for "required counseling services". As discussed below, patients are required to pay the user fees or are denied access to OAT. Consequently, private for-profit clinics appear to be more expensive for patients than would be attending physicians with methadone licenses, practicing in their own offices.

The growth in private for-profit sector is thought to be in response to service demands exceeding the capacity of the publicly funded sector. However, these service gaps have also led to a potentially lucrative business opportunity for clinic owners, many of who co-own dispensing pharmacies, as noted above. A number of concerns have been raised in regard to the private methadone clinic model, including: private for-profit clinics provide OAT separately from comprehensive substance use treatment; they include mandatory patient user fees that are likely to pose a cost barrier to accessing basic OAT; and there may be a conflict of interest inherent in the co-ownership of onsite or adjacent private methadone pharmacies.

Current Practice – Service Models across Canada

Primary Care Practices: OAT is most commonly provided through traditional FFS based group or individual primary care practices across Canada; primary care physician prescribers in every province are an essential component of OAT service delivery. In the Yukon and Northwest Territories, primary care practices are the sole provider of OAT, as these regions lack centralized mental health and substance use treatment facilities with embedded OAT programs.

Provincially Funded Mental Health and Addiction Treatment Programs: With the exception of Ontario, Nova Scotia and British Columbia, the primary model of service delivery for provincially funded OAT programs is a comprehensive addiction treatment program. In these specialized settings the treatment program usually includes screening and assessment, complete medical, mental health and psychosocial assessments, prescribing, counselling (either individual or group therapy), and ongoing monitoring, which is delivered by a care team of physicians, nurses, social workers, counsellors, and pharmacists. Although this model follows Health Canada Best Practices in terms of providing a comprehensive service, these programs are resource intensive and usually unable to meet demand, with waitlists ranging from one month to a year. In addition, the centralization of comprehensive services into regional facilities has resulted in very poor or non-existent access to treatment in rural or remote areas of each province.

To improve access and reduce wait-lists for provincially-funded programs, several provinces have recently changed their policies towards counselling, shifting from mandatory to voluntary counselling services in an effort to reduce per-patient resource and service utilization rates. The rationale for this

policy change was that health care professionals interact regularly with clients, through prescribing, screening, and dispensing, and that for many clients, particularly those with established treatment and personal stability, these brief interactions were sufficient to optimize care and treatment outcomes.

Private Methadone Clinics: For-profit clinics have been established in several provinces in Canada to meet demand, although this service model is most prevalent in BC and Ontario. In fact, in Ontario, private clinics provide OAT to approximately half of the total population of patients enrolled in the program.

Current Practice – BC Funding Models

The customary funding model for OAT physician services is fee-for-service, with the addition of pharmacy services[2], and ancillary support services, the latter which may include patient user fees, especially where private for-profit methadone clinics are the source of care. The following details each of these funding streams, including separate sections detailing the nature of patient user fees associated with such private clinics and associated barriers to access.

Physician Fees and Related Service Costs

As noted above, nearly all physicians providing OAT are paid on a fee-for-service basis by MSP. In recognition of the commonly unstable nature of OAT patients and the need to respond to pharmacy and/or other concerns potentially outside of regular office hours, physicians bill a standing weekly fee ($22.85/week) for every patient enrolled in MMP under their care. This fee is billed, regardless of the number of appointments, time spent with the patient and their families, level and type of care setting, and/or if the consultation occurs off-hours.

The methadone or buprenorphine/naloxone treatment fee is the only fee payable through MSP for any visit or medically necessary service associated with OAT, and must include physician counselling if provided. This means that the same fee is paid regardless of how comprehensive the service episode is.

Physicians also bill MSP an additional fee to cover costs associated with mandatory urine testing associated with MMP ($12.29 per test; maximum of 26 tests submitted for compensation per year).

The relevant sections of the MSP billing schedule are summarized in Table 1.

[2] The Network is aware of stakeholder consultation and evaluation processes underway for the PharmaCare component of the provincial OAT system under the leadership of the Ministry of Health. As such, information about the PharmaCare system included in this report is limited and primarily presented for overall context. It is acknowledged through the recommendations made in this report that enhanced collaboration across these initiatives may be of value in future, particularly for informing recommendations, program restructuring and planning, and operationalizing deliverables, using a system-wide approach as opposed to evaluating each component in isolation.

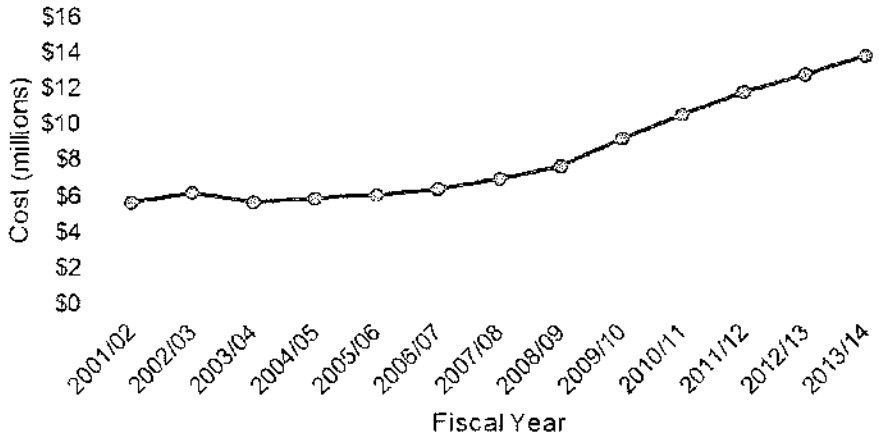
Table 1. Provincial MSP Fee Codes and Summary of Physician Services Included

T00039 Methadone or buprenorphine/naloxone treatment.....$22.85/week **T00039 is the only fee payable for any visit or medically necessary service associated with methadone maintenance therapy. Services include, but are not limited to the following:**
At least one visit per week with the patient during the induction of methadone or buprenorphine/naloxone/methadone or buprenorphine/naloxone stabilization.
At least two visits per month with the patient after induction/stabilization on methadone or buprenorphine/naloxone is complete. Exceptions to this criterion are where the patient resides/works in an isolated locale which is a significant distance from the prescribing physician.
Case management/treatment planning with care team.
Supervised urine drug screening and interpretation of results.
Counselling by a physician.
Communication with non-physician counsellor.
Communication with dispensing/supervising pharmacist.
Communication with primary care physician.
Communication with hospital-based physician when patient admitted to hospital.
Completion and submission of documentation relating to registration, termination or transfer.
Notes: The physician does not necessarily have to have direct face-to-face contact with the patient for these fees to be paid. Claims for visit fees are not payable in addition. This fee is payable once per week per patient regardless of the number of visits per week.
P15039 GP Point of Care (POC) testing for methadone or buprenorphine/naloxone maintenance.....$12.29/biweekly
Notes: Maximum of 26 P15039 claims per patient per annum. Health Canada approved POC tests must be utilized in order to be eligible for compensation under this filing.

Physicians working in private methadone clinics also submit claims for MSP Fee T00039. The private clinic charges each physician a percentage of that fee as an overhead charge. In addition, private clinics may divert some or all MSP payments associated with urine drug screens from the physician to general revenue. For example, a POC test costs $4 purchased in bulk, is billed at $12.50, and so the profit to the primate clinics is $8.50. This translates to $221 additional income per patient per year. In this way, a private clinic with a standard caseload of 200 patients could potentially generate additional annual revenue of $44,200 from POC tests.

In 2013/14, MSP expenditures (i.e., physician fees) associated with provision of OAT totalled approximately $13.75 million. Across the province, physician fees filed with MSP have increased since fiscal year 2001/02, and particularly in recent years with expansion of the OAT program and the addition of buprenorphine/naloxone to the provincial formulary in 2010 (Figure 3). Over the past five years, total MSP expenditures attributable to OAT have remained stable in Vancouver Coastal, but have increased in Island Health, Fraser Health and Interior Health, where the number of patients enrolled in OAT has increased at a faster rate than in the Lower Mainland.

Figure 3. Medical Service Plan Expenditures for Opioid Agonist Treatment, 2001/02 - 2013/14



Adapted from: BC Opioid Substitution Treatment System, Performance Measures 2013/2014, 2012/2013, and 2011/12. Office of the Provincial Health Officer, British Columbia Ministry of Health.

It is noted that physician providing OAT services in Health Authority and/or publicly funded treatment programs and community health centres are more likely remunerated through alternative funding arrangements, outside of the MSP funding model. The Ministry of Health Alternative Payments Program (APP) includes two alternative funding methods - service agreements and sessional contracts. These payment models tend to be used in health settings where the fee-for-service model is not appropriate (i.e., some community programs, complex care patients, some hospital-based services such as emergency, geriatrics and psychiatry, etc.). APP models can also be used in geographic locations where patient service volumes are so low that FFS billings do not produce sufficient income to attract or maintain sufficient physician capacity. A service agreement is generally a part time employment contract between a physician and the Health Authority based on an hourly rate, while a sessional contract pays a physician based on 3.5 hours of services. As of April 2016, sessional rates are $440.05 per session for general practitioners, and $519.08 for specialists in the province, as negotiated by the Doctors of BC.

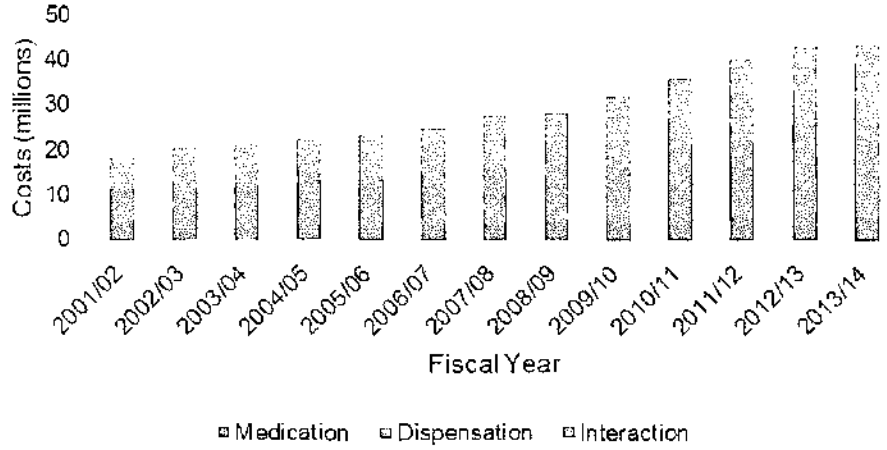
Although it is possible that physician OAT services may be included in terms of service outlined in some contract agreements or paid through sessional payments, this can't be determined. Although physicians paid through APP models are required to "shadow-bill" for MPS services, compliance is low and so it is not possible to determine when and where OAT services may be provided.

Pharmacy Services and Costs.

In fiscal year 2013/14, total BC PharmaCare expenditures for the provincial MMT program were approximately $43.7 million. Professional service fees, including dispensation, interaction and witnessed ingestion, accounted for approximately 88% of total expenditures, with 78% of these claims attributed to limited one-day supplies of methadone and associated professional fees charged on a daily basis. It should be noted here that pharmacies are currently unable to charge witnessed ingestion fee for buprenorphine/naloxone. If costs associated with buprenorphine/naloxone prescriptions are included in

estimated PharmaCare expenditures for OAT in 2013/14, total costs increase slightly to an estimated $46 million (Figure 4).[61]

Figure 4. BC PharmaCare Expenditures for OAT Program, 2001/02 - 2013/14



Adapted from: BC Opioid Substitution Treatment System, Performance Measures 2013/2014, 2012/2013, 2011/12. Office of the Provincial Health Officer, British Columbia Ministry of Health.

Ancillary Support Services

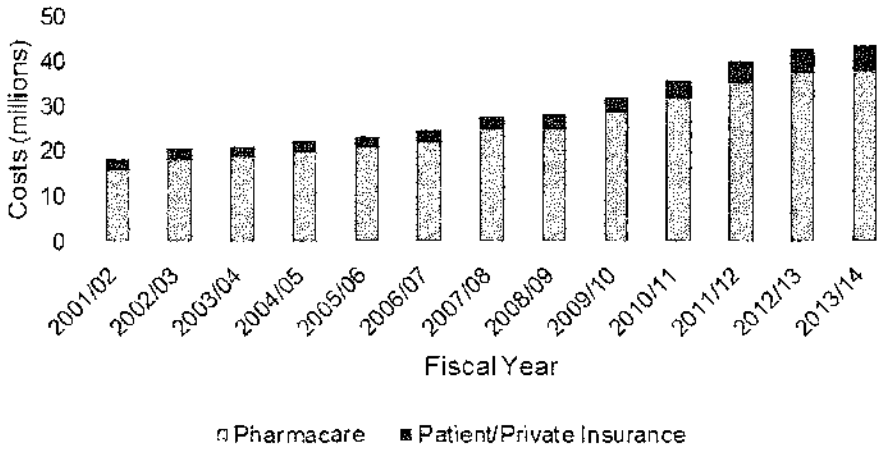
As noted above, MSP Fee T00039 is intended to include all care delivered to a patient in the context of OAT, regardless of the number of appointments, time spent with the patient and their families, level and type of care setting, and/or if the consultation occurs off-hours. Patients who receive addiction counselling at a publicly funded program (i.e., provincial mental health and substance use services, community substance treatment clinics) or directly from a physician (i.e., GP, family practice) do not pay user fees for this service.

Patients referred to or who elect to seek counselling from a private addiction counsellor (e.g., psychologist, therapist) pay for these services out-of-pocket. Some may be reimbursed through private, third-party insurance. The Ministry of Social Development and Social Innovation (MSDSI) provides income assistance recipients registered in the MMP with an Alcohol and Drug Treatment supplement of $500 per year, intended to support costs of substance use treatment and ancillary services. Currently clients registered with private for profit methadone clinic will need to use this supplement to pay clinic user fees, which typically are not recognized by the provincial Medical Services Plan. In fiscal year 2013/14, $2.6 million was expended through the MSDSI Alcohol and Drug Treatment supplement program[61], although it is not known what proportion of this spending was used for user fees to private methadone clinics.

In terms of medication costs, the majority of OAT clients in BC are registered in PharmaCare's Plan C, which covers 100% of prescription costs for residents receiving medical benefits and income assistance. Most other OAT clients are registered in BC PharmaCare's Plan I, or Fair PharmaCare plan. Fair PharmaCare registrants pay an annual deductible for eligible prescriptions, and co-payments for prescription medications and associated fees as determined by net family income. Individuals enrolled in Fair PharmaCare can either pay co-payments out-of-pocket or through third-party insurance benefits, if

available. In 2013/2014, the estimated annual cost of OAT medications per patient enrolled was $3,219. On average, PharmaCare paid $2,742 or 85 per cent of this cost, and patients or private insurers paid the remaining $477, or 15 per cent. While overall medication costs have increased steadily since 2001/02, the average percentage of costs paid by patients has remained relatively stable over the past five years (Figure 5, depicts MMT costs only).

Figure 5. Source of Payment for MMT Medication Costs, 2001/02-2013/14



Adapted from: Methadone Maintenance Payment Program Review, Medical Beneficiary and Pharmaceutical Services Division, British Columbia Ministry of Health, January 2015.

Private Methadone Clinic Patient Charges

Most private for profit methadone clinics in BC charge each patient a monthly user fee ranging from $40 to $80. As noted above, patients receiving income assistance can use the MSDSI Alcohol and Drug Treatment supplement to pay or subsidize that user fee. However, as those monthly charges often exceed the Alcohol and Drug supplement amount, the difference (estimated to be up to be as much as an additional $25 per month) must be paid out-of-pocket or deducted from income assistance cheques. Importantly it is reported that some private clinics require patients to sign a Fee Authorization Agreement granting permission for monthly deductions from their MSDSI cheques to pay clinic user fees. There have been reports of private clinics withholding medically necessary OAT treatment until this agreement is in place and payment is guaranteed. This is particularly troublesome in that it creates a cost barrier to accessing OAT among low income patients. The impact of financial barriers on access to treatment is discussed in more detail below.

To gather more information about the fee-for-service system in private clinics, a preliminary survey was conducted of 20 private for-profit methadone clinics spanning the province. They reported that patient user fees range from $40-65. Two clinics reported that clinic user fees for individuals on income assistance were higher than for individuals who did not receive income assistance ($60/month and $65/month, versus $30/month and $40/month for those not on income assistance), but noted that when subsidized by the Alcohol and Drug supplement, actual out-of-pocket costs for these patients on income assistance were lower. This disparity in charges is troubling given it suggests that private clinic user fees may be gauged to "what the market can bear", with the Alcohol and Drug supplement being seen as a predictable source of revenue.

Of 11 private clinics that provided information regarding utilization of patient fees, 8 clinics described their monthly patient user fee as a "clinic/facility fee", 1 clinic reported it was a "doctor and counselling fee", 1 clinic reported the user fee included counselling services, and 1 clinic reported that it covered counselling provided at time of initial assessment and diagnosis. Overall, this assessment revealed a lack of clarity regarding the specific purpose for the clinic user fee and it would appear they are merely an additional source of clinic revenue.

The high volume of patients seen in some private for profit clinics doesn't appear to accommodate for time consuming counselling or support services, such as referral to other health and social service agencies. Survey responses and informal assessments suggested that when counselling is provided, it is more likely to be informal or unstructured as opposed to a structured psychosocial treatment approach. No instances of addiction counselling provided by a trained addictions counsellor/professional were formally or informally identified in preliminary consultations.

Whereas the MSP Fee T00039 is designed to cover include comprehensive OAT services, the above suggests that the monthly user fee charged by private for profit clinics provides for no additional service. This suggests that patients required to pay private sector user fees from their MSDSI Alcohol and Drug supplement (and in some cases with additional private funds) secure no more services than are provided free in publicly funded programs, community-based substance treatment programs, and primary care practices.

The practice of charging user fees is particularly problematic given the evidence that out-of-pocket payments are a significant barrier to accessing preventive health services, as well as utilization of and adherence to proven medications.[62,63] Although patient co-payments and cost-sharing approaches in health care systems are commonly presented as a cost-containment approach that incentivizes primary prevention and adoption of a healthier lifestyle, this should be weighed against the proven effectiveness of OAT and the known costs of untreated opioid use disorder. Untreated opioid use disorder is associated with significant costs related to criminal activity; emergency department, hospital and community health services utilization; lost productivity; overdose deaths and premature mortality; and increased risk of HIV and HCV transmission. These costs far outweigh the costs of providing treatment; in the US, it is estimated that for every dollar spent on methadone maintenance treatment, there is a cost savings to the community of $4-$13.[64] Canadian estimates suggest that the average social cost of untreated opioid use disorder is $44,600 per year, while methadone maintenance treatment costs approximately $6000 per year. [65,66] In light of this, attention must be focused on dismantling these barriers, particularly for low income patients, in order to improve access and retention in proven treatments for opioid use disorder.

Current Practice – Payment Models across Canada

Physician Services:

In most provinces, physicians who prescribe OAT are paid on the fee-for-service model, funded by the respective provincial health budgets. Several provinces have specific billing codes for provision of OAT, including British Columbia, Saskatchewan, Ontario, New Brunswick and Newfoundland. While BC restricts fee-for-service billing for associated patient care to these OAT specific codes (unless unrelated clinical services are also provided in clinical visits), other provinces permit use of both OAT-

specific and general mental health billing codes, such as assessment, counselling, or psychotherapy, for compensation of services provided.

In 2012, Ontario instituted an additional level of compensation for a "team care" approach to OAT, intended to support interdisciplinary care and ancillary services, however, uptake has been low. Physicians report that the additional funding is insufficient to support recruitment and retention of counselling staff in smaller practices, and use of the "team" code is linked to restrictions in use of other billing codes, effectively reducing the total number of billable physician visits and impacting caseloads. Among provinces that do not have OAT-specific billing schedules, OAT services are compensated under general substance use assessment and/or general mental health/addiction codes, including generic counselling codes. A summary of physician billing schedules for services related to OAT by province is included in the Appendix (A6).

In all provinces, physicians employed at provincial treatment centres are either paid through fee-for-service billing as described above, or are salaried employees paid through alternate payment structures or service contracts.

Only two provinces, BC and Ontario, provide additional compensation to physicians for point-of-care urine testing performed in the context of OAT. In Ontario, this practice came under scrutiny when it was reported that some physicians were billing for more frequent urine drug screens than recommended (i.e., two or more urine tests per week). It was suggested that some physicians were using this activity to generate additional revenue, although some OAT physicians justified the practice as a means to enhance patient motivation to maintain abstinence from opioids and other drugs. Patients reported that frequent urine screens were intrusive and created an atmosphere of mistrust as opposed to a supportive, therapeutic relationship between patient and physician.

In recent years, the Ontario Ministry of Health has introduced several amendments to the billing schedule to prevent unnecessary testing, including restricting the number of urine tests that can be performed per patient, and reducing the amount of compensation received per test. It is noted that the number of billable urine screens is restricted to 26 tests per patient per year in BC, and excessive billing for urine testing has not been an issue in the province.

Pharmacy Services

In provinces with provincial drug benefit programs, most pharmacies are reimbursed for OAT medication costs, as well as additional fees for dispensing medication and witnessing ingestion as required by regulatory Colleges. Several provinces also charge an additional interaction fee.

Medication costs are typically covered in part or in full through provincial insurance plans, with patient deductibles and co-payment levels determined by family income. Patients who are not eligible for full medication coverage under provincial drug benefit programs either pay out of their own pocket or through private insurance plans. Provinces typically provide full coverage for medication and associated fees for seniors and individuals on income assistance.

Ancillary Services and Direct Patient Charges and User Fees

Across provinces, outside of publicly funded multidisciplinary programs, there is a lack of consistent funding for counselling, psychosocial treatment interventions, and psychosocial supports as compared to

the prescribing and dispensing of methadone and buprenorphine/naloxone. Ancillary services such as addiction counselling are typically not covered through provincial insurance plans unless delivered through a publicly funded mental health and substance use treatment centre or community health clinic. If patients have third-party, private insurance, private counselling services may be covered, although in most cases there is a cap on amount that can be claimed per year.

The practice of charging patient user fees to access treatment at private clinics varies across provinces. Private clinics in Alberta charge similar rates to BC, which are on average $45-60 per month. In contrast, private clinics in Ontario and Manitoba do not charge monthly patient user fees, and clinic operations are wholly supported through physician fee-for-service billing and revenue from affiliated pharmacies.

International Service and Funding Models

There is considerable variation in service delivery and funding models for international OAT programs, with treatment provided in a range of settings (specialty addiction clinics, methadone clinics, community health centre, general practice settings) and by different health care professionals (physicians, nurses/nurse practitioners, pharmacists). Determining the optimal service delivery model is challenging because few studies have assessed comparative effectiveness of practice setting or program structure on a scale that would be appropriately matched to a population-based provincial OAT program. It is generally recognized that a stepped care or continuum model that incorporates different levels of treatment intensity matched to individual needs and circumstances is ideal, but difficult to establish. An overview of OAT in several international jurisdictions is presented here to illustrate this diversity.

United States. The US has some of the most restrictive public health policies around provision of methadone maintenance treatment among high income countries. The distribution of methadone is highly regulated and monitored, and treatment can only be administered in federally approved centres, with a few exceptions (primarily for research). To qualify as a Federal Treatment Program (FTP), facilities must be able to demonstrate ability to provide adequate medical, counseling, vocational, educational, and other assessment and treatment services.

In addition to counselling provided by a drug counsellor with requisite education, training, or experience to assess the psychological and sociological background of patients, the FTP must be able to provide HIV risk reduction, pre- and post-test counselling. The FTP must also be able to provide directly, or through referral to adequate and reasonably accessible community resources, vocational rehabilitation, education, and employment services for patients who either request such services or who have been determined by the program staff to be in need of such services. These services must be available at the primary facility, except where the program sponsor has entered into a formal, documented agreement with a private or public agency, organization, practitioner, or institution to provide these services to patients enrolled in the FTP. Structured counselling is mandatory in nearly all Federal Treatment Programs, with approximately 98% of outpatients receiving some form of individual or group addictions counselling.[67]

Federal Treatment Programs can also administer buprenorphine/naloxone-based OAT, but it is less strictly regulated than methadone and available for prescription outside of the Federal treatment system. As such, buprenorphine/naloxone is largely prescribed on an outpatient basis from primary-care or office-based physicians, which typically involves routine medical management counselling.[68,69] This

divergence in OAT delivery systems has been driven by "*The Drug Addiction Treatment Act*" (2000), which enabled all primary care physicians to administer buprenorphine/naloxone following completion of a short online training course, effectively mobilizing physicians to become active partners in the diagnosis and treatment of opioid use disorder.

Increased uptake of buprenorphine for treatment of opioid use disorder has subsequently been associated with considerable public health benefits including: reductions in opioid-related overdose deaths,[8,70] decreased illicit opioid and other drug use,[71-74] and decreased HIV risk behaviours.[75,76] In addition, the ability to treat opioid use disorder in primary care settings has been shown to improve other health outcomes such as the identification and treatment of other chronic medical conditions.[77]

Until recently, OAT was not a Medicaid-eligible expense, and fewer than 10% of patients eligible could afford maintenance treatment unless covered by private insurance. Changes are expected with mandated coverage for mental health and substance use disorder treatment through the Affordable Care Act, but this data is not yet available and it may take years before benefits are fully realized at the population level. Although overall there appears to be a trend toward increasing coverage of opioid agonist therapies, several states have opted to exclude methadone and buprenorphine from Medicaid plans, and have enacting policies that may serve as barriers to access (e.g., prior authorization requirements).[78] For many patients, the cost of sublingual buprenorphine preparations remains prohibitive.

France. Methadone, which was introduced in France in 1995, is initiated only in drug maintenance clinics, though the prescription may be transferred to a general practitioner after the patient is stabilized. There is no registration of users, no biological testing for use of other substances, and patients are not required to undergo any type of counselling. Methadone is generally prescribed for a maximum of 14 days with divided doses available every seven days at the dispensing pharmacy. Prescribing physicians may allow longer periods for the divided dose.

France began offering buprenorphine treatment by prescription in 1996. Similar to methadone but with a longer maximum prescription length of 28 days, buprenorphine is typically prescribed with divided doses every seven days unless otherwise ordered by the prescribing physician. Dispensing pharmacists are expected to provide buprenorphine daily for the first several days and directly observe dose-taking before beginning unsupervised administration.

Methadone is free in clinics, while buprenorphine is purchased at a pharmacy and reimbursed through classic prescription coverage, with third party insurance often paying for most or all of the treatment. The primary care model adopted in France is credited with mainstreaming and destigmatizing OAT. It has also resulted in more comprehensive treatment for patients - many primary care providers prescribe both methadone or buprenorphine treatment and antiretroviral treatment to HIV-positive patients, resulting in a better ability to manage drug interactions.

This policy also allowed for low-barrier access to treatment though primary care physicians for approximately 65,000 patients per year nationally, engaging ten times more patients in care than the more restrictive methadone treatment model, which remains an alternative option.[70] Overall, approximately 20% of all physicians in France are now prescribing buprenorphine to treat approximately half of the estimated 150,000 opioid users in the country.[70] No negative consequences to general population health or safety have been reported; in fact, opioid-related overdose deaths have declined by approximately 80% since 1995.[9]

United Kingdom. Healthcare policy in the United Kingdom gives priority to the provision of better access to effective and comprehensive treatment, particularly for vulnerable or excluded groups, and to encouraging client retention, recovery and reintegration. Delivery of treatment is through local multi-agency partnerships representing health, criminal justice agencies and social care services.

Drug treatment in the United Kingdom encompasses a range of available treatments and services including community and primary care based prescribing, community one-to-one and group based psychosocial treatment interventions to support recovery, and intensive outpatient programs, and quasi- and full residential drug treatment and rehabilitation supports. Local areas across the United Kingdom are expected to provide a wide range of services, including information and advice, screening, care planning, psychosocial treatment interventions, community prescribing, inpatient drug treatment and residential rehabilitation. In addition, patients are offered aftercare and relapse-prevention programmes, HBV vaccinations, testing for HBV, HCV and HIV, and access to hepatitis and HIV treatment.

Opioid agonist treatment remains the most common treatment in the United Kingdom for opiate users.. Methadone is the most commonly prescribed drug for OAT although buprenorphine has also been available since 1999. Prescribed injectable methadone and diamorphine are also available in England, although rarely used as a first-line treatment option.

All direct and ancillary costs of OAT are covered through national and local budgetary funds. The UK primarily utilizes a shared care model, where specialists and GPs collaborate to provide OAT, in close collaboration with community pharmacists – the specialist does the assessment, induction and stabilization. Uncomplicated patients are transferred to GPs for maintenance, and more complex patients are retained in specialized care until stable. All patients have access to counselling and drug screening via specialist – typically at a multidisciplinary care centre. Almost all dispensation is done at community pharmacies and pharmacists are considered an essential member of the multidisciplinary team.

Alternate and Emerging OAT Service Delivery Models

The recent rise in overdose deaths due to illicit drug use in British Columbia underscores the importance of developing a coordinated, evidence-based strategy to address the public health harms related to pharmaceutical and illicit opioids in the province. One key component of this strategy is the delivery of health system interventions that optimize engagement, care and treatment of individuals with opioid use disorder. To meet demand for OAT from an equitable, patient-centred perspective, it has become increasingly clear that a true continuum of care options for clinical management of opioid use disorder must be established. At the same time, it is increasingly recognized that the comprehensive approach outlined in the Health Canada Best Practices document is not scalable, and is not inclusive of the increasingly diverse patient population engaged in OAT. Here we briefly review the evidence for three approaches to OAT that could be components of a province wide stepped-care model, where treatment approach is matched to individual needs, circumstances, and preferences: low threshold, primary care, integrated approaches.

Low-Threshold/High Tolerance Approaches:

Traditional comprehensive OAT programs invest considerable resources in programmatic and ancillary services that support the biopsychosocial model. In contrast, the low-threshold/high tolerance (LTHT)

approach utilizes a medical model of addiction, and directs resources primarily towards medical management and medication-assisted treatment of opioid use disorder accordingly. LTHT methadone maintenance treatment programs have been established for specific populations in British Columbia (i.e., Sheway, Vancouver Native Health Society, Cool Aid Community Clinic, among others), Ontario, Quebec, Nova Scotia, and New Brunswick.

Typically, these programs target street-involved and marginalized populations of persons who inject drugs who may experience multiple barriers to accessing medical care in traditional settings. Participation in counselling or other ancillary services is often not a requirement, urine tests may be scheduled (not random), and there is increased tolerance of issues that would normally result in involuntary discharge from treatment (i.e., positive urine screens, ongoing substance use). The rationale for this approach is that patients should not denied medically necessary treatment because of structural or systematic barriers, including stigma and discrimination. Research indicates that this approach is effective: in St. John, the 12-month retention rate among 86 participants in a LTHT methadone program was 95%, with 67% of the cohort achieving abstinence from illicit opioids and an additional 13% achieving abstinence from cocaine.[79] In Toronto, participation in low threshold MMT has been associated with significant reductions in HIV-risk behaviours, including injecting drugs, sharing needles and other injection equipment, and indirect sharing practices (e.g., front- and/or back-loading).[80] Taken together, these research results strongly support more widespread adoption of low-threshold approaches in Canada, and affirm the need to re-evaluate the role of counselling in OAT in a broader context.

Primary Care Practice:

Primary care practice can also be considered a low threshold approach, in that patients can access treatment from a low-barrier setting as opposed to a publicly funded treatment centre, which often have extensive wait-lists. Patients may also have an established therapeutic relationship with their primary care provider and prefer to seek treatment from a provider whom they know and trust. As well, the emphasis on continuity of care and chronic disease management in primary care settings is well suited to individuals with opioid use disorder. Although opioid use disorder is viewed as a chronic, relapsing medical condition, currently, OAT patients often do not receive the standard model of care used for other chronic diseases (e.g., diabetes, heart disease, or cancer), where continuing care is considered a mainstream approach.

The evidence supporting effectiveness of primary-care models for OAT provision is clear. In France, the Methadone Induction in Primary Care for Opioid Dependence study randomly assigned participants with opioid use disorder to methadone induction at a primary care clinic or at a specialty clinic: individuals enrolled into the primary care group were more likely to accept treatment and to have increased satisfaction with no difference in treatment retention.[81] The German COBRA study compared individuals enrolled in large specialised centres with those enrolled in primary care settings and identified a significantly higher reduction in criminal behaviour and health risk behaviour in those in primary care.[82] Similarly, other studies have reinforced that decreasing barriers to methadone by provision of access through primary care physicians is safe, equally effective, and increases access to an essential medical therapy.[83,84] These findings are of particular importance in settings where incidence of HIV related to drug use remains high. In Vancouver, where a longstanding collaboration between primary care providers and community pharmacies has enabled provision of low-threshold primary care methadone to marginalized populations, MMT participation has been associated with significantly

reduced mortality rates (overdose-related and all-cause mortality) and lower risks of HIV acquisition.[85,86]

Although primary care-based OAT is available and utilized in BC, dedicated efforts need to be made to expand the number of primary care physicians and practices providing OAT care, particularly in rural and remote areas of the province, but also in urban centres that are currently dependent on private methadone clinics to meet the demand for treatment. Multiple factors have impeded wider implementation of primary care based OAT in British Columbia. These include a lack of medical education and training in addiction medicine amongst primary care providers, and a paucity of evidence-based resources to guide practice. As well, pervasive stigma around substance use can influence willingness to accept OAT patients in practice. Perhaps of most relevance to this report, physicians paid through the FFS model report that the current billing schedule for OAT does not provide adequate compensation for the time and resources required to provide quality care for patients and families, particularly for those individuals with complex medical and social needs (i.e., concurrent psychiatric disorders, HIV/HCV, polysubstance use). Consistent with this, some physicians have been observed to refer to the viability of incorporating OAT into private practice as "a numbers game", requiring at least 200 patients to be sustainable. Re-evaluation of the remuneration for physician services is warranted.

Integrated Approach:

As mentioned throughout, when patients receive addiction treatment, it is usually episodic and restricted to specialty care delivery systems that are separate from other systems of medical care, with infrequent interaction or collaboration with general medical providers, or even the primary care providers of patients engaged in treatment. In *Setting Priorities for the BC Health System* (2014), coordinated primary and community care strategies were identified as a mechanism for shifting the way health care is managed and delivered for individuals with substance use disorders.

There is evidence from the literature that coordinated care models provide the continuity of care required to meet the complex health needs of some individuals with opioid use disorder, and facilitate transitions between levels of care intensity. This individualized approach permits patients to graduate from high- to low-intensity care settings once stabilized on a maintenance dose, avoiding unnecessary health care visits, interventions and associated health system expenditures. As well, coordinated care permits individuals who require more intensive care at any stage of treatment to be rapidly transitioned to specialist care, permitting early intervention and harm reduction. In a longitudinal observational study, OAT patients who received coordinated care consisting of routine physician screening for substance abuse in primary care, referral to specialty care when needed, and referral back to primary care when stabilized were followed for nine years. Patients who received coordinated OAT care had significantly lower health service utilization costs and improved health outcomes compared to case-matched controls who received specialist OAT addiction care that was not tailored to individual needs or circumstances.[87,88] Several randomized controlled trials have confirmed this finding, reporting that patients who receive comprehensive medical care from an integrated program were twice as likely to be abstinent from opioids, and had significantly reduced hospital and health service utilization rates than a comparable cohort receiving non-integrated care.[89-91] The establishment of the BC Divisions of Family Practice and efforts to enhance collaboration between primary care physicians, specialists and provincial Health Authorities present a unique opportunity to mobilize this approach. It is noted that this approach is not without challenges to implementation, including new financial and resource costs, and establishment of infrastructure including health information sharing, tracking systems and patient registries.

Analysis

The scan confirmed that although most provinces recognize the need for more than one model of treatment, no province has established a true continuum of care options that reflects the diversity of the patient population, and/or different levels of treatment intensity that may be required for different individuals and over time. As is the case with BC, service delivery across Canada is fragmented with little communication or collaboration between physician practices and publicly funded programs providing OAT.

A number of issues specific to the BC context were identified, including the need for evidence-based clinical practice guidelines, more explicit MMP regulations, revisions to the definition of MSP Fee Item T00039 to ensure consistency with research evidence, optimization of current public sector OAT capacity and likely development of additional capacity to avoid expansion of the more expensive and less controlled private sector.

Of particular concern is the private sector practice of charging income assistance recipients, a patient population with extremely limited financial resources, a user fee exceeding their MSDSI Alcohol and Drug supplement seemingly for services that already are a condition of MSP Fee Item T00039. Reports also suggested that private clinics may charge user fees solely as a revenue source, recognizing that patients on income assistance receive and will use their Alcohol and Drug supplement to cover them.

Section Two Recommendations

With regard to OAT service models:

1. The current capacity of publicly funded OT providers should be optimized, thereby reducing demand for the more expensive private clinic sector.

Proposal for Action:

- Explore strategies to optimize the capacity of physicians with methadone licenses, including consideration of introducing stepped care models that permit immediate or graduated referral of low risk users to primary care practices for OAT maintenance.

2. Barriers preventing primary care physicians from providing OAT should be eliminated.

Proposal for Action:

- Better utilize primary care physicians in the prevention and treatment of opioid use disorder by including them as active participants in development of OAT program regulations and clinical practice guidelines.
- As has been demonstrated in the United States and France, buprenorphine/naloxone can be administered safely and effectively in primary care settings, and expanding access to buprenorphine/naloxone, particularly in the primary care setting, should be prioritized.

With regard to OAT funding models:

3. Based on the research evidence that counselling and psychosocial treatment interventions are not necessary components of OAT and do not contribute to better outcomes, these services should not be directly or indirectly publicly funded as part of OAT.

Proposals for Action:

- The following statement should be amended or removed from the Provincial Methadone Maintenance Treatment Agreement: *"Patients attending a clinic for methadone are expected to be receiving more than just methadone. I agree to attend counselling at the clinic or from an alcohol and drug service provider. I am also willing to involve myself in a support group which will aid my recovery."* as it is not of proven benefit, and not consistent with or the Health Canada Best Practices for Methadone Maintenance Treatment.

- Given in BC the customary OAT providers are physicians remunerated through FFS by the Medical Service Plan, Fee Item T00039 Methadone or buprenorphine/naloxone treatment, should be amended to eliminate the requirement of" Counselling by a physician". Fee item P15039 GP Point of Care (POC) testing for methadone or buprenorphine/naloxone maintenance, is unaffected.

