Working with Opiate users in Community Based Primary Care

The Irish College
of General Practitioners
Coláiste Dhochtúirí Teaghlaigh Éireann
The Professional Body for General Practice in Ireland

ADDENDUM –DECEMBER 2011

You may be aware of some recent media comments regarding the current ICGP best practice guidelines "Working with Opiate Users in Community Based Primary Care ". There were a number of concerns raised which were addressed when the Best Practice Guidelines Committee was recalled to discuss the matters raised.

We wish to advise you that the ICGP is confident that these Guidelines are evidenced based where possible and are supported by the experience of experts in the field where evidence is not available. We also wish to remind all practitioners that best practice guidelines provide guidance on what is considered best practice; they are not a substitute for clinical judgement.
In view of the concerns raised we wish to add the following addendums to the existing guidelines:

- Page 17 of the guidelines in relation to incrementing doses: in addition to the statement "Increments should be no greater than 10mg at a time" we wish to add that the **"total dose increases should not exceed 20-30mg in one week".**

- Page 17 of the guidelines under section 2, Commencing and Stabilising on Methadone Treatment the statement "Patients usually stabilise on doses between 60mg to 80mg" should read **"Patients usually stabilise on doses between 60mg to 120mg".** This is in line with international best practice guidelines. However we recommend that this statement is read in the context of the complete section on commencing doses

- Pg 17 of the guidelines: It is not intended to suggest that > 80mg would be interpreted as a high dose. In the interest of clarity, this statement could be read "**Higher doses of methadone..."** rather than "Higher doses of methadone (>80mgs)....". Similarly, in the section under Remember on page 18, this sentence should read **"if a patient requires a higher dose and you have limited experience..."** rather than "if a patient requires a dose >80mgs and you have limited experience..."

The current guidelines are now available only through the ICGP website (we are not doing a further print run as the guidelines are currently under review). Please note the addendums above will be added to the on-line version of the Guidelines. Dr Cathal O Sullivan has asked that his name be removed from the Guidelines because of the concerns he raised and this has also been done on the on-line version.

Following the publication of the Opiate Treatment Review in December 2010, new National Guidelines are currently being developed in conjunction with the Irish College of Psychiatrists, the ICGP, the HSE and the Pharmaceutical Society of Ireland. The first draft of these Guidelines will be available for review early 2012 and will be circulated to all stakeholders for comment before publication. The nominated ICGP representatives on the MTP National Guidelines group are Dr. Des Crowley and Dr Harkin.

If you have queries with regard to the addendums, please to not hesitate to contact a member of the Substance Misuse Programme through niamh.killeen@icgp.ie.

About The Guidelines

These guidelines are the second edition of "Working with Opiate users in Community Based Primary Care". They are compiled by a representative group of General Practitioners (GPs) who are experienced in managing opiate misuse. Where possible all recommendations are based on existing evidence and are referenced in the document. Some recommendations are based on current practice that has evolved over the years.

In compiling the guidelines we have used as a reference the European Methadone Guidelines[1], Drug Misuse and Dependence –Guidelines on Clinical Management[2] ("Orange Guidelines") and The Methadone Briefing[3]. In this edition we have also taken into consideration the January 2007 NICE guidelines Methadone and Buprenorphine for managing Opioid Dependence[4].

The guidelines are intended to be used as an aid to Level 1 and Level 2 trained GPs managing opiate dependent patients in the primary care setting. GPs who work in Health Services Executive (HSE) treatment clinics as well as doctors working in other clinical situations, e.g. A/E departments or psychiatric departments, may also find them a helpful guide.

The guidelines aim to facilitate GPs in providing safe and effective care for drug dependent patients. As with all guidelines doctors are expected to take the guidelines into account when exercising their clinical judgement. However, they do not override the responsibility of the doctor to make appropriate clinical decisions based on individual need and in consultation with the patient.

