### Contact details – AMS and CADS units

**Note:** Please do not provide individual staff phone numbers to clients.

<table>
<thead>
<tr>
<th>Pitman House</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 Carrington Road, Pt Chevalier</td>
<td>(09) 815 5830 ext 5006</td>
<td>(09) 815 5840</td>
</tr>
<tr>
<td>Opening Hours: Mon-Fri 8.30am-5.00pm</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>AMS Pharmacy</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Mon-Fri 10.00am-1.00pm)</td>
<td>(09) 815 5830 ext 5120 or 5006</td>
<td>(09) 815 5840</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AMS Liaison Pharmacist</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(09) 815 5841</td>
<td>(09) 815 5850</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AMS Reception (Medical Officers, manager &amp; other staff)</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(09) 815 5841</td>
<td>(09) 815 5850</td>
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<table>
<thead>
<tr>
<th>Clinical Nurse Specialist &amp; GP Liaison Issues</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(09) 845 7518 021 784 266</td>
<td>(09) 815 5850</td>
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</tbody>
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<table>
<thead>
<tr>
<th>AMS Duty</th>
<th>Phone</th>
<th>Fax</th>
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</thead>
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<tr>
<td></td>
<td>(09) 815 5830 ext 5012</td>
<td>(09) 815 5850</td>
</tr>
</tbody>
</table>

**After hours** (evenings, weekends & public holidays)

<table>
<thead>
<tr>
<th>AMS Pharmacy</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>(9.00am-12 midday Sat, Sun &amp; Public Holidays)</td>
<td>(09) 815 5830 ext 5006</td>
<td>(09) 815 5840</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>On-Call Medical Officers and information re methadone dose etc. is available by phoning:</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(09) 815 5830 ext 5100</td>
<td>(09) 815 5848</td>
</tr>
<tr>
<td></td>
<td>(09) 815 5839</td>
<td></td>
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</table>

### Community Alcohol & Drug Services (CADS) – Auckland

<table>
<thead>
<tr>
<th>CADS Call Centre</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(09) 845 1818</td>
<td>(09) 845 1845</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>CADS Central</th>
<th>Phone</th>
<th>Fax</th>
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</thead>
<tbody>
<tr>
<td>409 New North Road, Kingsland</td>
<td>(09) 845 1800</td>
<td>(09) 845 1845</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CADS North</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 Como Street, Takapuna</td>
<td>(09) 488 2701</td>
<td>(09) 488 2703</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CADS West</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Floor, 1 Trading Place, Henderson</td>
<td>(09) 837 9400</td>
<td>(09) 837 9494</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CADS South</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building 4, 17 Lambie Drive, Manukau City</td>
<td>(09) 263 2000</td>
<td>(09) 263 2011</td>
</tr>
</tbody>
</table>

**CADS website** [www.cads.org.nz](http://www.cads.org.nz)
Community Pharmacy Manual

Overview

This document

This manual has been written by Community Alcohol & Drug Services (CADS) – Auckland, and contains information and guidelines for community pharmacists trained to dispense opioid substitution medication. This document will assist in the provision of a quality professional service that ensures safe and consistent dispensing of opioid substitution medication throughout the Auckland region.

Review

This document was reviewed by AMS pharmacists, clinical governance team and selected community pharmacists.

Reviews:

v1: March 1999
v2: June 2000
v3: May 2005
v4: August 2009

Acknowledgements

AMS would like to acknowledge the individuals and groups who have been involved in this review. Special thanks to Maree Jensen and Don Bensemann, community pharmacists, whose expertise, comments, opinion and feedback has been invaluable.

Changes

This manual has been revised to replace the 2005 version. A more user-friendly order or format, updated service overview, added sections (e.g. E-scripting, split dosing, flexible consumption), updated forms, and change in terminology e.g. Opioid Substitution Treatment (OST), are just some of the major changes.

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Community Pharmacy Manual

Introduction

Purpose

Community pharmacy is an integral part of the multidisciplinary team that delivers treatment for opioid dependence. The Auckland Methadone Service (AMS) intends that this document will assist pharmacists to ensure the delivery of a quality, safe, professional service to AMS clients.

This manual is based on AMS philosophy and the framework for opioid substitution treatment as set out in the ‘Practice Guidelines for Opioid Substitution Treatment in New Zealand 2008’ (Ministry of Health 2008).

Situations will arise which are not specifically addressed in this manual. In these instances a decision must be made after consultation with AMS staff and based on AMS philosophy and practice.

Scope

This document applies to community pharmacists who administer and dispense opioid medication for dependence to AMS clients.

Associated documents

The table below identifies associated documents.

<table>
<thead>
<tr>
<th>Type</th>
<th>Title/Description</th>
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<tbody>
<tr>
<td>NZ national standards</td>
<td>Health and Disability Services Standards 2008</td>
</tr>
<tr>
<td>NZ guidelines</td>
<td>Code of Ethics (Pharmacy Council of NZ, 2004)</td>
</tr>
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<td></td>
<td>Practice Guidelines for Opioid Substitution Treatment in New Zealand 2008 (Ministry of Health 2008)</td>
</tr>
<tr>
<td>NZ legislation</td>
<td>Health (Retention of Health Information) Regulations 1996</td>
</tr>
<tr>
<td></td>
<td>Health Act 1956</td>
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<tr>
<td></td>
<td>Health Information Privacy Code 1994</td>
</tr>
<tr>
<td></td>
<td>Code of Health and Disability Services Consumers’ Rights 1996</td>
</tr>
<tr>
<td></td>
<td>Medicines Act 1981</td>
</tr>
<tr>
<td></td>
<td>Medicines Regulations 1984</td>
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<tr>
<td></td>
<td>Misuse of Drugs Act 1975</td>
</tr>
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<td></td>
<td>Misuse of Drugs Regulations 1977</td>
</tr>
<tr>
<td></td>
<td>Also refer to subsequent amendments.</td>
</tr>
</tbody>
</table>

Addenda

Refer to *Forms and client information sheets*, page 43.
Service overview

About AMS

The Auckland Methadone Service (AMS) is one of the services offered by Community Alcohol & Drug Services (CADS) – Auckland, which is part of the Mental Health Services Group, Waitemata District Health Board (WDHB). CADS Auckland is a regional service which covers the catchment areas of Waitemata, Auckland and Counties-Manukau DHBs.

AMS Philosophy

AMS provides services for the management of opioid dependency from a biopsychosocial model which focuses on minimising harm, supporting people towards their recovery, relative to each individual and his or her own goals, needs and circumstances.

Underpinning the practices and policies of AMS is local and international research that demonstrates the effectiveness of opioid substitution treatment (OST). The research also supports individualised maintenance doses in the higher range (e.g. methadone 80 to 120 mg daily) where this is therapeutically indicated, and a long-term treatment approach whilst treatment remains beneficial. Treatment provided by AMS is delivered within a framework of sound medical practice, accepted standards, approved guidelines and legal requirements.

AMS seeks to ensure that opioid medications are prescribed and dispensed in a clinically responsible manner.

Continued on next page
AMS is guided by a harm reduction approach with all aspects of service provision aimed at reducing harm to the individual, the family/whanau and the community.