- So as to ensure that all patients receiving OAT can be easily connected to other health and social supports when desired (e.g. specialised behavioral interventions, housing, vocational skills, legal services etc.), consideration should be given to requiring physicians billing T00039 to have formal referral and/or shared care arrangements in place with a publicly funded treatment program.

- In the case of private for profit clinics, where physicians employed or under contract bill T00039, they should be made aware of the definition change to T00039 and be advised that adherence to the revised OAT/MMP program regulation is a condition of payment.

- MSDSI should consider disallowing use of the addiction supplement for the purposes of OAT-associated counselling or psychosocial treatment interventions. Provision of informal OAT counselling during routine clinical visits that is equivalent to medical management of any other chronic condition, and appropriately matched to individual patient circumstances and needs, should be provided without a user fee being charged to patients.

It is acknowledged that the following recommendations require a more intensive stakeholder consultation process, including government representatives, physicians, staff, administrators, pharmacists and patients who utilize public systems and private methadone clinics to guide decision making, program restructuring.

In addition, a more comprehensive evidence review and environmental scan also may be required so to ensure a strong evidence base for decisions related to the development of new funding and service delivery models for OAT in BC. It is anticipated that the evaluation of the Provincial OAT pharmacy/Pharmacare system currently underway also will contribute to this evidence base.

Furthermore, it is recognized that in the short term, private methadone clinics may be necessary to meet treatment demands across most regions of the province, and therefore, to minimize any negative impacts or disruptions to patient care, this process may need to proceed in stages. However it is anticipated that through more standardized management of methadone treatment, capacity of the public system can extend to meet demand.

Summary and Conclusion

The release of **Healthy Minds, Healthy People** in 2010 established a decade-long vision for collaborative and integrated action on mental health and psychoactive substance use in British Columbia. This comprehensive strategy for improving the provincial approach to mental health and substance use set ambitious goals, including improved professional addiction training and public education, engagement of primary and community care models in substance use disorder treatment, implementation of evidence-based medications and interventions into practice, building complementary rehabilitation and support service structures that improve treatment outcomes. An identified priority of this strategy was to strengthen the medical, pharmaceutical and psychosocial support components of the Provincial Methadone Maintenance Program to optimize service delivery, reduce wait-lists, increase retention, improved patient and population health outcomes, and eliminate structural and systemic barriers to accessing treatment.

As we move into the second half of the decade, new challenges have emerged, as have unique opportunities to affect transformative change in the provincial strategy for addiction care and treatment. In this context, The Network is firmly committed to working with the Ministry of Health to achieve a shared vision - a system of responsive and effective health care services that will improve access to evidence-based treatment and intervention for all patients and families affected by substance misuse in the province of British Columbia.

The preliminary recommendations enclosed in this report regarding the structure and delivery of the opioid agonist treatment program hold potential to move this agenda forward. The Network has made several key recommendations:

With regards to psychosocial treatment interventions in OAT:

- Evidence-based OAT service components should be clearly defined in program regulations and clinical practice guidelines.
- Based on research evidence, counselling and psychosocial treatment interventions are not necessary components of OAT and do not contribute to better health outcomes.

With regards to payment models for OAT prescribing and physician care

- The current capacity of publicly funded OT providers should be optimized, thereby reducing demand for the more expensive private clinic sector.
- Barriers preventing primary care physicians from providing OAT should be eliminated.
- Based on the research evidence that psychosocial treatment interventions are not necessary components of OAT and do not contribute to better outcomes, these services should not be directly or indirectly publicly funded as part of OAT

These recommendations are firmly aligned with the Priorities for the BC Health System to achieve a sustainable system that promotes and sustains health, and provides high-quality publicly funded health care that best meets the needs of patients and families.

Appendices

A1. Resource List

Luce J, and Strike C. A Cross-Canada Scan of Methadone Maintenance Treatment Policy Developments. Report Prepared for the Canadian Executive Council on Addictions, April 2011. http://www.ceca-cect.ca/pdf/CECA%20MMT%20Policy%20Scan%20April%202011.pdf

BC Opioid Substitution Treatment System, Performance Measures 2013/2014. Office of the Provincial Health Officer, British Columbia Ministry of Health, July 2015. http://www2.gov.bc.ca/assets/gov/health/about-bc-s-health-care-system/office-of-the-provincial-health-officer/reports-publications/special-reports/bc-ost-system-measures-2013-2014.pdf

BC Opioid Substitution Treatment System, Performance Measures 2012/2013. Office of the Provincial Health Officer, British Columbia Ministry of Health, May 2014. http://www2.gov.bc.ca/assets/gov/health/managing-your-health/methadone-2012-13.pdf

BC Opioid Substitution Treatment System, Performance Measures 2011/2012. Office of the Provincial Health Officer, British Columbia Ministry of Health, May 2014. http://www2.gov.bc.ca/assets/gov/health/about-bc-s-health-care-system/office-of-the-provincial-health-officer/reports-publications/special-reports/methadone-2011-12.pdf

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Reist D. Methadone Maintenance Treatment in British Columbia, 1996-2008 Analysis and Recommendations. Report prepared for the British Columbia Ministry of Healthy Living and Sport by the Centre for Addictions Research BC (CARBC), May 2010. http://www.health.gov.bc.ca/library/publications/year/2010/Methadone_maintenance_treatment_review.pdf

Parkes T, Reist D. British Columbia Methadone Maintenance Treatment Program: A Qualitative Systems Review – Summary Report. Report prepared for the British Columbia Ministry of Healthy Living and Sport by the Centre for Addictions Research BC (CARBC), April 2010. http://www.uvic.ca/research/centres/carbc/assets/docs/report-methadone-maintenance-treatment-program.pdf

Bertschi M, Wright T, Petrucci F, Campbell J. An Environmental Scan of Methadone Maintenance Treatment Services in Northern BC. Report prepared for the Northern Health Region, March 2012. https://northernhealth.ca/Portals/0/Your_Health/Programs/Mental_Health_and_Addictions/documents/MethadoneMaintenanceTreatmentServicesInNorthernBC.pdf

Healthy Minds, Healthy People: A Ten-Year Plan to Address Mental Health and Substance Use in British Columbia
Ministry of Health Services and Ministry of Children and Family Development, November 2010

http://www.health.gov.bc.ca/library/publications/year/2010/healthy_minds_healthy_people.pdf

Bodnarchuk J, Patton D, Broszeit B. Evaluation of the AFM's Methadone Intervention & Needle Exchange Program (m.i.n.e.). Winnipeg: Addiction Foundation of Manitoba; 2005. 58 p. http://digitalcollection.gov.mb.ca/awweb/pdfopener?smd=1&did=17361&md=1

Burbridge AMM, Campbell MA. Evaluating Methadone Maintenance Treatment Outcomes in an Atlantic Canadian Milieu. Fredericton: Center for Criminal Justice Studies, University of New Brunswick; 2012. 97 p.
http://www.unb.ca/saintjohn/ccjs/_resources/pdf/mmtfinalreport2012.pdf

Corporate Relations and Evaluation Unit. Prince Edward Island Methadone Maintenance Treatment Program Evaluation Report. Charlottetown: Department of Health, Province of Prince Edward Island; 2008. 36 p.
http://www.gov.pe.ca/photos/original/doh_mmtp_eval.pdf

Methadone Maintenance Treatment Practices Task Force. Report of the Methadone Maintenance Treatment Practices Task Force. Ottawa: Ministry of Health and Long-Term Care, Ontario. 2007. 156 p.
http://www.ontla.on.ca/library/repository/mon/18000/275439.pdf

Health Canada Best Practices - Methadone Maintenance Treatment. Ottawa: Health Canada, 2002. 104p.
http://www.hc-sc.gc.ca/hc-ps/pubs/adp-apd/methadone-bp-mp/index-eng.php

OxyContin Task Force. OxyContin Task Force Final Report. Departments of Health and Community Services, Justice and Education, Government of Newfoundland and Labrador, 2004. 64 p.
http://www.health.gov.nl.ca/health/publications/oxycontin_final_report.pdf

Keeney E, Saucier R. Lowering the Threshold: Models of Accessible Methadone and Buprenorphine Treatment. Open Society Foundation, International Harm Reduction Development Program. Feb 2010.
https://www.opensocietyfoundations.org/sites/default/files/lowering-the-threshold-20100311.pdf

BC Ministry of Health. Setting Priorities for the B.C. Health System. Feb 2014. 52 p.
http://www.health.gov.bc.ca/library/publications/year/2014/Setting-priorities-BC-Health-Feb14.pdf

A2. Methadone Maintenance Treatment Agreement and Consent

BC METHADONE PROGRAM
College of Physicians and Surgeons of British Columbia
300–669 Howe Street
Vancouver BC V6C 0B4
www.cpsbc.ca
Telephone: 604-733-7758 ext. 2626
Toll Free: 1-800-461-3008 (in BC)
Fax: 604-733-3257

Methadone Maintenance Treatment Agreement and Consent

PATIENT INFORMATION

Name _____
Surname Given name(s)

_____ _____
Date of birth Personal health number (PHN)

AGREEMENT

I UNDERSTAND AND AGREE THAT:

1 I am being placed on:

☐ a methadone maintenance program for an indefinite period of time or
☐ a withdrawal program for a maximum of _____ months

2. For safety reasons, my methadone prescriber will contact my family physician and any other physicians involved in my care, in order to ensure that each physician is fully aware of the treatment being provided by the other.

3 Patients attending a clinic for methadone are expected to be receiving more than just methadone. I agree to attend counselling at the clinic or from an alcohol and drug service provider. I am also willing to involve myself in a support group which will aid my recovery.

4. Methadone is a long-acting narcotic, which is addictive and has abuse potential. If methadone is inappropriately used it is dangerous and can lead to death. It must be safely stored and not be accessible to other people, especially children and non-tolerant individuals.

5. In order for methadone to be effective, it must be ingested on a daily basis at the prescribed dosage level and doses should not be altered without medical consultation.

6 My physician will adjust methadone dosage levels, frequency of dispensing, frequency of clinic visits and frequency of urine drug testing in order to provide safe care. My dosing schedule will entail daily witnessed ingestion until I am stable, after which carries may be gradually introduced at the discretion of my physician

7 No person other than myself may pick up my methadone from the pharmacy and I understand that I will need to attend at the pharmacy daily until I am granted carry privileges.

8. Failure to collect medication from the pharmacy for two successive days raises safety concerns, which require that the medication be withheld until the reason for my non-attendance has been reviewed by my physician. A reduction in methadone dose may be necessary after several missed doses.

9 There will be no replacement of any lost, stolen or spilled medication.

10. Medication may not be picked up early from the pharmacy.

11. Urine for drug testing will be collected by the office staff on a random basis as judged appropriate. I may be contacted and given 24 hours to come to the clinic and provide a urine sample. Failure to provide a sample when requested is considered to be a significant program violation and will result in a revision of my treatment plan which may include loss of carry privileges

12. Any cold or tampered urine sample will be treated as a serious program violation and will result in a revision of my treatment plan and loss of carry privileges. Recurrent cold samples and/or tampered urine specimens may lead to dismissal from the program.

13 The ingestion of any psychoactive substances, whether by prescription or over the counter, without a valid indication is not acceptable. I understand that I will be expected to notify *ANY* treating physician that I am on methadone maintenance and that narcotics and sleeping pills/tranquillizers should not be prescribed unless there are no alternatives. If I am taking such medication I will notify my methadone physician as soon as possible.

A3. List of Psychosocial Treatment Interventions included in Section 1 Evidence Review

Intervention (as defined by authors)	Description
Acceptance and Commitment Therapy[92]	Behavioural therapy with an emphasis on spirituality, mindfulness and behaviour changes. The aim is to regulate thoughts, feelings or other private experiences.
Biofeedback[93]	Behavioural treatment that aims to relieve anxiety based on the assumption that certain environmental stimuli can cause anxiety and may motivate further drug use in people attempting to abstain. EMG biofeedback attempts to teach people to control EMG activity.
Cognitive Behavioural Therapy[27,32-34,40,42,44,94-97]	Cognitive components include identifying and disputing irrational assumptions, sensitisation to adverse consequences of drug use, setting realistic goals and developing positive self-talk. Behavioural component consists of training in approach of conflict situations, practicing and identifying assertive communication, identifying and engaging in pleasant events and rehearsal of behaviour that will lead to goal attainment.
Contingency Management Interventions[22,25,26,32,39,45,98-115]	Behavioural treatment based on positive/negative reinforces to promote abstinence This may include payment or prizes or a take-home pharmacological treatment dose as a reward for drug free urine or completing a treatment goal.
Customized Employment Supports[116]	Counsellors work intensively with patients to overcome barriers that hinder employment with goal of attaining rapid job replacement.
Enhanced Medical Management[35,36,117]	30-minute sessions of manual guided counselling focused on barriers and facilitators of compliance with treatment
Enhanced Methadone Services [24,31,37,47,118-120]	Counselling plus on site medical, psychiatric, employment and family services with educational, directive and prescriptive interventions. Uses short-term behavioural contracts aimed at improving treatment adherence and getting patients to make lifestyle changes.
Free Mapping and Free plus guide Mapping[122]	Free Mapping: Clients and counsellors construct node-link display through counselling to facilitate engagement of patients in treatment, positive feelings about self/treatment and therapeutic alliance. A marker board/large sheet of paper is used for visualization. Free plus guide Mapping: A preformed "fill in the node" is used to help patients and counsellors examine treatment related issues
Information-Motivation-Behavioural Skills Model[123]	A model of behaviour change that focused on reducing both drug and sex risks. All interventions are behavioural approaches and in line with reinforcement principles.
Rational Psychotherapy Mother's Group [124]	Supportive psychotherapy designed to serve heroin addicted mothers with children less than 16 years of age which aims to address psychosocial vulnerabilities and facilitate optimal parenting
Short term Interpersonal Psychotherapy [125]	Based on the concept that psychiatric disorders, including opiate addiction, are associated with disturbances in interpersonal functioning, which may perpetuate the disorder.

Intervention (as defined by authors)	Description
Subliminal Stimulation[126]	Based on theory that unconscious wishes have a direct impact on overt behaviour. Stimuli are designed to activate unconscious wishes and fantasies in order to promote various outcomes such as allaying anxiety or leaving a person feeling connected to a therapist and more able to respond to treatment.
Supportive-Expressive Therapy [96,127]	Aims to help participant feel comfortable discussing his or her personal experiences and help them identify and work through problematic relationship themes such as drug dependence and how problems may be solved without recourse to drugs.
Twelve-step Facilitation [41,92]	Structured intervention designed to parallel and facilitate participation in a 12-step program. Emphasizes acceptance of problem, surrendering control and active participation in 12-step meetings and program of recovery.

A4. Scan of Provincial Clinical Practice Guidelines and Recommendations for Psychosocial Treatment Interventions in OAT Programs.

British Columbia

College of Physicians and Surgeons of British Columbia. Methadone Maintenance Program: Clinical Practice Guideline. Vancouver: College of Physicians and Surgeons of British Columbia; 2015. https://www.cpsbc.ca/files/pdf/MMP-Clinical-Practice-Guideline.pdf

Page 24:
Many methadone patients struggle with a number of challenges, such as poverty, lack of education, exposure to violence, poor nutrition, serious physical or mental health problems and involvement with the criminal justice system. These problems are not addressed with the provision of methadone alone. Methadone programs that do little more than provide a methadone prescription are inadequate; methadone programs are expected to incorporate a comprehensive biopsychosocial and spiritual approach to treatment. When counselling is integrated into methadone maintenance programs, there are significant reductions in drug use.11 It is important for methadone prescribers not to adopt the perception that counselling is a task to be taken on exclusively by other staff or caregivers. All MMT physicians share this significant responsibility as part of their overall mission to facilitate treatment and, ultimately, recovery.

4.1 The Methadone Prescriber's Role
In order to assist the patient in meeting treatment goals, methadone prescribers must establish trusting, therapeutic relationships with their patients. Physicians need to create non-judgmental, collaborative environments in which patients feel safe to discuss their concerns. If positive relationships do not develop, the methadone maintenance program will have minimal benefit. Once constructive relationships have been established, physicians must work with patients to identify aspects of each patient's life that could be changed or modified to benefit the patient. These treatment goals should be identified collaboratively between the patient and the physician. Many appropriate treatment goals are not necessarily focused on drug-using behaviour. For example, patients may wish to move to better or safer housing, improve their general health, enrol in training programs, learn better communication skills, learn relaxation techniques or improve the quality of their personal relationships. Newer technologies including telemedicine may reduce the barriers to access to care; however, this technology should not reduce the level of clinical care as outlined in these guidelines. Initial assessments and induction of patients must involve a face-to-face encounter and clinical examination.

After goals have been identified, methadone prescribers should work with patients to develop treatment plans to meet these goals. This progress should be monitored and outcomes documented. Depending on each patient's circumstances, physicians may opt to work in collaboration with counsellors, or may refer patients to independent counselling agencies or self-help groups such as Alcoholics Anonymous (AA) or Narcotics Anonymous (NA) and Self-Management and Recovery Training (SMART). Many other specialized resources may be available to aid methadone patients. Physicians are expected to familiarize themselves with the full spectrum of services available to their patient population through their local health authorities, and are encouraged to refer their MMT patients to appropriate community treatment programs, support groups and counsellors. Whatever resources are chosen, physicians should be aware of the issues each patient is attempting to address and what progress has been made. This information

should be incorporated into the patient's treatment plan. Regardless of where the patient is engaged in counselling, the physician should communicate with the counsellor (with the patient's consent), document and play an active role in the process. The most important element of treatment is ensuring that the patient is engaged in the treatment, rather than the particular therapeutic model employed or the details of the treatment."

Discontinuation in Unstable Patients: Treatment Goals Not Achieved (p.31)
Some patients choose to taper methadone despite its benefits even though they are not yet fully stable. In this case, tapering will place patients at high risk for relapse. The physician and counselling team should explore the patient's motivation for tapering and provide alternative treatment options, including Suboxone.

2. Adolescent Patients (p.34)
Some adolescent patients do meet criteria for late-stage dependence, are experiencing significant adverse consequences, have inadequate systems and have relapsed after previous abstinence-based treatments. These patients may benefit from Suboxone or MMT, but they require rigorous assessment and a detailed treatment plan which is frequently reviewed. Supportive counselling must be a condition for continued Suboxone or MMT. Only physicians who work with counsellors and have some experience in dealing with substance-dependent youth should agree to accept these patients.

5.3.1 Management Issues (p.44)
Substance dependent patients also have a significantly higher incidence of mental, physical and sexual abuse. Identifying and providing focused counselling may be beneficial in assisting recovery.

Alberta

College of Physicians and Surgeons of Alberta. Alberta Methadone Maintenance Treatment: Standards and Guidelines for Dependence. Edmonton: College of Physicians and Surgeons of Alberta; 2014. http://cpsa.ca/wp-content/uploads/2015/06/alberta-mmt-standards-guidelines.pdf?3c3402

- Inpatient Assessment for Admission for to an MMT Program, "17. The physician must encourage the patient to include non-pharmacological measures (i.e.: addiction counselling) as a part their treatment plan."(p.13).
- In Discontinuation, "4. The Initiating/Maintaining Physician should encourage the patient to engage with other health care professionals or an addiction treatment program for counselling and support." (p.24).

Saskatchewan

College of Physicians and Surgeons of Saskatchewan. Saskatchewan Methadone Guidelines and Standards for the Treatment of Opioid Addiction/Dependence. Saskatoon: College of Physicians and Surgeons of Saskatchewan; 2015.
https://www.cps.sk.ca/Documents/Programs%20and%20Services/Methadone/SK-Methadone-Guidelines-2015-Mar-FINAL.pdf

- Standards for initiating and maintaining physicians include recommendation that physicians "make reasonable efforts to provide non-pharmacological supports to their patients (i.e., Pharmacy, addictions services, counselling, etc.)." (p.11).

Manitoba

College of Physicians and Surgeons of Manitoba. Manitoba Methadone and Buprenorphine Maintenance: Recommended Practice. Winnipeg: College of Physicians and Surgeons of Manitoba; 2014.
http://mpha.in1touch.org/uploaded/web/Guidelines/CPSM%20Manitoba%20Methadone%20&%20Buprenorphine%20Maintenance%20-%20Recommended%20Practice%20.pdf

- Access to counselling should be an integral part of methadone/buprenorphine maintenance treatment (p.32).
- Counselling can be structured around a variety of things, as diverse as trauma, housing, mental wellness and stress, legal issues, harm reduction, etc. (p.32).
- Emphasize importance of a therapeutic alliance between patient and physician (p.32).
- If patient has complex psychosocial issues, physician is encouraged to access formal and informal supports for the patient, including stable patient family members (p.32).
- At assessment for MMT: treatment goals should be set which strive to improve psychosocial function, and the possible need for counselling should be addressed (p.6).
- Ongoing during MMT: physician should continually assess if form of counselling patient is receiving is adequate, and modify/offer more intensive counselling/treatment if necessary (p.7).
- At taper: emphasizes the importance of support and counselling (p.22).

Ontario

The College of Physicians and Surgeons of Ontario. Methadone Program: Methadone Maintenance Treatment Program Standards and Clinical Guidelines. Toronto: The College of Physicians and Surgeons of Ontario; 2011.
http://www.cpso.on.ca/uploadedFiles/members/MMT-Guidelines.pdf

- Recognize counselling as an element of effective MMT.
- Note one of the professional duties of an MMT physician is to "Provide or facilitate patient access to health and social services, such as counselling and primary health care" (p.22).
- Note various stages of the MMT patient pathway in which counselling is helpful.
- In regular visits in which physician assesses the patient, they should provide supportive counselling.
- Physician should also encourage patient to connect with another health care provider or addiction treatment program for counselling or support.
- Standards of Counselling and Case Management (p.60):
    - S10.1 The MMT physician shall provide counselling to willing patients or refer them to counselling services in the community while on MMT.
    - S10.2 The MMT physician shall regularly document how the patient is doing in terms of their overall functioning.

- Specific patient issues that may require the physician to seek external formal and informal supports (p.62):
    - Medical and wellness issues:
        - Identification and treatment of concurrent mental illness
        - Chronic physical health problems (HCV, HIV)
        - Pregnancy
        - Issues of abuse – physical, sexual, emotional – and trauma
        - Parenting and family counselling
        - Changing drug and alcohol use
        - Lifestyle changes such as smoking, nutrition, exercise, leisure time
    - Life skills:
        - Securing basic necessities, such as housing, food, clothing
        - Legal issues
        - Coping with stress
        - Social isolation
        - Chaotic lifestyle (frequently missed appointments or doses)
        - Stopping drug use and preventing relapse.
    - Practical support:
        - Support and someone to talk to; general counselling
        - Help with referrals to community resources, filling out forms and applications, providing letters

Quebec

Collège des médecins du Québec and Ordre des pharmaciens du Québec. Clinical Practice Guidelines: The Use of Methadone in the Treatment of Opiate Addiction. Montréal: Collège des médecins du Québec; 2000.

- During MMT/long-term treatment: calls for a psychosocial assessment to be completed before treatment begins, by a qualified professional, and should be repeated as frequently as necessary during MMT. Exemption: if patient needs to enter MMT in an emergency case, urgently.
- If physician is treating pt in a private practice setting: lack of resources may permit the psychosocial assessment from happening; "At the very least, the physician should identify the main psychosocial problems associated with the drug abuse and obtain the expert assessments appropriate to his needs. Some patients may refuse psychosocial services, but this is not a contraindication to commencing or continuing medical treatment."(p.8).
- Pharmaceutical counselling: pharmacist must see patient in a private area which ensures confidentiality, to offer counselling services, and to assess how treatment is progressing; info from these meetings need to be communicated with MMT prescriber and rest of care team.
- In the standard patient contract: "I understand that this program includes different types of treatment: individual counselling, marital counselling, family therapy and group therapy. Depending on my needs, which will be assessed by the program's care-givers, I may be offered one or several types of supportive treatment. I understand that I must attend these therapy sessions, in addition to the regularly scheduled meetings with my doctor." (p.22)

New Brunswick

College of Physicians and Surgeons of New Brunswick. Rothesay: College of Physicians and Surgeons of New Brunswick. Guidelines: Treatment of Opioid Addiction; 2015. https://www.cpsnb.org/english/Guidelines/TreatmentofOpioidAddiction.htm

- Notes that the evidence of benefit of counselling for MMT patients is not clear in the literature, and therefore the lack of availability of counselling should not prevent the MMT patient from receiving MMT.

Nova Scotia

College of Physicians and Surgeons of Nova Scotia. CPSNS Methadone Maintenance Treatment Handbook. Halifax: College of Physicians and Surgeons of Nova Scotia; 2012. http://www.nspmp.ca/library/00000264-library.pdf

Refers to NFLD & Labrador guidelines.

Prince Edward Island

College of Physicians and Surgeons of Prince Edward Island. Prescribing Methadone Treatment for Opioid Dependency. Charlottetown: College of Physicians and Surgeons of Prince Edward Island; 2012. http://cpspei.ca/wp-content/uploads/2013/11/METHADONE-Maintenance-Treatment-for-Opioid-Dependency-P-Nov-2012.pdf

New and ongoing MMT clients must have:

- "Awareness of and access to ancillary services, including but not limited to counseling, a methadone dispensing pharmacist and other methadone prescribers from whom advice may be sought." (p.5).

Newfoundland and Labrador

College of Physicians and Surgeons of Newfoundland and Labrador. Methadone Maintenance Treatment: Standards and Guidelines. St. John's: College of Physicians and Surgeons of Newfoundland and Labrador; 2013. https://www.cpsnl.ca/userfiles/file/Methadone%20Maintenance%20Treatment%20Standards%20and%20Guidelines%20-%20CPSNL%20-%20March%2014,%202013%20-%20Final.pdf

Standards of practice for counselling and case-management:

- The MMT physician shall provide counseling to willing patients or refer them to counseling services in the community while on MMT.
- The MMT physician shall regularly document how the patient is doing in terms of their overall functioning." (p.63).

Recognize the complexity of issues MMT patients may be facing, and the need for individualized counselling and other psychosocial supports, including spiritual support if appropriate:

- Specific patient issues that may require the physician to seek external formal and informal supports (p.66) [note – duplication of ON Guidelines]:
    - Medical and wellness issues:
        - Identification and treatment of concurrent mental illness
        - Chronic physical health problems (HCV, HIV)
        - Pregnancy
        - Issues of abuse – physical, sexual, emotional – and trauma
        - Parenting and family counselling
        - Changing drug and alcohol use
        - Lifestyle changes such as smoking, nutrition, exercise, leisure time
    - Life skills:
        - Securing basic necessities, such as housing, food, clothing
        - Legal issues
        - Coping with stress
        - Social isolation
        - Chaotic lifestyle (frequently missed appointments or doses)
        - Stopping drug use and preventing relapse.
    - Practical support:
        - Support and someone to talk to; general counselling
        - Help with referrals to community resources, filling out forms and applications, providing letters
    - Emphasizes inclusion of nurses, addictions services, counselors, etc., who work with the prescribing physician as in integrated and collaborative care team. Stress the importance of establishing a therapeutic relationship (p.63).
    - Patient should design treatment goals, and physician should work with patients to design treatment plans which incorporate supports to meet these goals. Ongoing monitoring and assessment by prescribing physician to see if patient is meeting these goals (p.64).
    - Suggest CBT and MI as potentially useful options for therapy in MMT patients (p.67).
    - Provide examples of integrating positive brief interventions in practice to support patient through their MMT (p.68):
        - Building a therapeutic relationship (be present when with patient, regularly schedule visits)
        - Education (drug info, but also symptoms of relapse and cognitive/behavioural patterns to be mindful of)
        - Goal planning (around all areas of life, not solely drug use, recognize barriers)
        - Promoting self-awareness and positive behaviours (identify triggers, strengths-based support)

Yukon

Yukon Medical Counsel. Medical Practice: Methadone. Whitehorse: Yukon Medical Counsel; [date unknown].
http://www.yukonmedicalcouncil.ca/pdfs/Methadone.pdf

References Alberta guidelines.

Northwest Territories and Nunavut

No MMT Guidelines.

First Nations Health Authority

References BC guidelines.

A5. Provincial Scan of OAT Service Delivery Systems

Region	Service models	Waitlists
British Columbia	Primary care practice; multidisciplinary models, private clinics.	Waitlists are a problem outside the lower mainland.
Alberta	Two provincially funded clinics (Edmonton and Calgary); seven private clinics (Calgary, Medicine Hat, Lethbridge, Red Deer and two in Edmonton), primary care practice. Permit 2nd level prescribing: 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 OAT clinics. Edmonton AHS, in 2008 was 3 weeks.
Saskatchewan	Primary care practice; three provincially funded clinics. 2nd level prescribing permitted.	Provincially funded clinics: One waiting list is closed; waiting lists at the other two clinics.
Manitoba	Two provincially funded clinics, two private clinics, primary care practice.	Addictions Unit Opioid Assessment Clinic has a 3 month waitlist; waitlist varies for treatment options in the community.
Ontario	Private clinics, provincially funded clinics (in addiction treatment centres, CHC, needle exchange program, CAMH), primary care practice.	Waitlists vary from none to 6 months.
Quebec	OAT is provided in addiction treatment centres, hospitals, regional health authorities, and primary care physicians.	Most waitlists are under 3 months, in Montréal and Laval it is 6-12 months.
Newfoundland & Labrador	One provincially funded OAT clinic and two primary care 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.
Nova Scotia	Four provincially funded clinics (Halifax (2), Sydney and Truro), primary care practice, private clinics and prison.	Varies: 2 weeks in Halifax, longer in other areas of the province.
New Brunswick	4 provincially funded OAT programs (Moncton, Miramichi, Fredericton, St. John); primary care practice, CHC, prison and private clinic.	Varies from a few weeks to 4-5 months.
Prince Edward Island	2 provincially funded OAT clinic (Addiction Services). Three physicians in primary care practice, and prison.	90 people on waitlist at Addiction Services, usually 3-6 month wait.
Yukon	Primary care practices.	
Northwest Territories	Primary care practices.	
Nunavut	No OAT	

First Nations, Métis and Inuit	National Native Alcohol and Drug Abuse Program does not offer OAT. Some reserve communities have arrangements with provincial health departments to provide physician or nurse for OAT; some private practices establish program just outside of reserve; some addiction treatment programs off reserve offer OAT.	N/A

A6. Summary of Physician Billing Codes used for OAT by Province

Region	Physician Fee-for-Service Schedules
British Columbia	Medical Services Commission Payment Schedule Section 3 General Services: T00039 Methadone or buprenorphine/naloxone treatment only .....22.85 **Notes:** i) The physician does not necessarily have to have direct face-to-face contact with the patient for these fees to be paid. ii) 00039 is the only fee payable for any visit or medically necessary service associated with methadone maintenance therapy. This includes but is not limited to the following: a) At least one visit per week with the patient during the induction of methadone or buprenorphine/naloxone/methadone or buprenorphine/naloxene stabilization. b) At least two visits per month with the patient after induction/ stabilization on methadone or buprenorphine/naloxone is complete. Exceptions to this criterion are where the patient resides/works in an isolated locale which is a significant distance from the prescribing physician. c) Case management/treatment planning with care team. d) Supervised urine drug screening and interpretation of results. e) Counselling by a physician. f) Communication with non-physician counsellor. g) Communication with dispensing/supervising pharmacist. h) Communication with primary care physician. i) Communication with hospital-based physician when patient admitted to hospital. j) Completion and submission of documentation relating to registration, termination or transfer. iii) Claims for visit fees are not payable in addition. iv) This fee is payable once per week per patient regardless of the number of visits per week. v) This fee is not payable with out of office hours premiums. vi) Eligibility to submit claims for this fee item is limited to physicians who: a) have a current valid license to prescribe methadone or buprenorphine/naloxone for addiction. b) are actively supervising the patient's continuing use of methadone or buprenorphine/naloxone within the provincial methadone program. vii) This payment stops when the patient stops taking methadone or buprenorphine/naloxone. P15039 GP Point of Care (POC) testing for methadone or buprenorphine/naloxone maintenance .....12.29 **Notes:** i) Restricted to physicians who have exemptions to prescribe methadone or buprenorphine/naloxone for their patients with opioid dependency in B.C. ii) Restricted to patients registered in the B.C. Methadone Maintenance Treatment Program. iii) Maximum billable: 26 per annum, per patient. iv) Confirmatory testing (reanalyzing a specimen which is positive on the initial POC test using a different analytic method) is expensive and seldom necessary once a patient has enrolled in the Methadone Maintenance Program. Accordingly, confirmatory testing should be utilized only when medically necessary and when a confirmed result would have a significant impact on patient management. v) This fee includes the adulteration test. vi) Only POC urine testing kits that have met Health Canada Standards are to be used.
Alberta	No specific MMT billing code.

Region	Physician Fee-for-Service Schedules
Saskatchewan	Monthly stipend for Overseeing Methadone Management 60B • First 3 months -- per patient (lifetime maximum) $46.60 61B • Second 3 months -- per patient (lifetime maximum) $35.00 62B • Thereafter -- per patient $23.30 Conditions: 1. No restarts in the payment program; if the patient leaves the program and then at a later date re-enters the program, his payment would resume at the same level as when he/she opted out. 2. Only one physician will be paid the monthly stipend. 3. Change of physician does not affect level of payment. 4. Visits for each patient contact would be paid as at present (5B's or 40B's) in addition to monthly stipend. 5. Not eligible for premiums or surcharges. 6. Entitlement to these monthly stipends is limited to physicians who: a. have a current valid license to prescribe methadone for addiction; and b. are actively supervising the patient's continuing use of methadone or buprenorphine/naloxone (Suboxone) within the provincial methadone program. 7. This payment stops when the patient stops taking methadone Counselling 40B -- first 15 minutes, includes: $37.50 a) history review; b) counselling; c) educational dialogue; d) intervention; e) record of service provided, and; f) time spent counselling. 41B -- next 15 minutes or major portion thereof $37.50 May be billed by any physician 5B Partial assessment or subsequent visit -- includes: $33.80 a) history review; b) history of presenting complaint; c) functional enquiry; d) examination of affected part(s) or system(s); e) assessment; f) diagnosis; g) necessary treatment; h) advice to the patient; and, i) record of service provided. NOTE: Use 55B instead of 5B for a visit where a specialist referral is made and continue using 5B for visits where a specialist referral is not made 55B Partial assessment or subsequent visit involving a specialist referral -- includes: $33.80 a) history review; b) history of presenting complaint; c) functional enquiry; d) examination of affected part(s) or system(s); Conditions: 1. Counselling is where the physician engages with the patient on an individual basis, where the goal of the physician and patient is to become aware of the patient's problems or situation and of the modalities for prevention and/or treatment 2. Counselling can also include an educational dialogue with the patient regarding prevention/health promotion, early detection of health problems, environmental issues related to the patient's health and occupational health and safety. 3. It is recognized that techniques may include hypnosis. 4. Payment for this service implies that it is a discrete service provided by the physician personally. 5. It is not a substitute for a visit involving a complete or partial examination or assessment. 6. This code is not to be used simply because an assessment and/or treatment took 15 minutes or longer, such as in the case of multiple complaints. Third party counselling: 1. It is payable on a third party basis when a family member is counselled because of the patient's serious and complex problem. 2. It is not payable for routine briefing or advice to relatives, which is considered part of the visit service fee. 3. Third party counselling must be provided at a booked separate appointment. 4. Third party counselling claims are subject to a maximum of 30 minutes and should be submitted in the counselled individual's name. 5. Diagnosis must be confirmed or the diagnostic code Z84 must be indicated.

Region	Physician Fee-for-Service Schedules
Manitoba	No specific MMT billing code.
Ontario	Monthly management of a patient in an Opioid Agonist Maintenance Program (OAMP) Definition/Required elements of service: Monthly management of a patient in an Opioid Agonist Maintenance Program (OAMP) is the one month management and supervision of a patient receiving opioid agonist treatment by the physician most responsible for the management and supervision of that patient when rendered in accordance with the definitions and payment rules described below. The monthly management of a patient in an OAMP is only eligible for payment to a physician who has an active general exemption for methadone maintenance treatment for opioid dependence pursuant to Section 56 of the Controlled Drugs and Substances Act 1996. This service includes the following specific elements: 1. All medication reviews, adjusting the dose of the opioid agonist therapy, and where appropriate, prescribing additional therapy, and discussions with pharmacists; 2. With the exception of all physician to physician telephone consultation services, discussion with, and providing advice and information to the patient, patient's relative(s), patient's representative or other caregiver(s), in person, by telephone, fax or e-mail on matters related to the service, regardless of identity of person initiating discussion; and c. All discussions in respect of the patient's opioid dependency, except where the discussion is payable as a separate service. K682 Opioid Agonist Maintenance Program monthly management fee - intensive, per month..... 45.00 K683 Opioid Agonist Maintenance Program monthly management fee - maintenance, per month..... 38.00 K684 - Opioid Agonist Maintenance Program - team premium, per month, to K682 or K683 .....add 6.00 Required services are: 1. a consultation, assessment or visit from the Consultation and Visits section of this Schedule; or 2. a K-prefix time-based service excluding group services and case conferences. 3. OAMP - intensive, is the service for management of an OAMP patient receiving an opioid agonist where the physician renders at least two (2) required services in the month. 4. OAMP - maintenance, is the service for management of an OAMP patient receiving an opioid agonist where the physician renders one required service in the month. 5. OAMP - team premium, is the service for management of an OAMP patient receiving an opioid agonist where: a. the physician most responsible for the OAMP management of the patient provides one of K682 or K683 in the month and supervises members of the OAMP management team; b. the OAMP management team consists of the physician most responsible for the OAMP treatment and at least two other non-physician members who have successfully completed a training program in addiction medicine that includes opioid agonist management; c. the OAMP management team members provides at least one in-person therapeutic

Region	Physician Fee-for-Service Schedules
	encounter with the patient in the month for which the service is payable; and d. the therapeutic encounter is not primarily for the purpose of urine testing or the provision of a prescription. 6. For the purposes of K682 and K683 the required services may be rendered by direct patient encounter or telemedicine. 7. A service primarily for the purpose of providing a prescription does not constitute a required service and does not count towards the minimum requirements of K682 or K683. Payment rules: 1. K682, K683 and K684 are only eligible for payment to the physician most responsible for the patient's OAMP for the applicable month. 2. K684 is only eligible for payment when all required patient encounters are documented in the medical record. 3. K682 is limited to a maximum of six services per patient per 12 month period. 4. A maximum of one of K682 or K683 is eligible for payment per patient per month any physician. 5. In circumstances where the administration of an opioid agonist is delegated to another qualified health professional, K682 and K683 are only eligible for payment if the physician can demonstrate that he/she has received a delegation exemption from the CPSO. Point of care drug testing G041 Target drug testing, urine, qualitative or quantitative.....per test 3.70 G042 Target drug testing, urine, qualitative or quantitative .....per test 2.50 G040 Drugs of abuse screen, urine, must include testing for at least four drugs of abuse .....per test 15.00 G043 Drugs of abuse screen, urine, must include testing for at least four drugs of abuse .....per test 7.50 Payment rules: 1. For the purposes of opioid agonist maintenance treatment, G040, G042, G041 and G043 are only eligible for payment to a physician who has an active general exemption for methadone maintenance treatment or chronic pain treatment with methadone pursuant to Section 56 of the Controlled Drugs and Substances Act 1996. 2. G040 and G041 are limited to a maximum of five (5) services per patient (any combination) per month to any physician when K682 or K683 is payable. 3. G042 and G043 are limited to a maximum of four (4) services per patient (any combination) per month to any physician when K682 or K683 is payable. 4. Any combination of G040, G041, G042 and G043 is limited to a maximum of three (3) services per patient per month for management of a patient with chronic pain, an addiction, or receiving opioid agonist treatment program where K682 or K683 is not payable in the month for the same patient to any physician. 5. G040, G041, G042 and G043 are not eligible for payment unless K623 or K624 or a consultation, assessment or time-based service involving a direct physical encounter with the patient is payable in the same month to the same physician rendering the G040, G041, G042 or G043 service. 6. G039 is limited to a maximum of two (2) tests per patient per week, any physician. 7. G039 is only eligible for payment when rendered to rule out urine tampering.