A special thank you to all those involved in the revising the guidelines. The committee members were:

Dr Ide Delargy, Director of the ICGP Drug Misuse Programme (Chairperson)
Dr Margaret Bourke, GP Co-ordinator, HSE
Dr Des Crowley, GP Co-ordinator, HSE
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Dr. Brid Hollywood, Level 2 GP
Dr Shay Keating, Hepatology Specialist, Level 2 GP
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ICGP January 2008

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Introduction

It is well recognised that GPs have a pivotal role to play in the management of drug users and many GPs who manage drug users in practice have found this work to be a rewarding professional experience. As addiction is a chronic relapsing condition, the GP's unique knowledge of the patient and their extended family can make a considerable contribution to the long-term management of drug using patients.

Drug treatment services have expanded significantly throughout Ireland since the publication of Report of the Methadone Treatment Services Review Group[5] in 1998. This report recommended a change in the way methadone could be prescribed and dispensed in Ireland and the existing Misuse of Drugs Act was amended to reflect these recommendations. It further recommended that all GPs involved in providing methadone treatment should receive suitable training. It also outlined a variety of models of care which now operate in the primary care setting and in HSE based clinics. The format for how Methadone is regulated and how opiate dependant patients are managed is now commonly known as the Methadone Treatment Protocol (MTP).

Chapter 1 The Methadone Treatment Protocol

1 GP Training in Drug Misuse

With the spread of problem drug use nationally, GP's will increasingly be confronted with the health consequences of problem drug users. It is important for clinicians to ensure that they are competent to treat drug misusers. Doctors completing their training in general practice should have received Level 1 training before graduating from their training programme. Regular Level 1 training courses are provided by the ICGP throughout the year (details available on the ICGP website)[6].

1.1 Level One Training

Level 1 training is provided in two modules over two separate evening meetings. This course provides the foundation for treating **stable methadone maintained** patients in general practice. Having completed this training a GP may accept up to fifteen patients for methadone maintenance treatment. Stabilisation usually takes place in a health board treatment centre but may also be offered by a suitably trained GP colleague (Level 2). Referral between Level 1 and Level 2 GPs is encouraged where this option is available.

1.2 Level Two Training

A GP is eligible to apply for Level 2 training once the following criteria have been fulfilled:

- the GP should have managed at least five patients on the MTP for a minimum of one year.
- the GP should have successfully completed an external clinical audit conducted by the ICGP

Following the required training which currently requires 13 clinical sessions supervised by a GP mentor, a Level 2 GP may initiate treatment, stabilise a drug user and provide ongoing maintenance treatment in the primary care setting. A successful external Level 2 audit completes the accreditation process.

Further information on the Level1 and Level 2 training and accreditation criteria can be obtained from the ICGP website.[6]

1.3 Continuing Medical Education

After completing Level 2 training, the GP is expected at engage in regular continuing medical education. In these sessions a wide range of issues relating to community based drug treatment are addressed.

1.4 Annual Audit

Regular audit is provided by an ICGP/HSE appointed audit nurse. The format for the audit is regularly updated and revised as appropriate. The range of care provided by the GP to his/her methadone patients is reviewed and referenced to the current best practice guidelines issued by the ICGP. See **Appendix A.**

2 Models of Care for Drug Misusers

There are a range of models of service delivery to drug users throughout the country. Within the greater Dublin area all models of care co-exist. Outside of the Eastern region, services are more limited and are generally confined to Satellite clinics and Level 1 and Level 2 GPs. Ideally all treatment services should have multidisciplinary care teams which include doctors, nurses, addiction counsellors and access to community welfare officers and social workers.

2.1 Level 2 GP Services

Level 2 GPs are trained to do an initial assessment and to initiate methadone treatment. Once a patient has been stabilised on the programme the Level 2 GP can provide ongoing care and methadone maintenance.
In some areas a system of inter-GP referral can operate. In these situations a patient may be referred to a Level 2 doctor, for the purposes of initiating and stabilising the patient on methadone. Once stabilised the patient can be re-referred to their own Level 1 GP.