The outcomes sought are defined as follows:

- contribute to improving the health of clients as well as aspects of their personal and social functioning (bio-psycho-social model)
- reduce the spread of infectious diseases associated with injecting drug use, especially hepatitis B and C and HIV/AIDS
- reduce the mortality and morbidity resulting from the misuse of opioid drugs
- reduce episodes of illegal and other harmful drug use
- reduce crime associated with opioid use
- assist withdrawal from opioid maintenance treatment if appropriate and desired by the client (‘Practice Guidelines for Opioid Substitution Treatment in New Zealand 2008’, Ministry of Health 2008).

Treatment provided by AMS is essentially pragmatic in its approach, focusing on and giving priority to realisable goals. Improvement for clients is likely to be progressive and will vary greatly from client to client.

An important outcome measure of OST is retention in treatment which is focussed on:

- Encouraging clients to continue with treatment while it remains beneficial
- Delivering user friendly services that are both accessible and acceptable to clients
- Maintaining a partnership approach with clients
- Adopting a motivational rather than confrontational approach
- Adopting prescribing practices that are symptom based and ensure clients are free from opioid withdrawal symptoms and craving for opioid drugs
- Supporting planned withdrawal from opioid medication for dependence when appropriate.

Continued on next page
The components of the AMS programme are:
- Assessment
- Stabilisation
- Specialist Maintenance
- GP Shared Care
- Treatment completion

The goals of Stabilisation are to stabilise the client on methadone (or Suboxone®) and to improve their wellbeing. Once attained, the client will transfer to the GP Shared Care or the Specialist Programme as appropriate.

GP Shared Care supports clients to have OST integrated with primary health care and includes continued support from an AMS case manager/clinician.

Shared Care is suitable for clients who have attained a good level of sustained stability. OST in this context will involve an agreement between the client, the authorised GP, the community pharmacist and AMS as outlined in the Shared Care Agreement form (refer to the Forms section of this manual).

The Specialist Programme is for clients who, due to other issues, require continued engagement with the AMS team.

As with all drug and alcohol dependencies, treatment for opioid dependency is characterised by episodes of relapse. Where clients transfer to GP Shared Care but experience a loss of stability then the service will review the client and either support the GP to continue provision of OST or transfer the client back to the Specialist Programme. It is recognised that a period of re-stabilisation with a higher level of intervention and specialist input may only be required for a limited period.

Treatment completion can be classified into three categories:
1. Clients who have made significant life changes and are likely to be able to leave treatment without these gains being lost.
2. Clients who leave against the advice of the AMS team.
3. Involuntary withdrawal of clients due to situations where OST is ineffective (i.e. achieves no measurable positive outcomes).

Continued on next page
Service overview, Continued

Phases of Treatment

Treatment is evidence based and guided by a harm reduction approach with measurable goals. Treatment is usually long term and continues whilst it remains beneficial.

Roles and responsibilities

AMS undertakes to:

- Act in accordance with the ‘Practice Guidelines for Opioid Substitution Treatment in New Zealand 2008’ and the AMS policies and procedures.
- Acknowledge the community pharmacist as an integral part of the treatment multidisciplinary team and consult the pharmacist where appropriate.
- Provide a point of contact through the AMS pharmacy and the on-call medical officer when difficulties arise outside AMS opening hours.
- Provide all communications regarding prescriptions in writing.
- Provide the pharmacist with names of AMS case manager/clinician and authorised GPs for clients dispensed at community pharmacy and to update these as required.
- Provide medicines information as required.
- Provide information about drugs of abuse as required.
- Provide or ensure initial training for all pharmacists involved in dispensing opioid medication for dependence in the Auckland region.
- Provide support including ongoing training, availability for consultation and visits to each dispensing pharmacy on occasion.
Roles and responsibilities, Continued

Community pharmacy responsibilities to AMS and clients

- To be familiar with the contents of the ‘Practice Guidelines for Opioid Substitution Treatment in New Zealand 2008’ (Ministry of Health 2008).
- To act and dispense medication in accordance with relevant legislation, and AMS policies and procedures in the AMS community pharmacy manual.
- To clarify with AMS or the prescribing GP any instructions that are unclear.
- To liaise where necessary with AMS (AMS case manager/clinician, pharmacist, medical officer) or prescribing GP.
- To provide feedback as requested or when it is appropriate.
- To pass on AMS communications to the client.
- To inform AMS or prescribing GP when a client has failed to present for observed consumption or is admitted to hospital.
- To inform AMS or prescribing GP when a medication error has occurred.
- Pharmacists to complete initial training with an AMS pharmacist.
- To ensure the provision of methadone for observed consumption occurs in a safe and sensitive manner.
- Not to dispense if a client presents intoxicated or misses three doses in a row.
- To notify AMS of pharmacy closures, changes to dispensing hours, changes in ownership and pharmacy name.
- To adhere to the principles of good pharmaceutical practice, the Quality Standards for Pharmacy in New Zealand and the Code of Ethics for Pharmacists.
- To maintain client confidentiality and privacy in accordance with relevant legislation including the Health Information Privacy Code 1994, the Code of Health and Disability Services Consumers’ Rights 1996.

Instructions for new staff pharmacists/locums

Where a new pharmacist or locum will be managing dispensing and administration of opioid substitution treatment, the principal pharmacist must ensure that:

- AMS is informed so that training of the new pharmacist can occur.
- A copy of this AMS Community Pharmacy Manual is available for the pharmacist.
- Current client photographs are available to allow client identification (These can be requested from AMS).
Community Pharmacy Manual

Administration and dispensing

Summary

1. Ensure legality of prescription, sighting original or fax.

2. Check dose & takeaway status unchanged if a renewal, and script starts on a consumption day. For current scripts check to make sure that there are no changes to dispensing (e.g. cancellation of dose or extra takeaway/s authorised).

3. Sight client photograph/ID if unknown to pharmacist.

4. Assess client for signs of withdrawal/intoxication (sunglasses to be removed). Refer to Clinical monitoring by a pharmacist, page 21. Take appropriate action if client is assessed to be either intoxicated or in withdrawal. Refer to Signs & Symptoms, page 40.

5. Measure dose, annotate prescription and record dose in CD register. Dispense takeaway dose/s, if applicable.

6. Ensure the client does not have anything in their mouth, and/or are not holding a drink bottle (or other container) that they could spit into, prior to consuming dose. Refer to Detection of diversion, page 24.

7. Administer consumption dose to client, ensuring whole dose is taken and consumption is completed by having the client speak and/or drink additional fluid after swallowing dose.

8. Ask client to place disposable cup into appropriate waste container in pharmacy before leaving to reduce the risk of diversion.

9. Hand takeaway dose/s to client after checking they are closed properly, and ask client to check takeaway bottles have not leaked before leaving the pharmacy.

General

The pharmacist must ensure that the correct medication is given to the right client in the right dose at the right time.