Region	Physician Fee-for-Service Schedules
	8. Only one of G040, G041, G042 or G043 is eligible for payment per urine sample.
Quebec	No specific MMT billing code
Newfoundland & Labrador	Methadone Maintenance Therapy - Monthly stipend for overseeing patients on methadone for opioid dependency. 54596 Per patient, once per month..... 70.00 Notes: 1. Entitlement to this monthly stipend is limited to physicians who: (a) have a current valid licence to prescribe methadone for addiction; and (b) are actively supervising the patient's continuing use of methadone. 2. Only one physician will be paid the monthly stipend. 3. Visits for each patient contact would be paid as at present. 4. Not eligible for premiums or surcharges. 5. This payment stops when the patient stops taking methadone.
Nova Scotia	No specific MMT billing code.
New Brunswick	Methadone Visit – methadone (diagnosis and follow-up).....8116 *30 18.2 Office Visits First visit with complete examination, including psychiatric evaluation and certification if indicated .....324 111 Other office visits.....325 40 The code for other office visits applies also to office consultations and examinations that cannot be claimed under a higher fee code, for example due to limitations in frequency or service intervals. Methadone Visit – methadone (diagnosis and follow-up).....8116 29 ΦMedicare Note: Physicians must adhere to the "Methadone Maintenance Treatment Policies and Procedures". The guidelines can be found at the following website: http://www.gnb.ca/0378/addiction-e.asp. Patients must have been diagnosed with an opiate addiction and physicians must adhere to both the policy for transporting methadone (Carries Policy) and the urine screening policy. Should an alternative approach be required, the physician must seek approval from Addiction and Mental Health Services prior to opening a methadone service. ΦMedicare note: Please note that physicians with the appropriate license requirements should bill Service Code 8116 when the sole purpose of the visit is for treatment of addiction. Refer Chapter 3 Section 1.1 for the principles of billing. This also applies to physicians who are required to submit shadow billing. A copy of your license permitting the prescribing of methadone should be submitted to the Practitioner Registrar at Medicare Eligibility and Claims.
Prince Edward Island	No specific MMT billing code.
Yukon	N/A
Northwest Territories	N/A
Nunavut	N/A

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Psychosocial Treatment Interventions and Physician Remuneration for Opioid Agonist Treatment

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Disclosures

- None

Deliverables

To produce a report summarizing the evidence and providing recommendations for:

- **#1** The role and medical necessity of psychosocial treatment interventions for opioid agonist patients

- **#2** Funding models for physician services related to OAT and associated counselling services.

Glossary

- **Psychosocial treatment interventions:**
  structured and/or manualized counselling that incorporates principles of psychoanalytic therapy, cognitive behavioural therapy, interpersonal therapy, dialectic behavioural therapy, contingency management, biofeedback, hypnotherapy/subliminal, twelve step facilitation, family/group counselling

Glossary

- **Medical Management:** health and wellness checks, support and advice, fostering of medication adherence, optimizing dosing, and referrals to appropriate health and social services

- **Psychosocial supports:** housing, income assistance programs, vocational training, life skills, legal services, etc.

Preferred Terminology

- Opioid use disorder (OUD)
- Opioid Agonist Treatment (OAT).

Deliverable #1

THE ROLE AND MEDICAL NECESSITY OF PSYCHOSOCIAL TREATMENT FOR OAT PATIENTS

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Methodology

- A systematic review assessing the impact of psychosocial interventions provided in combination with opioid agonist treatment

- Not included: studies evaluating the impact of psychosocial interventions in combination with OAT in the context of opioid withdrawal management (e.g., rapid taper approaches)

Methodology

- Based on a systematic review and use of a traditional hierarchy of evidence
- Primary outcomes: included retention in treatment, opioid use, and continuous abstinence
- Secondary outcomes: mental health outcomes, HIV- and hepatitis C-related care outcomes

Overview of OAT in BC

- Methadone (MMT)
  - Administered as Methadose®
  - Treatment retention[1], suppresses heroin use[1], injection risk behaviours, and risk of HIV/HCV for PWID [2,3,4]
  - Requires Section 56 exemption

1. Mattick RP, Breen C, Kimber J, Davoli M. Methadone maintenance therapy versus no opioid replacement therapy for opioid dependence. *Cochrane Database Syst Rev.* 2009(3):CD002209.
2. MacArhur GJ, Minozzi S, Martin N, et al. Opiate substitution treatment and HIV transmission in people who inject drugs: systematic review and meta-analysis. *BMJ.* 2012;345:e5945.
3. Gowing L, Farrell MF, Bornemann R, Sullivan LE, Ali R. Oral substitution treatment of injecting opioid users for prevention of HIV infection. *Cochrane Database Syst Rev.* 2011(8):CD004145.
4. Nolan S, Dias Lima V, Fairbairn N, et al. The impact of methadone maintenance therapy on hepatitis C incidence among illicit drug users. *Addiction.* 2014;109(12):2053-2059.

Overview of OAT in BC

- Buprenorphine/naloxone (Suboxone®)
  - Added to the provincial formulary in 2010
  - First line treatment option of opioid use disorder (OUD)
    - Comparable tx outcomes to MMT with[1]:
    - ↓ Side effects and drug interactions
    - ↓ risk of diversion
    - ↑ Safety profile
  - Requires methadone exemption + online CME

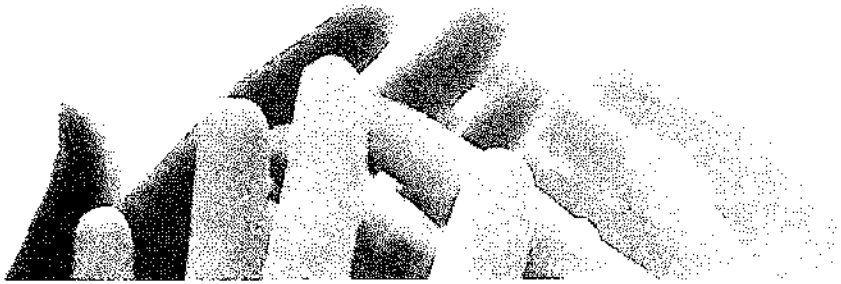
1. Mattick RP, Breen C, Kimber J, Davoli M. Buprenorphine maintenance versus placebo or methadone maintenance for opioid dependence. *Cochrane Database of Systematic Reviews.* 2014(2).

Performance of OAT in BC

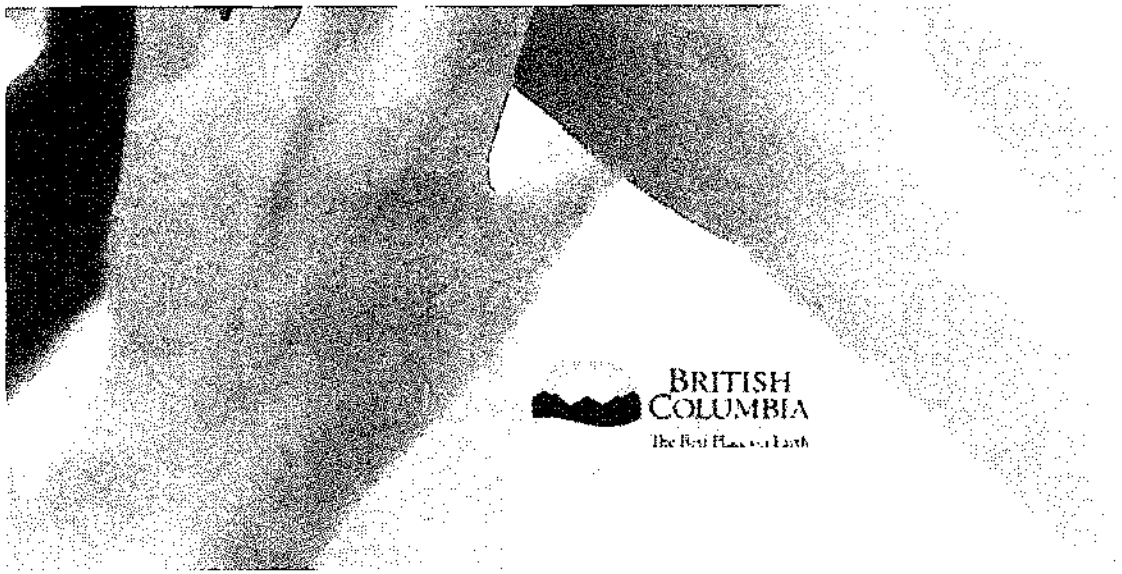
2013-14	BC	ON	NB
Retention in treatment	36%	55%	57%
Optimal dosing level	50%	N/A	N/A

Healthy Minds, Healthy People

A Ten-Year Plan to Address Mental Health and Substance Use in British Columbia



- By 2015, 90 per cent 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.



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Current Practice | OAT + Psychosocial Interventions

BC | Methadone Maintenance Treatment Agreement

- *"Patients attending a clinic for methadone are expected to be receiving more than just methadone. I agree to attend counselling at the clinic or from an alcohol and drug service provider. I am also willing to involve myself in a support group which will aid my recovery."*

Current Practice | OAT + Psychosocial Interventions

Canada

- Health Canada Best Practices for Methadone Maintenance Treatment document (2002)

When they are ready to do so, clients/patients should have access to evidence-based approaches to counselling to address issues of concern to them. ***These services should be provided on an as-needed, rather than mandatory, basis.***

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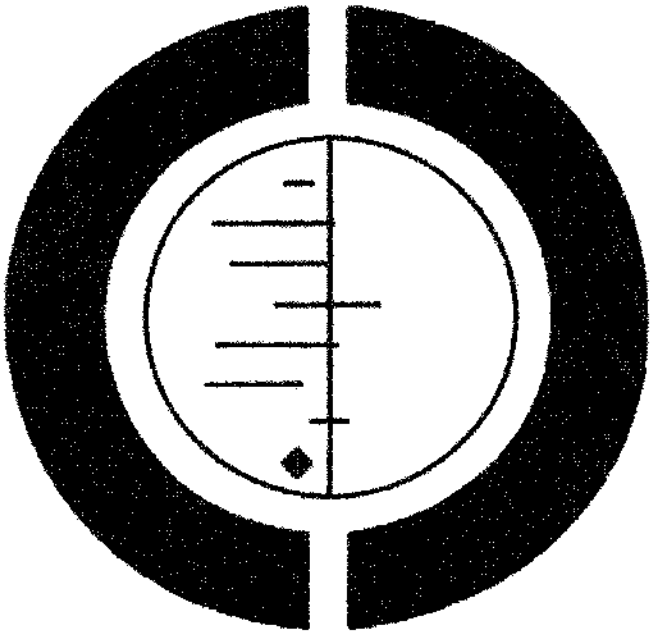
Specific clinical practice guidance by province is included in Appendix A3.

Psychosocial combined with agonist maintenance treatments versus agonist maintenance treatments alone for treatment of opioid dependence (Review)

Amato L, Minozzi S, Davoli M, Vecchi S



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Results do not show a benefit in:

Behavioural interventions (N=24 studies)	Acceptance and commitment therapy Biofeedback Cognitive Behavioural Therapy Contingency management approaches Information-Motivation-Behavioral Skills Model
Psychoanalytic-oriented (N=4 studies)	Subliminal stimulation Supportive-Expressive Therapy Short-term interpersonal therapy
Counselling (N=7 studies)	Customized employment support Enhanced Methadone Services Enhanced Pharmacy Services
Other types (N=2 studies)	Relational Psychotherapies Mother's Group 12-Step Facilitation

Results do not show a benefit in:

Outcomes	RR or MD	95% Confidence Interval
Retention in Treatment	RR 1.03	0.98-1.07
Abstinence by opiate during the treatment	RR 1.02	0.92-1.37
Compliance (# of sessions attended)	MD 0.43	-0.05-0.92
Psychiatric symptoms	MD 0.02	-0.28-0.31
Depression	MD -1.70	-3.91-0.51
Treatment completion rates	RR 0.91	0.77-1.07

RR= Relative Risk
MD= Mean difference

Psychosocial combined with agonist maintenance treatments versus agonist maintenance treatments alone for treatment of opioid dependence (Review)

Amato L, Minozzi S, Davoli M, Vecchi S

Authors' Conclusions:

For the considered outcomes, it seems that adding any psychosocial support to standard maintenance treatments do not add additional benefits. Data to not show differences also for contingency management approaches, contrary to all expectations. Duration of the studies was too short to analysis relevant outcomes such as mortality.

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A Randomized Trial of Cognitive Behavioral Therapy in Primary Care-based Buprenorphine

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RESULTS—The 2 treatments had similar effectiveness with respect to reduction in the mean self-reported frequency of opioid use, from 5.3 days per week (95% confidence interval, 5.1–5.5) at baseline to 0.4 (95% confidence interval, 0.1–0.6) for the second half of maintenance ($P<.001$ for the comparisons of induction and maintenance with baseline), with no differences between the 2 groups ($P=.96$) or between the treatments over time ($P=.44$). For the maximum consecutive weeks of opioid abstinence there was a significant main effect of time ($P<.001$), but the interaction ($P=.11$) and main effect of group ($P=.84$) were not significant. No differences were observed on the basis of treatment assignment with respect to cocaine use or study completion.

CONCLUSIONS—Among patients receiving buprenorphine/naloxone in primary care for opioid dependence, the effectiveness of physician management did not differ significantly from that of physician management plus cognitive behavioral therapy.

RESULTS

The three treatments had similar efficacies with respect to the mean percentage of opioid-negative urine specimens (standard medical management and once-weekly medication dispensing, 44 percent; standard medical management and thrice-weekly medication dispensing, 40 percent; and enhanced medical management and thrice-weekly medication dispensing, 40 percent; P=0.82) and the maximum number of consecutive weeks during which patients were abstinent from illicit opioids. All three treatments were associated with significant reductions from baseline in the frequency of illicit opioid use, but there were no significant differences among the treatments. The proportion of patients remaining in the study at 24 weeks did not differ significantly among the patients receiving standard medical management and once-weekly medication dispensing (48 percent) or thrice-weekly medication dispensing (43 percent) or enhanced medical management and thrice-weekly medication dispensing (39 percent) (P=0.64). Adherence to buprenorphine–naloxone treatment varied; increased adherence was associated with improved treatment outcomes.

CONCLUSIONS

Among patients receiving buprenorphine–naloxone in primary care for opioid dependence, the efficacy of brief weekly counseling and once-weekly medication dispensing did not differ significantly from that of extended weekly counseling and thrice-weekly dispensing. Strategies to improve buprenorphine–naloxone adherence are needed. (ClinicalTrials.gov number, NCT00023283.)

+ 25 studies not included in 2011 Cochrane

- Evaluated a variety of psychosocial interventions
- Small number of studies suggested a greater effect size structured psychosocial programs. [1-8]
- 5/8 of these studies were conducted in China
- Other study limitations including:
  - Small sample sizes (N=52) [1]
  - Limited duration of studies (i.e. 30 days) [2]
  - Measurement of drug use buy self-report only [1-8]

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Studies Referenced

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8. Ruetsch C, Tkacz J, McPherson TL, Cacciola J. The effect of telephonic patient support on treatment for opioid dependence: outcomes at one year follow-up. *Addict Behav.* 2012;37(5):686-689.

Other outcomes

- No improvement in patient compliance[1-4]
- No improvement in patient satisfaction [5-7]
- No improvement in HIV related outcomes [8-10]
- No improvement in HIV related risk behaviours [10]
- Decreased HIV and HCV incidence with structured counseling and CM [11]

Studies Referenced

1. Ruetsch C, Tkacz J, McPherson TL, Cacciola J. The effect of telephonic patient support on treatment for opioid dependence: outcomes at one year follow-up. *Addict Behav.* 2012;37(5):686-689.
2. Ling W, Hillhouse M, Ang A, Jenkins J, Fahey J. Comparison of behavioral treatment conditions in buprenorphine maintenance. *Addiction.* 2013;108(10):1788-1798.
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6. Moore BA, Barry DT, Sullivan LE, et al. Counseling and directly observed medication for primary care buprenorphine maintenance: a pilot study. *J Addict Med.* 2012;6(3):205-211.
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8. Schwartz RP, Kelly SM, O'Grady KE, Gandhi D, Jaffe JH. Interim methadone treatment compared to standard methadone treatment: 4-Month findings. *Journal of Substance Abuse Treatment.* 2011;41(1):21-29.
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10. Gruber VA, Delucchi KL, Kielstein A, Batki SL. A randomized trial of 6-month methadone maintenance with standard or minimal counseling versus 21-day methadone detoxification. *Drug Alcohol Depend.* 2008;94(1-3):199-206.
11. Wang L, Wei X, Wang X, Li J, Li H, Jia W. Long-Term Effects of Methadone Maintenance Treatment with Different Psychosocial Intervention Models: e87931. *PLoS One U6 - Journal Article.* 2014;9(2).

12-Step Facilitation (TSF)

- No well designed studies
- Small number of observational studies [1-2]
- Philosophical conflicts may negatively impact engagement, disclosure and deter regular attendance[3]

1. Weiss RD, Griffin ML, Gallop RJ, et al. The effect of 12-step self-help group attendance and participation on drug use outcomes among cocaine-dependent patients. *Drug Alcohol Depend.* 2005;77(2):177-184.
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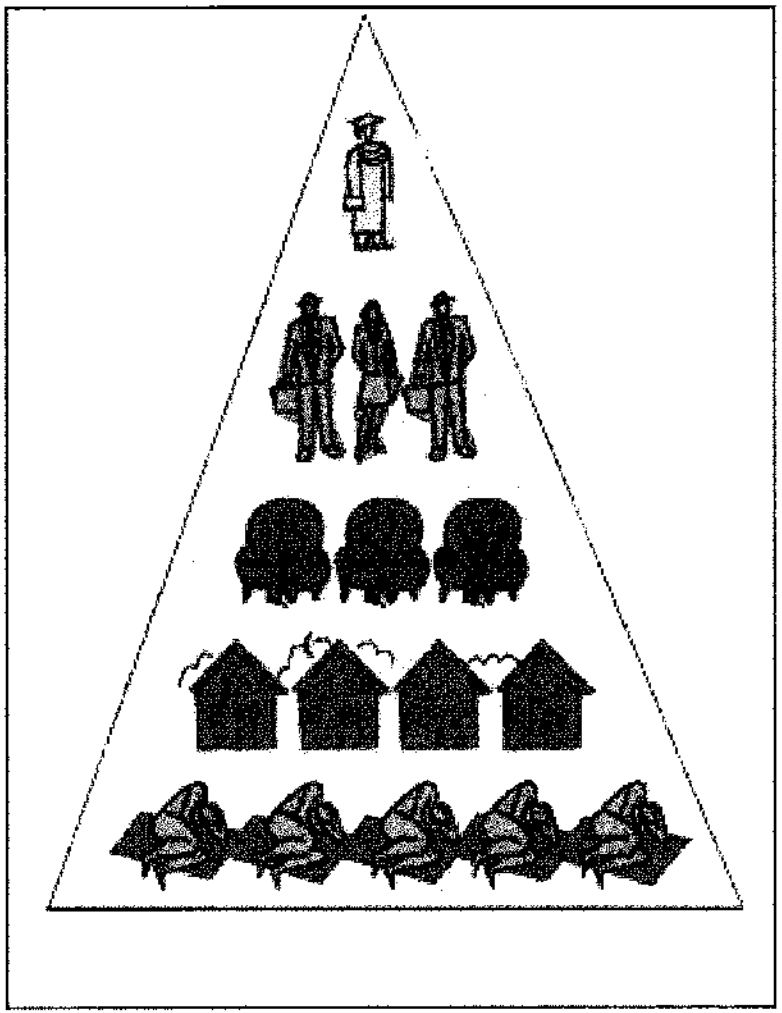
3. Fiorentine R, Hillhouse MP. Drug treatment and 12-step program participation: the additive effects of integrated recovery activities. *J Subst Abuse Treat.* 2000;18(1):65-74.
4. Suzuki J, Dodds T. Clinician recommendation of 12-step meeting attendance and discussion regarding disclosure of buprenorphine use among patients in office-based opioid treatment. *Subst Abus.* 2016;37(1):31-34.

Psychosocial Needs

- No high level reviews
- Housing [1-3]



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2. Strathdee SA, Patrick DM, Currie SL, et al. Needle exchange is not enough: Lessons from the Vancouver injecting drug use study. *Aids.* 1997;11(8):F59-F65.
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Conclusions

"In sum, the vast majority of controlled, clinical studies investigating the impact of counselling and/or structured psychosocial interventions in conjunction with OAT **have found no additional benefit over standard practices in OAT programs.** These findings are similarly confirmed in the conclusions of systematic reviews and meta-analyses.[21,45,57] A summary of psychosocial interventions included in this review is included in the Appendix (A2)."

Recommendations

1. Evidence-based OAT service components should be clearly defined in program regulations and clinical practice guidelines.

2. Based on research evidence, counselling and psychosocial treatment interventions are not necessary components of OAT and do not contribute to better health outcomes.

Deliverable #2

PAYMENT MODELS FOR OAT PRESCRIBING AND PHYSICIAN CARE

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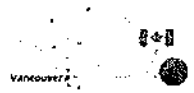


Methodology

- Document reviews
- Scientific literature reviews
- Informal consultation
- Interviews
- Informal survey of 20 private clinics

A resource list is included in the Appendix (A1).

Service Delivery Models in BC

1. Independent physicians with methadone licenses
2. Provincially funded Services (MHSU)
3. Private for profit clinics

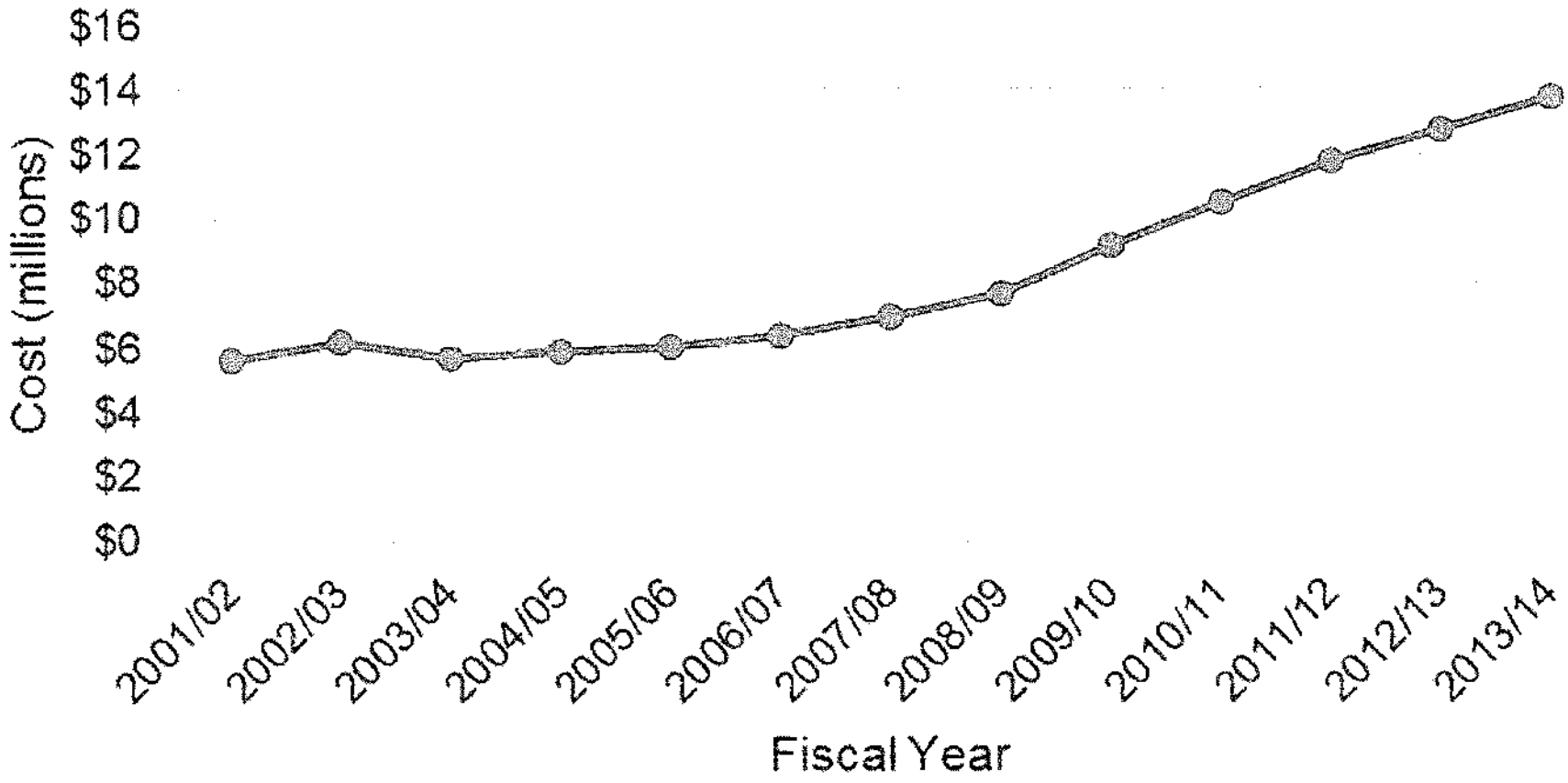
	Description	Advantages	Disadvantages
Independent physicians with MMT licenses	• FFS private practice	• Pre-existing and established therapeutic relationship • Can be beneficial for lower intensity levels of care	• May be limited in geographic regions • Lack of integration with other services • Incentive volume rather than quality
Provincially funded Services (MHSU)	• Delivered through publicly funded independent agencies • Common in larger urban centres.	• multidisciplinary • Low-threshold programs • Higher intensity level of care	• Overcapacity and have lengthy wait lists
Private for profit clinics	• Generally provide OAT exclusively • Charge for services • Mostly in urban areas	• Have been responsive to service demands exceeding the capacity of the publicly funded sector	• Cost barrier to patients • Conflict of interest with co-ownership/pharmacies • Inability to assess quality of care provided

Funding Mechanisms in BC

- Physician Fees + Related Service Costs
- Pharmacy Services and Costs
- Ancillary Services
- Direct Patient Costs
  - Private clinic patient charges

Treatment Setting	Physician Fees
Independent physicians with MMT licenses	• FFS • T00039 $22.85/week • UDS
Provincially funded Services (MHSU)	• Often alternative funding arrangements (APP) • Service Agreements & Sessional
Private for profit clinics	• FFS • T00039 $22.85/week • UDS • Clinic charges OH (+/- UDS)

Figure 2. Medical Service Plan Expenditures for Opioid Agonist Treatment, 2001/02 - 2013/14



Adapted from: BC Opioid Substitution Treatment System, Performance Measures 2013/2014, 2012/2013, and 2011/12. Office of the Provincial Health Officer, British Columbia Ministry of Health.

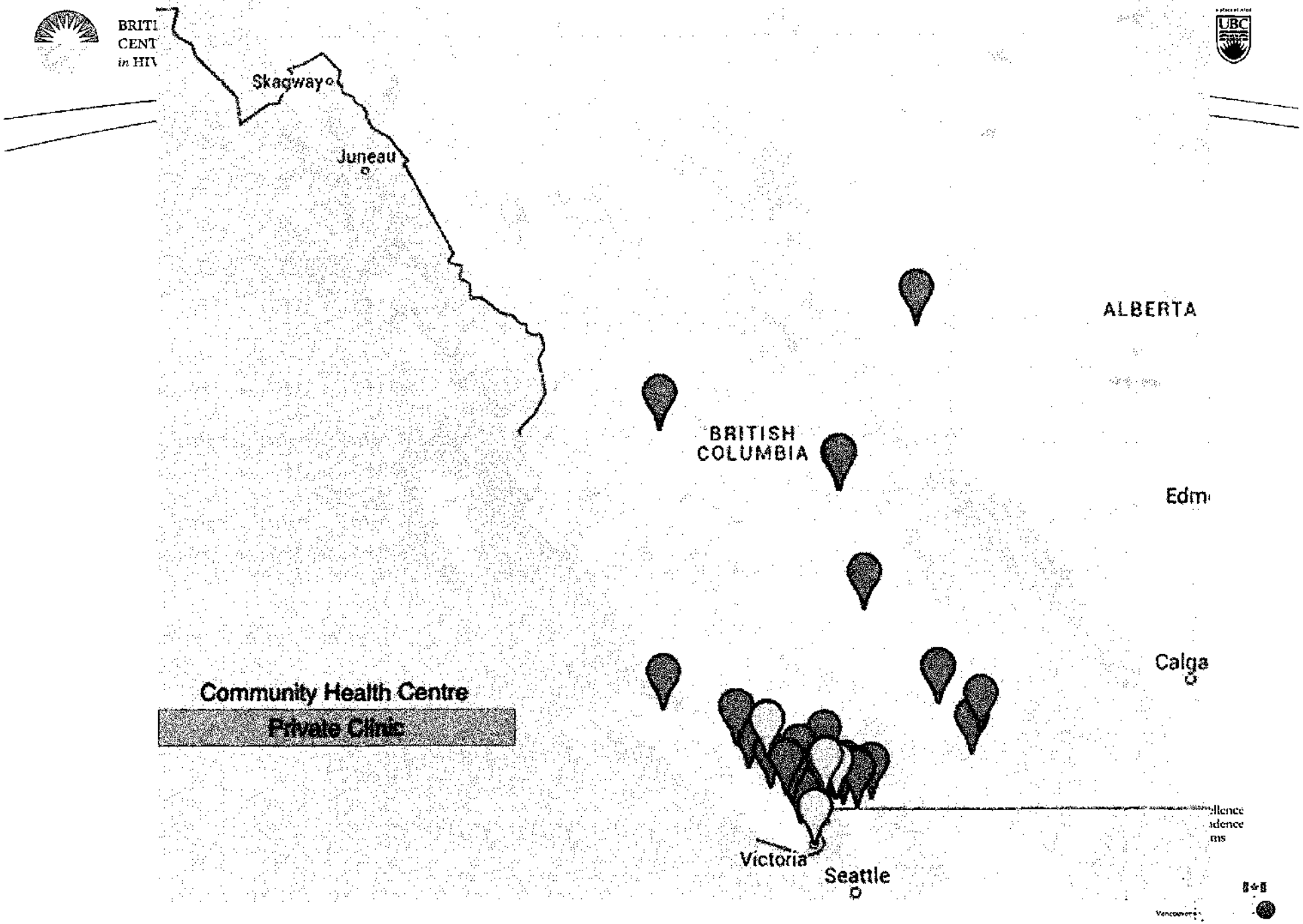
PharmaCare	Description
Plan C	• 100% covered for patients on income assistance • No additional fees for addiction counseling • May pay for private counseling

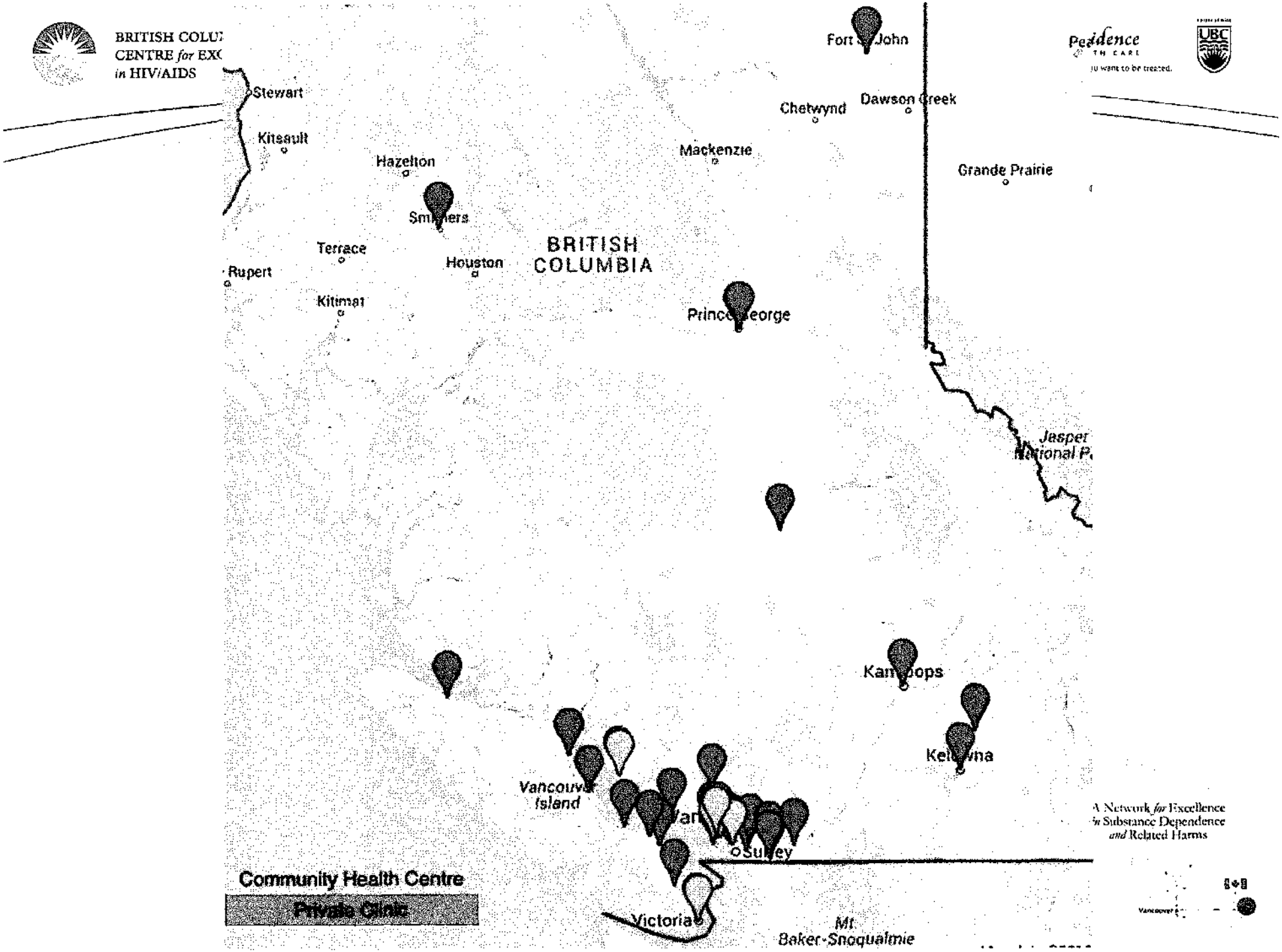
Plan I	• Fair PharmaCare
	• Annual deductible
	• Co-pay based on family income
	  • Out of pocket or
	  • 3rd party

Treatment Setting	Ancillary Services + Direct Patient Costs	Patients on Income assistance
Independent physicians with MMT licenses	• All physician services covered by MSP • No additional fees for addiction counseling • May pay for private counseling • UDS	• MSDI provides $500 supplement drug and alcohol supplement • Patients may choose to pay private for profit methadone fees • $2.6 M billed in 2013-14
Provincially funded Services (MHSU)	• All physician services covered by MSP • No additional fees for addiction counseling • May pay for private counseling	
Private Clinics	• All physician services covered by MSP • May pay for additional private counseling • UDS • Clinic charges OH (+/- UDS)	

More on Private For Profit Charges

- Monthly service fee between $40-80
- Pts may MSDSI Alcohol and Drug Treatment supplement to subsidize the private clinic fee
  - Monthly charges often exceed the supplement amount
  - Estimated difference up to $25/month: must be paid out-of-pocket or deducted from income assistance cheques


BRITI
CENT
in HIV
Skagway
Juneau
ALBERTA
BRITISH
COLUMBIA
Edm
Calga
Community Health Centre
Private Clinic
Victoria
Seattle


BRITISH COLU
CENTRE for EX
in HIV/AIDS
Stewart
Kitsault
Hazelton
Smithers
Terrace
Houston
Rupert
Kitimat
BRITISH
COLUMBIA
Fort St. John
Dawson Creek
Chetwynd
Mackenzie
Grande Prairie
Prince George
Jasper
National P
Kamloops
Kelowna
Vancouver
Island
Surrey
Victoria
Mt
Baker-Snoqualmie
Community Health Centre
Private Clinic
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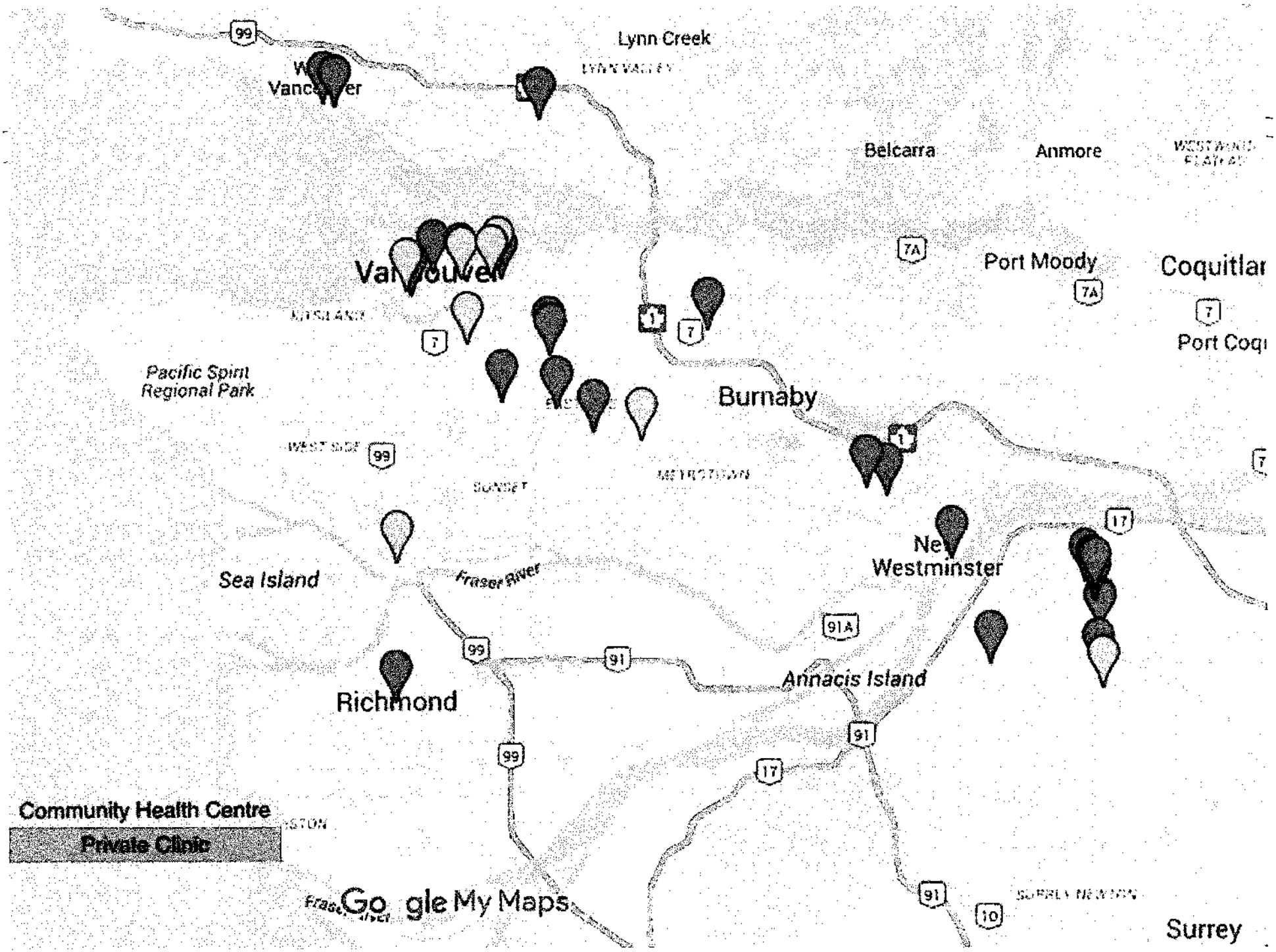
Lynn Creek
Belcarra
Anmore
Port Moody
Coquitlar
Port Coq
Vancouver
Burnaby
Pacific Spirit
Regional Park
Sea Island
Fraser River
Richmond
Annacis Island
Surrey
Community Health Centre
Private Clinic
Google My Maps

Findings: Informal Survey of 20 Private Clinics

- User fee ranges $40-65
- 2 report clinic user fees for individuals on income assistance were higher than for individuals who did not receive income assistance ($60/month and $65/month, versus $30/month and $40/month for those not on income assistance)
  - noted that when subsidized by the Alcohol and Drug supplement, actual costs to patients on income assistance were lower

Findings: Informal Survey of 20 Private Clinics

- 11 clinics provided info on utilization fees
  - 8 clinics "clinic facility fee"
  - 1 clinic as Doctor/Counselling Fee
  - 1 counselling fee
  - 1 covered counselling provided at time of initial assessment and diagnosis

MSP Models Across Canada

- **Physician fees**
  - Mostly FFS
  - Billing codes for OAT (BC, SK, ON, NB, NFL)
  - BC restricts fee-for-service billing for associated patient care to these OAT specific codes
    - All other provinces allow this

MSP Models Across Canada

- **Ancillary Services**
  - Lack of consistent funding for counselling and psychosocial supports
  - Addiction counselling not covered through provincial insurance plans (unless MHSU or CHC)
  - User fees vary
    - AB: $45-60/month
    - ON and MB: no user fees

International Services and Funding Models

- USA
- Australia
- UK

International Services and Funding Models

USA

- MMT is highly regulated
- Only administered in qualified federally treatment programs
- 98% of patients receive structured counselling[1]
- Bup/nx less strictly regulated than MMT
  - Largely prescribed in primary care with routine MM [2-3]

1. NNSTATS 2016)
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3. Maxwell JC, McCance-Katz EF. Indicators of buprenorphine and methadone use and abuse: what do we know? *Am J Addict.* 2010;19(1):73-88.