2.2 Level 1 GP Services

Once a patient has been stabilised at any of the locations outlined above, the patient can be referred for ongoing methadone maintenance to a Level 1 GP. Ideally this should be the patients' own GP who is responsible for all the individual's healthcare needs.

2.3 Treatment Centres

The treatment centres provide methadone treatment through a multidisciplinary team approach and are set up in geographical areas with a high prevalence of drug use. Typically the Treatment Centres are large centres providing services to between 100 to 300 patients. Prescribing and dispensing of methadone takes place on site. Doctors working in these centres are usually GPs who are have a special interest and training in substance misuse.
The Drug Treatment Centre Board (DTCB) at Trinity Court, Pearse Street, Dublin is the largest treatment centre in the country managing in excess of 500 patients. It is staffed by Consultant Psychiatrists and non-consultant hospital doctors training in psychiatry as well as a full multidisciplinary team. The DTCB has a remit to manage

patients with dual-diagnosis and difficult behavioural problems which require specialist care. The majority of homeless patients are also managed in the DTCB.

2.4 Satellite Clinics

There are approximately 45 satellite clinics in the country servicing 20 to 50 patients per day. Satellite clinics operate with full multidisciplinary teams and GPs specialising in substance misuse. Satellite clinics operate in partnership with local communities and are usually based on a parish catchment area. Patients at these clinics are normally dispensed their methadone in community pharmacies.

2.5 Inpatient Detoxification

In patient detoxification is available on a limited basis for patients who wish to become drug free and detox from methadone. Currently there are a total of 26 detoxification beds available nationally through St. Michael's ward in Beaumont Hospital and Cuan Dara in Cherry Orchard. Other in-patient detox facilities are available through non-statutory agencies and vary from region to region.

2.6 Rehabilitation Programmes

A wide range of rehabilitation programmes, both in-patient and outpatient, are available for patients wishing to avail of these services. In most centres, patients must be methadone abstinent before admission. However a small number of units offer a short detox as part of the rehabilitation programme. Details of local services are available through your HSE Addiction Co-ordinator. **Appendix B.**

3 Research and Development

The National Advisory Committee on Drugs was first established in 2000. Its role is to advise the government in relation to prevalence, prevention, treatment, rehabilitation and the consequence of drug use in the Irish and international context. It also has a remit to commission relevant research into drug use in Ireland.

The Drug Misuse Research Division (DMRD) of the Health Research Board collects annual statistics on all people presenting to drug treatment services. Statistics regarding all drugs abused by presenting patients are captured and these allow for more accurate planning in terms of services development nationally. The DMRD also provides a library facility, which is available to all GPs[7]. The library has all relevant drug dependency journals as well as electronic data search.

The Central Treatment List (CTL) is a database of all patients who are currently or who have ever been on methadone treatment. Under the 1998 Methadone regulations, it is a legal requirement for all patients in receipt of methadone treatment to be registered on the CTL. Access to the database is restricted to doctors and pharmacists participating in the MTP.

Chapter 2 Aims & Objectives of Treatment

The treatment of opiate misusers aims to improve the physical, psychological and social health of individuals by:

- Minimising all harm associated with opiate misuse
- Reducing the health risks associated with illicit drug use, particularly the risk of HIV, hepatitis B and C, and other blood-borne infections.
- Improving the overall personal, family and social functioning of the individual
- Stopping or reducing the use of illicit or non-prescribed drugs by the individual.
- Facilitating and fully supporting patients in achieving a life free of drug dependency while recognising that this may not be achievable for all individuals.
- Prescribing safely, which helps reduce diversion of drugs into the illegal market.

Chapter 3 Assessment and Management Options

1 Initial Assessment

When a GP is approached by a patient who claims to be using illicit opiates it is important for the GP to assess the patient carefully before considering how to proceed. Initial management will depend on the level of training you have as a GP. Level 2 GPs can do the following assessment and initiation of treatment. A Level 1 GPs should refer the patient to a more experienced colleague or a HSE clinic for further assessment.