Continued on next page
Controlled drug prescription forms

The use of H572M controlled drug prescription forms is restricted to prescribing methadone for clients on OST by prescribers, whether they be approved/gazetted to prescribe or are working under authority (refer Misuse of Drugs Act 1975 S24). The form is not to be used for the prescribing of methadone to clients in other circumstances (e.g. pain relief); in these cases the general H572 controlled drug prescription must be used. The above mentioned Act allows AMS to authorise a named GP to prescribe methadone for OST for a specified AMS client.

The following must be checked to ensure the prescription is valid:

1. Actual date pharmacist is to begin dispensing. (see note)*
2. Name and current residential address of client. It is not acceptable to use the pharmacy address as the client address.
3. Client’s NHI number.
4. In most instances the prescriber will cross out “methadone” and annotate the prescription with the product required. Where a stamp is used e.g. “Biodone Forte” as per illustration, each copy of the prescription will be stamped.
5. Written dose, preferably in numeric and word form e.g. 80 (eighty) mg. Note, if a client is undertaking any type of withdrawal from methadone, then the new prescription should state the current dose as the starting dose.
6. Start date (actual date pharmacist is to begin dispensing). Check that the commencement date is a consumption day.
7. Total period of supply up to a maximum of 28 days. Check for written Close Control (or C.C.) and initials beside dose.
8. Maximum rate of any withdrawal regimen is specified.
9. This statement no longer applies due to misinterpretations.
10. Days for which takeaways are authorised. For example, ‘Tuesday, Wednesday, Friday, Saturday and Sunday’ for a client on twice weekly dispensing who collects and consumes doses on Mondays and Thursdays.
11. Name of pharmacy.
12. Prescriber’s signature
13. Prescriber’s stamp or print NZMC Reg. No., doctor name and address.
14. Top three copies to pharmacy (via client or post). Bottom copy (blue) to be kept on client file.

*Note: The start date and prescription date are the same date to avoid confusion. There is an understanding between Medsafe and AMS prescribers to allow prescriptions to be written in advance.
Administration and dispensing, Continued

E-Scripting

E-Scripting is the writing of methadone prescriptions using electronically generated and printed text on the approved H572M form. The Director-General of Health, under regulation 29(1)(b) of the Misuse of Drugs Regulations 1977, has given AMS written approval to write scripts this way for the prescribing of methadone.

This authority is only applicable to medical practitioners employed by AMS (does not apply to authorised GPs).

The following must be in the medical officers own handwriting:
- any changes to the script after it has been printed (and initialled)
- the daily dose in words
- “close control” initialled
- signature.

Administered or dispensed dose

There are two ways that a client can receive their medication - as an administered dose consumed under observation or as a dispensed dose taken away to be consumed at a later time without observation.

A takeaway dose of opioid medication for dependence is any dose that is not consumed under observation. Controlled drugs prescribed by AMS are usually consumed under pharmacist supervision on at least three non-consecutive days per week. Less frequent dispensing may be considered for stable clients.

The client must consume the full prescribed dose of opioid medication at the time of each observed consumption.

Methadone Formulation

- All methadone dispensed to AMS clients must be the brand and strength prescribed. No substitution is permitted without authorisation.
- AMS preferred product is Biodone® 5mg/ml solution, free of additives in line with our harm reduction philosophy.
- All requests for a change in formulation must be referred to the prescriber.
- For clients undergoing a reduction, a 2mg/ml formulation may be prescribed if the dose becomes difficult to measure using the 5mg/ml preparation.

Continued on next page
### Administration and dispensing, Continued

#### Buprenorphine Formulation

Buprenorphine with naloxone (Suboxone®) is now registered for the treatment of opioid dependence in NZ but is not yet subsidised. AMS prescribes buprenorphine to a small number of clients who are able and willing to pay for this medicine. There are special considerations when administering and dispensing this medication. Pharmacies asked to dispense buprenorphine (Suboxone®) will be trained by an AMS pharmacist prior to commencement of dispensing.

#### Dose Measurement

Methadone doses must be measured using syringes (with or without adaptor caps) or a burette to ensure accuracy and avoid fluctuations in dose. Measuring cylinders and/or conical flasks are not to be used as any small discrepancy in volume can translate to a relatively large discrepancy in dose.

#### Consumed doses

Consumed doses must be supplied in a disposable clear cup which must not be recycled and where possible be disposed of in a biohazard container.  
*(‘Practice Guidelines for Opioid Substitution Treatment in New Zealand 2008’, MOH, 2008)*

#### Takeaway doses

Takeaway doses of methadone **must not be diluted** by the pharmacist except where specifically instructed by the prescribing medical practitioner.

Takeaway methadone doses are to be dispensed as individual daily doses. If the client is on a split dosing regimen, each am and pm daily dose is to be packed individually (i.e. two containers per day). All doses are to be packed in appropriately labelled bottles with child resistant closures (CRC’s). The Pharmacist should emphasise the importance of storing takeaway doses inside a plastic bag and in a cool place, out of sight from, and out of the reach of, children (preferably locked away).

*(‘Practice Guidelines for Opioid Substitution Treatment in New Zealand 2008’, MOH 2008)*

Hand takeaway dose/s to client after checking they are closed properly, and ask client to check takeaway bottles have not leaked before leaving the pharmacy to avoid client requesting replacement doses after leaving the pharmacy. Refer to *Replacement doses*, page 25

Plastic containers and lids for takeaway doses should not be reused.  
*(Pharmacy Practice Handbook 2003, page 107.)*  

*Continued on next page*
Administration and dispensing, Continued

Collecting doses on behalf of a client

Takeaway doses must not be collected by any person other than the client for whom they are prescribed, unless the pharmacist has received written authorisation to do so. This will be in the form of written notification of the agent’s identification and an approval from the prescriber for the agent to collect the dose(s) on behalf of an AMS client. A Receipt of takeaways on behalf of an AMS client form (refer to the Forms section at the end of this manual) will be faxed to pharmacy for completion.

The pharmacist should:
- Check agent’s identification before providing the prescription
- Ensure the agent signs the Receipt of takeaways on behalf of an AMS client form (refer to the Forms section at the end of this manual)
- Give the doses to the agent and provide information on safety considerations e.g. keep out of reach of children
- Forward the signed Receipt of takeaways on behalf of an AMS client form to the AMS case manager/clinician or authorised GP.

Please note: Police Officers can act as agents for client’s incarcerated in police cells BUT approval from AMS or authorised GP must be given in writing before dispensing can occur.

Recording entries in the Controlled Drug register

All entries must be recorded in the controlled drug (CD) register. If pharmacies have multiple daily entries to record, pharmacists can alternatively use the MOH approved Methadone dispensing record sheet (Refer to Forms section at end of manual) and transfer the total daily amount to the CD register as one entry. Each month’s recording sheets must be kept with the CD register, to substantiate the daily total volumes recorded and for Medsafe audit purposes. (Pharmacy Practice Handbook 2003)

An excess of methadone is provided in each stock bottle. There is no need to set it aside for destruction. Any excess should be added back into the stock balance when the balance is checked regularly. Write “Balance checked and correct and excess added … ml” and enter the new total amount.

Continued on next page
Administration and dispensing, Continued

Administration errors in the pharmacy

Where a pharmacist has administered the wrong dose to a client, in the context of an overdose, the pharmacist will:

- Immediately advise the client of the medication error and the need for the client to be seen by an AMS medical officer or authorised GP (shared care clients only) within three to four hours.