International Services and Funding Models

USA

- ↑ uptake in bup/nx
  - ↓ fatal overdose [1,2]
  - ↓HIV risk behaviour [3-6]
  - ↓illict and other drug use [7-8]
- Addiction care in primary care improves health outcomes [9]

1. Schwartz RP, Gryczynski J, O'Grady KE, et al. Opioid agonist treatments and heroin overdose deaths in Baltimore, Maryland, 1995-2009. *Am J Public Health*. 2013;103(5):917-922.
2. Auriacombe M, Fatséas M, Dubernet J, Daulouède JP, Tignol J. French field experience with buprenorphine. *Am J Addict*. 2004;13 Suppl 1:S17-28.
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5. Potter JS, Dreifuss JA, Marino EN, et al. The multi-site prescription opioid addiction treatment study: 18-month outcomes. *Journal of Substance Abuse Treatment*. 2015;48(1):62-69.
6. Weiss RD, Potter JS, Griffin ML, et al. Long-term outcomes from the National Drug Abuse Treatment Clinical Trials Network Prescription Opioid Addiction Treatment Study. *Drug Alcohol Depend* 2015;150:112-119.
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International Services and Funding Models

Australia

- OAT provided in a variety of settings
- Federal government pays for medication
- Focused on MAT with limited ancillary services outside of specialist clinics

International Services and Funding Models

UK

- GPs and specialists collaborate to provide OAT
- Integrates pharmacy as member of multidisciplinary team
- Stepped care model approach

Alternative and Emerging Models

- Low threshold/High tolerance
- Primary Care
- Integrated Approach

Alternative and Emerging Models

Low threshold/High tolerance

- Medical model of addiction
- Established in BC, ON, NS and NB
- Typically target street-involved PWID
- Evidence from St. John's [1]
  - 12 month retention 95%
  - 67% abstinent from opioids
  - 13% abstinent from cocaine

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1. Christie TKS, Murugesan A, Manzer D, O'Shaughnessey MV, Webster D. Evaluation of a low-threshold/high-tolerance methadone maintenance treatment clinic in saint john, new brunswick, Canada: one year retention rate and illicit drug use. *Journal of addiction.* 2013;2013:753409-753409.

Alternative and Emerging Models

Primary Care

- Also low threshold
- Evidence from France [1]
  - ↑ Patient satisfaction
  - ↑Patient acceptance of treatment
- Evidence from Germany [2]
  - Reduction in criminal behaviours + health risk behaivour

1. Carrieri PM, Michel L, Lions C, et al. Methadone Induction in Primary Care for Opioid Dependence: A Pragmatic Randomized Trial (ANRS Methaville). *Plos One*. 2014;9(11).
2. Wittchen HU, Apelt SM, Soyka M, et al. Feasibility and outcome of substitution treatment of heroin-dependent patients in specialized substitution centers and primary care facilities in Germany: a naturalistic study in 2694 patients. *Drug Alcohol Depend*. 2008;95(3):245-257.

Alternative and Emerging Models

Integrated Approach

- *Setting Priorities for the BC Health System* (2014)
- Evidence
  - Longitudinal observational study [1,2]
    - significantly lower health service utilization costs
    - Improved health outcomes
  - RCTs [3-5]
    - 2x as likely to be abstinent
    - Significant reduction in health care utilization

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Vancouver

Alternative and Emerging Models

Integrated Approach References

1. Chi FW, Parthasarathy S, Mertens JR, Weisner CM. Continuing Care and Long-Term Substance Use Outcomes in Managed Care: Early Evidence for a Primary Care-Based Model. *Psychiatric Services.* 2011;62(10):1194-1200.
2. Parthasarathy S, Chi FW, Mertens JR, Weisner C. The Role of Continuing Care in 9-year Cost Trajectories of Patients With Intakes Into an Outpatient Alcohol and Drug Treatment Program. *Medical Care.* 2012;50(6):540-546.
3. Mertens JR, Lu YW, Parthasarathy S, Moore C, Weisner CM. Medical and psychiatric conditions of alcohol and drug treatment patients in an HMO: comparison with matched controls. *Arch Intern Med.* 2003;163(20):2511-2517.
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5. Weisner C, Mertens J, Parthasarathy S, Moore C, Lu Y. Integrating primary medical care with addiction treatment - A randomized controlled trial. *Jama-Journal of the American Medical Association.* 2001;286(14):1715-1723.

Conclusions

- No provinces have established a true continuum of care, including treatment intensity levels
- Fragmented care with little communication
- BC specific issues
  - Evidence based clinical practice guidelines
  - Explicit OAT regulations
  - Revisions for MSP Fee Item T00039
  - Private for profit concerns

Recommendations

A. With regard to OAT service models:

1. The current capacity of publicly funded methadone providers should be optimized, thereby reducing demand for the more expensive private clinic sector

Recommendations

A. With regard to OAT service models:

2. Barriers preventing primary care physicians from providing OAT should be eliminated.

Recommendations

B. With regard to OAT funding models:

3. Based on the research evidence that counselling and psychosocial interventions are not necessary components of OAT and do not contribute to better outcomes, these services should not be directly or indirectly publicly funded as part of OAT.

A. Summary of Evidence in the Role of Psychosocial Treatment Interventions in OAT

	Recommendation	For more information see pages...
1	Evidence-based OAT service components should be clearly defined in program regulations and clinical practice guidelines.	10, 15
2	Based on research evidence, counselling and psychosocial treatment interventions are not necessary components of OAT and do not contribute to better health outcomes.	11, 15

B. Summary of Evidence of Payment Models for OAT Prescribing and Physician Care

	Recommendation	For more information see page...
With regard to OAT service models:		
1	The current capacity of publicly funded OT providers should be optimized, thereby reducing demand for the more expensive private clinic sector.	31
2	Barriers preventing primary care physicians from providing OAT should be eliminated.	31
With regard to OAT funding models:		
3	Based on the research evidence that psychosocial treatment interventions are not necessary components of OAT and do not contribute to better outcomes, these services should not be directly or indirectly publicly funded as part of OAT.	32

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

Contents

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)

o o o

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

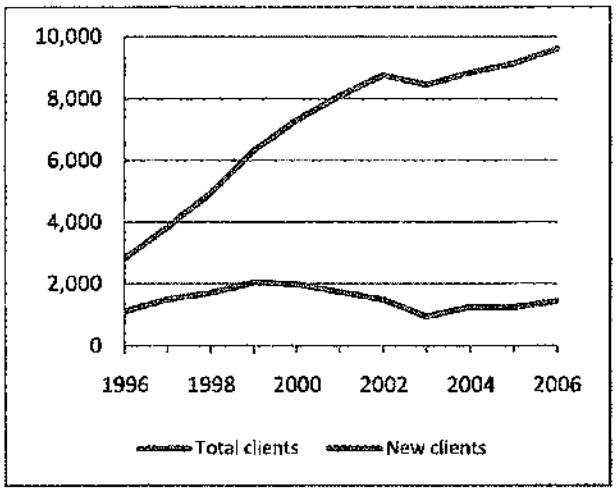
Program when it was formed in 1996. The large literature supporting the effectiveness and cost-effectiveness of MMT (Barnett & Hui, 2000; Zaric, Barnett, & Brandeau, 2000; Zarkin, Dunlap, Hicks, & Mamo, 2005; Connock, et al., 2007) and the high societal costs of untreated use (Wall, Rehm, & Fischer, 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)

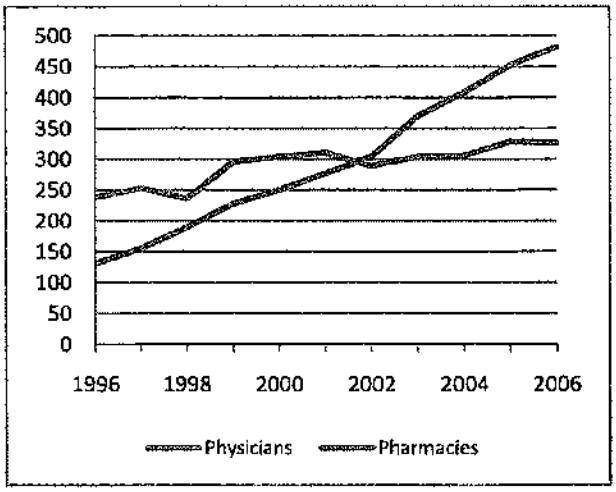


Aboriginal British Columbians, more seriously than the general population (Parkes, 2009).

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 co-morbidity, 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 MMT[3] 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*

[3] Optimized MMT was defined within the North American Opiate Medication Initiative (NAOMI 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).

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

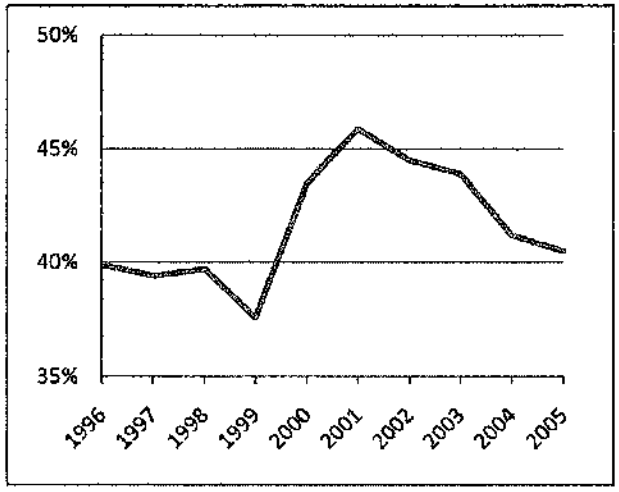
practices, and some physicians have argued that this has interfered with effective treatment for some clients (Parkes, 2009). On the one hand, the incentives may improve client retention, leading to a net benefit. On the other hand, if the money is used to purchase other drugs, it could have a negative 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.

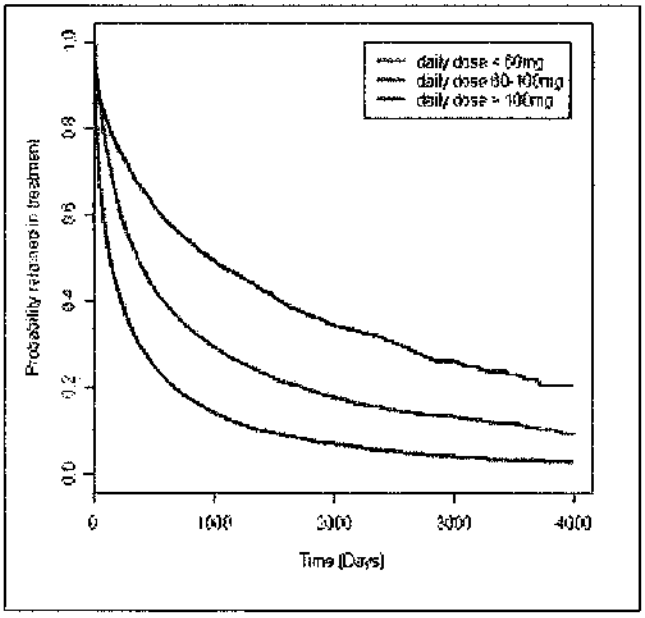
[5] This declining rate of retention is particularly troubling in that other current demographic trends (e.g., age and levels of treated co-morbidity) are associated with increased retention.

[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).

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



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.

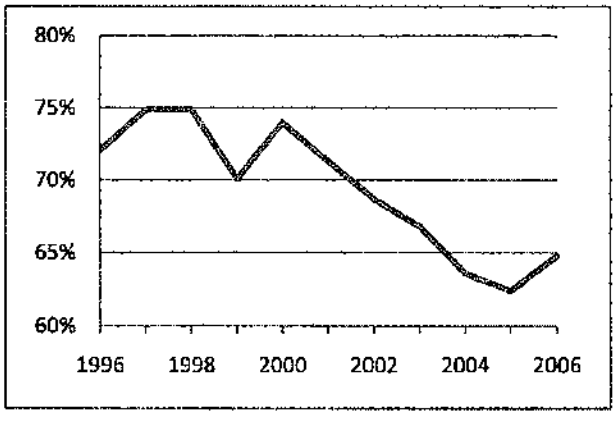
Figure 4 displays the probability of remaining in treatment over time given the mean daily dose prescribed during the treatment episode. Episodes with daily doses over 100mg had the highest probability of being retained in treatment at every time point. Episodes with daily dose below 60mg discontinued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

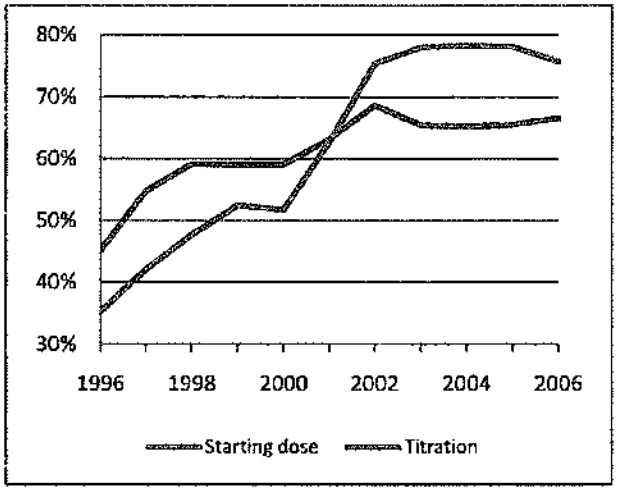


initiation of treatment and methadone-related deaths among non-patients have raised concerns regarding compliance with guidelines on starting doses, the rate of dose titration and prescription of take-home, or carry doses in the early stages of treatment (Drummer, Opeskin, Syrjanen, & Cordner, 1992; 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).

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

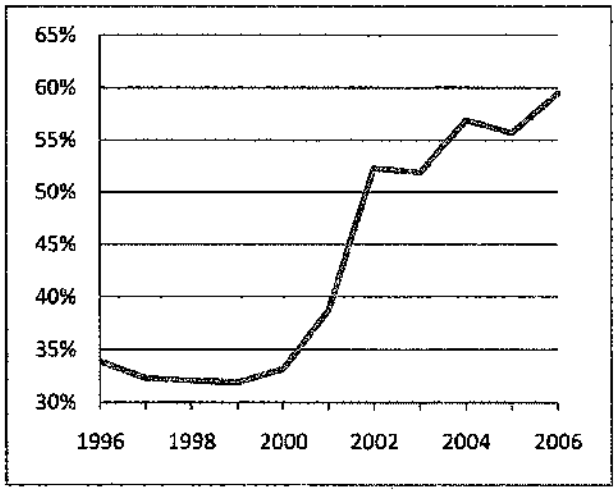


Take-Home Doses

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 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

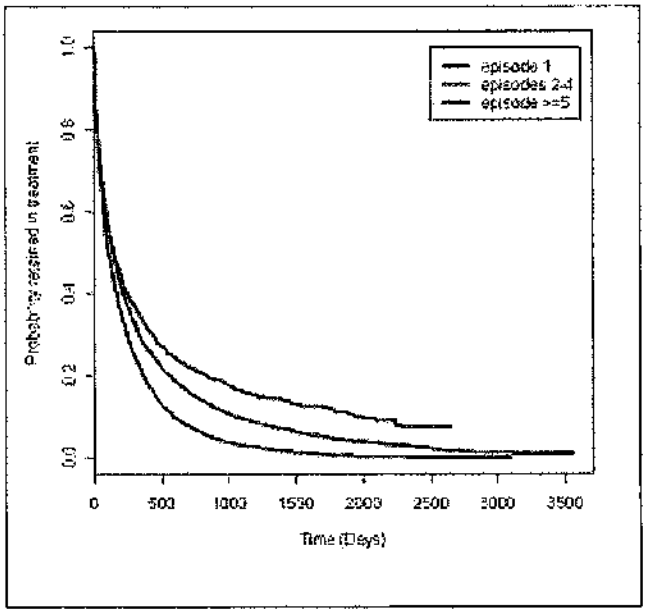
Stakeholders sometimes express frustration over the "revolving door" through which clients repeatedly cycle in and out of treatment. As noted above, retention in treatment is an important indicator of treatment effectiveness, and risk of mortality is increased during periods of transition. Therefore, 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 discontine 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.

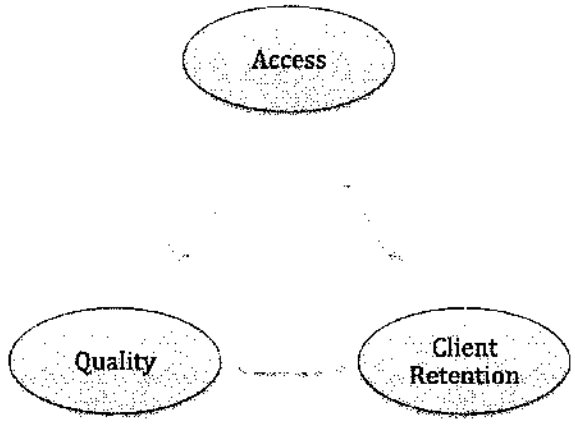
Discussion

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.*

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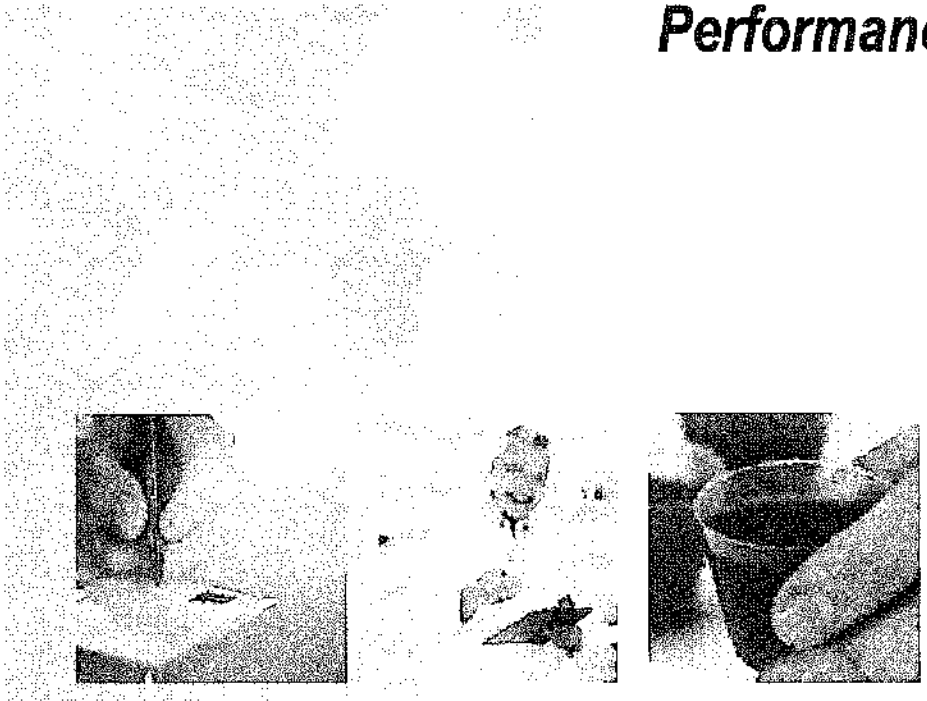
BC METHADONE MAINTENANCE SYSTEM

Performance Measures
2011/2012



Office of the Provincial Health Officer

With contributions by:

Pharmaceutical Services Division &
Population and Public Health Division
British Columbia Ministry of Health

February 2013

BRITISH COLUMBIA Office of the Provincial Health Officer

CONTENTS

1 INTRODUCTION

Opioid dependence is a chronic, recurrent medical illness associated with co-morbid mental illness, transmission of infectious diseases (such as HIV/AIDS and hepatitis C), and premature mortality.[1] Methadone maintenance is widely regarded as both a highly effective treatment for opioid dependence and an evidence-based harm reduction intervention to prevent the transmission of blood-borne pathogens. Additionally, numerous studies have found that methadone maintenance reduces harms associated with non-medical opioid use, including injection-related risks and criminal activity, and increases the social functioning and quality of life of patients.

British Columbia's *Healthy Minds, Healthy People: A Ten-Year Plan to Address Mental Health and Substance Use in British Columbia*[2] outlines key actions and outcomes that relate to BC's Methadone Maintenance System:

- Enhance and improve BC's methadone maintenance treatment system (including medical, pharmaceutical and psychosocial support components)
- By 2015, 90% of methadone prescribers will adhere to optimal dose guidelines and 60% of people started on methadone maintenance treatment will be retained at 12 months
- Where appropriate, expand the reach and range of harm reduction services that prevent and reduce the health, social and fiscal impacts of illegal drug use
- By 2015, more people living with mental illness and/or substance dependence will report that they feel a sense of belonging within their communities

The effectiveness of the province's Methadone Maintenance System depends on a multidisciplinary approach with three key components: prescribing, dispensing, and counselling or other adjunct services and supports. Two professional regulatory bodies are responsible for the prescribing and dispensing components of the Methadone Maintenance System: the College of Physicians and Surgeons of British Columbia (CPSBC) and the College of Pharmacists of British Columbia (CPBC).

CPSBC oversees the prescribing component through its Methadone Maintenance Program, under the advisement of its Methadone Maintenance Committee, composed of physicians with expertise in addictions medicine and opioid substitution treatment. The objective of CPSBC's program is to support physicians to safely and effectively prescribe methadone for maintenance purposes. CPSBC develops guidelines and provides education to physicians for prescribing methadone and submits applications on behalf of physicians to the federal Minister of Health for exemptions to the Controlled Drugs and Substances Act so that methadone can be legally prescribed.

CPBC licenses and regulates pharmacists, pharmacy technicians and the places in which they practice. CPBC provides policy guidance and training for pharmacists who purchase and dispense methadone. Pharmacists must complete the College's Methadone Maintenance Treatment training as identified in the 2010 CPBC Policy Guide,[3] and meet the necessary practice requirements prior to providing methadone-related pharmacy services.

A 2010 review of methadone maintenance in BC identified the delivery of the psychosocial services component as one of the system's biggest challenges.[4] Psychosocial services and supports are an integral part of methadone maintenance and are provided by health authorities, private physicians, counsellors, and other allied health professionals.

This report presents data related to the prescribing and dispensing components of British Columbia's Methadone Maintenance System and addresses the recommendation in the Centre for Addictions Research of BC report, *Methadone Maintenance Treatment in British Columbia, 1996-2008* [4] to report regularly on the province's Methadone Maintenance System. The indicators that are reported on reflect available Ministry of Health provincial-level data, and may not capture all aspects of methadone maintenance services. Data tables for the figures in this report will be made available on the website of the Office of the Provincial Health Officer: **http://www.health.gov.bc.ca/pho/**

The performance measures in this report are provided on a fiscal year basis (April–March). The outcome measures in this report are based on the publication *An Evaluation of Methadone Maintenance Treatment in British Columbia: 1996-2007*, by Nosyk et al.[1]

Data Sources

Data in this report was drawn from the Ministry of Health's HealthIdeas Data Warehouse. The databases from which specific Ministry program area data were drawn are as follows:

i. PharmaNet (records of prescription drug claims dispensed at community pharmacies)

ii. MSP Genesis (Medical Services Plan fee-for-service claims)

iii. DAD (hospital discharge abstract data)

iv. HealthIdeas Client Registry (client age, gender, date of death)

The report does not include data on methadone maintenance services provided to on-reserve First Nations patients, whose health services and medications for eligible clients are provided through Health Canada's non-insured health benefits program.

Acknowledgements: The Ministry of Health would like to thank Dr. Bohdan Nosyk (BC Centre for Excellence in HIV/AIDS) and his colleagues at UBC's Centre for Health Evaluation and Outcome Sciences for their earlier work in analyzing methadone maintenance data in BC, which provided some of the methodological foundations for this report. The Ministry would also like to thank Ray Ghouse, Christine Voggenreiter, Patrick Day, Brett Wilmer, Kenneth Tupper and River Chandler for their work developing this report. Special thanks to the Centre for Addictions Research of BC for its assistance with layout and production of the report.

2. METHADONE MAINTENANCE SYSTEM MEASURES

The reach of BC's Methadone Maintenance System (MMS) can be summarized by reporting on key indicators of participation in the MMS. These include numbers of patients with methadone maintenance prescriptions (whose medication is covered by PharmaCare), numbers of physician prescribers of methadone for maintenance purposes, and numbers of methadone-dispensing pharmacists and pharmacies. This section also provides a summary of the direct costs of methadone maintenance and the PharmaCare program associated with BC's MMS.

2.1 Methadone Maintenance Patients

Figure 1. **Methadone Maintenance Patients by Local Health Area, 2011/2012**

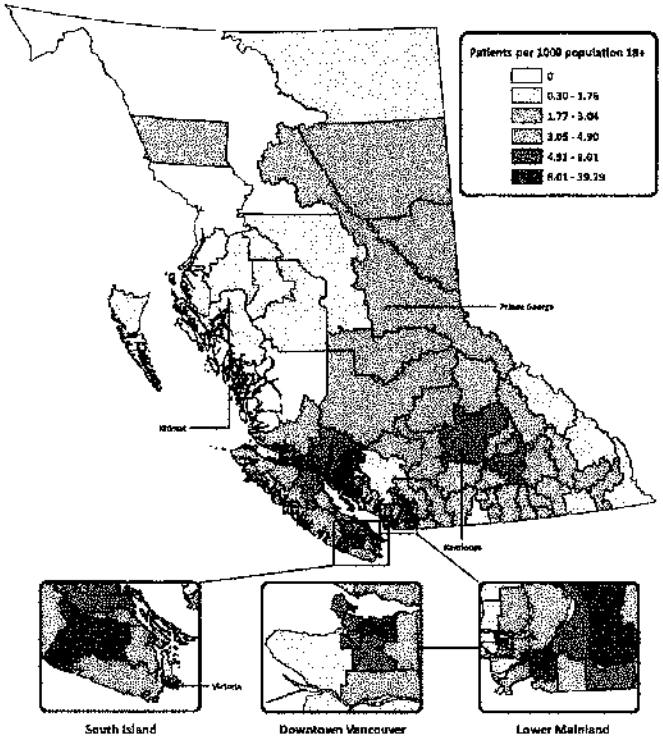


Figure 1 shows the rates of engagement in methadone maintenance across the province in 2011/2012. Higher rates are found in BC's larger urban areas such as the Lower Mainland, Victoria, Nanaimo and Kamloops. However, high rates (i.e., 5 to 8 patients per 1,000) also exist in smaller population centres such as Powell River, Lake Cowichan and Campbell River.

In 2011/2012, PharmaCare provided coverage for methadone maintenance pharmacy costs for 13,894 patients. This is a 9 per cent increase from the previous year and a 79 per cent increase from 2001/2002, which was the first year of a new payment structure for methadone maintenance pharmacies. Figures 2 and 3 break down methadone maintenance patient counts by health authority.

Figure 2. **Methadone Maintenance Patients by Health Authority, BC, 2001/2002 to 2011/2012**

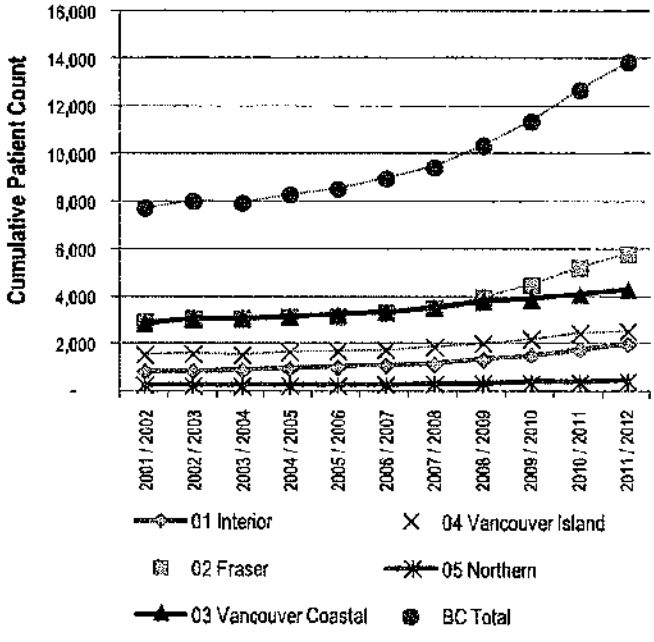


Figure 3. **New Methadone Maintenance Patients by Health Authority, BC, 2001/2002 to 2011/2012**

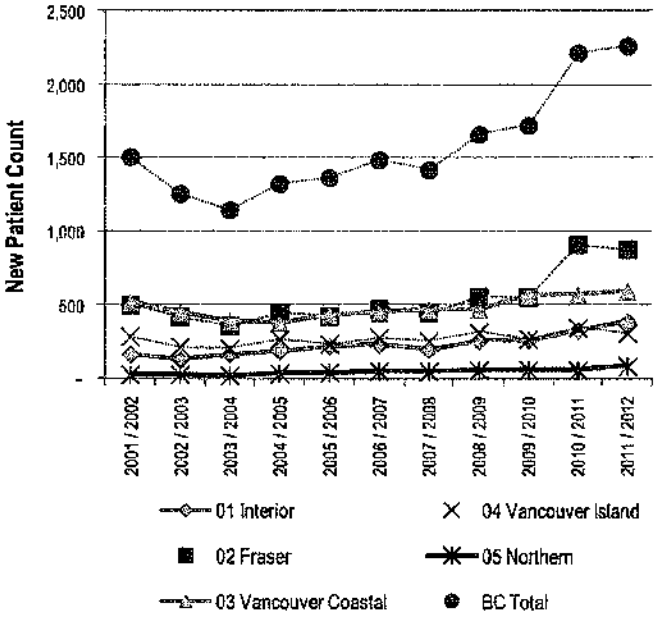
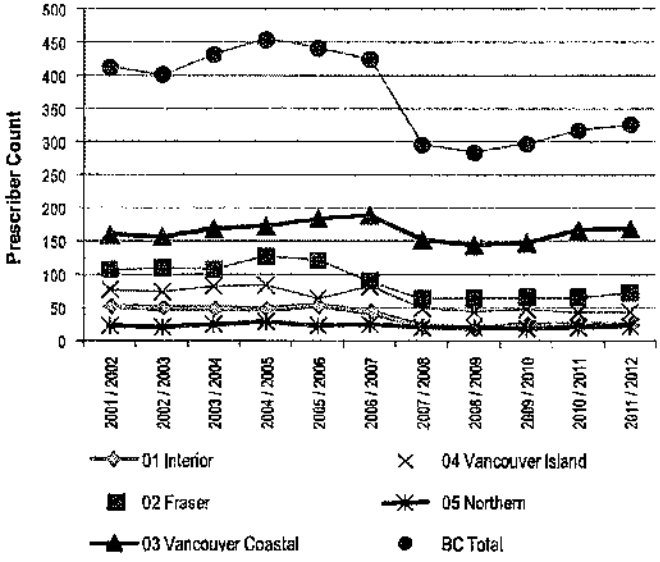


Figure 4. **Methadone Maintenance Program Active Prescribers by Health Authority, BC, 2001/2002 to 2011/2012**



2.2 Methadone Maintenance Program Prescribers

Physicians who want to prescribe methadone for maintenance purposes are required to receive authorization by CPSBC. The requirements for authorization include attending a day-long certification course, complying with prescribing guidelines (which are monitored by CPSBC) and re-certification on an ongoing basis.

In 2011/2012, there were 11,980 professionally active physicians in British Columbia. Of these, 433 were authorized to prescribe methadone for maintenance purposes, and 327 actually prescribed for patients during that 12-month period, 168 (51 per cent) of whom were based in Vancouver Coastal Health Authority. Figure 4 provides the annual physician prescriber count by health authority since 2001/2002.

As shown in Figure 4, there was a decrease of over 100 prescribers between 2006/2007 and 2007/2008. This decline in methadone prescribers appears to have little effect on the numbers of patients initiating methadone maintenance; on average, physicians continuing to prescribe methadone have individually taken on more patients. The Ministry of Health is investigating the reasons for this decrease and the Office of the Provincial Health Officer will provide an online update to this report when these are determined.

2.3 Methadone Maintenance Pharmacists and Pharmacies

Similar to prescribing physicians, pharmacists in BC must meet specific training and certification requirements to be eligible to dispense methadone for maintenance purposes. Pharmacists dispense measured doses of methadone in liquid form for witnessed oral ingestion on-site or in carry-out packaging as appropriate for certain patients.

The numbers of BC pharmacists and pharmacies dispensing methadone for maintenance purposes have more than doubled since 2001/2002. Figures 5 and 6 plot these numbers by health authority.