Management of the drug user begins at the initial consultation and **a full assessment may need to take place over 2-3 consultations.** Urine screening is an important part of this assessment; three urine screens over three separate consultations should be taken.

Having confirmed patient's identification the Key Points of assessment are:

1.1 Explore realistic goals with patient

- To stop or reduce illicit drug use.
- To reduce or stop frequency of injecting.
- If the patient continues to take drugs, encourage use for relief of withdrawal symptoms rather than to get intoxicated.
- Review alcohol or other drug consumption if relevant.
- Where possible patients should be encouraged to stop using benzodiazepines while cautioning against abrupt cessation of treatment.
- To begin to tackle other problem areas e.g. legal, financial, accommodation and relationship problems.
- Regularise lifestyle e.g. attending appointment on time.
- Attend an addiction counsellor as appropriate.

1.2 Discuss practice policies

Drug users respond best to care and concern on the one hand and firm and consistent boundaries on the other. In order to provide such boundaries, practices may benefit from an agreed written policy about working with drug users. Policies relating to appointments, prescriptions, medication and behaviour should be clearly stated in the practice agreement. It is useful to involve your practice staff in discussions about the formulation of such a practice policy. See sample agreement **Appendix C.**

Use of policies and agreements may enhance the doctor/patient relationship. However, it can be inappropriate for the doctor to apply policies rigidly in all circumstances. 'Flexible rigidity' describes an approach that seems to works best with this patient group. It may be useful to indicate to the patient if there are any conditions where flexibility will not be exercised, such as acts of violence, abuse of staff etc.

1.3 Take a drug history including, medical, psychiatric, forensic and social history

Making decisions about the treatment of individual patients has to be based on a thorough assessment of what will work for that person. This assessment should include a detailed drug history, along with a full medical, psychiatric, forensic and social history. An assessment should also include a relevant physical examination and urinalysis. There are a number of standardised assessment forms available which may be helpful in documenting the relevant points when taking the history.

A sample assessment form detailing relevant history is available at **Appendix D.**

1.4 Assess the presence of dependence

Before starting any type of methadone treatment it is necessary to confirm that the patient is taking opioids and to establish the presence and severity of opiate dependence. The ICD10 are the internationally accepted criteria for establishing dependence.

Quick Reference to ICD10 Criteria:

Physical

- **Withdrawal** manifested by the characteristic withdrawal syndrome or by the use of the substance to relieve or avoid withdrawal symptoms.
- **Tolerance** is defined by either increased amounts used to achieve intoxication or other desired effect or diminished effects with continued use of the same amount of the substance.

Psychological

- Difficulty in **controlling** substance use; unsuccessful attempts to cut down or taking the substance in larger amount over a longer period than intended.
- Continued substance use despite **awareness** of negative consequences of drug use.

Social

- **A great deal of time spent** in obtaining the substance, using the substance, or recovering from the effects of substance use.
- **Neglect** of important social, occupational, or recreational activities.

1.5 Explore patient's expectations and their reasons for presenting at the time

The patient may be:

- Motivated to change behaviour
- Suffering from mental illness
- Pregnant
- Due in court
- Referred from Drug Court
- Referred by a social worker
- Seeking advice about the effects of the drug they were taking
- Have had a recent health risk or have anxieties over their drug taking
- Brought for treatment by a concerned parent or friend
- No longer be able to source their drugs
- Referred from another Medical Practitioner

2 Urine Screening

Patients are asked to provide a fresh (preferably supervised) specimen of urine as part of their initial assessment. Where supervision is not available temperature jars are a useful substitute.

Remember:

- **As a general rule, 3 urine samples, separated by at least 3 day intervals should form part of the initial assessment and be completed prior to commencing a patient on methadone.**

- **The doctor should be satisfied as far as is possible that the sample is from the patient being assessed preferable by supervising the sample.**

- **Urine screening is not a substitute for clinical assessment of the patient.**

A full drug screen tested by the laboratory is recommended prior to commencing methadone treatment. On the spot testing may be done with a dipstick test (available through your local treatment service). If heroin has been taken within the previous 72 hours, urine toxicology should be positive. It does not however indicate what quantity has being taken. Heroin may be detected **up to** 7 days in urine after ingestion however it is usually excreted in 3-4 days.