- Advise the AMS case manager/clinician, or authorised GP of the medication error if the client has already left the pharmacy. The AMS case manager/clinician or authorised GP (or person delegated) will make every effort to contact the client to advise and request the client to attend for a medical appointment.

- If the error occurs after AMS normal business hours (refer Contact Details, page 1) contact the on-call medical officer on (09) 8155830 ext 5100.

- Notify AMS or authorised GP in writing of the incident and actions taken.

In the context of an underdose, the client must be informed as soon as the error is detected and asked to attend again on the same day to receive the balance. (If not given the same day, the balance may not be given later). Inform AMS or authorised GP in writing as soon as possible of the error so that it can be recorded.
Management of Common Clinical Issues

Stabilisation / Restabilisation

During initial dose stabilisation the majority of clients will receive medication dispensed from AMS pharmacy unless specifically negotiated with a community pharmacy. Clinical observations of intoxication and withdrawal are very important in this phase of treatment, as this is the time of greatest risk of overdose, and clients may use other substances on top of their dose in an attempt to manage withdrawal symptoms.

It is important that
• the prescription is strictly followed
• communication with the AMS team occurs regularly, e.g. when a dose is missed
• professional and firm boundaries are established with the client.

Clients stabilising are not eligible for takeaway doses (except in some circumstances). Daily doses are consumed at the pharmacy under observation.

AMS will only stabilise/restabilise clients in a community pharmacy when all of the following conditions apply:
• Access to opioid treatment would be compromised if the client was required to attend the AMS Pharmacy daily
• The client meets the indicators of stability
• The pharmacist is given specific stabilisation training by AMS.

Maintenance

Clients attending community pharmacy for their medication will typically be in the maintenance phase of the programme with little variation in their daily dose.

As a routine, all AMS maintenance clients (including those in GP shared care) consume regular doses under observation according to their prescription. All clients should consume at least one dose per week under observation of the pharmacist.

Continued on next page
Stabilisation / Restabilisation, Continued

**Takeaway doses**

The AMS team reaches decisions around a client’s takeaway regime by considering their presentation and overall stability. Refer to *Indicators of stability*, page 22. The community pharmacist can play a key role in assisting this decision making process.

Clients in the maintenance phase of opioid treatment with AMS may be dispensed no more than three consecutive takeaway doses at any one time except in the following instances:

- For specified holiday periods where the prescriber may authorise one additional takeaway dose.
- In unique circumstances and only after clinical review.

Clients would have signed the *Responsibility for takeaway doses of methadone agreement* form and received the *Takeaways* client information sheet. (Refer to *Forms* section at the end of the manual).
Clinical monitoring by a pharmacist

Summary

The community pharmacist plays a key role in clinical monitoring that includes but is not limited to the following:

- The pharmacist must notify the AMS case manager/clinician or authorised GP in writing each time the client:
  - fails to present for dosing
  - presents intoxicated at the point of dispensing
  - exhibits abusive or threatening behaviour
  - diverts their dose or makes a serious attempt to divert their dose
  - exhibits withdrawal symptoms
  - deteriorates in their physical, emotional or mental state.

- The pharmacist must contact the prescriber for clarification of any administration/dispensing instructions that are unclear on the prescription.

- The pharmacist must not dispense to a client who has not collected their medication for three consecutive days or to any client(s) whose presentation for dosing deviates from the administration/dispensing pattern outlined on the prescription.

- The pharmacist can participate in a client’s clinical review as part of the multidisciplinary team.

- Feedback to AMS case manager/clinician or authorised GP should be made using the Community Pharmacy Feedback to AMS form (refer to the Forms section at the end of this manual).
Clinical monitoring by a pharmacist, Continued

**Indicators of stability**

The following indicators are considered by AMS when determining client stability:

- No problematic, harmful or hazardous use of alcohol or other drugs
- No evidence of criminal activity
- Responsible management of takeaways
- Schedules and attends appointments
- Rarely requests changes to dispensing
- Social stability as evidenced by relationships with others, stable and healthy housing, employment/occupation
- Any co-existing mental or physical health problems are well managed
- Participates in primary health care
- Complies with programme requirements.

**Indicators of instability**

- Problematic, harmful or hazardous use of alcohol or other drugs
- Engagement in or support of criminal activity
- Signs of intoxication at clinic or pharmacy
- Evidence of regular intravenous injecting
- Irregular dosing
- Poor attendance at appointments
- Avoidance of urinalysis or blood tests
- Behavioural problems such as aggression
- Frequent requests for changes to dispensing
- Frequent requests to replace lost, leaked or stolen doses
- Co-existing mental or physical health problems are not well managed.

**Client non-attendance (DNA) or Missed doses**

AMS should be contacted if a client misses two or more consecutive doses. If a client does not attend (DNA) for three consecutive days, they cannot be dispensed on the fourth or subsequent days. Refer the client to their case manager/clinician or duty case manager for reassessment by an AMS medical officer, or to their authorised GP.

The pharmacist must be notified, in writing, by the prescriber if authorisation to resume dispensing is given.
Intoxicated clients

**If a client is intoxicated at the point of dispensing, no dose should be supplied due to the risk of overdose.** The risk of overdose is most significant when the substance used is a CNS depressant (e.g. other opioids, alcohol, benzodiazepines, GHB). Refer to *Signs and symptoms of opioid intoxication / overdose*, page 40.

The pharmacist may:
- Request that the client re-present later that day when they are not intoxicated
- Phone AMS for support and advice
- Refer the client to AMS or their authorised GP for review before any dose is dispensed.

The pharmacist should notify AMS or the authorised GP when a client has presented intoxicated (the *Community Pharmacy Feedback to AMS* form may be used - refer to the *Forms* section at the end of this manual).

**NB:** If withholding the dose places pharmacy staff at risk due to the threat of violence, AMS supports the pharmacist in giving a dose. Consider administering a partial dose in these circumstances and notify AMS immediately.

Management of threatening and abusive behaviour

AMS does not condone threatening and abusive behaviour by any client. In accordance with the ‘normalisation’ principle, it is expected that the response to an AMS client’s behaviour will be the same as the response to the behaviour of any other pharmacy customer.

- Follow the pharmacy’s internal procedures in relation to threatening behaviour.
- Contact police to lay charges if necessary
- Notify AMS case manager/ clinician or authorised GP in writing of incident, actions taken, and reason for dispensing if intoxicated, e.g. felt threatened.
Detection of diversion

When the client does not consume their dose of medication as prescribed and in accordance to dispensing and administration guidelines, the dose is said to have been diverted.

The Opioid Substitution Treatment in NZ Guidelines 2008 defines diversion as “a failure to consume onsite and instead sell, swap or give methadone or another opioid substitute medicine to others. Injecting the methadone or using opioid substitutes against medical advice is defined as ‘misuse’ rather than diversion.”

AMS expects that all reasonable steps will be taken to ensure that AMS clients take their medication as prescribed to reduce the risk of medication being diverted for misuse or onto the ‘black market’.