Figure 5. **Methadone Maintenance Pharmacists by Health Authority, BC, 2001/2002 to 2011/2012**

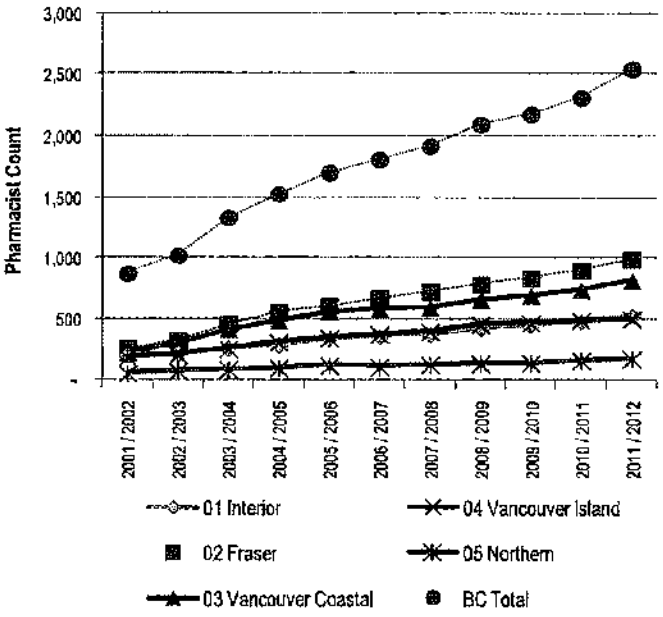
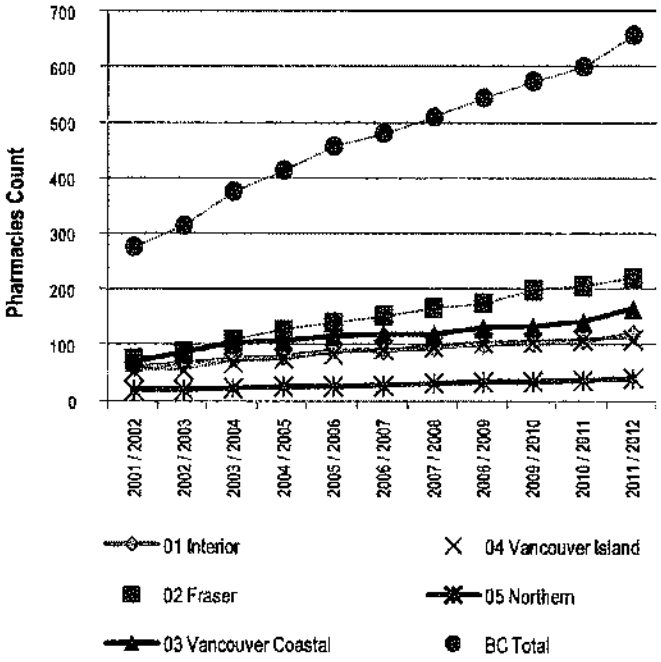


Figure 6. **Methadone Maintenance Pharmacies by Health Authority, BC, 2001/2002 to 2011/2012**

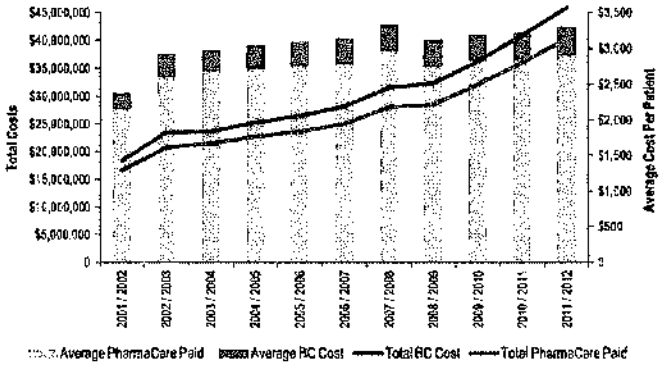


2.4 Methadone Maintenance Expenditures

PharmaCare helps British Columbians with the cost of eligible prescription drugs and designated medical supplies. PharmaCare reimburses methadone ingredient costs and dispensing fees, as well as interaction fees for pharmacists who witness ingestion on-site. Patients registered with PharmaCare Plan C (for recipients of BC income assistance) are eligible for full reimbursement of their methadone costs for prescribing and dispensing. Patients registered with Fair PharmaCare pay deductibles and co-pays, based on family income. For some patients, private insurance will cover a portion of these costs.

The total pharmacy costs for methadone maintenance in BC reached nearly $46 million in 2011/2012, $40 million of which was paid by PharmaCare. Figure 7 summarizes the trend in costs over time.

***Figure 7.* Provincial Government and PharmaCare Methadone Expenditures, BC, 2001/2002 to 2011/2012**

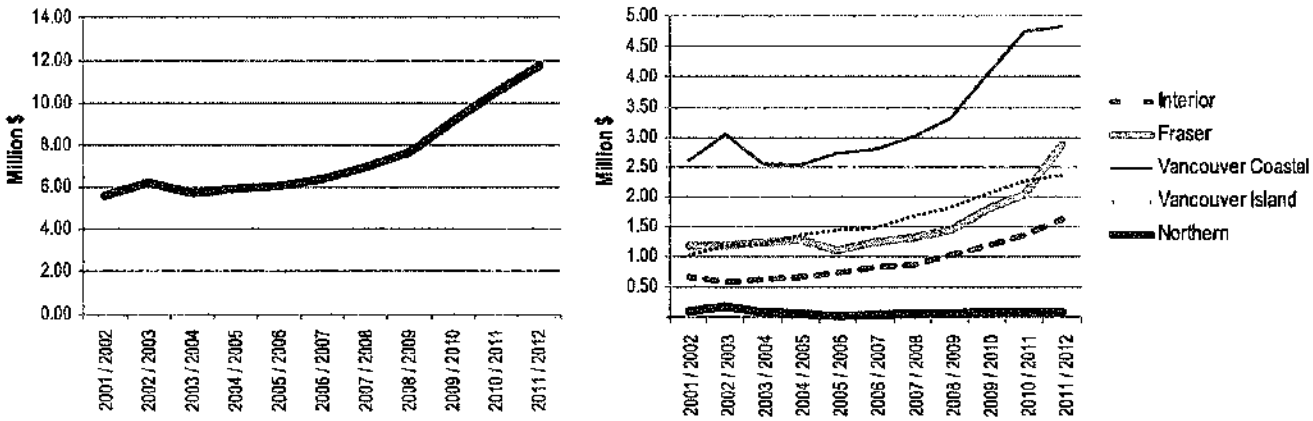


Note: Methadone costs include costs of ingredients, dispensing fees and interaction fees. Total costs in BC include payments made by PharmaCare, patients, and third party insurers. Payments for interaction fees are made in bulk to pharmacies; therefore, it is difficult to disaggregate costs to patient by health authority.

As shown in Figure 7, average per patient pharmacy costs have dropped slightly from 2007/2008 levels. In 2011/2012, average annual methadone costs per patient were $3,301 ($2,899 of which was paid by PharmaCare). This decline is likely due to the Frequency of Dispensing policy, which limits the number of dispensing fees that PharmaCare will pay on a daily basis. The increase in overall costs may be due to inflation, patient population growth, and more complex care needs.

Medical Services Plan (MSP) payments for physician fee-for-service claims have seen an equivalent increase since fiscal year 2001/2002 (see Figure 8).

***Figure 8.* Medical Services Plan Methadone Expenditures for Methadone Maintenance Treatment Only, by Health Authority (right), BC (left), 2001/2002 to 2011/2012**



Note: Includes only MSP payment for physician fee-for-service claims specifically for the purposes of methadone maintenance treatment (and Suboxone as a limited coverage benefit of November 2010) (fee item 39).Excludes alternative payments and physician salaries.

A Ministry of Social Development (MSD) supplement provides income assistance clients with up to $500 per calendar year (average of $41.67 per month) for costs of substance use counselling or related services where no other resources are available. This includes user fees charged by some methadone clinics. The MSD supplement pays for user fees ostensibly for services not paid for by MSP. The total annual expenditure by MSD for the addiction counselling supplement in 2011/2012 was $2.37 million (a majority of which goes to methadone patients).

3. SYSTEM OUTCOME MEASURES

This section summarizes system outcome measures that are indirectly associated with BC's MMS through the impacts of methadone maintenance on the underlying health conditions (including opioid dependence) of participants in the program.

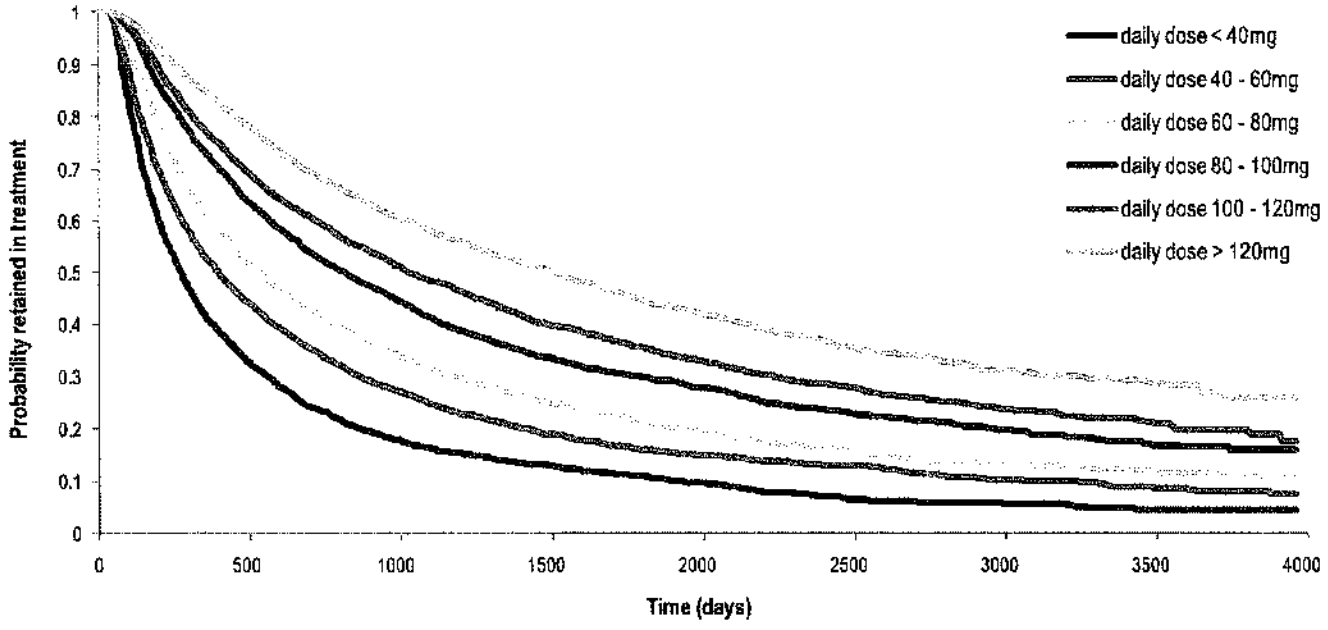
All outcome measures presented here are for episodes of methadone maintenance treatment, defined as continuous dispenses of methadone (plus additional days supplied for off-site use). A gap of more than 30 consecutive days determines the end of an episode of treatment.

An important caveat for this section is that the outcome measures were obtained without an attempt to isolate the effect of methadone maintenance (versus no treatment or other treatments). Therefore, the material presented here is intended to be hypothesis-generating and may initiate further analysis of more specific outcomes using observational study designs.

3.1 Methadone Maintenance Duration and Retention

Methadone maintenance duration is measured in days of maintenance per episode, and is an important indicator of treatment effectiveness. Studies referenced in Nosyk et al.[1] suggest that longer treatment duration is associated with improved post-treatment outcomes. Nosyk et al.[1] also found a significant correlation between dose and treatment retention, with probability of being retained in treatment lowest for patients receiving maintenance doses below 40mg per day and highest for patients receiving above 100mg per day (CPSBC, 2009, *Methadone Maintenance Handbook* recommends stabilization doses of between 60 to 120 mg per day as optimal for most patients).

***Figure 9.* Effect of Daily Dose on Methadone Maintenance Treatment Retention (Kaplan-Meier Curve)**

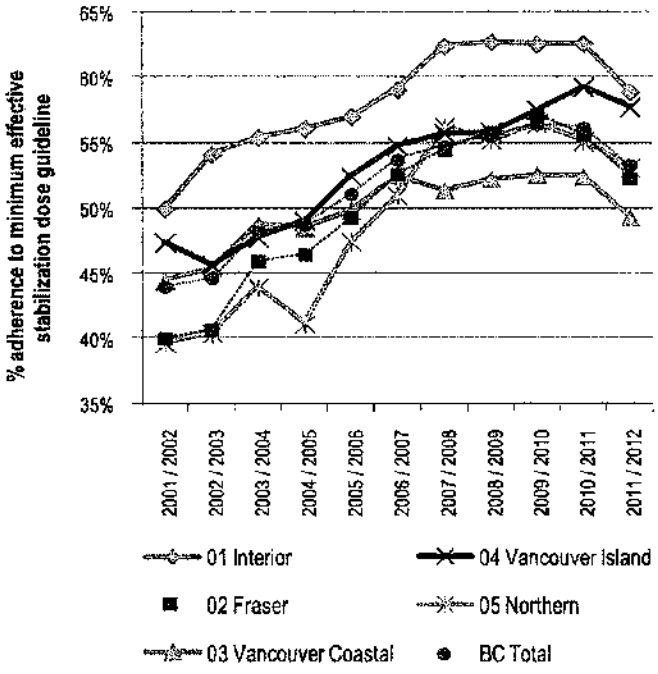


In Figure 9, daily dose is calculated as the average amount (in milligrams) of methadone prescribed during the maintenance period of each treatment episode. To examine the effect of the daily dose on the probability of remaining in treatment, episodes were categorized into the following six daily dose levels:

1. Episodes with a mean dose <40mg
2. Episodes with a mean dose 40-60mg
3. Episodes with a mean dose 60-80mg
4. Episodes with a mean dose 80-100mg
5. Episodes with a mean dose 100-120mg
6. Episodes with a mean dose >120mg

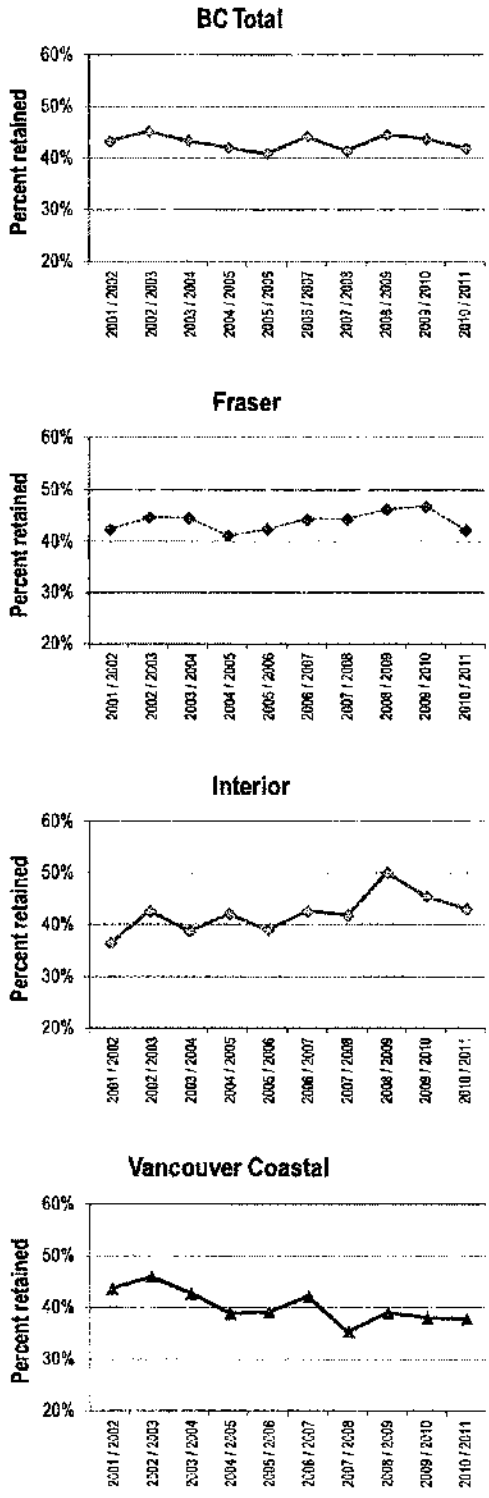
Figure 9 shows the probability of remaining in treatment over time by daily dose category as defined above. At the start of an episode, the patient has a high probability of remaining in treatment. As time passes, however, the probability of remaining in treatment declines for all daily dosage categories. Episodes with daily doses greater than or equal to 120mg had the highest probability of being retained in treatment at every time point. That is, these episodes had the longest duration. By contrast, episodes for which the mean dose was below 40mg per day discontinued the earliest. Figure 10 shows the percentage of physicians who adhere to CPSBC's minimum recommended stabilization dose of 60 mg/day.

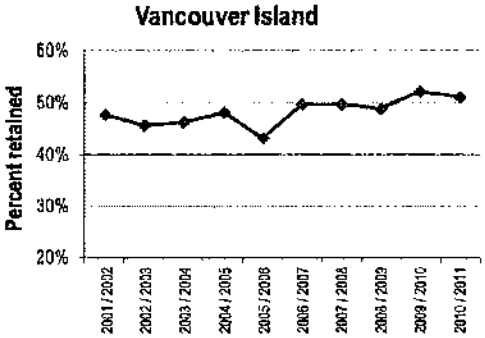
***Figure 10.* Adherence to Minimum Effective Dose Guideline, by Health Authority, BC, 2001/2002 to 2011/2012**

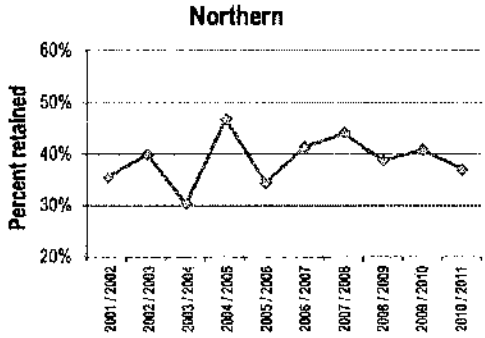


Methadone maintenance retention rates in Vancouver Island Health Authority are consistently higher than the BC average, while rates in Vancouver Coastal appear lower than the average in more recent years (see Figure 11).

***Figure 11.* Percentage of People Started on Methadone Maintenance Treatment Retained at 12 Months, by Health Authority, BC, 2001/2002 to 2010/2011**







3.2 Hospitalizations and Costs

This section examines methadone patients' hospitalizations (for any cause) and the costs associated with hospitalizations. Table 1 summarizes the incidence and cost of hospitalizations while patients are engaged in methadone maintenance treatment.

The total cost of hospitalizations for patients engaged in methadone maintenance reached a high of $14.5 million in 2008/2009. The average cost per patient was $1,721. While the corresponding total cost for total hospitalization in 2010/2011 increased again to $14.2 million (up from $12.6 million in 2009/2010), the average cost per patient was at its lowest level since 2002/2003 at $1,299.

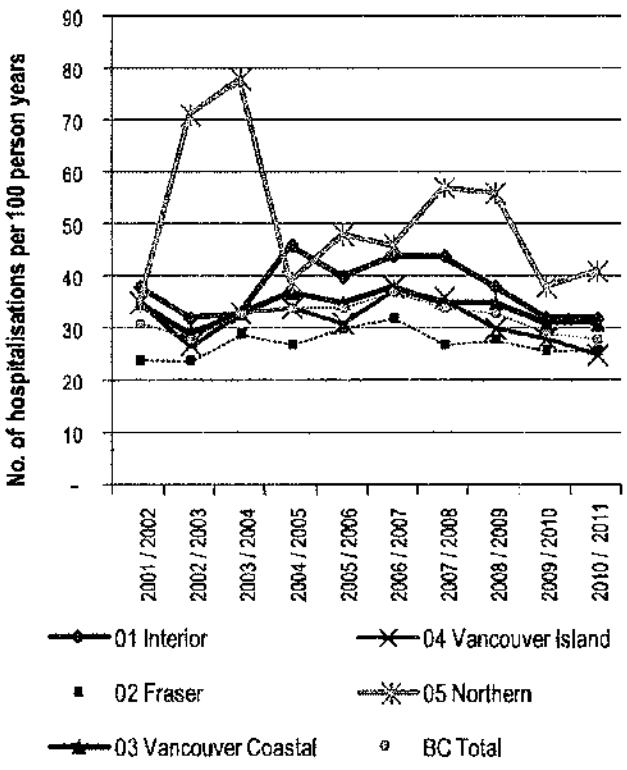
Figure 12 shows the number of hospitalizations per 100 person years for patients engaged in methadone maintenance.

Table 1. **Hospitalizations and Costs During Methadone Maintenance by Fiscal Year, 2001/2002 to 2010/2011**

	No. of Admissions		Hospital Cost	
	Total	Rate per 100 person years	Total	Average
2001/2002	299	31.0	$2,739,177	$1,039
2002/2003	650	28.0	$4,038,741	$1,032
2003/2004	935	33.0	$6,383,645	$1,422
2004/2005	1,179	34.0	$8,372,147	$1,583
2005/2006	1,339	34.0	$9,682,807	$1,635
2006/2007	1,688	37.0	$11,775,471	$1,770
2007/2008	1,802	34.0	$13,314,521	$1,817
2008/2009	1,955	33.0	$14,452,144	$1,721
2009/2010	2,022	29.0	$12,566,345	$1,323
*2010/2011**	*2,249*	*28.0*	*$14,192,650*	*$1,299*

**Note:* 2010/2011 figures may be incomplete because patients admitted to hospitals in 2009/2010 but not discharged until 2011/2012 will not appear in 2010/2011 data. Median costs were $0 because fewer than 50 per cent of patients were hospitalized each fiscal year.

Figure 12. **Hospitalizations per 100 Person Years During Methadone Maintenance, by Health Authority, BC, 2001/2002 to 2010/2011**



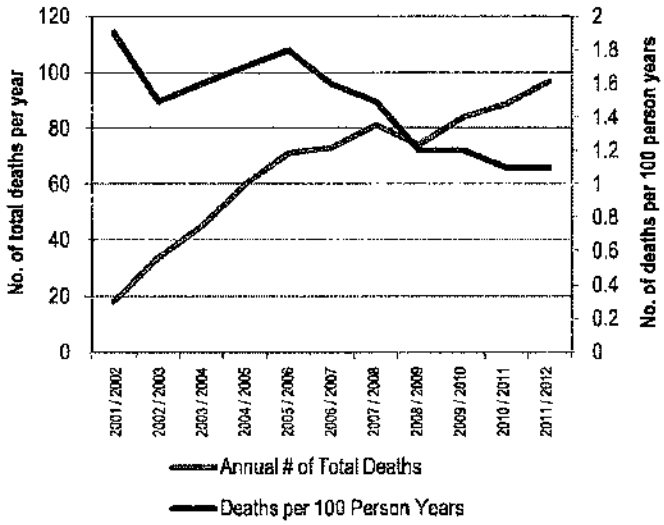
3.3 Mortality

This section provides measures of mortality during methadone maintenance. Mortality is measured in terms of deaths from any cause recorded within 30 days of an episode of methadone maintenance.

Table 2. **All-cause Mortality During Methadone Maintenance Treatment, by Fiscal Year, 2001/2002 to 2011/2012**

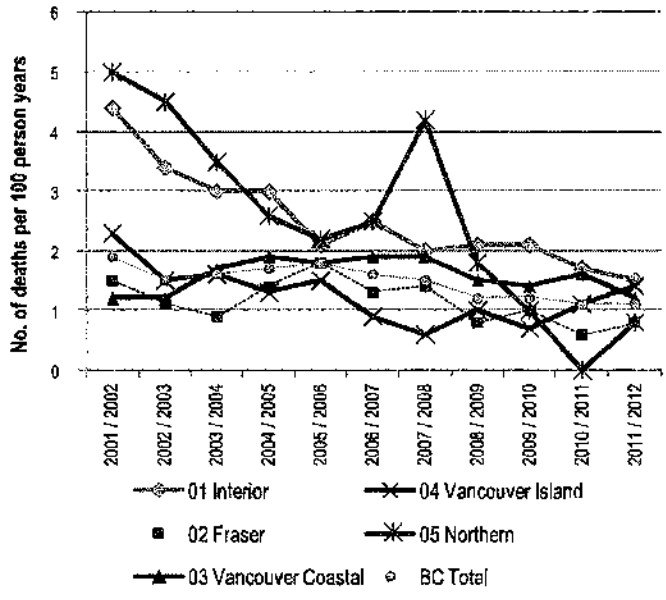
	No. of Deaths	
	Total	Rate per 100 person years
2001/2002	18	1.9
2002/2003	34	1.5
2003/2004	45	1.6
2004/2005	60	1.7
2005/2006	71	1.8
2006/2007	73	1.6
2007/2008	81	1.5
2008/2009	74	1.2
2009/2010	84	1.2
2010/2011	89	1.1
2011/2012	97	1.1

Figure 13. **All-cause Mortality During Methadone Maintenance Treatment, by Fiscal Year, BC, 2001/2002 to 2011/2012**



Although the number of patient deaths has increased between 2001/2002 and 2011/2012 (reflecting overall growth of the patient population during this period), the rate per 100 person years on methadone has decreased (see Table 2 and Figure 14). These unadjusted rates cannot be used to draw conclusions about the effectiveness or risks of methadone maintenance therapy. However, Figure 13 shows that the number of patients engaged in methadone maintenance increased without a proportional increase in rates of death, providing some reassurance of the relative safety of methadone maintenance in BC.

Figure 14. **Deaths by Any Cause per 100 Person Years During Methadone Maintenance by Health Authority, BC, 2001/2002 to 2011/2012**



4. CONCLUSION

Methadone maintenance treatment for opioid dependence in British Columbia has undergone significant growth over the past decade. Greater access to methadone maintenance, along with other harm reduction initiatives, has helped contribute to the lower incidence of HIV infection among people who inject drugs.[5] This report provides relevant data on key indicators of BC's methadone maintenance system, although further work needs to be done on aspects of the system and indicators that are not covered here (such as psychosocial supports). The information it presents is important for improving health service delivery and health system planning—and, ultimately, achieving better health outcomes for opioid-dependent people—in the province.

RESOURCES

British Columbia Methadone Program Websites

BC Ministry of Health
www.health.gov.bc.ca/cdms/methadone.html

College of Physicians & Surgeons of BC
www.cpsbc.ca/node/94

College of Pharmacists of BC
www.bcpharmacists.org/about_us/key_initiatives/index/articles144.php

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[1] *Nosyk B, Sun H, Sizto S, Marsh D, Anis A. An evaluation of methadone maintenance treatment in British Columbia: 1996-2007. Vancouver, BC: University of British Columbia; 2009.*

[2] *Ministry of Health Services, Ministry of Children and Family Development. Healthy minds, healthy people: a 10-year plan to address mental health and substance use in British Columbia. Victoria, BC: Ministry of Health Services, Ministry of Children and Family Development; 2010 Nov [cited 2013 Feb 19]. Available from:* **http://www.health.gov.bc.ca/library/publications/year/2010/healthy_minds_healthy_people.pdf**.

[3] *College of Pharmacists of British Columbia. Policy Guide: Methadone Maintenance Treatment – Professional Practice Policy #66. Vancouver, BC: College of Pharmacists of British Columbia; 2010 [cited 2013 Feb 19]. Available at:* **http://library.bcpharmacists.org/A-About_Us/A-8_Key_Initiatives/1029-PPP66_Policy_Guide_MMT.pdf**.

[4] *Centre for Addictions Research of BC. Methadone maintenance treatment in British Columbia, 1996-2008. Vancouver, BC: Centre for Addictions Research of BC; 2010 May [cited 2013 Feb 19]. Available from:* **http://www.health.gov.bc.ca/library/publications/year/2010/Methadone_maintenance_treatment_review.pdf**.

[5] *Gilbert M, Buxton JA, Tupper KW. Decreasing HIV infections among people who use drugs by injection in British Columbia: Potential explanations and recommendations for further action. Victoria, BC: Office of the Provincial Health Officer; 2011 [cited 2013 Feb 19]. Available at:* **http://www.health.gov.bc.ca/library/publications/year/2011/decreasing-HIV-in-IDU-population.pdf**.

BC Methadone Maintenance System: Performance Measures 2011/2012

Appendix A: Report Figures and Data

Pharmaceutical Services Division &
Population and Public Health Division
British Columbia Ministry of Health

BRITISH COLUMBIA
Office of the
Provincial Health Officer

February 2013

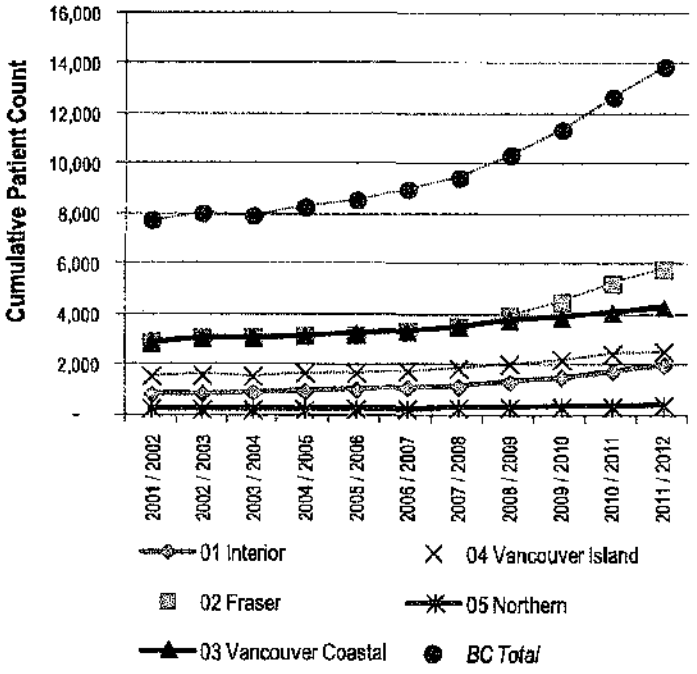
You may download the full report from:

http://www.health.gov.bc.ca/pho/pdf/methadone-2011-12.pdf

Table of Contents

Figure 2

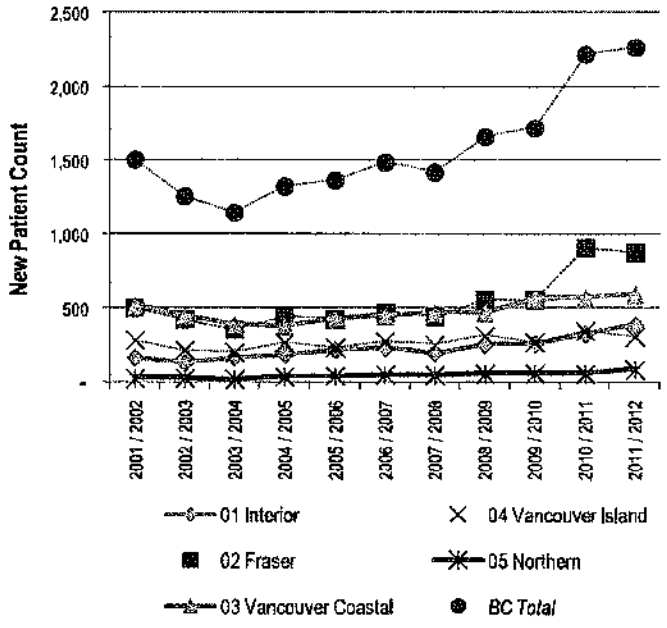
Methadone Maintenance Patients by Health Authority, 2001/2002 to 2011/2012



Patient Health Authority	Fiscal Year	Total Patients
01 Interior	2001/2002	826
	2002/2003	850
	2003/2004	886
	2004/2005	940
	2005/2006	996
	2006/2007	1,094
	2007/2008	1,128
	2008/2009	1,317
	2009/2010	1,512
	2010/2011	1,755
	2011/2012	1,984
02 Fraser	2001/2002	2,929
	2002/2003	3,072
	2003/2004	3,072
	2004/2005	3,147
	2005/2006	3,161
	2006/2007	3,336
	2007/2008	3,520
	2008/2009	3,983
	2009/2010	4,495
	2010/2011	5,246
	2011/2012	5,810
03 Vancouver Coastal	2001/2002	2,858
	2002/2003	3,048
03 Vancouver Coastal *(continued)*	2003/2004	3,080
	2004/2005	3,151
	2005/2006	3,251
	2006/2007	3,349
	2007/2008	3,530
	2008/2009	3,784
	2009/2010	3,902
	2010/2011	4,108
	2011/2012	4,318
04 Vancouver Island	2001/2002	1,544
	2002/2003	1,582
	2003/2004	1,536
	2004/2005	1,659
	2005/2006	1,701
	2006/2007	1,753
	2007/2008	1,860
	2008/2009	2,034
	2009/2010	2,202
	2010/2011	2,443
	2011/2012	2,538
05 Northern	2001/2002	248
	2002/2003	220
	2003/2004	200
	2004/2005	215
	2005/2006	233
	2006/2007	255
	2007/2008	294
	2008/2009	320
	2009/2010	333
	2010/2011	345
	2011/2012	406
BC Total	***2001/2002***	***7,755***
	2002/2003	***8,029***
	2003/2004	***7,967***
	2004/2005	***8,318***
	2005/2006	***8,563***
	2006/2007	***8,998***
	2007/2008	***9,466***
	2008/2009	***10,372***
	2009/2010	***11,385***
	2010/2011	***12,703***
	2011/2012	***13,894***

Figure 3

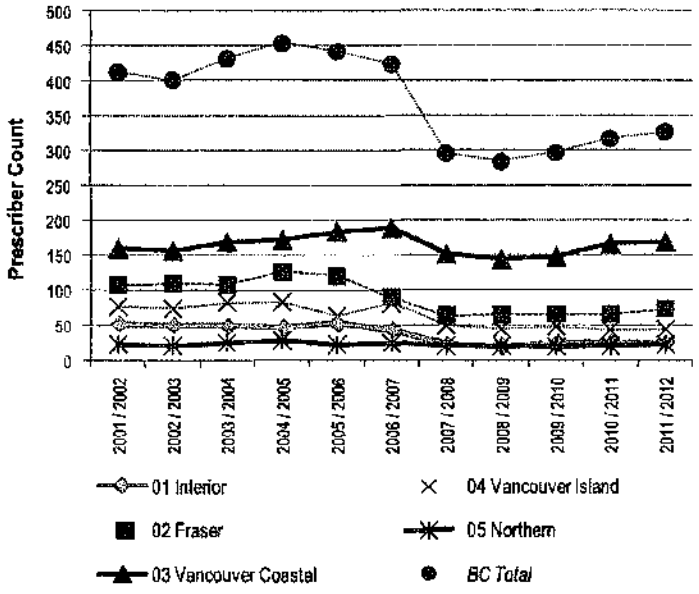
New Methadone Maintenance Patients by Health Authority, BC, 2001/2002 to 2011/2012



Patient Health Authority	Fiscal Year	New Patients
01 Interior	2001/2002	168
	2002/2003	131
	2003/2004	168
	2004/2005	189
	2005/2006	221
	2006/2007	232
	2007/2008	198
	2008/2009	255
	2009/2010	261
	2010/2011	328
	2011/2012	390
02 Fraser	2001/2002	504
	2002/2003	426
	2003/2004	361
	2004/2005	448
	2005/2006	428
	2006/2007	473
	2007/2008	446
	2008/2009	561
	2009/2010	558
	2010/2011	911
	2011/2012	879
03 Vancouver Coastal	2001/2002	522
	2002/2003	454
03 Vancouver Coastal *(continued)*	2003/2004	391
	2004/2005	383
	2005/2006	437
	2006/2007	451
	2007/2008	471
	2008/2009	472
	2009/2010	570
	2010/2011	573
	2011/2012	597
04 Vancouver Island	2001/2002	286
	2002/2003	218
	2003/2004	204
	2004/2005	269
	2005/2006	236
	2006/2007	279
	2007/2008	255
	2008/2009	315
	2009/2010	271
	2010/2011	347
	2011/2012	310
05 Northern	2001/2002	28
	2002/2003	29
	2003/2004	23
	2004/2005	38
	2005/2006	45
	2006/2007	53
	2007/2008	51
	2008/2009	59
	2009/2010	62
	2010/2011	59
	2011/2012	88
BC Total	***2001/2002***	***1,508***
	2002/2003	***1,258***
	2003/2004	***1,147***
	2004/2005	***1,327***
	2005/2006	***1,367***
	2006/2007	***1,488***
	2007/2008	***1,421***
	2008/2009	***1,662***
	2009/2010	***1,722***
	2010/2011	***2,218***
	2011/2012	***2,264***

Figure 4

Methadone Maintenance Program Active Prescribers by Health Authority, BC, 2001/2002 to 2011/2012

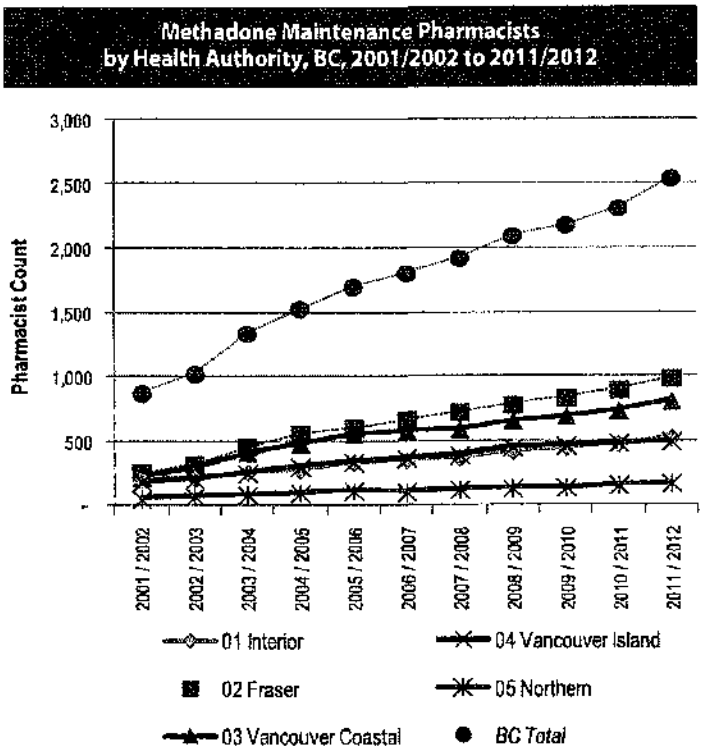


Notes:

- Data obtained August 21, 2012 from Health Ideas/PharmaNet database
- Methadone prescribers counted if they prescribed at least one PharmaCare accepted claim for methadone maintanence (PINS: 66999990, 66999991, 66999992, 66999993) during the fiscal year
- Precribers limited to MSP prescribers with valid College of Physicians and Surgeons of BC licence number