Ask the client to take their medication according to the Pharmacy Dispensing client information sheet. (Refer to Forms section at the end of the manual).

Notify the AMS case manager/clinician or authorised GP in writing of the details of the incident if a client fails to comply with pharmacist request or requires intervention on an ongoing basis. (Use the Community Pharmacy Feedback to AMS form - refer to the Forms section at the end of this manual).

Some methods used to attempt diversion of medication

- A child or other person diverts the pharmacist’s attention from observing the consumption of the medication.
- Pouring methadone or placing Suboxone® into a container hidden in clothing.
- Holding the dose in the mouth until outside the pharmacy then putting it in another container hence the need to get the client to speak after medication is taken.
- Spitting the methadone down a straw into a drink container.
- Swapping cups during the dispensing process with a cup brought into the pharmacy.
- Transferring dose to an empty cup with a lid.
- Holding an absorbent material in the mouth (e.g. cotton wool, tampon)
Replacement doses

**Replacement of doses**

- AMS does not replace lost, leaked or stolen doses except in exceptional circumstances. No replacement dose/s can be issued without authorisation from an AMS authorised medical practitioner. Interim written or verbal authorisation (e.g., a faxed note) will always be followed, within 2 working days, by a H572M controlled drug prescription.
- All clients requesting replacement dose(s) should be told to contact their AMS case manager/clinician or prescribing GP during business hours.
- After business hours, the pharmacy may contact the on-call medical officer (8155830 extn 5100), or the AMS pharmacy for advice. Refer to **Contact Details**, page 1 for AMS business hours.
- All replacement doses must be consumed under observation at the pharmacy.
- AMS pharmacy will only administer replacement doses to community pharmacy clients when the client’s community pharmacy is closed.
- **Please Note:** A new H572M prescription is required for any replacement dose.

**Lost, leaked or stolen doses**

If more than one dose is lost or stolen, an AMS medical officer/prescribing GP will need to assess for withdrawal and where withdrawal is evident will prescribe so as to manage this withdrawal.

AMS clients (not including GP clients) should be referred to AMS pharmacy at weekends/on public holidays between the hours of 9am-12pm to be assessed by the on-call medical officer.
Replacement doses, Continued

Vomited dose

The pharmacist can only replace a vomited dose after receiving authorisation from an AMS medical officer or the prescribing GP. This will be in the form of a new H572M prescription.

AMS will only consider replacing a vomited dose when a client vomits within approximately 30 minutes of consuming their dose and the replacement is clinically justified. (Absorption of methadone is rapid with approximately 80% of the dose being absorbed in 20 minutes).

The range of replacement for vomited doses will be between 50% and 100%. When deciding the replacement dose, the full clinical picture will be taken into consideration. The prescriber must be satisfied that the client has vomited their dose.

Vomiting may be problematic (e.g. in pregnancy), some strategies for managing this are the client:
• remaining in the pharmacy for 20 minutes post dose to ensure the dose has been absorbed.
• eating prior to attending for their dose.
• drinking cold or chilled water with methadone.
Flexible consumption days

Occasionally scripts will be written for clients with flexible consumption days to enable clients to meet work commitments which are unpredictable. If the pharmacist receives a script for flexible dosing they should:

- Clarify what is intended by the script if this is not clear (i.e. the minimum number of consumptions per week and what day the week starts and finishes).
- Have a system to clearly communicate to other pharmacists at the pharmacy what has already been dispensed and which have been consumed/takeaway doses.
- NOT allow the client to ‘borrow’ doses from one week to the next.
- If in doubt, call the client’s case manager/clinician or the prescriber.

Split dosing

A split dose is one which is partly consumed under observation in the morning and the remainder is given to the client as a takeaway to be consumed at the end of the day/in the evening.

Clients will be prescribed a split dose if they are established as being a fast metaboliser of methadone, or sometimes during pregnancy.

Split doses should only ever be given with the authorisation of the prescriber. The majority of the dose should be the part that is consumed under observation.

The split dosing instructions will be clearly written on the H572M methadone prescription.
Changes to dispensing

**Summary**

- Any dose change must be made by writing a new H572M prescription.
- Pharmacists must not make any changes to a dispensing regimen without written authorisation from an AMS medical officer or AMS authorised GP.
- All changes to ‘takeaway’ arrangements must be in writing on the Changes to Dispensing (for cancellation only by AMS staff) or Medical Officer Changes to Dispensing form (refer to the Forms section at the end of this manual) or through the provision of a new H572M prescription.
- Doses cancelled on a current prescription requires written authorisation, from an AMS medical officer or authorised GP, before dispensing may be resumed on that prescription.
- If a client requests changes to the dispensing regimen such as early pick up, extra takeaways, or changing a consumption dose to a takeaway dose, this must be authorised by the medical officer or authorised GP on a Medical Officer Changes to Dispensing form.

**Cancellation of administered and dispensed doses**

AMS Medical Officers, AMS staff, authorised GPs and the dispensing pharmacist may cancel medication doses or cancel takeaway arrangements for clients under the following circumstances:

- to prevent a client from receiving a double dose of medication
- to prevent an intoxicated client from receiving additional medication
- to prevent situations that may endanger a client’s health
- to ensure that an accurate medication serum level is obtained
- to re-establish contact with a client where all other attempts have failed.

All cancellations of doses will be in writing on the Changes to Dispensing or Medical Officer Changes to Dispensing form (refer to the Forms section at the end of this manual).

Any of the above persons who initiate a medication dose cancellation must notify the client directly of any cancellation. If direct contact is unable to be made with the client, a confidential letter will be sent to the client, via the pharmacy, outlining the reasons for this intervention.

When a pharmacist cancels a dose, they must notify the AMS case manager/clinician or prescribing GP in writing of the intervention and the reason for that intervention as soon as possible and before the end of the day on which the dose was cancelled.
Clients admitted to hospital

If a hospital (doctor, nurse or pharmacist) telephones to confirm a dose it is the community pharmacist’s responsibility to:

- Ensure that the person telephoning is a doctor, nurse or pharmacist from the hospital
- Confirm dose
- Inform hospital of any takeaway doses in the client’s possession and the date of their last consumed dose in pharmacy
- Inform AMS case manager/clinician and/or prescribing GP that client is in hospital.

Note: It is best practice that communication, between the hospital and the community pharmacy, is confirmed in writing to ensure:

- the client dosing information is communicated accurately
- the request is authenticated.

Opioid substitution medication will be supplied by the hospital whilst the client is an inpatient. Therefore, do not deliver, or give to an agent on behalf of the client any medication for dependence.

(Incidents have occurred where clients who are still inpatients have received methadone from both their community pharmacy and the hospital).

If the client discharges themselves from hospital and presents to the pharmacy for dispensing, dispensing can not occur until an AMS medical officer or prescribing GP has reinstated the prescription in writing (a ‘Changes to Dispensing’ form should be used). This is to ensure that double dosing does not occur.
### Laboratory testing

#### Urinalysis

Pharmacists are required to hand the client’s urinalysis forms **on the date specified** when requested by AMS case manager/clinician, AMS medical officer or authorised GP.