Health Authority	Fiscal Year	Number of MMP Prescribers
01 Interior	2001/2002	52
	2002/2003	50
	2003/2004	49
	2004/2005	48
	2005/2006	53
	2006/2007	44
	2007/2008	22
	2008/2009	18
	2009/2010	25
	2010/2011	25
	2011/2012	25
02 Fraser	2001/2002	108
	2002/2003	110
	2003/2004	108
	2004/2005	127
	2005/2006	121
	2006/2007	91
	2007/2008	64
	2008/2009	65
	2009/2010	66
	2010/2011	66
	2011/2012	73
03 Vancouver Coastal	2001/2002	159
	2002/2003	156
	2003/2004	168
	2004/2005	172
	2005/2006	184
	2006/2007	189
	2007/2008	151
	2008/2009	143
	2009/2010	147
	2010/2011	166
	2011/2012	168
04 Vancouver Island	2001/2002	77
	2002/2003	74
	2003/2004	83
	2004/2005	84
	2005/2006	64
	2006/2007	82
	2007/2008	49
	2008/2009	44
	2009/2010	48
	2010/2011	43
	2011/2012	44
05 Northern	2001/2002	23
	2002/2003	21
	2003/2004	25
	2004/2005	29
	2005/2006	23
	2006/2007	25
	2007/2008	20
	2008/2009	20
	2009/2010	19
	2010/2011	20
	2011/2012	22
BC Total	***2001/2002***	***413***
	2002/2003	***402***
	2003/2004	***432***
	2004/2005	***454***
	2005/2006	***442***
	2006/2007	***425***
	2007/2008	***296***
	2008/2009	***284***
	2009/2010	***297***
	2010/2011	***317***
	2011/2012	***327***

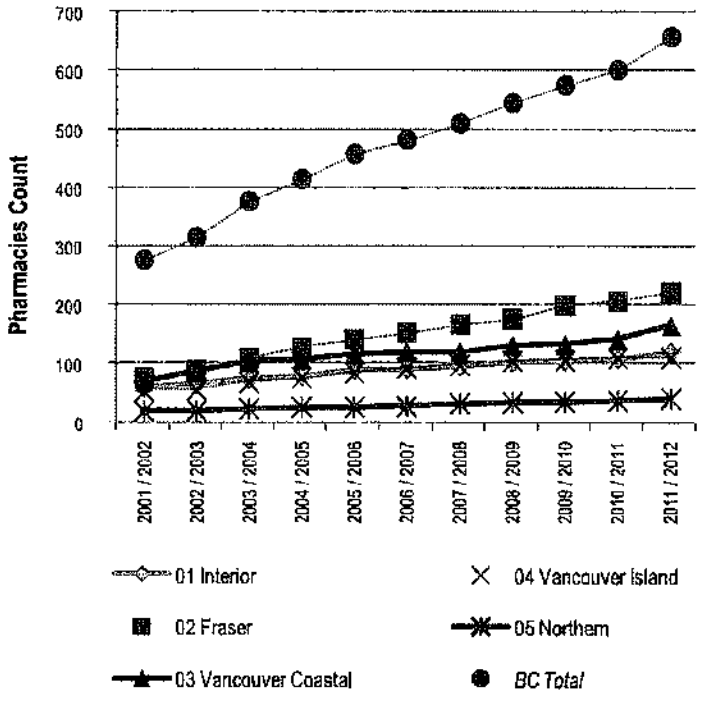
Figure 5



Pharmacy Health Authority	Fiscal Year	Total MMP Pharmacists
01 Interior	2001/2002	207
	2002/2003	219
	2003/2004	265
	2004/2005	287
	2005/2006	341
	2006/2007	356
	2007/2008	373
	2008/2009	424
	2009/2010	453
	2010/2011	481
	2011/2012	527
02 Fraser	2001/2002	263
	2002/2003	326
	2003/2004	465
	2004/2005	563
	2005/2006	608
	2006/2007	672
	2007/2008	730
	2008/2009	786
	2009/2010	838
	2010/2011	902
	2011/2012	991
03 Vancouver Coastal	2001/2002	228
	2002/2003	301
	2003/2004	415
	2004/2005	484
	2005/2006	561
	2006/2007	584
	2007/2008	594
	2008/2009	662
	2009/2010	697
	2010/2011	741
	2011/2012	812
04 Vancouver Island	2001/2002	187
	2002/2003	207
	2003/2004	258
	2004/2005	307
	2005/2006	343
	2006/2007	371
	2007/2008	396
	2008/2009	455
	2009/2010	467
	2010/2011	490
	2011/2012	499
05 Northern	2001/2002	59
	2002/2003	78
	2003/2004	90
	2004/2005	105
	2005/2006	122
	2006/2007	111
	2007/2008	129
	2008/2009	136
	2009/2010	143
	2010/2011	163
	2011/2012	178
BC Total	***2001/2002***	***875***
	2002/2003	***1,023***
	2003/2004	***1,340***
	2004/2005	***1,534***
	2005/2006	***1,706***
	2006/2007	***1,812***
	2007/2008	***1,924***
	2008/2009	***2,100***
	2009/2010	***2,184***
	2010/2011	***2,315***
	2011/2012	***2,546***

Figure 6

Methadone Maintenance Pharmacies by Health Authority, BC, 2001/2002 to 2011/2012



Notes:

- Data obtained September 2, 2011 from Health Ideas/PharmaNet database
- Methadone pharmacies counted if they filled at least one PharmaCare accepted claim for methadone maintanence (PINS: 66999990, 66999991, 66999992, 66999993) during the fiscal year
- Witnessed Ingestion Pharmacies counted if filled claim for specific PINs for methadone taken on-site (PINs: 66999990, 66999993)
- Carry Home Pharmacies counted if filled claim for specific PINs for methadone taken off-site (PINs: 66999991, 66999992)
- Population figures includes only pharmacies active in PharmaNet during the fiscal year

Pharmacy Health Authority	Fiscal Year	MMP Pharmacies per 100 Pharmacies	Total MMP Pharmacies
01 Interior	2001/2002	31.91	60
	2002/2003	34.2	66
	2003/2004	37.95	74
	2004/2005	38.92	79
	2005/2006	42.45	90
	2006/2007	41.28	90
	2007/2008	42.04	95
	2008/2009	42.98	101
	2009/2010	42.62	104
	2010/2011	43.55	108
	2011/2012	48.19	120
02 Fraser	2001/2002	26.5	75
	2002/2003	30.34	88
	2003/2004	36.95	109
	2004/2005	40.19	127
	2005/2006	42.86	141
	2006/2007	44.09	153
	2007/2008	45.14	167
	2008/2009	42.82	176
	2009/2010	45.43	199
	2010/2011	47.92	207
	2011/2012	48.37	222

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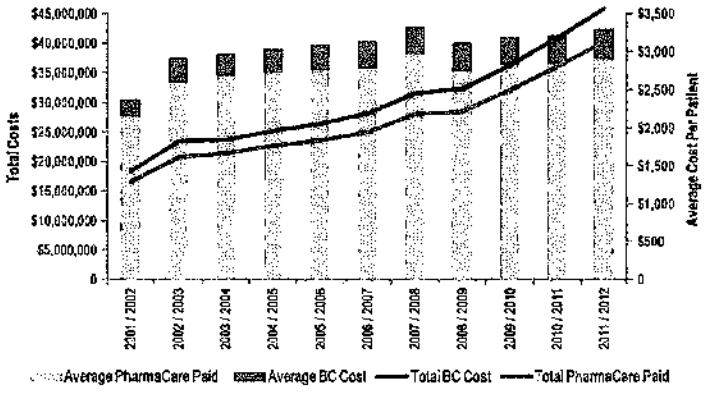
Figure 6 data continued from previous page

Pharmacy Health Authority	Fiscal Year	MMP Pharmacies per 100 Pharmacies	Total MMP Pharmacies
03 Vancouver Coastal	2001/2002	25.75	69
	2002/2003	31.62	86
	2003/2004	36.79	103
	2004/2005	36.77	107
	2005/2006	38.24	117
	2006/2007	37.85	120
	2007/2008	36.47	120
	2008/2009	38.3	131
	2009/2010	36.44	133
	2010/2011	39.5	141
	2011/2012	44.47	165
04 Vancouver Island	2001/2002	27.46	53
	2002/2003	27.64	55
	2003/2004	33.33	68
	2004/2005	36.02	76
	2005/2006	39.44	84
	2006/2007	41.44	92
	2007/2008	42.73	97
	2008/2009	43.88	104
	2009/2010	43.75	105
	2010/2011	46.19	109
	2011/2012	44	110
05 Northern	2001/2002	22.89	19
	2002/2003	23.81	20
	2003/2004	25.84	23
	2004/2005	29.21	26
	2005/2006	28.57	26
	2006/2007	29.35	27
	2007/2008	34.04	32
	2008/2009	35.79	34
	2009/2010	36.84	35
	2010/2011	40.66	37
	2011/2012	44.09	41
BC Total	***2001/2002***	***27.19***	***276***
	2002/2003	***30.35***	***315***
	2003/2004	***35.47***	***377***
	2004/2005	***37.39***	***415***
	2005/2006	***39.79***	***458***
	2006/2007	***40.3***	***482***
	2007/2008	***41.01***	***511***
	2008/2009	***41.36***	***546***
	2009/2010	***41.68***	***576***
	2010/2011	***44.13***	***602***
	2011/2012	***46.27***	***658***

Figure 7

Provincial Government and PharmaCare Methadone Expenditures, BC, 2001/2002 to 2011/2012



Notes:

- Data obtained September 2, 2011 from Health Ideas/PharmaNet database
- Data includes all PharmaCare accepted claims for methadone maintanence (PINS: 66999990, 66999991, 66999992, 66999993) during the fiscal year
- BC Costs include total cost to PharmaCare, patients, or other 3rd party insurers of ingredients, dispensing fees, and interaction fees for witnessed ingestion
- PharmaCare Paid costs include on costs to PharmaCare for ingredients, dispensing fees, and interaction fees
- Median costs include an estimate of interaction fees for individual patients; actual interaction fee is paid in bulk to pharmacies

Fiscal Year	Patients	Average PharmaCare Paid	Total PharmaCare Paid	Average BC Cost	Total BC Cost
2001/2002	7,755	$2,147	$16,646,864	$2,377	$18,429,806
2002/2003	8,029	$2,592	$20,811,537	$2,917	$23,418,357
2003/2004	7,967	$2,674	$21,303,616	$2,963	$23,604,168
2004/2005	8,318	$2,722	$22,642,611	$3,034	$25,237,224
2005/2006	8,563	$2,751	$23,555,163	$3,088	$26,442,849
2006/2007	8,998	$2,782	$25,029,135	$3,138	$28,236,952
2007/2008	9,466	$2,958	$27,999,245	$3,325	$31,477,889
2008/2009	10,372	$2,747	$28,490,085	$3,110	$32,255,307
2009/2010	11,385	$2,826	$32,170,225	$3,187	$36,282,537
2010/2011	12,703	$2,837	$36,032,632	$3,214	$40,826,395
2011/2012	13,894	$2,899	$40,276,077	$3,301	$45,867,722

Figure 8a

Medical Services Plan Methadone Expenditures for Methadone Maintenance Treatment Only, BC Total, 2001/2002 to 2011/2012

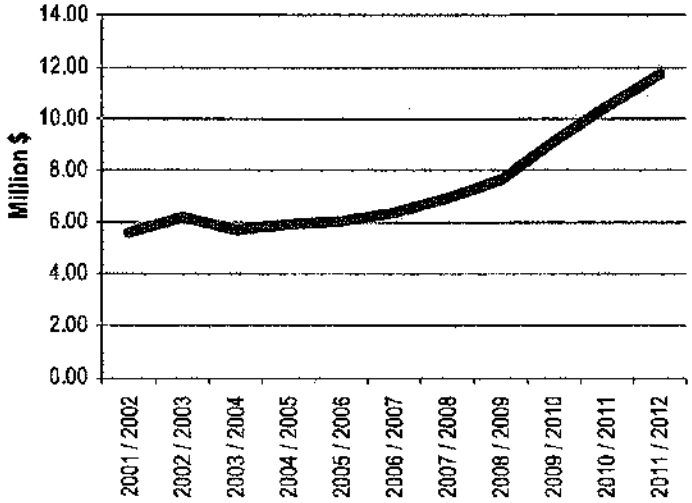
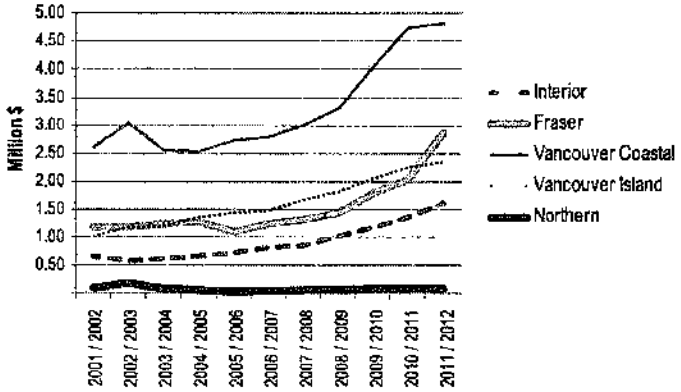


Figure 8b

Medical Services Plan Methadone Expenditures for Methadone Maintenance Treatment Only, by Health Authority, 2001/2002 to 2011/2012



Notes:

1. Data includes MSP fee-for-service services by date of service for selected Fee item 39 - METHADONE OR BUPRENORPHINE/NALOXONE TREATMENT ONLY for fiscal years 2001/2002 to 2011/2012, paid to December 31, 2012.
2. Services exclude visit/procedural premiums, no charge referrals and tray fees (but corresponding expenditures are reported).
3. Data exclude third party billings (e.g, ICBC, WCB).

Practitioner Health Authority	Fiscal Year	Expenditure
1 - Interior	2001/2002	$661,605
	2002/2003	$577,081
	2003/2004	$624,929
	2004/2005	$664,869
	2005/2006	$732,711
	2006/2007	$821,042
	2007/2008	$865,421
	2008/2009	$1,023,030
	2009/2010	$1,174,458
	2010/2011	$1,362,612
	2011/2012	$1,618,047
2 - Fraser	2001/2002	$1,185,860
	2002/2003	$1,184,806
	2003/2004	$1,234,185
	2004/2005	$1,288,085
	2005/2006	$1,101,002
	2006/2007	$1,244,313
	2007/2008	$1,321,416
	2008/2009	$1,432,659
	2009/2010	$1,799,963
	2010/2011	$2,040,644
	2011/2012	$2,865,334

Practitioner Health Authority	Fiscal Year	Expenditure
3 - Vancouver Coastal	2001/2002	$2,613,232
	2002/2003	$3,057,189
	2003/2004	$2,556,576
	2004/2005	$2,540,455
	2005/2006	$2,734,901
	2006/2007	$2,792,363
	2007/2008	$3,022,183
	2008/2009	$3,322,460
	2009/2010	$4,054,611
	2010/2011	$4,738,335
	2011/2012	$4,834,282
4 - Vancouver Island	2001/2002	$1,014,368
	2002/2003	$1,178,390
	2003/2004	$1,211,725
	2004/2005	$1,369,014
	2005/2006	$1,444,773
	2006/2007	$1,483,609
	2007/2008	$1,677,994
	2008/2009	$1,823,050
	2009/2010	$2,059,432
	2010/2011	$2,263,307
	2011/2012	$2,360,815

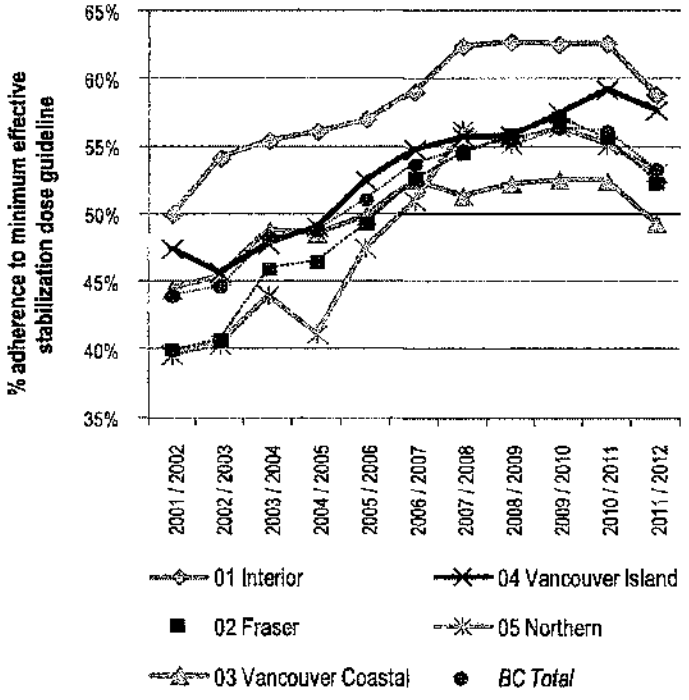
continued on next page....

Figure 8 data continued from previous page

Practitioner Health Authority	Fiscal Year	Expenditure
5 - Northern	2001/2002	$113,187
	2002/2003	$187,761
	2003/2004	$83,746
	2004/2005	$59,125
	2005/2006	$27,784
	2006/2007	$46,661
	2007/2008	$58,275
	2008/2009	$66,370
	2009/2010	$85,914
	2010/2011	$82,647
	2011/2012	$92,997
99 - Unknown	2003/2004	$4,397
	2005/2006	$810
	2009/2010	$6,447
BC Total	***2001/2002***	***$5,588,252***
	2002/2003	***$6,185,227***
	2003/2004	***$5,715,559***
	2004/2005	***$5,921,548***
	2005/2006	***$6,041,981***
	2006/2007	***$6,387,988***
	2007/2008	***$6,945,289***
	2008/2009	***$7,667,569***
	2009/2010	***$9,180,825***
	2010/2011	***$10,487,546***
	2011/2012	***$11,771,476***

Figure 10

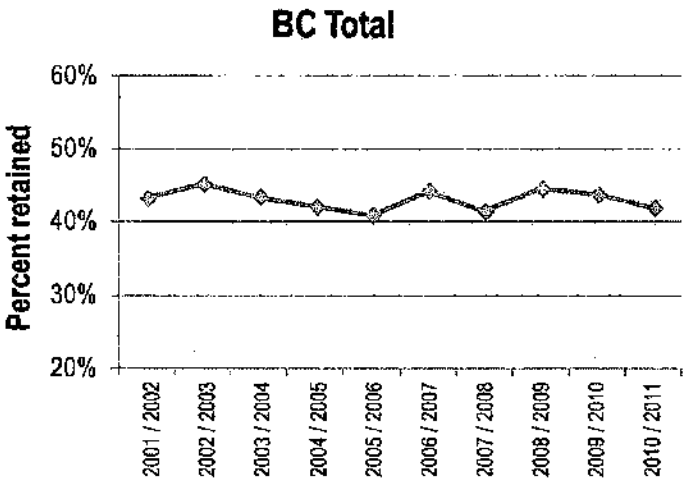
Adherence to Minimum Effective Dose Guideline, by Health Authority, BC, 2001/2002 to 2011/2012

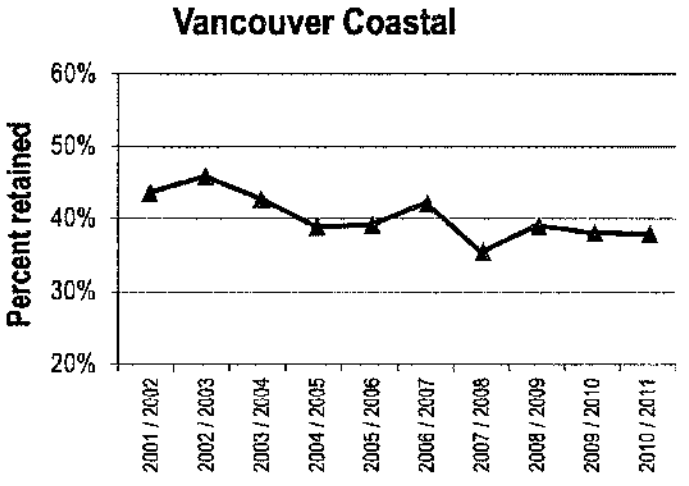


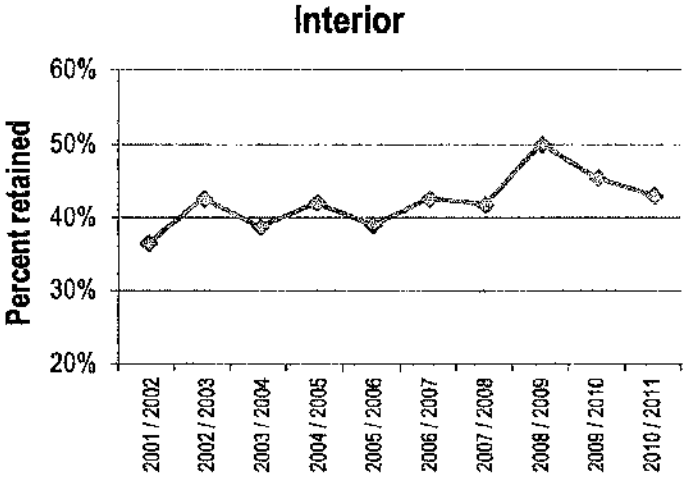
Patient Health Authority	Fiscal Year	% Adherance to Minimum Effective Dose Guidelines
01 Interior	2001/2002	50.00%
	2002/2003	54.16%
	2003/2004	55.46%
	2004/2005	56.14%
	2005/2006	57.04%
	2006/2007	59.09%
	2007/2008	62.42%
	2008/2009	62.74%
	2009/2010	62.56%
	2010/2011	62.62%
	2011/2012	58.90%
02 Fraser	2001/2002	40.06%
	2002/2003	40.75%
	2003/2004	45.99%
	2004/2005	46.51%
	2005/2006	49.35%
	2006/2007	52.68%
	2007/2008	54.54%
	2008/2009	55.88%
	2009/2010	57.17%
	2010/2011	55.69%
	2011/2012	52.35%
03 Vancouver Coastal	2001/2002	44.46%
	2002/2003	45.47%
	2003/2004	48.81%
	2004/2005	48.59%
	2005/2006	49.91%
	2006/2007	52.56%
	2007/2008	51.38%
	2008/2009	52.31%
	2009/2010	52.58%
	2010/2011	52.49%
	2011/2012	49.35%
04 Vancouver Island	2001/2002	47.45%
	2002/2003	45.71%
	2003/2004	47.80%
	2004/2005	49.09%
	2005/2006	52.48%
	2006/2007	54.81%
	2007/2008	55.77%
	2008/2009	55.85%
	2009/2010	57.54%
	2010/2011	59.27%
	2011/2012	57.74%
05 Northern	2001/2002	39.66%
	2002/2003	40.43%
	2003/2004	44.00%
	2004/2005	41.18%
	2005/2006	47.50%
	2006/2007	51.02%
	2007/2008	56.28%
	2008/2009	55.25%
	2009/2010	56.51%
	2010/2011	55.14%
	2011/2012	53.12%
BC Total	***2001/2002***	***44.00%***
	2002/2003	***44.68%***
	2003/2004	***48.26%***
	2004/2005	***48.81%***
	2005/2006	***51.12%***
	2006/2007	***53.75%***
	2007/2008	***54.76%***
	2008/2009	***55.55%***
	2009/2010	***56.44%***
	2010/2011	***56.20%***
	2011/2012	***53.35%***

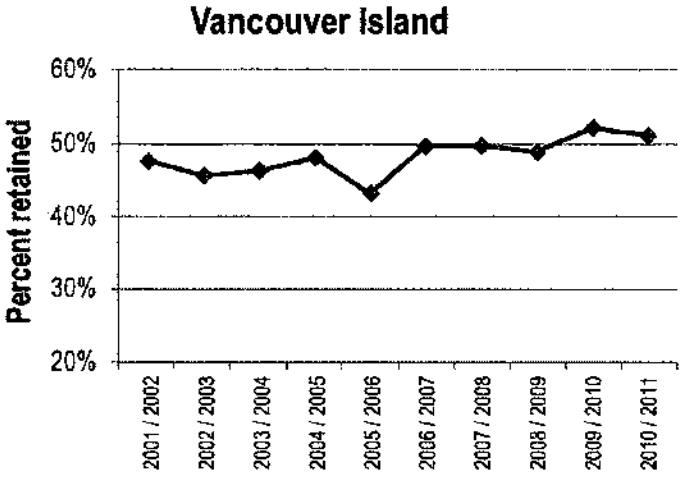
Figure 11

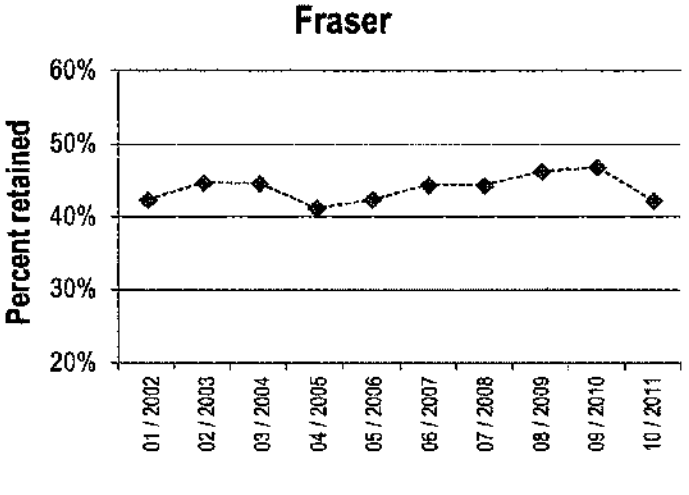
Percentage of People Started on Methadone Maintenance Treatment Retained at 12 Months, by Health Authority, BC, 2001/2002 to 2010/2011











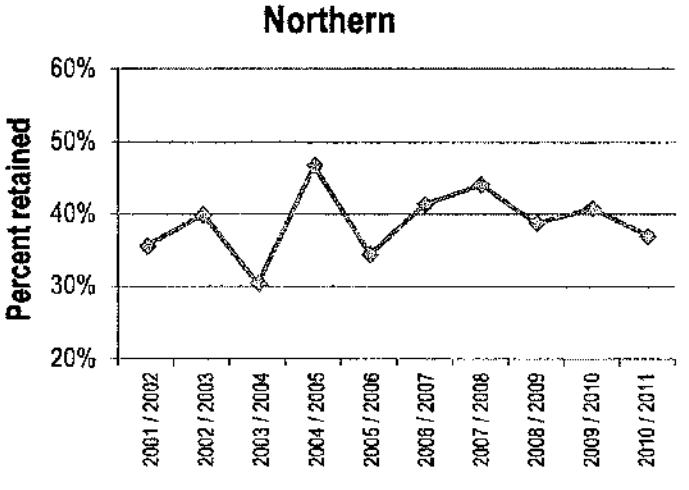


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Figure 11 data continued from previous page

Notes:

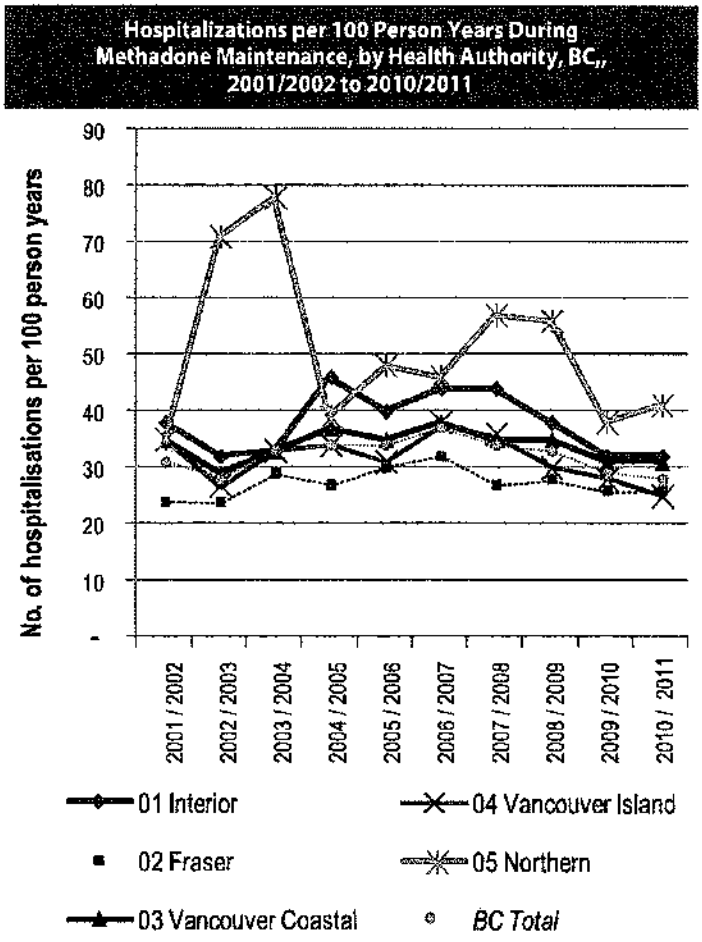
- Data obtained August 30-31 2011 from Health Ideas/PharmaNet database & September 6, 2011 from Hospital Discharge Abstract Database (DAD)
- Hospital Admissions are measured as unique records of entry into DAD
- 100 Person years calculated as days of methadone maintanence treatment divided by 36,500
- Hospital costs for years 2001/02 to 2003/04 apply cost per weighted case of $5,010 to resource intensity weights (RIW) of each admission; this is the 2008/09 cost per weighted case
- Hospital costs for years 2004/05 to 2009/10 apply cost per weighted case of $5,390 to resource intensity weights (RIW) of each admission; this is the 2009/10 cost per weighted case
- 2009/10 RIWs not available for years 2001/02 to 2003/04
- Median cost excluded because fewer than 50% of patients admitted to hospitals during methadone maintanence

* 2009/10 figures may be incomplete because patients admitted to hospitals in 2009/10 but not discharged until 2010/11 will not appear in 2009/10 data

Patient Health Authority	Fiscal Year	Retention After 1 Year (%)
01 Interior	2001/2002	37%
	2002/2003	43%
	2003/2004	39%
	2004/2005	42%
	2005/2006	39%
	2006/2007	43%
	2007/2008	42%
	2008/2009	50%
	2009/2010	46%
	2010/2011	43%
02 Fraser	2001/2002	42%
	2002/2003	45%
	2003/2004	45%
	2004/2005	41%
	2005/2006	42%
	2006/2007	44%
	2007/2008	44%
	2008/2009	46%
	2009/2010	47%
	2010/2011	42%
03 Vancouver Coastal	2001/2002	44%
	2002/2003	46%
	2003/2004	43%
	2004/2005	39%
	2005/2006	39%
	2006/2007	42%
	2007/2008	35%
	2008/2009	39%
	2009/2010	38%
	2010/2011	38%

Patient Health Authority	Fiscal Year	Retention After 1 Year (%)
04 Vancouver Island	2001/2002	48%
	2002/2003	46%
	2003/2004	46%
	2004/2005	48%
	2005/2006	43%
	2006/2007	50%
	2007/2008	50%
	2008/2009	49%
	2009/2010	52%
	2010/2011	51%
05 Northern	2001/2002	36%
	2002/2003	40%
	2003/2004	30%
	2004/2005	47%
	2005/2006	34%
	2006/2007	41%
	2007/2008	44%
	2008/2009	39%
	2009/2010	41%
	2010/2011	37%
BC Total	***2001/2002***	***43%***
	2002/2003	***45%***
	2003/2004	***43%***
	2004/2005	***42%***
	2005/2006	***41%***
	2006/2007	***44%***
	2007/2008	***41%***
	2008/2009	***45%***
	2009/2010	***44%***
	2010/2011	***42%***

Figure 12



Notes:

- Data obtained August 30-31 2011 from Health Ideas/PharmaNet database
- Deaths of all causes recorded within 30 days of episode of methadone maintanence therapy
- 100 Person years calculated as days of methadone maintanence treatment divided by 36,500

Patient Health Authority	Fiscal Year	Admissions per 100 Person Years	Total Hospital Admissions
01 Interior	2001/2002	38	34
	2002/2003	32	66
	2003/2004	33	89
	2004/2005	46	154
	2005/2006	40	173
	2006/2007	44	227
	2007/2008	44	256
	2008/2009	38	269
	2009/2010	32	266
	2010/2011	32	309
02 Fraser	2001/2002	24	78
	2002/2003	24	191
	2003/2004	29	278
	2004/2005	27	313
	2005/2006	30	394
	2006/2007	32	482
	2007/2008	27	455
	2008/2009	28	548
	2009/2010	26	589
	2010/2011	26	691

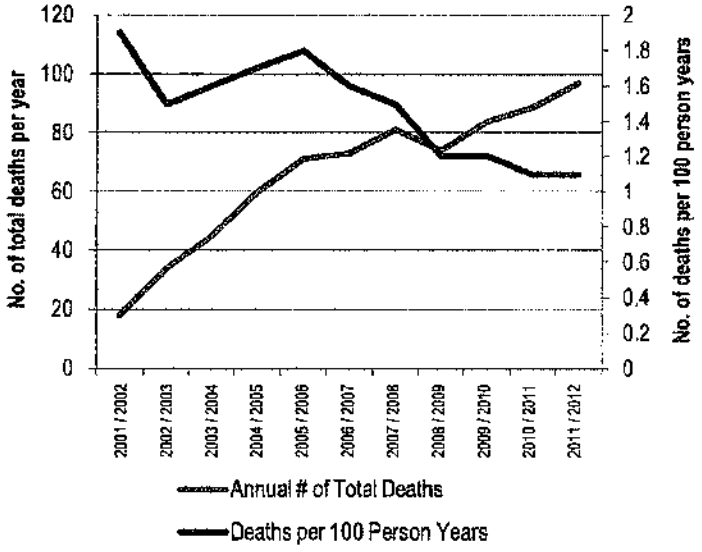
continued on next page....

Figure 12 data continued from previous page

Patient Health Authority	Fiscal Year	Admissions per 100 Person Years	Total Hospital Admissions
03 Vancouver Coastal	2001/2002	35	118
	2002/2003	29	248
	2003/2004	33	359
	2004/2005	37	466
	2005/2006	35	496
	2006/2007	38	603
	2007/2008	35	649
	2008/2009	35	702
	2009/2010	31	724
	2010/2011	31	811
04 Vancouver Island	2001/2002	35	62
	2002/2003	27	113
	2003/2004	33	165
	2004/2005	34	216
	2005/2006	31	232
	2006/2007	38	321
	2007/2008	36	360
	2008/2009	30	344
	2009/2010	28	367
	2010/2011	25	348
05 Northern	2001/2002	35	7
	2002/2003	71	32
	2003/2004	78	44
	2004/2005	39	30
	2005/2006	48	44
	2006/2007	46	55
	2007/2008	57	82
	2008/2009	56	92
	2009/2010	38	76
	2010/2011	41	90
BC Total	***2001/2002***	***31***	***299***
	2002/2003	***28***	***650***
	2003/2004	***33***	***935***
	2004/2005	***34***	***1,179***
	2005/2006	***34***	***1,339***
	2006/2007	***37***	***1,688***
	2007/2008	***34***	***1,802***
	2008/2009	***33***	***1,955***
	2009/2010	***29***	***2,022***
	2010/2011	***28***	***2,249***

Figure 13

All-cause Mortality During Methadone Maintenance Treatment, BC Total, 2001/2002 to 2011/2012



Notes:

- Data obtained August 30-31 2011 from Health Ideas/PharmaNet database

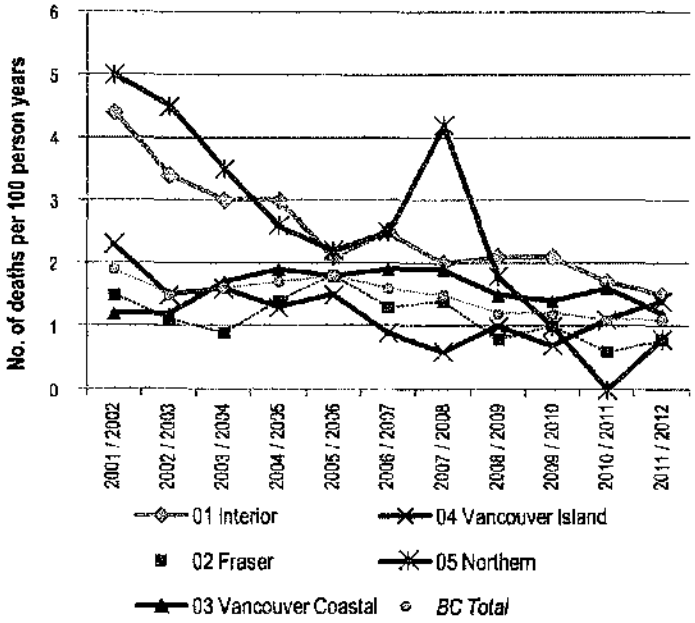
- Deaths of all causes recorded within 30 days of episode of methadone maintanence therapy

- 100 Person years calculated as days of methadone maintanence treatment divided by 36,500

Fiscal Year	Total Deaths in Methadone Maintenance Treatment	Deaths per 100 Person Years
2001/2002	18	1.9
2002/2003	34	1.5
2003/2004	45	1.6
2004/2005	60	1.7
2005/2006	71	1.8
2006/2007	73	1.6
2007/2008	81	1.5
2008/2009	74	1.2
2009/2010	84	1.2
2010/2011	89	1.1
2011/2012	97	1.1

Figure 14

Deaths by Any Cause per 100 Person Years During Methadone Maintenance by Health Authority, BC, 2001/2002 to 2011/2012



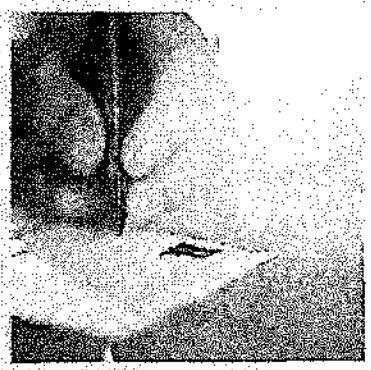
Notes:

- Data obtained August 30-31 2011 from Health Ideas/PharmaNet database
- Deaths of all causes recorded within 30 days of episode of methadone maintanence therapy
- 100 Person years calculated as days of methadone maintanence treatment divided by 36,500

Patient Health Authority	Fiscal Year	Deaths per 100 Person Years
01 Interior	2001/2002	4.4
	2002/2003	3.4
	2003/2004	3
	2004/2005	3
	2005/2006	2.1
	2006/2007	2.5
	2007/2008	2
	2008/2009	2.1
	2009/2010	2.1
	2010/2011	1.7
	2011/2012	1.5
02 Fraser	2001/2002	1.5
	2002/2003	1.1
	2003/2004	0.9
	2004/2005	1.4
	2005/2006	1.8
	2006/2007	1.3
	2007/2008	1.4
	2008/2009	0.8
	2009/2010	1
	2010/2011	0.6
	2011/2012	0.8
03 Vancouver Coastal	2001/2002	1.2
	2002/2003	1.2
	2003/2004	1.7
	2004/2005	1.9
	2005/2006	1.8
	2006/2007	1.9
	2007/2008	1.9
	2008/2009	1.5
	2009/2010	1.4
	2010/2011	1.6
	2011/2012	1.2
04 Vancouver Island	2001/2002	2.3
	2002/2003	1.5
	2003/2004	1.6
	2004/2005	1.3
	2005/2006	1.5
	2006/2007	0.9
	2007/2008	0.6
	2008/2009	1
	2009/2010	0.7
	2010/2011	1.1
	2011/2012	1.4
05 Northern	2001/2002	5
	2002/2003	4.5
	2003/2004	3.5
	2004/2005	2.6
	2005/2006	2.2
	2006/2007	2.5
	2007/2008	4.2
	2008/2009	1.8
	2009/2010	1
	2010/2011	0
	2011/2012	0.8
BC Total	***2001/2002***	***1.9***
	2002/2003	***1.5***
	2003/2004	***1.6***
	2004/2005	***1.7***
	2005/2006	***1.8***
	2006/2007	***1.6***
	2007/2008	***1.5***
	2008/2009	***1.2***
	2009/2010	***1.2***
	2010/2011	***1.1***
	2011/2012	***1.1***

Methadone Maintenance System Performance Measures – 2011/2012

Office of the Provincial Health Officer January 28, 2013



Dr. Eric Young, MD, MHSc, CCFP, FRCPC
Deputy Provincial Health Officer

Background

- 2002 Health Canada Best Practices – PMMT
- 2009 BCMA – Policy Paper on Addictions
- 2009 independent review of BC's methadone maintenance system (CARBC & UBC's CHEOS)
- "Methadone Maintenance Treatment in British Columbia, 1996-2008: Analysis and Recommendations" (September 2010)
- Government response
- PHO follow-up monitoring of MMT key indicators (not including data on-reserve First Nations)

Healthy Minds, Healthy People

A Ten Year Plan to Address Mental Health and Substance Use in British Columbia

HMHP Key actions and outcomes related to BC's Methadone Maintenance System

- p. 33 - Enhance and improve BC's methadone maintenance treatment system (including medical, pharmaceutical and psychosocial support components)
- p. 34 – By 2015:
  a) 90 per cent of methadone prescribers will adhere to optimal dose guidelines
  b) 60 per cent of people started MMT retained at 12 months
- p. 23 – Where appropriate, expand the reach and range of harm-reduction services that prevent and reduce the health, social and fiscal impacts of illegal drug use

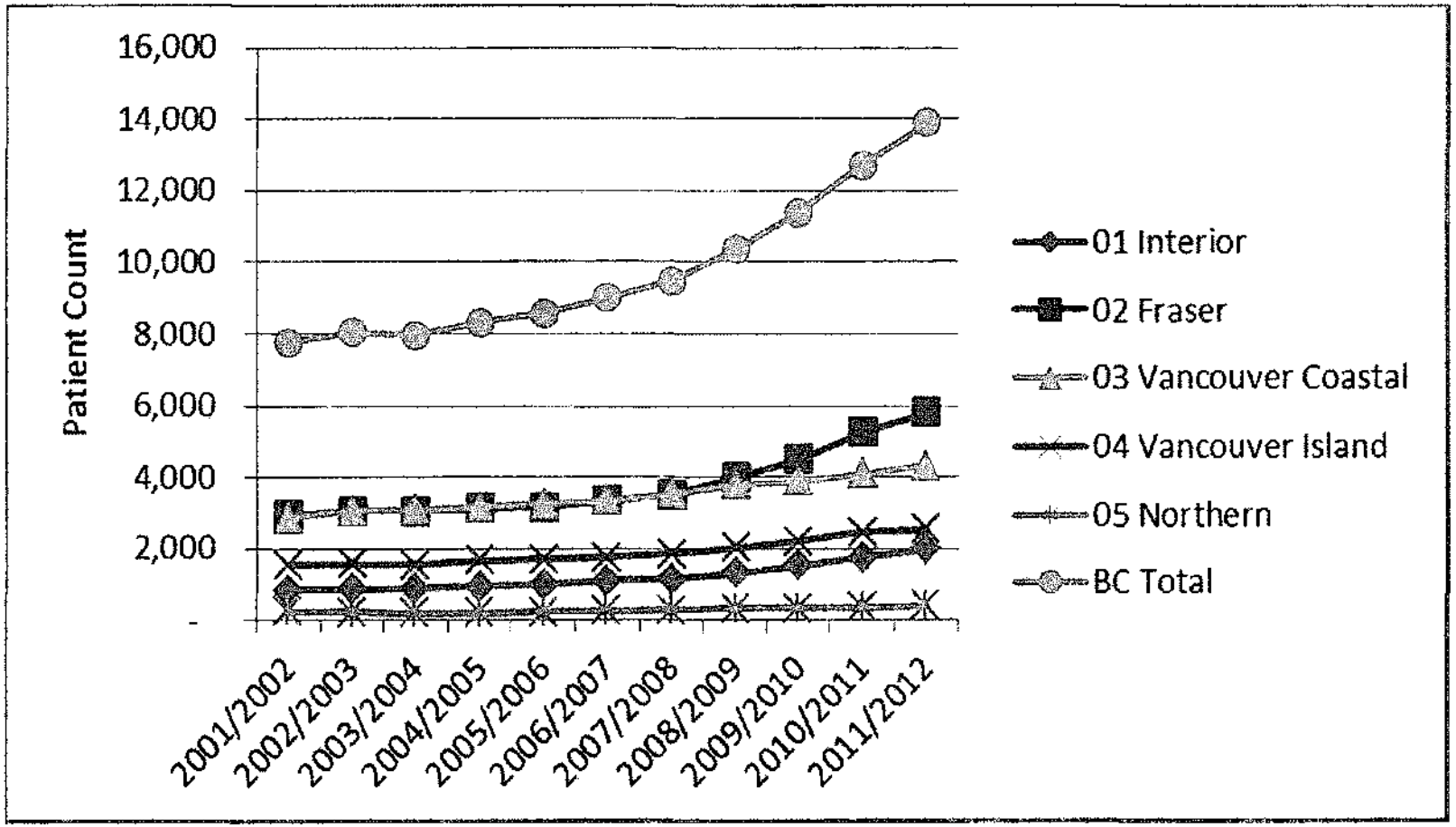
Introduction

- **Effectiveness of the province's MMS involves three key components:**
  - **prescribing**
  - **dispensing**
  - **counselling and other adjunct services and supports**
- **Regulatory Bodies**
  - **College of Physicians and Surgeons of BC**
  - **College of Pharmacists of BC**

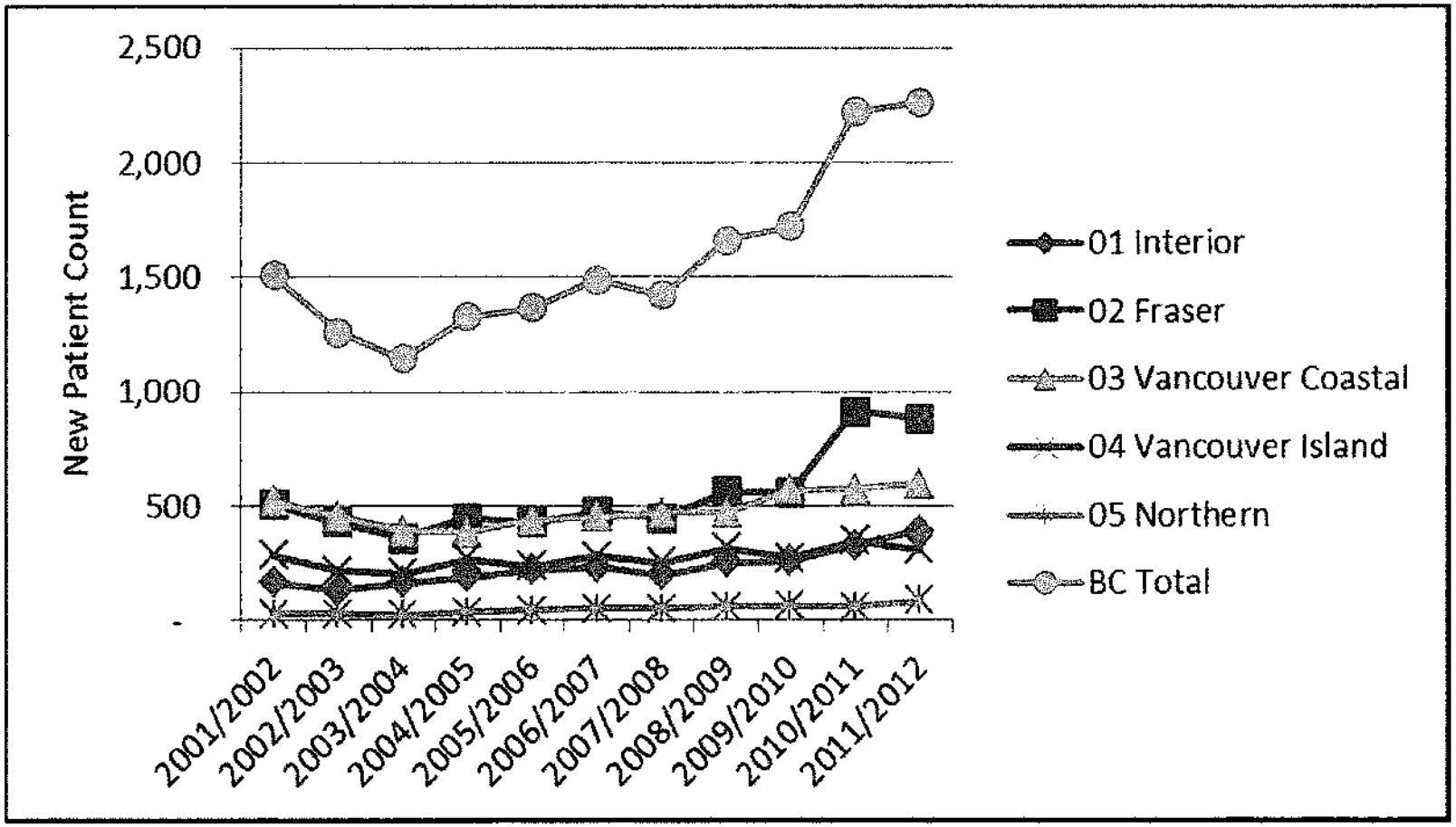
MMS Measures

- The reach of BC's MMS can be summarized by reporting on key professional participation indicators
  - # of patients with methadone maintenance prescriptions (whose meds covered by PharmaCare)
  - # of physician prescribers
  - # of methadone-dispensing pharmacists and pharmacies

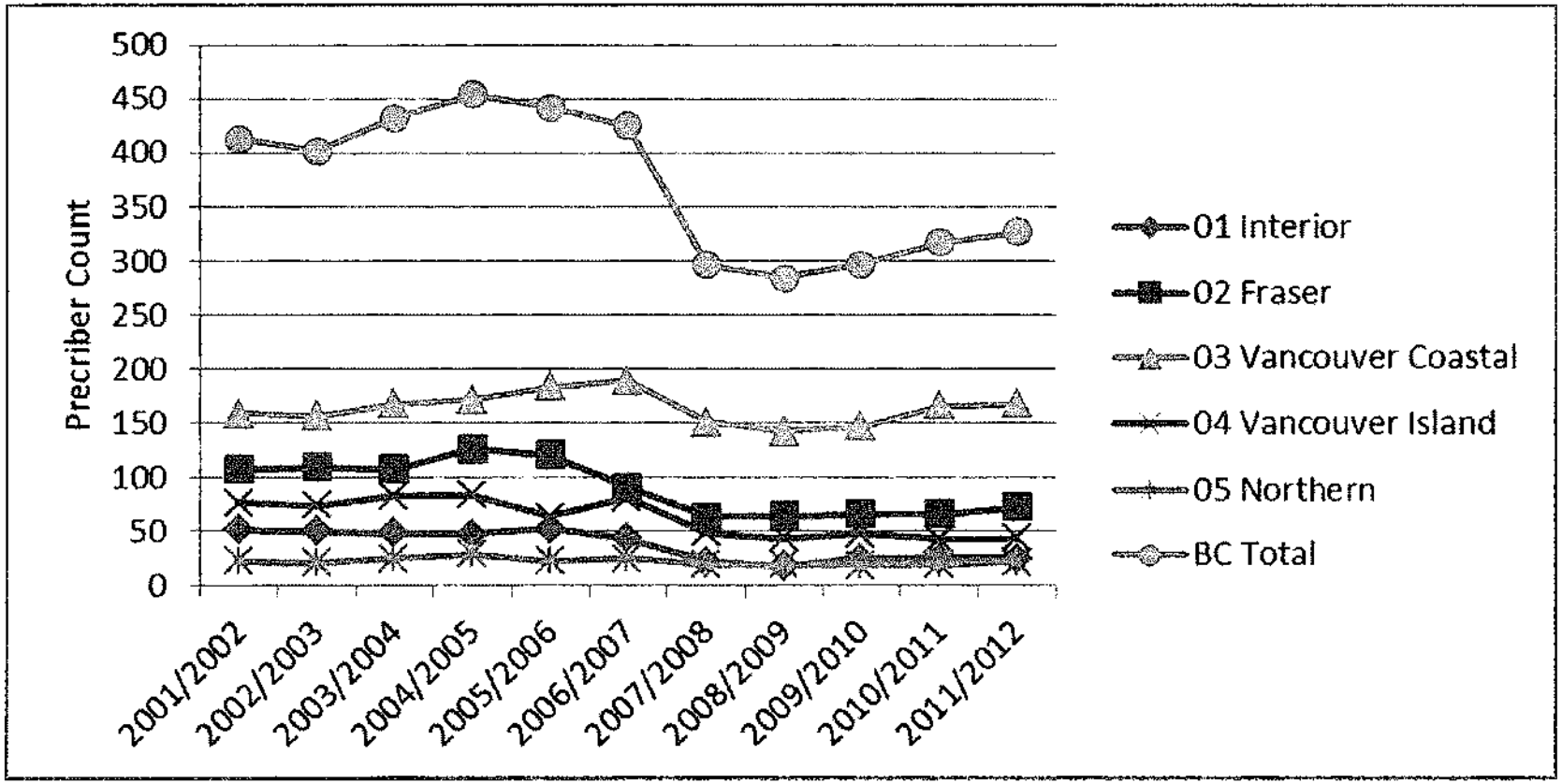
Methadone Maintenance Patients by Health Authority



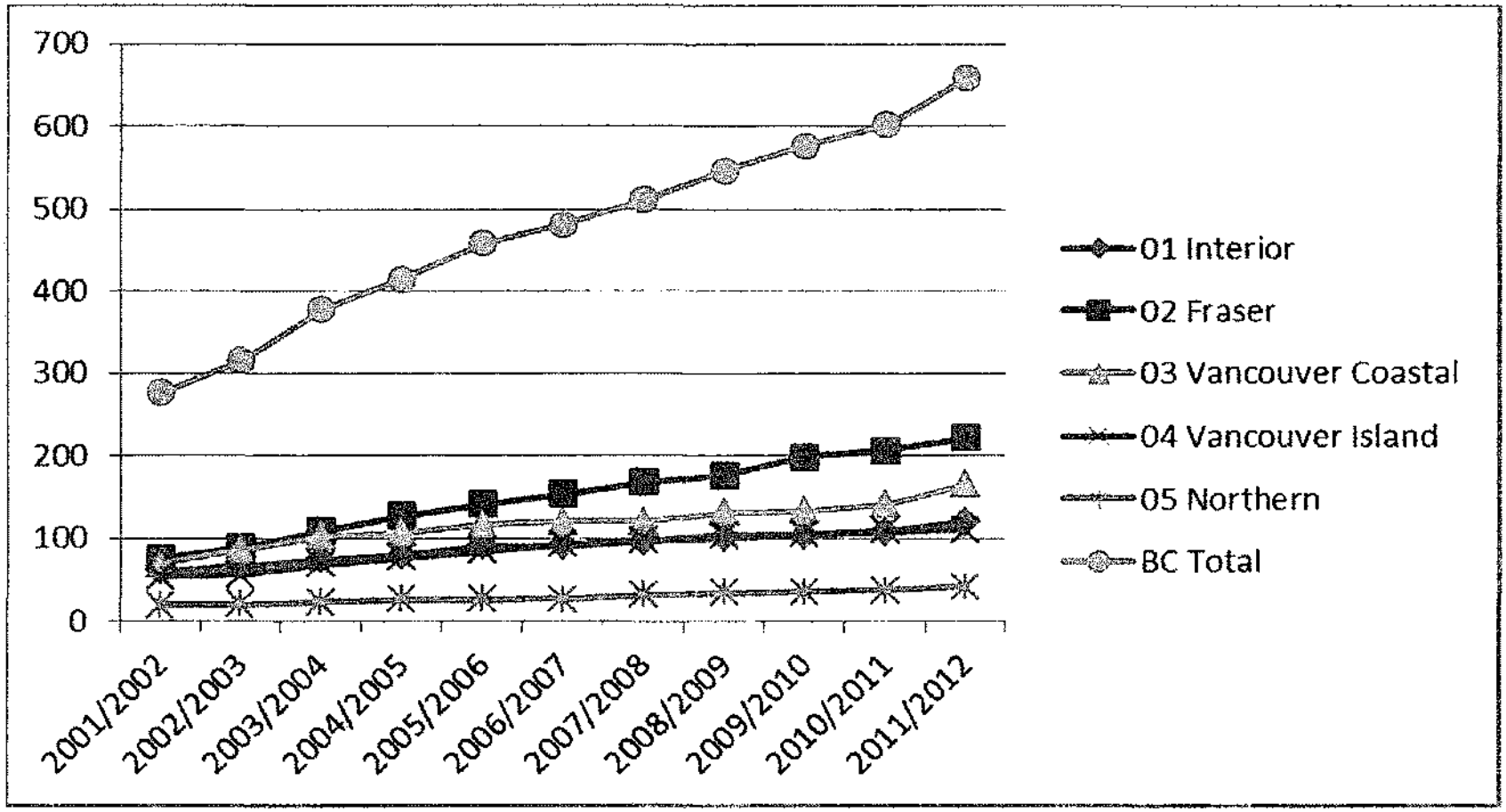
New Methadone Maintenance Patients by Health Authority



Methadone Maintenance Active Prescribers by Health Authority



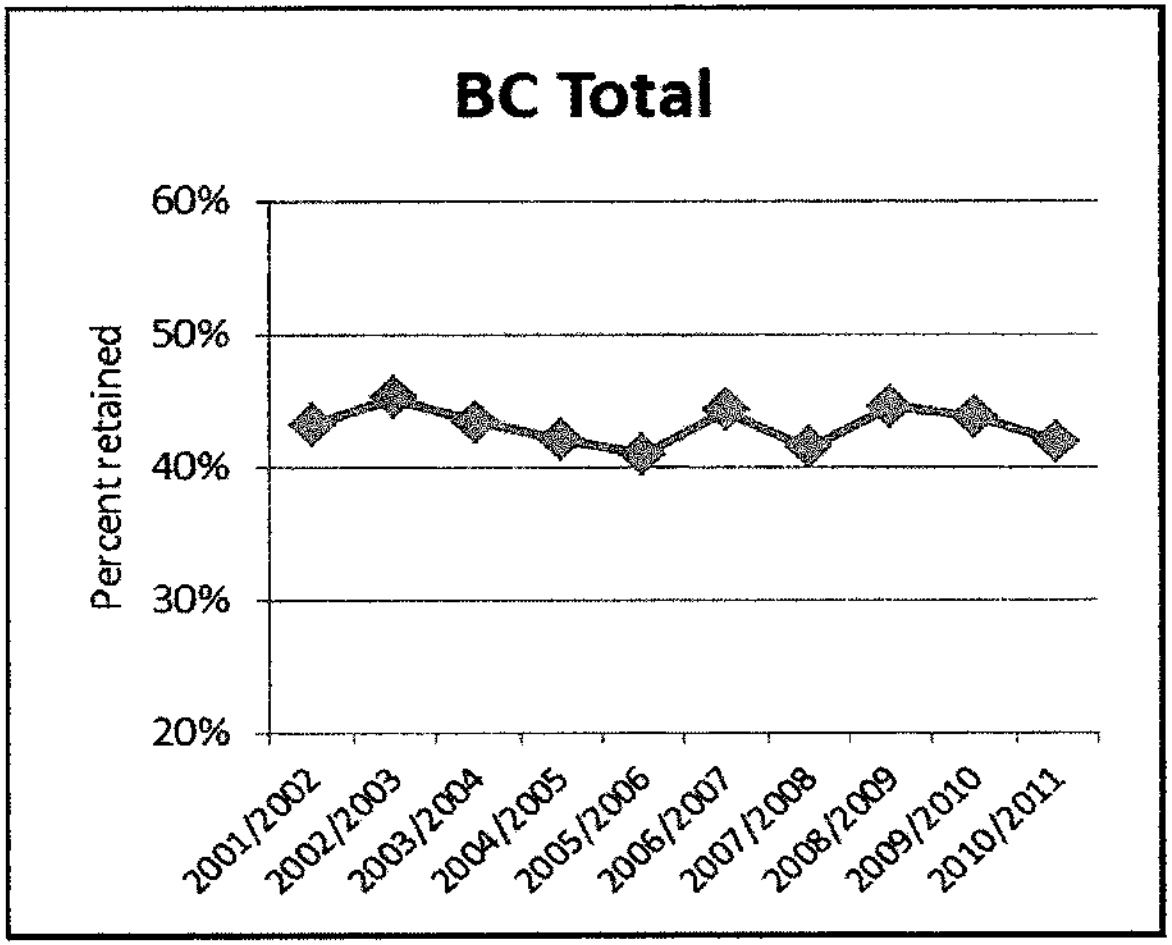
Methadone Maintenance Pharmacies by Health Authority



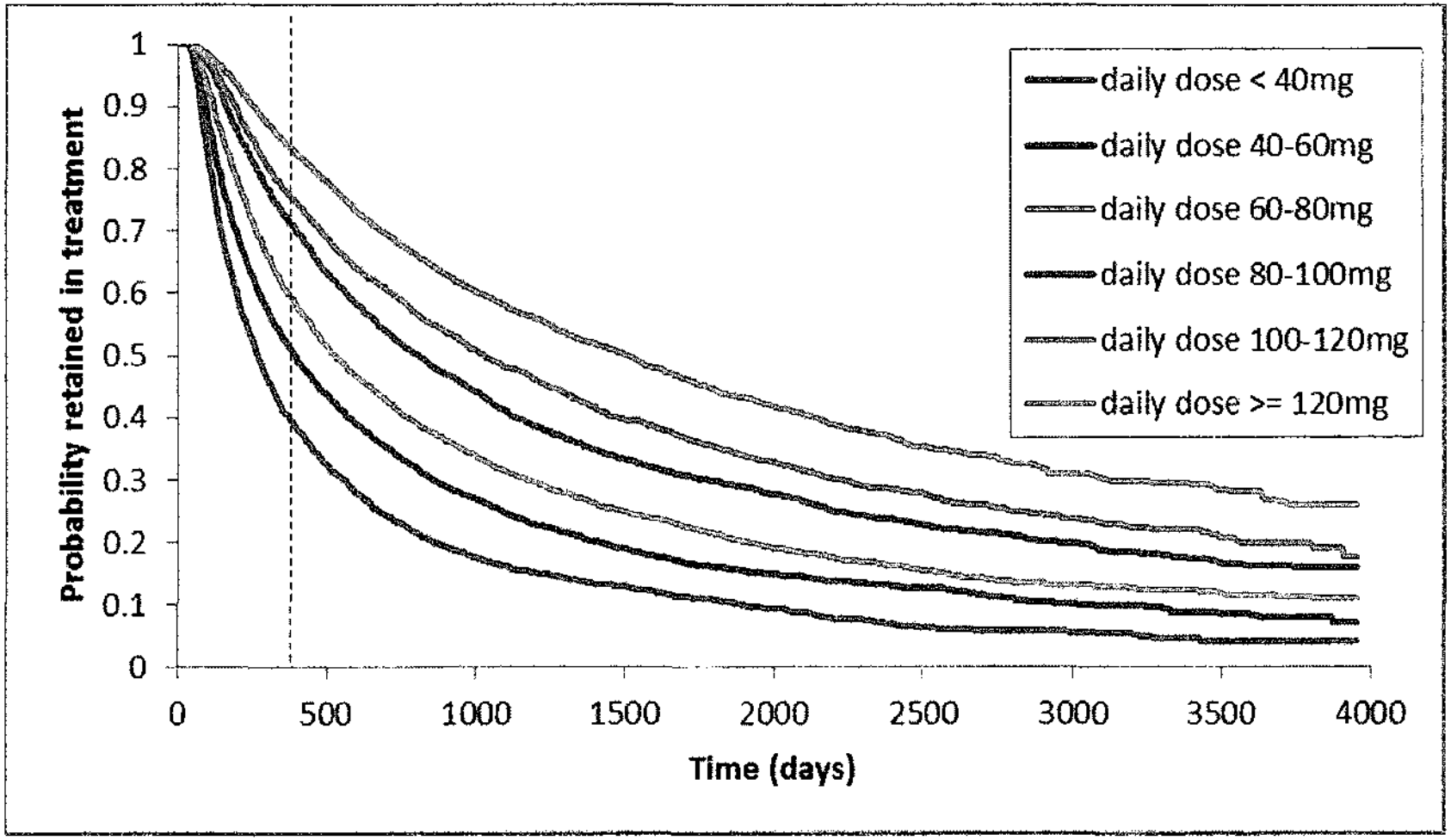
System Outcome Measures

- Retention on Rx
- Hospitalizations (all cause)
- Mortality (all cause)

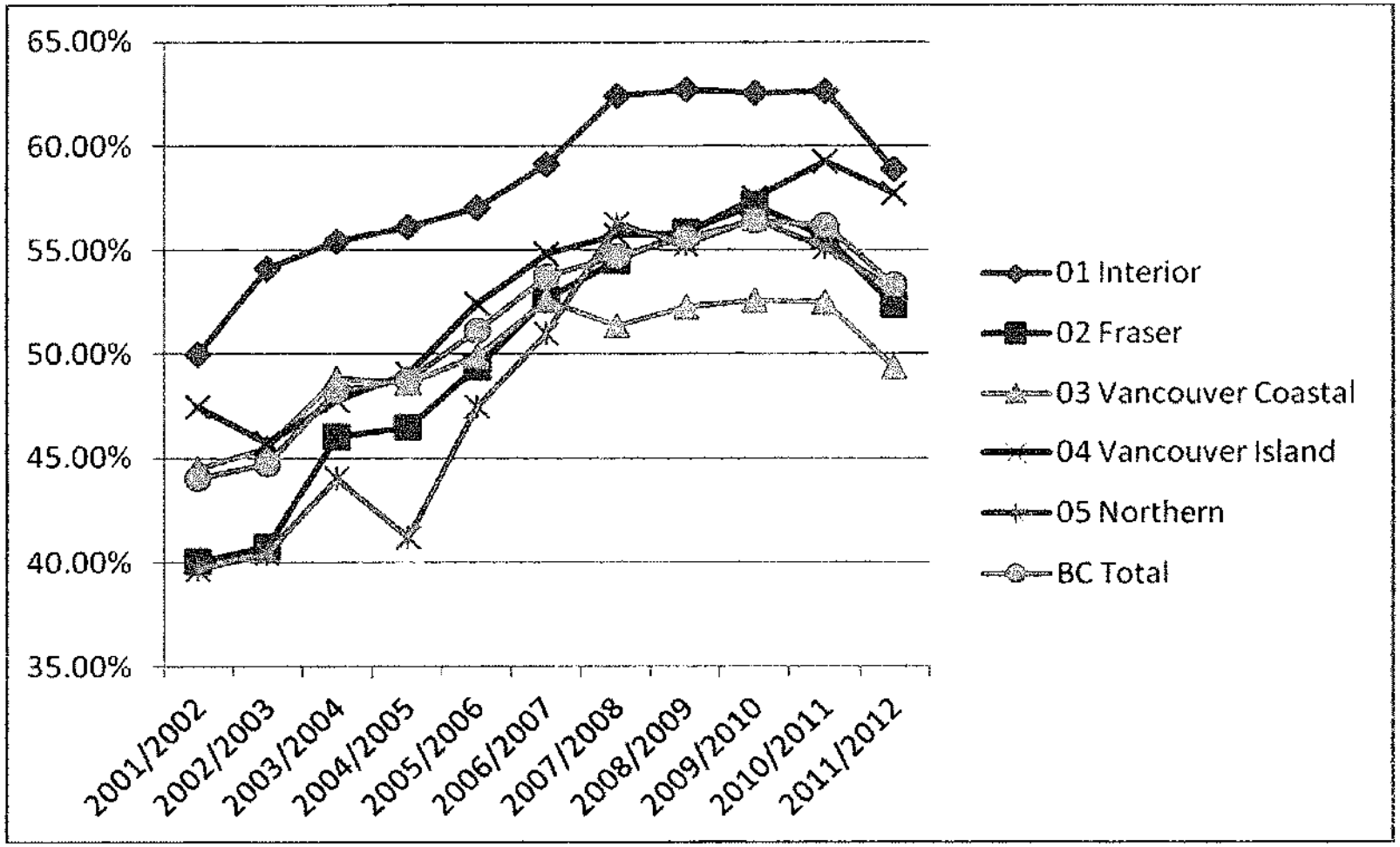
Percentage of patients started on MMT retained at 12 months



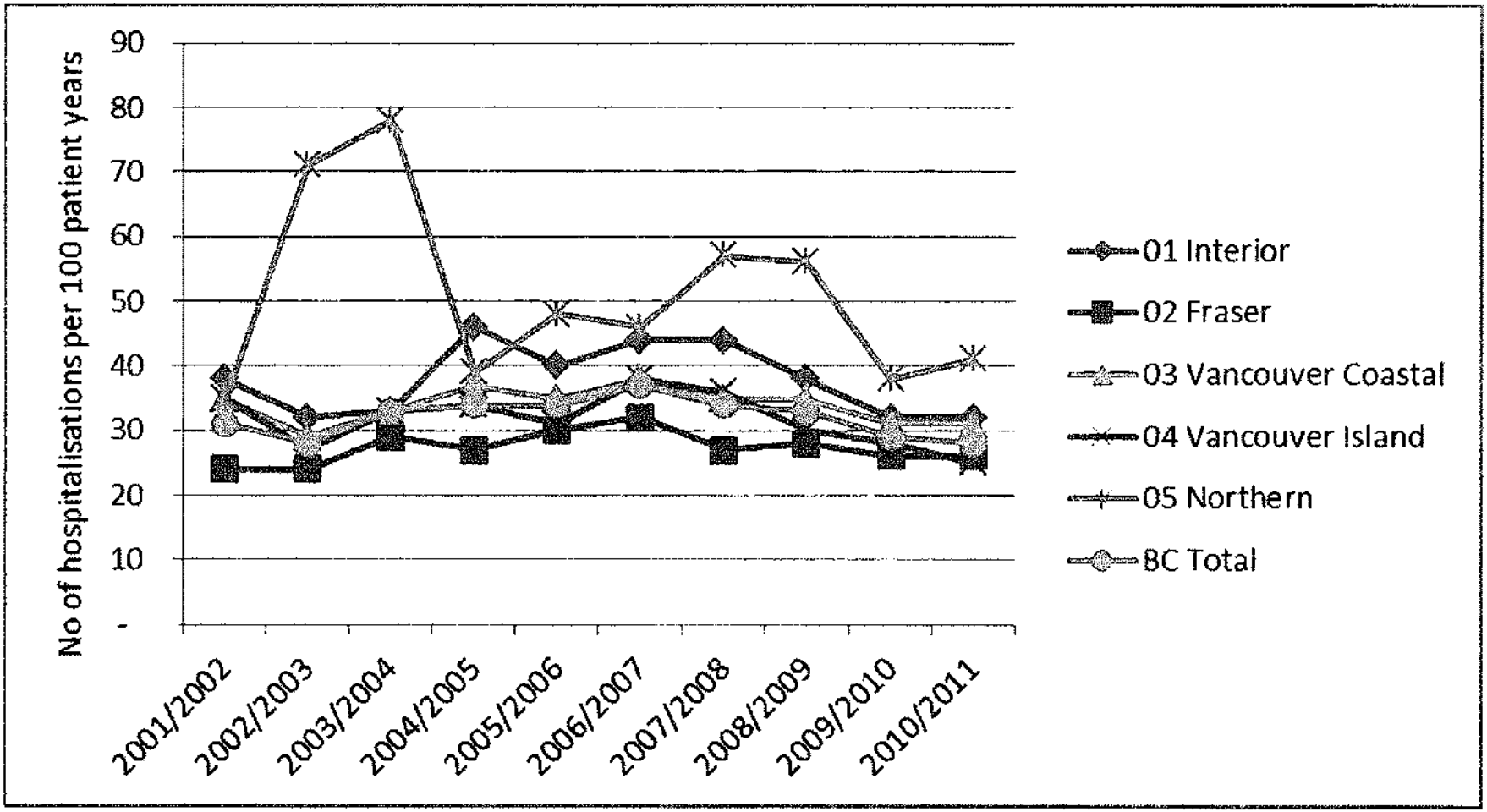
Effect of daily dose on methadone maintenance treatment retention



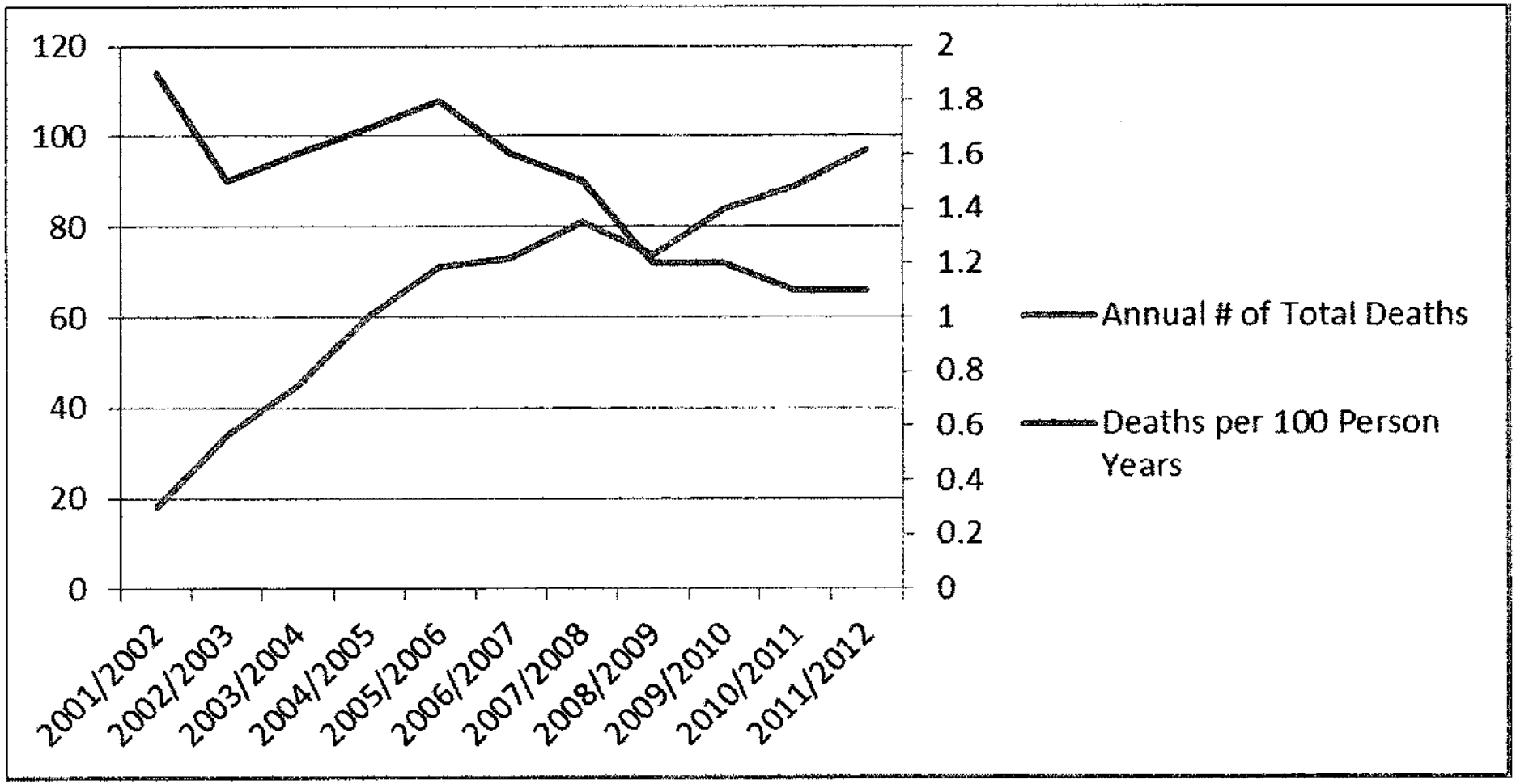
Adherence to minimum effective stabilization dose guideline



Hospitalizations per 100 Person Years During MMT



All-cause Mortality During Methadone Maintenance Treatment



Conclusion

- MMT – significant growth over the past decade
- > access to MMT and other harm reduction initiatives → lower incidence HIV infection among people who inject drugs
- There are areas of the system where progress is stagnant or reversing!
- Solutions - needed

BC OPIOID SUBSTITUTION TREATMENT SYSTEM

Performance Measures 2013/2014

Office of the Provincial Health Officer

With contributions by:

Medical Beneficiary & Pharmaceutical Services Division &
Population and Public Health Division
British Columbia Ministry of Health

July 2015

BRITISH COLUMBIA Office of the Provincial Health Officer

CONTENTS

1. INTRODUCTION

Opioid dependence is a chronic, recurrent medical illness often associated with co-morbid mental illness, transmission of infectious diseases (such as HIV/AIDS and hepatitis C), and premature mortality.[1] Opioid substitution treatment is widely regarded as both a highly effective treatment for opioid dependence and an evidence-based harm reduction intervention to prevent the transmission of blood-borne pathogens. Additionally, numerous studies have found that opioid substitution reduces harms associated with non-medical opioid use, including injection-related risks, opioid overdose deaths[2,3] and criminal activity, and increases the social functioning and quality of life of patients.[4,5]

The Government of British Columbia uses the term "opioid substitution treatment" (OST) to include the use of methadone and suboxone (buprenorphine and naloxone formulation) for maintenance treatment. This report includes overall OST data, along with separate methadone and suboxone data where relevant.