To provide useful information, urinalysis samples must be taken randomly. Therefore pharmacists must not indicate to the client any information that pre-warns the client of a pending urinalysis.

If the urinalysis form is not given out on the specified day e.g. due to it being a takeaway dose day etc, AMS requests that the pharmacist change the date on the form using the pharmacy stamp and sign the change.

#### Confirmation of handing out urinalysis request forms

AMS requests that the pharmacist has the client sign the *Confirmation of Client Receipt of Urinalysis Form* (refer to the *Forms* section at the end of this manual), completes it, and faxes it back to the case manager/clinician the same day the client receives the form.

#### Blood testing

Pharmacy staff are required to give client’s blood test forms on the date specified when requested by the authorised GP or AMS case manager/clinician or AMS medical officer.

Peak serum levels should be taken approximately 4 hours post dose, whilst trough levels should be taken approximately 24 hours post dose (i.e. immediately prior to daily dose).

Serum level requests sometimes require the client to consume daily, preferably at a similar time of day, in the pharmacy for 3-4 days prior to testing to ensure that the levels taken are a true reflection of the peak and/or trough levels for the client at their current dose. If this is required, accompanying authorisation for changes to dispensing will be given.

#### Withholding dose

Occasionally AMS will request that a pharmacist withhold a dose until they receive confirmation that urinalysis or a blood test has occurred. In these instances it is important that the pharmacist sights the form presented by the client to the laboratory, and confirms that it has been signed and stamped by the testing laboratory prior to administering a dose.
Delivery of medication

For safety reasons, AMS must be involved in decisions relating to the regular delivery of medication to clients. A delivery plan that maximises the safety of pharmacy staff (e.g. taking another staff member along) should be developed.

Note: Where the prescription requires observed consumption, this must still take place, along with clinical assessment for intoxication and withdrawal.

Public holiday dispensing

- All reasonable steps must be taken to ensure the continued safe dispensing of medication to AMS clients during public holiday periods.
- It is essential that pharmacists inform each client of planned pharmacy closures or changes to opening hours.
- If it is not considered appropriate to prescribe extra takeaways, the AMS medical officer and case manager/clinician will ensure that the client is transferred to a pharmacy that is open. Any change in dispensing arrangements will be advised to the client by the case manager/clinician.
- A fax is sent to pharmacies several weeks prior to a public holiday requesting opening hours for the holiday period. If the planned pharmacy opening hours change after the fax has been returned, it is important that AMS is notified to avoid errors in scripting.

The pharmacist should:
- Upon receipt of the holiday schedule, hand the second copy to the client and ensure they are clear about which days they are collecting their dose(s). (This allows for any problems to be sorted out before the holiday period).
- Dispense to clients in accordance with H572M prescription and/or attached holiday schedule.
- If no instructions are provided, contact the prescriber for written instruction. After hours, for AMS clients (not including GP clients), contact the on-call medical officer (8155830 extn 5100), the AMS pharmacy for advice. Refer to Contact Details, page 1 for AMS business hours.
Withdrawal from opioid medication

- Increased observation of, and communication with, the client is required to facilitate safe and effective managed withdrawal from opioid substitution treatment.
- AMS advocates increased communication between the community pharmacist and AMS during this period as the withdrawal process can be difficult and may increase the client's risk of relapse.
- The type and maximum rate of withdrawal will always be specified on the prescription or on a Medication Withdrawal Schedule (refer to the Forms section at the end of this manual).
- Once a client has had a dose decrease, as per withdrawal instructions or regime, the dose cannot be increased to the previous level unless authorised in writing by the prescriber with a new H572M prescription.

Reducing the dose

There is no set rate for reducing doses for people undergoing withdrawal. Clients can choose the rate at which they reduce their dose.

Some clients prefer to reduce their methadone dose in very small increments e.g. 0.5 to 1 mg and this can be dealt with by the pharmacist using the adaptor-cap and syringes or using a burette. If measurement becomes difficult, it is possible to use a 2mg/ml formulation of methadone. Contact the AMS case manager/clinician or prescriber to discuss this possibility.

The maximum rate of reduction on the prescription must not be exceeded without consultation with the prescribing doctor, as to do so may put clients at risk of withdrawal and/or relapse. Clients wishing to increase their rate of reduction should be advised to contact their case manager/clinician or authorised GP.

Clients undertaking voluntary withdrawal can choose to halt their withdrawal at any time*. They may plateau on a stable dose until they decide to continue their reduction, decrease the reduction rate or stop reducing altogether for a period of time. Advise clients to contact their case manager/clinician or authorised GP if they are expressing a desire to halt their withdrawal. The community pharmacist may be contacted by an AMS prescriber to confirm the current dose for the next prescription.

*Clients on an involuntary withdrawal cannot alter the reduction rate. These clients are usually being discharged from AMS.
Withdrawal from opioid medication, Continued

Fixed rate

The rate of reduction of the opioid medication is set by the prescriber and can only be altered by the prescriber.

Flexible rate

The rate of reduction of the opioid medication is set within a dosage and frequency range by the prescriber, and the client may initiate reductions within this range. These ‘client initiated’ dose changes may only be dose reductions; any increase in dose must be re-negotiated with the prescriber (a new H572M prescription would need to be provided in this case).

Blind

The client has the option of requesting a blind reduction where the client does not know their dose of medication. The client agrees to the overall withdrawal objective(s) and the AMS case manager/clinician/medical officer or the authorised GP communicates these to the pharmacist and the pharmacist then determines the daily doses. Written client consent is required.

“Regulation 25 of the Misuse of Drugs Regulations 1977 contains an exemption from the normal labelling requirements. Regulation 25(4):

“No person shall...supply any controlled drug... with reference to the needs of a particular patient, unless the container of the controlled drug bears a label setting out the following:

(a) Either (i) The general nature of the medicine, and a recognised code that indicates the precise nature of the contents or consists of a reference to a prescription book or similar record; or
(ii) The name or a description of the nature of the contents; and

(b) ...”

In other words, if the label states Methadone Solution and the dose volume to be taken, the strength of the solution or amount of active ingredient does not need to be stated as long as the label also contains a reference to the prescription record which shows the exact contents.

E.g. the doctor could prescribe a 15mg dose to be made up to 40ml volume. This would be recorded in the dispensing records, and the label could state ‘40ml Methadone Solution. Take entire contents in one dose. Prescription number 123456’. Note that the label must also contain the normal requirements of patient name, pharmacy name etc.”

N. Anderson Ministry of Health (personal communication, April 15th, 2005.)
Withdrawal from opioid medication, Continued

The pharmacist plays a key role in blind withdrawal and needs to:
- Reduce dose in line with instructions from the prescriber
- Regularly liaise with the AMS case manager/clinician or prescribing GP
- Increase observation of and communication with the client to detect signs of withdrawal or intoxication
- Consider requests from a client to stop reductions and discuss these with AMS case manager/clinician/prescribing GP
- Make other pharmacy staff aware that they should not disclose the dose to the client.
Pharmacokinetics & Pharmacology

Pharmacokinetics of methadone

Absorption and half life
- Methadone is rapidly absorbed from the gastrointestinal tract after oral administration with detectable plasma levels after 30 minutes.
- It undergoes considerable tissue distribution and crosses the blood brain barrier.
- Peak plasma level is 3 to 4 hours after oral consumption.
- With regular doses the half-life is 13 to 47 hours with a mean of 25 hours.
- Steady state plasma levels are reached after approximately 4.5 half lives.
- Methadone accumulates on repeated administration therefore doses should not be increased more often than every 4 days.