This report presents data related to the prescribing and dispensing components of British Columbia's OST system and addresses the recommendation in the Centre for Addictions Research of BC report *Methadone Maintenance Treatment in British Columbia, 1996-2008*,[6] to report regularly on the province's system. The reported indicators reflect available Ministry of Health provincial-level data, and may not capture all aspects of methadone/suboxone maintenance services. The data do not include health services provided to on-reserve First Nations patients, or health services provided to patients in the provincial or federal corrections systems. The PharmaNet data do not include OST provided to hospitalized patients.

Data related to suboxone prescribing and dispensing are provided for four years only, reflecting the Ministry of Health's decision to add suboxone to the PharmaCare formulary in 2010.

The performance measures in this report are provided on a fiscal year basis (April 2013 – March 2014), and are based in part on the methodology in *An Evaluation of Methadone Maintenance Treatment in British Columbia: 1996-2007*, by Nosyk et al.[1] The methods used to calculate a number of components of this year's report (e.g., new patients, dosing, retention) have been adjusted for improved accuracy; thus, some of the data in this report may not be congruent with that presented in previous years.

See the 2012/2013 *BC Opioid Substitution Treatment System Performance Measures*[7] report for further information about opioid substitution treatment in BC.

Data Sources

Data in this report were drawn from the Ministry of Health, HealthIdeas Data Warehouse. Ministry program area data were drawn from the following databases:

i. PharmaNet (records of prescription drug claims dispensed at community pharmacies).
ii. MSP Genesis (Medical Services Plan fee-for-service claims).
iii. DAD (hospital discharge abstract data).
iv. HealthIdeas Client Registry (client age, gender, date of death).

Acknowledgements: The Provincial Health Officer would like to thank Eric Larson, Patrick Day, Christine Voggenreiter, Kenneth Tupper, Kathleen Perkin and Manik Saini for their assistance in preparing this report.

2. OPIOID SUBSTITUTION TREATMENT – SYSTEM MEASURES

This section reports on indicators about the reach of BC's Opioid Substitution Treatment (OST) system. The indicators are as follows: the number of patients 18 years of age and older with methadone or suboxone maintenance prescriptions (whose medication is covered by PharmaCare); the number of physician prescribers of methadone or suboxone for maintenance purposes; and the number of methadone or suboxone-dispensing pharmacists and pharmacies. This section also includes a summary of the direct costs of methadone/suboxone maintenance in BC.

2.1 Opioid Substitution Treatment Patients

Figure 1. Opioid Substitution Treatment Patients by Local Health Area, 2013/2014

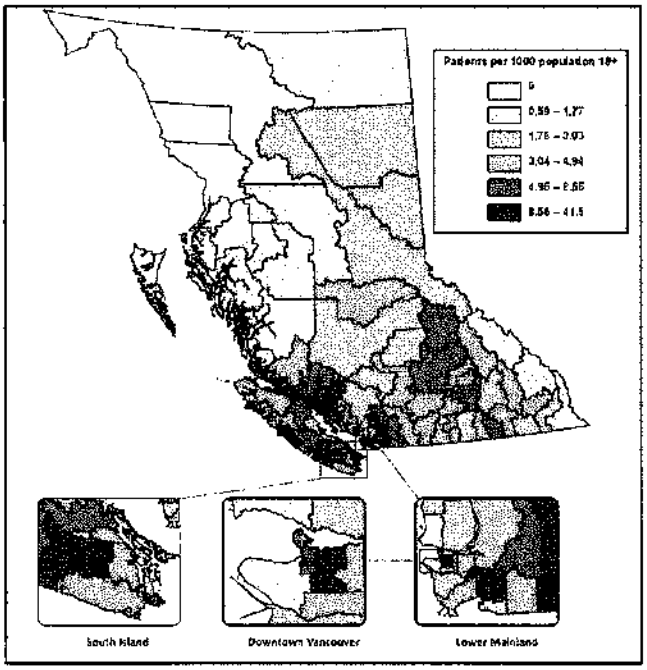
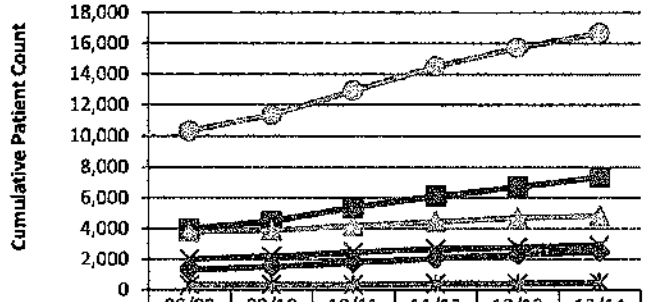


Figure 1 shows the number of OST patients per 1,000 population in each Local Health Area across the province in 2013/2014. Overall, urban areas like the Lower Mainland have higher rates of OST (more than 8 patients per 1,000 in some areas). However, some smaller population areas, such as Powell River and Lake Cowichan, have high rates. The relative rates of OST across Local Health Areas are similar to those seen in 2012/2013.

Please note that the health authority totals do not necessarily add up to the provincial total for each year. Patients may access OST in more than one health authority in a given year. Similarly, physicians and pharmacists may practice in more than one health authority and pharmacies occasionally move to a different location.

Figure 2. Opioid Substitution Patients by Health Authority, BC, 2008/2009 to 2013/2014[a]



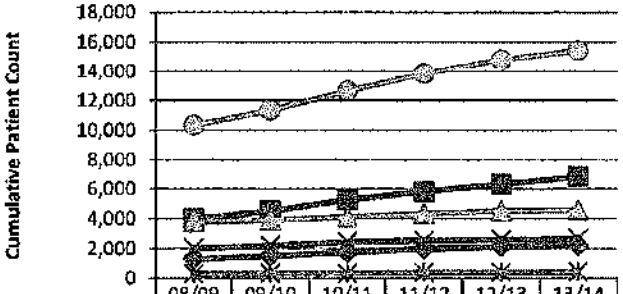
	08/09	09/10	10/11	11/12	12/13	13/14
IH	1,318	1,513	1,774	2,067	2,338	2,523
FH	3,983	4,493	5,381	6,120	6,716	7,349
VCH	3,784	3,901	4,187	4,465	4,723	4,852
IslH	2,034	2,202	2,469	2,674	2,787	2,915
NH	320	333	347	410	430	482
BC Total	10,341	11,359	12,917	14,494	15,720	16,668

[a] IH=Interior Health; FH=Fraser Health; VCH=Vancouver Coastal Health; IslH=Island Health; NH=Northern Health

BC's OST program continues to expand. The program had 16,668 patients in 2013/2014 (see Figure 2), a 6 per cent increase from the previous year and a 61 per cent increase from 2008/2009. Interior Health had the largest increase in the number of patients—approximately 91 per cent since 2008/2009.

Patients receiving OST are prescribed either methadone or suboxone. Figures 3 and 4 show the number of patients receiving each type of medication as a treatment for opioid dependence.

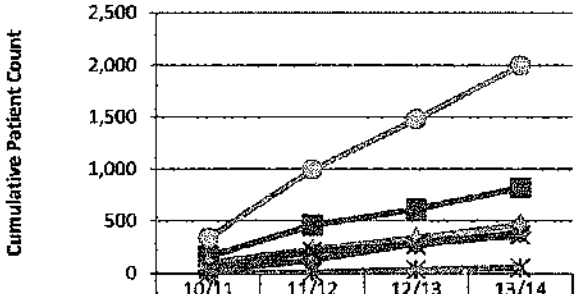
Figure 3. Methadone Maintenance Treatment Patients, by Health Authority, BC, 2008/2009 to 2013/2014



	08/09	09/10	10/11	11/12	12/13	13/14
IH	1,318	1,513	1,755	1,984	2,143	2,238
FH	3,983	4,493	5,247	5,812	6,331	6,849
VCH	3,784	3,901	4,106	4,318	4,510	4,568
IslH	2,034	2,202	2,443	2,538	2,614	2,660
NH	320	333	345	406	408	445
BC Total	10,341	11,359	12,664	13,856	14,800	15,418

In 2013/2014, the number of methadone maintenance treatment patients increased by 618 compared to 2012/2013 (see Figure 3). All health authorities have had increases in the number of patients. Fraser Health has seen the biggest expansion in patient numbers, with a 72 per cent increase since 2008/2009. This trend continues in 2013/2014, with an increase of 518 patients in Fraser Health from the previous year, making up 84 per cent of the total increase in BC in 2013/2014.

Figure 4. Suboxone Treatment Patients, by Health Authority, BC, 2010/2011 to 2013/2014

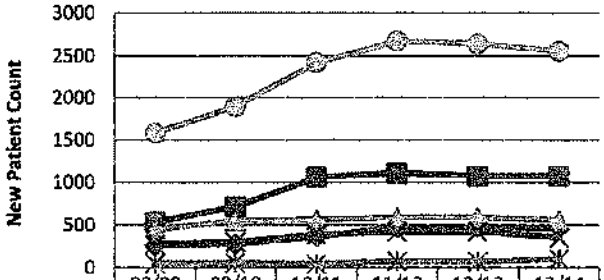


	10/11	11/12	12/13	13/14
IH	26	129	283	392
FH	166	459	614	820
VCH	103	228	339	469
IslH	47	208	274	367
NH	2	9	36	57
BC Total	338	995	1,481	2,000

The number of patients on suboxone has increased steadily since 2010 in all health authorities (see Figure 4).

Figure 5. New Opioid Substitution Treatment Patients, by Health Authority, BC, 2008/2009 to 2013/2014

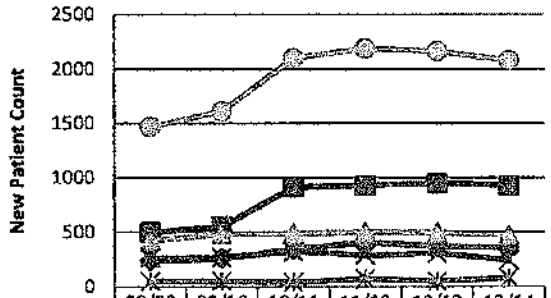
Figure 5 shows the number of new patients entering opioid substitution treatment. A new patient is someone who begins OST for the first time, according to PharmaCare data. This includes patients who have



	08/09	09/10	10/11	11/12	12/13	13/14
IH	261	279	364	475	479	466
FH	537	714	1061	1111	1074	1075
VCH	455	546	562	589	588	558
IslH	279	298	390	422	426	355
NH	54	57	46	79	76	105
BC Total	1586	1894	2423	2676	2643	2559

been on OST in another province and continue treatment when they relocate to BC, and patients who have been on OST in the corrections system or while in hospital and continue treatment upon release. Someone who simply leaves the program and re-enters it would not be counted as a new patient. The number of new patients has been fairly consistent in the last few years.

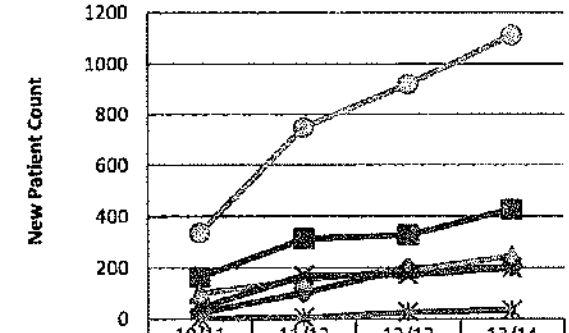
Figure 6. New Methadone Maintenance Treatment Patients, by Health Authority, BC, 2008/2009 to 2013/2014



	08/09	09/10	10/11	11/12	12/13	13/14
IH	240	260	341	406	367	359
FH	496	550	912	927	949	926
VCH	421	483	486	498	494	471
IslH	263	269	323	289	306	245
NH	48	51	41	71	51	81
BC Total	1468	1613	2103	2191	2167	2082

The number of patients entering methadone maintenance treatment has been relatively consistent over the last few years (see Figure 6). A patient who switched from suboxone to methadone would be counted as a new methadone patient as long as they had not been prescribed methadone in the past.

Figure 7. New Suboxone Treatment Patients, by Health Authority, BC, 2010/2011 to 2013/2014



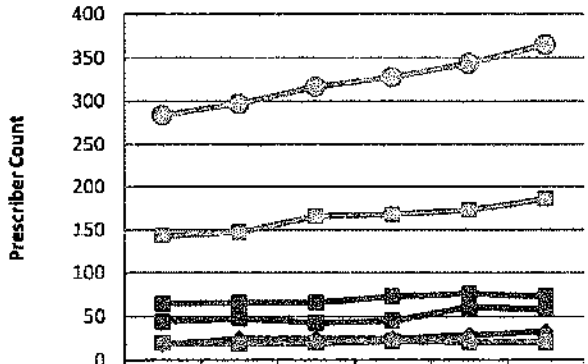
	10/11	11/12	12/13	13/14
IH	26	103	198	204
FH	165	314	328	428
VCH	101	154	193	246
IslH	44	172	172	200
NH	2	6	27	35
BC Total	338	749	918	1113

The number of new suboxone patients has increased every year since 2010, when suboxone was approved as a limited coverage benefit in PharmaCare (see Figure 7). Although the number of new patients on suboxone is increasing, twice as many people started methadone maintenance treatment as initiated suboxone in 2013/2014. A patient who switched from methadone to suboxone would be counted as a new suboxone patient as long as they had not been prescribed suboxone in the past.

2.2 Prescribers of Opioid Substitution Treatment

In order to prescribe methadone or suboxone for maintenance purposes, physicians need authorization from the College of Physicians and Surgeons of British Columbia (CPSBC). Physicians seeking this authorization must attend a day-long certification course, complete a preceptorship, undertake annual continuing medical education in addiction medicine, and re-certify on an ongoing basis.

Figure 8. Opioid Substitution Treatment Active Prescribers, by Health Authority, BC, 2008/2009 to 2013/2014



	08/09	09/10	10/11	11/12	12/13	13/14
IH	18	25	25	25	29	33
FH	65	66	66	73	76	73
VCH	143	147	166	168	173	186
IslH	44	48	43	45	61	58
NH	20	19	20	22	21	21
BC Total	284	297	317	328	344	365

Figure 8 provides the annual physician prescriber count by health authority since 2008/2009. The number of BC physicians able to prescribe OST has been increasing in recent years, with 365 physicians prescribing this treatment in 2013/2014. As in 2012/2013, about half of OST prescribers were in Vancouver Coastal Health.

In 2013/2014, there were 81 more OST prescribers than in 2008/2009. This number also includes hospitalist and temporary exemptions, so the actual number of physicians providing regular ongoing medical care for OST patients is estimated to be fewer

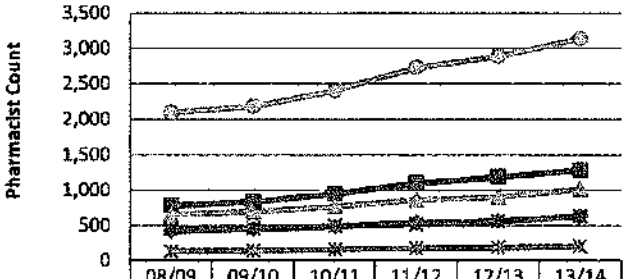
than 300. Prescribing capacity for OST in some parts of the province, especially rural and remote regions, remains a challenge for the provincial health system.

2.3 Opioid Substitution Pharmacists and Pharmacies

Pharmacists in BC must undergo training and certification in order to dispense opioids for maintenance purposes.[8] Pharmacists dispense doses of liquid methadone for patients to drink while in the pharmacy, or provide methadone in carry-out packaging as determined by the prescribing physician. In March 2014, PharmaCare switched from covering compounded methadone to covering only Methadose, a more concentrated proprietary formulation of methadone that does not require refrigeration. Pharmacists dispense suboxone as a sublingual tablet.

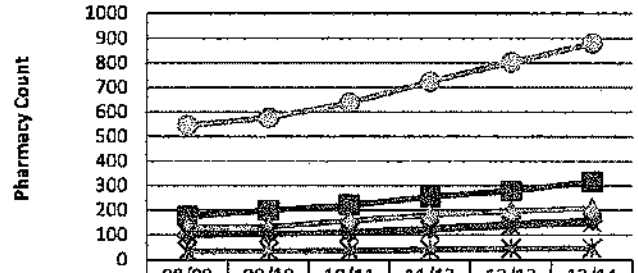
The number of pharmacies and pharmacists dispensing methadone or suboxone for maintenance purposes has been increasing since 2008/2009. Figure 9 shows the number of pharmacists dispensing methadone or suboxone. Figure 10 is the number of pharmacies (locations) where patients can get their methadone and/or suboxone prescriptions filled. For more information about methadone provision and remuneration in BC, see *Methadone Maintenance Payment Program Review*.[9]

Figure 9. Opioid Substitution Treatment Pharmacists, by Health Authority, BC, 2008/2009 to 2013/2014



	08/09	09/10	10/11	11/12	12/13	13/14
IH	424	453	486	546	563	631
FH	786	838	950	1,098	1,188	1,286
VCH	662	697	772	864	906	1,016
IslH	455	467	496	525	564	634
NH	136	143	163	178	189	207
BC Total	2,100	2,184	2,404	2,726	2,886	3,136

Figure 10. Opioid Substitution Treatment Pharmacies, by Health Authority, BC, 2008/2009 to 2013/2014



	08/09	09/10	10/11	11/12	12/13	13/14
IH	101	104	111	127	146	160
FH	176	199	221	254	279	316
VCH	131	133	157	181	197	208
IslH	104	105	111	121	137	151
NH	34	35	37	41	45	47
BC Total	546	576	637	724	804	881

2.4 Opioid Substitution Treatment Expenditures

In BC, pharmacy costs for OST are paid from three sources: the province (PharmaCare), patients and private insurers. PharmaCare is a provincial program that helps British Columbians with the cost of eligible prescription drugs and designated medical supplies. PharmaCare reimburses opioid substitution ingredient costs and dispensing fees, as well as interaction fees for pharmacists who witness methadone ingestion on-site. The level of reimbursement patients receive for the costs of opioid substitution medication depends on their individual PharmaCare plan and private insurance coverage.[b] If patients have private insurance that covers prescription drugs, this insurance may cover OST pharmacy costs. The patient pays out-of-pocket for any amounts not eligible for reimbursement from either PharmaCare or a private insurer.

It is important to note that the federal Non-Insured Health Benefits program lists methadone and suboxone on their drug benefit list, but no data from that program are presented in this report. In BC, this program is administered as the First Nations Health Authority Health Benefits Program. Any BC patients accessing OST through that program only would not be represented in this report, and any associated pharmacy costs are not included in this analysis.

[b] For more information about PharmaCare coverage, see www2.gov.bc.ca/gov/content/health/health-drug-coverage/pharmacare-for-bc-residents.

Pharmacy costs for BC's OST system totaled nearly $53 million in 2013/2014, $46 million of which was paid by PharmaCare. The balance (approximately $7 million) was paid by patients or private insurers. Figure 11a summarizes the trends in provincial costs over time. The increase in overall costs may be due to patient population growth and the addition of suboxone as a limited coverage benefit in November 2010.

Figure 11a. Total Pharmacy Opioid Substitution Costs, BC, 2008/2009 to 2013/2014

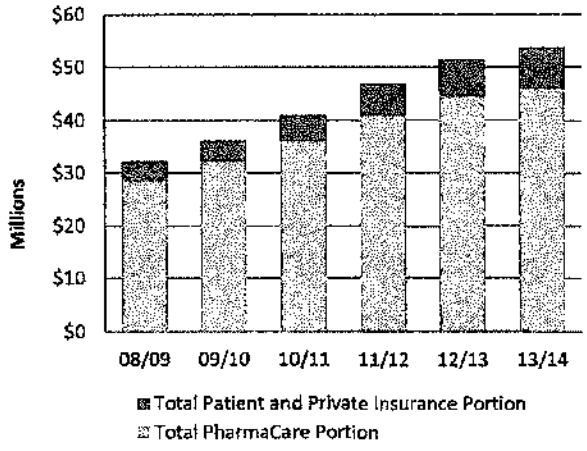
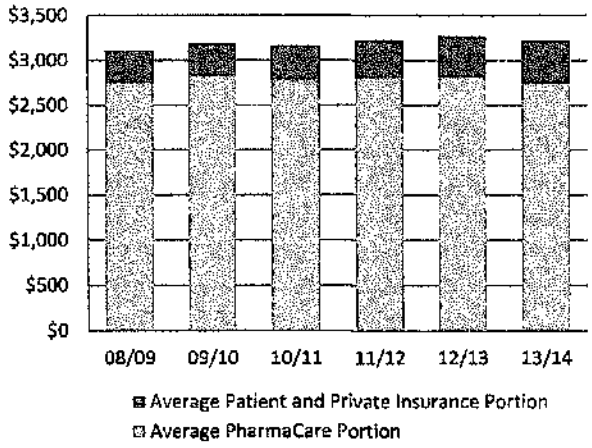


Figure 11b shows average annual per patient pharmacy costs. The average cost per patient has not increased significantly from 2008/2009 levels. In 2013/2014, the average annual cost of OST per patient was $3,219 (approximately the same as 2008/2009). On average, PharmaCare paid $2,742 or 85 per cent of this cost, and patients or private insurers paid the remaining $477, or 15 per cent.

Figure 11b. Average Pharmacy Opioid Substitution Costs per Patient, BC, 2008/2009 to 2013/2014



The Medical Services Plan pays physicians on a fee-for-service basis for providing OST. These costs began to rise in 2007/2008 (see Figure 12). Island Health, Fraser Health and Interior Health have seen the sharpest rise in costs (see Figure 13). Costs in Vancouver Coastal Health have been stable in the last few years. In total, the Medical Services Plan spent $13.75 million for physician fees related to OST in 2013/2014.

Figure 12. Medical Services Plan Expenditures for Opioid Substitution Treatment (Fee Item "Methadone or Buprenorphine/Naloxone Treatment Only"),[c] BC, 2002/2003 to 2013/2014

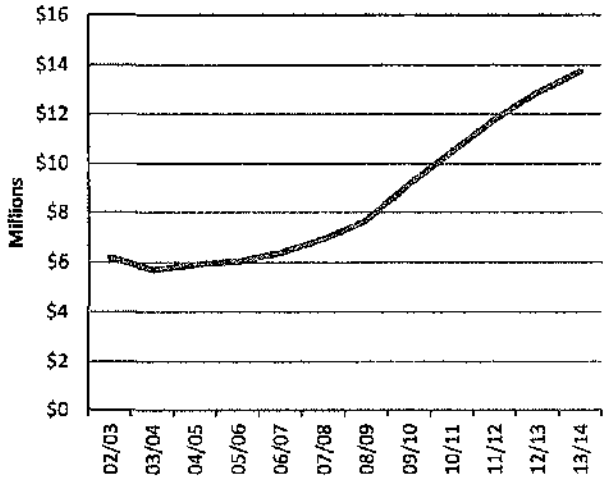
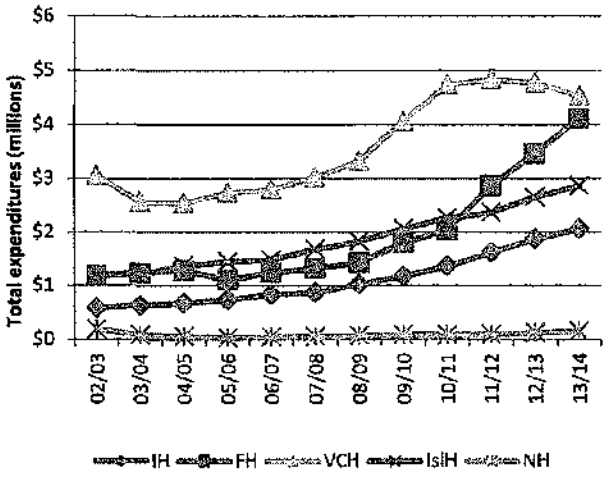


Figure 13. Medical Services Plan Expenditures for Opioid Substitution Treatment (Fee Item "Methadone or Buprenorphine/Naloxone Treatment Only"), by Health Authority, BC, 2002/2003 to 2013/2014



[c] Please note that this fee item was previously called Methadone Maintenance Treatment Only.

A Ministry of Social Development and Social Innovation supplement provides up to $500 per calendar year ($41.67 per month, on average) to income assistance clients to assist with the cost of substance use counselling or related services where these kinds of resources are not available. Clients can use the supplement to pay fees charged by some methadone clinics, which are generally not billable to Medical Services Plan. In total, the Ministry of Social Development and Social Innovation expended $2.6 million for this supplement in 2013/2014, most of which went to ancillary costs related to treatment for OST patients.

3. OPIOID SUBSTITUTION TREATMENT – OUTCOME MEASURES

This section summarizes outcome measures that are indirectly associated with BC's opioid substitution treatment (OST) system: retention in opioid substitution treatment, use of health services and mortality rate. The outcome measures presented are for episodes of methadone or suboxone maintenance treatment, including additional doses supplied as take-away carries. A gap of more than 30 consecutive days determines the end of an episode of treatment.

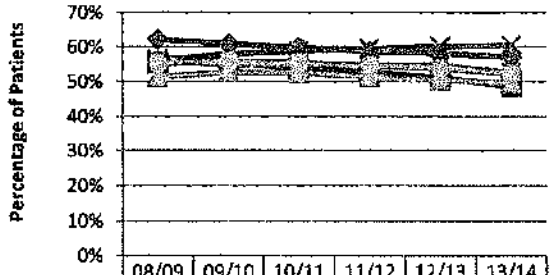
It is important to note that the outcome measures in this section were obtained without an attempt to determine whether or to what degree opioid substitution treatment affected outcomes like mortality and use of health services. Therefore, the material presented here is intended to be hypothesis-generating and may initiate further analysis, but is not meant to demonstrate a cause and effect relationship between opioid substation treatment and health outcomes.

3.1 Duration and Retention on Opioid Substitution Treatment

The length of time a patient spends in opioid substitution treatment (number of days per episode of treatment) is an important indicator of treatment effectiveness. More time in treatment is associated with better outcomes.[1] For the purposes of this report, treatment retention is defined as a continuous period of treatment without a gap of more than 30 consecutive days.

Dosing level seems to be an important factor in retaining patients in treatment. The probability of a patient staying in treatment is highest for patients taking at least 100 mg of methadone per day.[1] The College of Physicians and Surgeons of British Columbia's 2014 *Methadone Maintenance Program's Clinical Practice Guideline*[10] states that most patients will achieve stability on maintenance doses of between 60 and 120 mg of methadone daily.

Figure 14. Percentage of Patients Receiving a Stabilization Dose of Methadone >60 mg, by Health Authority, BC, 2008/2009 to 2013/2014



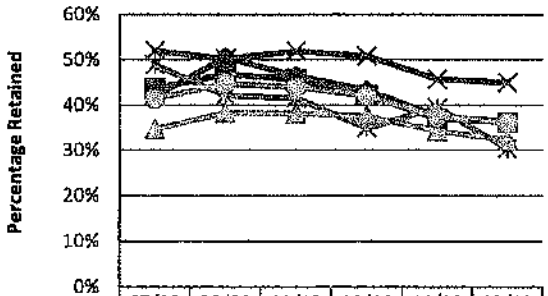
	08/09	09/10	10/11	11/12	12/13	13/14
IH	62%	61%	60%	59%	58%	57%
FH	55%	55%	54%	53%	51%	49%
VCH	51%	53%	53%	51%	50%	50%
IslH	56%	58%	59%	59%	60%	61%
NH	57%	55%	55%	55%	55%	53%
BC Total	55%	56%	55%	55%	54%	52%

Figure 14 shows the percentage of BC's methadone patients receiving a stabilization dose of more than 60 mg of methadone daily. This percentage has been stable at slightly over 50 per cent, with a small reduction over the last few years from 55 to 52 per cent.

People who stay longer in OST generally have better long-term health outcomes. A little more than one-third (36 per cent) of new patients are still in treatment after 12 months (see Figure 15). By comparison, Ontario's 12-month retention rate is approximately 55 per cent.[11] Possible reasons for these low retention rates in BC include the following:

a) People registered in methadone maintenance treatment care in hospitals or jails may re-register in the community upon release.
b) At clinics, multiple doctors might submit multiple registrations.
c) Transitioning between methadone and suboxone might result in re-registration.

Figure 15. Percentage of People Started on Methadone Maintenance Treatment Retained at 12 Months, by Health Authority, BC, 2007/2008 to 2012/2013

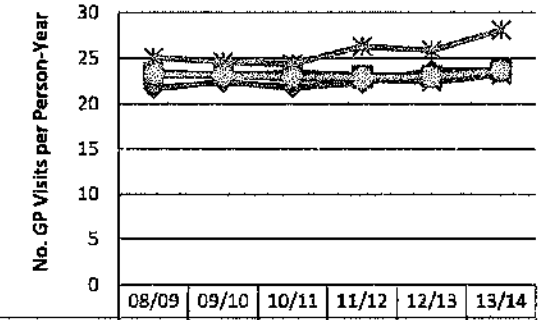


	07/08	08/09	09/10	10/11	11/12	12/13
IH	42%	50%	46%	43%	38%	36%
FH	44%	47%	46%	42%	37%	36%
VCH	35%	38%	38%	38%	34%	32%
IslH	52%	50%	52%	51%	46%	45%
NH	49%	42%	42%	35%	39%	30%
BC Total	41%	45%	44%	42%	38%	36%

3.2 General Practitioner Visits and Hospitalization Costs for People on Opioid Substitution Treatment

On average, people on OST visited their general practitioners 23.7 times per year in 2013/14 (see Figure 16). This includes visits not related to OST. Many OST patients have complex health needs so they require more care from physicians than the general population.

Figure 16. Number of General Practitioner Visits per Person-Year in Treatment, by Health Authority, BC, 2008/2009 to 2013/2014



	08/09	09/10	10/11	11/12	12/13	13/14
IH	21.7	22.4	21.8	22.3	23.7	23.6
FH	23.2	23.1	23.5	23.1	23.1	23.7
VCH	23.5	23.3	22.9	22.8	22.9	23.6
IslH	23.5	23.1	22.8	22.7	22.4	23.2
NH	25.1	24.6	24.4	26.3	25.9	28.1
BC Total	23.3	23.1	23.0	22.9	23.0	23.7

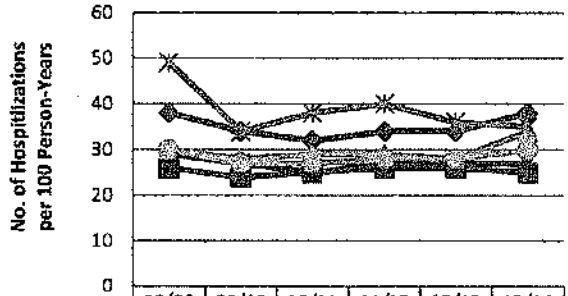
Table 1 summarizes the number and cost of hospitalizations while patients are engaged in OST. As the number of people on OST grows, the total hospital costs increase. However, the average cost of hospitalization per patient has mostly been declining since 2008/2009.

Table 1. Hospitalizations and Costs during Opioid Substitution Treatment, by Fiscal Year, 2008/2009 to 2013/2014

	No. of Admissions		Hospital Cost	
	Total	Rate per 100 Person-Years	Total	Average per Patient
08/09	2,416	30	$13,136,321	$1,226
09/10	2,465	27	$12,114,282	$1,013
10/11	2,728	27	$13,220,841	$981
11/12	3,111	28	$14,320,783	$950
12/13	3,322	28	$15,165,367	$932
13/14	3,731	30	$16,760,643	$973

One of the goals of OST is to improve a patient's overall health. Increasing rates of hospitalization could indicate poorer overall health among OST patients. Figure 17 shows the number of hospitalizations per 100 person-years for OST patients. The rate has been stable for the last six years, although Vancouver Coastal Health had a slight increase in 2013/2014.

Figure 17. Hospitalizations per 100 Person-Years during Opioid Substitution Treatment, by Health Authority, BC, 2008/2009 to 2013/2014



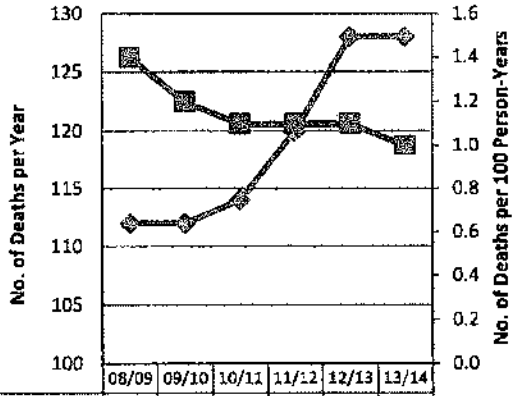
	08/09	09/10	10/11	11/12	12/13	13/14
IH	38	34	32	34	34	38
FH	26	24	25	26	26	25
VCH	30	28	29	29	28	34
IslH	29	27	25	27	27	27
NHA	49	34	38	40	36	35
BC Total	30	27	27	28	28	30

3.3 Mortality

This section includes information about mortality during OST. Mortality is measured in terms of deaths from any cause recorded within 30 days of the end of an episode of OST.

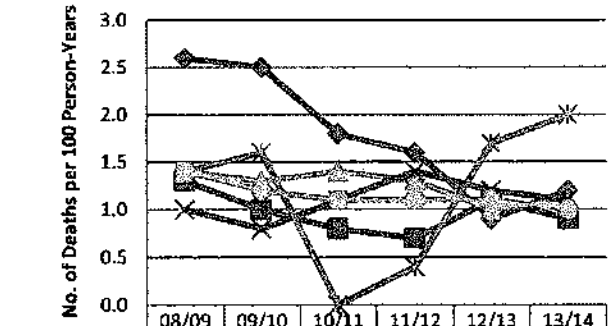
The number of patients in OST continues to increase, and over the last few years the number of deaths has also increased. This is not the case for the most recent year. The number of deaths in 2013/2014 is the same as in 2012/2013 (see Figure 18). The mortality rate, measured in deaths per 100 person-years, fell slightly in 2013/2014 compared with 2012/2013. We cannot draw conclusions about the risks or effectiveness of OST from these unadjusted rates. It is reassuring, however, that the number of patients in OST is increasing without a proportional increase in mortality among OST patients. Mortality rates among OST patients are substantially lower than mortality rates among regular or dependent users of street heroin, which are estimated to be 2.09 per 100 person-years.[2] Figure 19 shows each health authority's OST patient all-cause mortality rate (deaths per 100 person-years).

Figure 18. All-cause Mortality during Opioid Substitution Treatment, by Fiscal Year, BC, 2008/2009 to 2013/2014



	08/09	09/10	10/11	11/12	12/13	13/14
Total Deaths In OST Treatment	112	112	114	120	128	128
Deaths per 100 Person Years	1.4	1.2	1.1	1.1	1.1	1.0

Figure 19. Deaths by Any Cause per 100 Person-Years during Opioid Substitution Treatment, by Health Authority, BC, 2008/2009 to 2013/2014



	08/09	09/10	10/11	11/12	12/13	13/14
IH	2.6	2.5	1.8	1.6	0.9	1.2
FH	1.3	1.0	0.8	0.7	1.1	0.9
VCH	1.4	1.3	1.4	1.3	1.0	1.1
IslH	1.0	0.8	1.1	1.4	1.2	1.1
NH	1.4	1.6	0.0	0.4	1.7	2.0
BC Total	1.4	1.2	1.1	1.1	1.1	1.0

Northern Health has a small number of OST patients, which contributes to the large variation in the annual all-cause mortality rate.

4. CONCLUSION

British Columbia's methadone and suboxone maintenance treatment program for opioid dependence continues to expand. Most of the 2013/2014 increase in number of patients is attributable to new suboxone patients rather than new methadone patients. While informative about the overall state of OST in BC, the data presented in this report do not allow us to draw strong conclusions about all aspects of OST. Further hypotheses and possible interpretations have been identified through consultation with the College of Physicians and Surgeons of British Columbia. These hypotheses will inform future versions of the report. They include suggestions that

- The retention rate for methadone may be artificially low because a patient who switched from methadone to suboxone (or vice versa) may be counted as discontinuing opioid substitution treatment.
- It is unclear the degree to which lower than recommended average maintenance dose levels for methadone are the result of low-threshold or periodic OST prescribing.
- It is unclear how the Study to Assess Long-Term Opioid Medication Effectiveness (SALOME) may have influenced OST data in Vancouver Coastal Health. Patients participating in the SALOME study may appear to have discontinued OST, when in fact they have switched to an experimental treatment as part of the study.
- It is unclear how much the OST retention data may be affected by patients becoming hospitalized or incarcerated. In either case, patients may appear as having discontinued treatment, when in fact they may have continued treatment in those institutions. Hospital and correctional institution prescription medication data are not included in the PharmaNet datasets used for the report.
- Future analyses on treatment retention should link to Vital Statistics data, which would ensure retention estimates do not conflate people who die while receiving OST with people who simply discontinue treatment.
- Information is not available on the contribution of addictions to prescribed opioid medication to the demand for OST. We do not know how many new OST patients are transitioning into maintenance treatment from prescription pain medication.

Over the last decade, greater access to opioid substitution treatment, in addition to other harm reduction initiatives, has contributed to reduced HIV infection incidence among people who inject drugs.[12] Access to OST in rural and remote areas remains a challenge for the health system. The measures in this report are important indicators of the status of BC's OST system. Further work is needed on aspects of the OST system not included in this report (such as psychosocial supports). The information in this report is important for maintaining and improving service delivery and patient outcomes in BC.

5. RESOURCES

British Columbia Methadone Program Websites

The websites listed below provide relevant information about BC's opioid substitution treatment system.

BC Ministry of Health
www2.gov.bc.ca/gov/content/health/managing-your-health/mental-health-substance-use/mental-health-and-substance-use-information-and-publications

College of Physicians & Surgeons of BC
www.cpsbc.ca/programs/bc-methadone-program

College of Pharmacists of BC
www.bcpharmacists.org/methadone-maintenance-treatment-mmt

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s.3