Distribution
- Distributes into a tissue reservoir which includes lungs, liver, kidney and spleen.
- Crosses the blood-brain barrier.

Metabolism and excretion
Methadone is primarily metabolised in the liver, and is excreted in urine, faeces, sweat and saliva.

Refer to Medsafe website for data sheets.
Pharmacology of methadone

Effects on daily functioning

- Clients being (re)stabilised may have impaired judgement as the dose is increasing. It is not considered safe for such clients to be driving or operating machinery during this time.
- Clients on a stable dose will not have impaired reaction time and there is no evidence to suggest that methadone decreases driving or machinery operation ability.
- Subtle recall differences may appear on rigorous testing, but clinically no memory deficit can be identified.

Toxic dose of methadone

- For non-tolerant adults, doses of 50 mg or less have been fatal.
- Potentially lethal overdoses can occur within 0.5 to 6 hours after ingestion by non-tolerant or partially tolerant individuals.
- A child who has consumed any quantity of methadone must be immediately taken to accident and emergency. (The fatal dose for a child may be as low as 10mg).

Side effects of methadone

Some of these side effects may be confused with withdrawal symptoms and may be experienced even when the dose is appropriate. Serum level tests may be of assistance in determining adequacy of dose.

<table>
<thead>
<tr>
<th>Side effects</th>
<th>Notes</th>
<th>Intervention/ advice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aching muscles and joints</td>
<td>Some individuals report rheumatic type pains and ‘bone pain’ - uncommon</td>
<td>• Medical examination for any underlying pathology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Hot Epsom salts bath may ease symptoms</td>
</tr>
<tr>
<td>Analgesia</td>
<td></td>
<td>• Advise client to be extra careful when dealing with hot objects/fluids (e.g. when cooking)</td>
</tr>
<tr>
<td>Constipation</td>
<td>A common side effect</td>
<td>• Increase intake of water, fruit and fibre and increase exercise.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If necessary take regular Lactulose or Movicol or short course of stimulant laxatives. Do not give bulking laxatives (e.g. mucilax) as these may lead to bowel obstruction in patients taking opioids.</td>
</tr>
</tbody>
</table>

Continued on next page
Pharmacology of methadone, Continued

Side effects of methadone, continued

<table>
<thead>
<tr>
<th>Condition</th>
<th>Description</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Galactorrhoea</td>
<td>Due to mildly/moderately increased prolactin levels</td>
<td>• Check prolactin level and rule out pathology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Seek specialist endocrinologist advice if uncertain</td>
</tr>
<tr>
<td>Irregular menstrual cycle</td>
<td>Common in women who take opioids</td>
<td>• Educate women about the risk of pregnancy despite menstrual irregularity/amenorrhoea</td>
</tr>
<tr>
<td>amenorrhoea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowered sex drive</td>
<td>Common with all opioid use</td>
<td>• Reduce dose but needs to be weighed against compromising outcomes.</td>
</tr>
<tr>
<td>Oedema</td>
<td>Fluid retention, puffiness, swelling, particularly of feet and ankles - uncommon</td>
<td>• Usually resolves within a few weeks of starting treatment</td>
</tr>
<tr>
<td>Other GI effects</td>
<td>Include:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• nausea and vomiting</td>
<td>• To reduce nausea and vomiting, suggest client eat before consuming dose and drink dose slowly</td>
</tr>
<tr>
<td></td>
<td>• reduced gastric emptying</td>
<td>• Other symptoms may be reduced by reducing the dose</td>
</tr>
<tr>
<td></td>
<td>• elevated pyloric sphincter tone</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• biliary tract outflow effects (can result in biliary spasm)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• loss of appetite/increased appetite</td>
<td></td>
</tr>
<tr>
<td>Increased Perspiration</td>
<td>Common especially at peak serum levels</td>
<td></td>
</tr>
<tr>
<td>Sedation</td>
<td>Drowsiness may be experienced at peak serum level (3 to 4 hours after dose) especially during initial stabilisation</td>
<td>• Check serum levels</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Reduced dose or split dose may be necessary – see relevant sections</td>
</tr>
<tr>
<td>Shallow breathing</td>
<td>From the respiratory depressive action of opioids</td>
<td>• Reduce dose</td>
</tr>
<tr>
<td>Skin rash/itching</td>
<td></td>
<td>• Appropriate skin lotion, e.g. Alpha Keri, DP lotion or similar emollient, antihistamine cream or non-sedating antihistamine tablets</td>
</tr>
<tr>
<td>Tooth decay/ dry mouth</td>
<td>Opioids reduce the production of saliva</td>
<td>• Increase fluid intake</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Chew sugar free gum</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Regular flossing and tooth brushing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Regular dental checks</td>
</tr>
<tr>
<td>Weight gain</td>
<td>Occurs in a small number of clients</td>
<td>• Assistance with weight management strategies</td>
</tr>
</tbody>
</table>
Pharmacology of methadone, Continued

Drug interactions with methadone

- It may be hazardous to take methadone with other drugs without careful consideration.
- Additive Central Nervous System depression and death has occurred as a result of mixing methadone with some drugs. When more than one drug is used with methadone the effects can be unpredictable. Substances that alter liver metabolism may increase or decrease the metabolism of methadone.

<table>
<thead>
<tr>
<th>Drug</th>
<th>Status of Interaction</th>
<th>Effect</th>
<th>Mechanism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>Clinically significant</td>
<td>Increased sedation &amp; increased respiratory depression</td>
<td>Additive CNS depression (NB Chronic alcohol use leads to increased hepatic metabolism of methadone → decreased methadone levels; acute consumption leads to decreased metabolism → increased methadone levels)</td>
</tr>
<tr>
<td>Alcohol</td>
<td>Clinically significant</td>
<td>Increased respiratory depression (? Increased hepatotoxic potential)</td>
<td>Additive CNS depression (NB Chronic alcohol use leads to increased hepatic metabolism of methadone → decreased methadone levels; acute consumption leads to decreased metabolism → increased methadone levels)</td>
</tr>
<tr>
<td>Antacids</td>
<td>Unknown</td>
<td>Decreased plasma levels of methadone</td>
<td>Decreased absorption of methadone</td>
</tr>
<tr>
<td>Antipsychotics</td>
<td>Clinically significant</td>
<td>Additive sedation</td>
<td>Additive CNS depression</td>
</tr>
<tr>
<td>Antipsychotics</td>
<td>Clinically significant</td>
<td>Increased risk of hypotension &amp; ventricular arrhythmias</td>
<td>Additive CNS depression</td>
</tr>
<tr>
<td>Antipsychotics</td>
<td>Clinically significant</td>
<td>Additive sedation</td>
<td>Additive CNS depression</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>Clinically significant</td>
<td>Increased sedation</td>
<td>Additive CNS depression</td>
</tr>
<tr>
<td>Buprenorphine, Pentazocine</td>
<td>Clinically significant</td>
<td>Precipitation of opioid withdrawal. Increased sedation and respiratory depression</td>
<td>Partial opioid agonists</td>
</tr>
<tr>
<td>Carbamazepine, Phenobarbitone, Rifampicin, Phenytoin</td>
<td>All clinically significant</td>
<td>Decreased plasma levels of methadone  (Phenobarbitone: increased sedation, additive CNS depression also)</td>
<td>Hepatic enzyme induction leading to increased metabolism of methadone</td>
</tr>
</tbody>
</table>

Continued on next page
Pharmacology of methadone, Continued

### Drug interactions, continued

<table>
<thead>
<tr>
<th>Drug Interaction</th>
<th>Effect on Methadone</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>**Cimetidine, Fluconazole *, Isoniazid, Ritonavir <em>, Idinavir, Ketoconazole <em>, Erythromycin, Ciprofloxacin, SSRI’s, Grapefruit juice</em></em></td>
<td>All potentially clinically significant. (Biological variation) * = Clinically significant</td>
<td>Increased plasma levels of methadone. Fluconazole: found to decrease methadone clearance by 24%. SSRI’s: Fluvoxamine decreases clearance by 20 – 100%. Known effect with Fluoxetine. Caution with other SSRI’s. Hepatic enzyme inhibition leading to decreased metabolism of methadone.</td>
</tr>
<tr>
<td><strong>Cyclizine, Promethazine and other sedating antihistamines</strong></td>
<td>Unknown</td>
<td>Anecdotal. Reports of heightened effect when injected with opioids Additive psychoactive effects</td>
</tr>
<tr>
<td><strong>Disulfiram</strong></td>
<td>No known cases, but severe interaction occurs with pethidine</td>
<td>CNS excitation, delirium, hyperpyrexia, convulsions, hypotension, respiratory depression, serotonin syndrome Unclear. Avoid combination if possible</td>
</tr>
<tr>
<td><strong>MAOI’s</strong></td>
<td>Clinically significant</td>
<td>Increased respiratory depression. Increased sedation Additive CNS depression</td>
</tr>
<tr>
<td><strong>Other opioids</strong></td>
<td>Clinically significant</td>
<td>Increased sedation Desipramine: Plasma levels increased by 100% when given with methadone Additive CNS depression Methadone causes decreased hepatic metabolism of desipramine</td>
</tr>
<tr>
<td><strong>Tricyclic antidepressants</strong></td>
<td>Clinically significant with desipramine. Theoretically possible with other TCA’s</td>
<td>Increased sedation Desipramine: Plasma levels increased by 100% when given with methadone Additive CNS depression Methadone causes decreased hepatic metabolism of desipramine</td>
</tr>
<tr>
<td><strong>Urinary acidifiers</strong></td>
<td>Clinically significant</td>
<td>Decreased plasma levels of methadone</td>
</tr>
<tr>
<td><strong>Urinary alkalinisers</strong></td>
<td>Clinically significant</td>
<td>Increased plasma levels of methadone Decreased hepatic metabolism of Zidovudine</td>
</tr>
<tr>
<td><strong>Zidovudine (AZT)</strong></td>
<td>Clinically significant</td>
<td>Increased plasma levels of Zidovudine</td>
</tr>
<tr>
<td><strong>Zopiclone</strong></td>
<td>Clinically significant</td>
<td>Additive sedation Additive CNS depression</td>
</tr>
</tbody>
</table>
Signs & Symptoms of Withdrawal & Intoxication

Signs & Symptoms

Signs and symptoms of opioid withdrawal

- Lacrimation
- Dilated pupils
- Abdominal cramps
- Rhinorrhoea
- Anorexia/nausea
- Diarrhoea
- Perspiration
- Weakness
- Hot and cold flushes
- Yawning
- Gooseflesh
- Fatigue
- Restlessness
- Muscle aches/leg cramps
- Insomnia
- Joint pain, particularly backache

The onset of methadone withdrawal starts at 24 to 48 hours after the last dose. The duration of methadone withdrawal is up to 21 days.

Signs and symptoms of opioid intoxication / overdose

- Sedation/nodding off
- Nausea
- Pinpoint pupils
- Dizziness
- Slurred speech
- Bradycardia (slow pulse)
- Hypotension
- Respiratory depression
- Scratching of skin (itchiness)
- Coma
- Seizures
- Pulmonary oedema (frothing at the mouth)

Due to its long half life, signs of methadone intoxication may be observed for up to 48 hours post ingestion.

Continued on next page
### Signs & Symptoms, Continued

Common symptoms associated with intoxication with commonly used drugs

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Alcohol</th>
<th>Amphetamines</th>
<th>Benzo-diazepines</th>
<th>Opioids</th>
<th>GHB (Fantasy)</th>
<th>Cannabis</th>
<th>Hallucinogens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disinhibition</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Hyperactivity</td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor balance/coordination</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Dilated pupils</td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinpoint pupils</td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Red eyes</td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Drooling</td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nausea/Vomiting</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Hyperthermia</td>
<td>●</td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Hyperthermia (Ecstasy, cocaine)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Hypothermia</td>
<td>●</td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>High blood pressure</td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Low blood pressure</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>● (postural)</td>
</tr>
<tr>
<td>Sedation</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Slurred speech</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Tachycardia</td>
<td>●</td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Bradycardia</td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Slow Respiration</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Tremor</td>
<td>●</td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>
Community Pharmacy Manual

Signs & Symptoms, Continued

References

Community Pharmacy Manual

Forms and client information sheets

Forms

AMS code
M511 Medication Withdrawal Schedule (August 2009)
M513 Changes to Dispensing (August 2009)
M514 Medical Officer Changes to Dispensing (August 2009)
M517 Responsibility for Takeaway Doses of Methadone Agreement (August 2009)
M531 Methadone Dispensing Record Sheet (August 2009)
M532 Referral to Pharmacy sample (August 2009)
M534 Community Pharmacy Feedback to AMS (January 2010)
M536 Holiday Schedule sample (August 2009)
M538 Receipt of Takeaways on Behalf of an AMS Client (January 2010)
M551 Confirmation of Client Receipt of Urinalysis Form (January 2010)
M552G AMS Shared Care Agreement (August 2009)
- Urinalysis Request form sample (December 2009)
- Observed Urinalysis Request form sample (December 2009)

Client information sheets

9 Pharmacy Dispensing (August 2009)
13 Takeaways (August 2009)

Also available via CADS website: [www.cads.org.nz/Methadone.asp](http://www.cads.org.nz/Methadone.asp)
1 The OST programme
2 Facts about Methadone
3 First dose and stabilisation
4 Accidental Overdose
5 The maintenance phase
6 Indicators of Stability
7 Serum levels
8 Restabilisation
10 Changes to prescriptions
11 Holiday arrangements within NZ
12 Travelling Overseas
14 Shared Care with Your GP
15 Thinking about coming off?
16 Involuntarily withdrawal
17 Pregnancy and OST
18 Methadone and medication interactions
19 Driving and OST
20 Finding a GP
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