See Excretion Times **Appendix E.**

3 Management Options

3.1 General management principles

Having made the initial assessment the doctor should decide on the most appropriate treatment option for the patient. Your practice circumstances may dictate to some extent the management options. A guide to management is as follows:

If a patient has a small heroin habit:

e.g.: < 2 bags heroin daily
is smoking only
Using for a short time: < 3-6 months of **daily** use

Consider:

- Abstinence may be achievable in patients with a short history of heroin use
- Some patients may achieve abstinence without the need for substitution therapy.
- Symptomatic relief may be useful as an initial option in these cases (see section on self-detox).Encourage symptomatic detoxification unless this has already failed on previous occasions.
- If pharmacological intervention needed, consider short-term methadone stabilisation followed if possible by reducing doses.

If a patient has an established heroin habit:

e.g. >2 bags heroin daily
Smoking and/or injecting
Using for >6 months of **daily** use

Consider:

- Methadone stabilisation is generally the preferred option
- Following stabilisation methadone maintenance and/or methadone reducing doses as agreed with patient.

Remember:

- **Not all patients are suitable for treatment in primary care. Caution should be exercised where a patient has:**
  - **A history of violence**
  - **Is cross addicted to alcohol, benzodiazepines or other substances**
  - **A history of psychiatric illness**

If you consider the patient unsuitable for treatment in primary care, refer to the nearest addiction treatment service for further assessment

- **Counselling and rehabilitation as an outpatient or inpatient should be offered and made available to all patients as appropriate.**

WARNING!

It is recommended that benzodiazepines and codeine or morphine based medications are not prescribed to opiate dependent persons to assist with the withdrawal syndrome. There is no evidence to support their use as being helpful to the patient. There is a high risk that this medication will be abused and/or sold on the black market.

Chapter 4 Detoxification

1 Self Detoxification

Some people achieve abstinence through self-detox commonly known as going "cold turkey" or going through "sickness". It is important to reassure the patient and their family that "cold turkey" is not in itself dangerous albeit very uncomfortable.

Withdrawal **symptoms** include:

- Flu like symptoms
- Myalgia
- Nausea and diarrhoea
- Piloerection
- Runny nose and sneezing
- Dilatation of pupils
- Insomnia

The most reliable and objective signs of opiate withdrawal are tachycardia and dilated pupils.

The severity of withdrawal symptoms are often not directly related to the quantity of drugs previously consumed. Many other factors including emotional issues

2 Symptomatic Detox

The withdrawal process may be assisted by the short term prescription of other drugs to reduce withdrawal symptoms.

Consider medications such as:

- Non steroidal anti-inflammatories or paracetemol for muscle aches and pains.
- Antidiarrhoea agents such as loperamide 2mg up to five times daily.
- Anti-emetics such as metoclopramide or prochlorperazine 5mg tds.
- Mebeverine tds for stomach cramps.

- Sleep disturbance is a common problem encountered in withdrawal. This can take time to settle but patients should be advised that the sleep difficulties will resolve over time. Benzodiazepines should be avoided in this situation however if a patient is very anxious or agitated benzodiazepines can be considered but for short term use only.

For some individuals who undertake a symptomatic detox, general support, encouragement and an understanding of the symptomalogy may help them to be successful.

Chapter 5 Methadone Treatment

1 Evidence base for methadone treatment

Methadone is currently the only opiate substitute treatment available in Ireland. This is a well established treatment which has been available internationally for many years and which has a strong evidence base for its use**.** Methadone is a synthetic, orally active substance with properties similar to those of morphine. It was developed during World War II and since that time has been thoroughly researched as a substitute medication for opiate withdrawal syndrome.

In the Irish setting the 1mg/1ml sugar-free formulation of methadone is the only one available. It has a long half-life of up to 36 hours and therefore can be taken once daily. It is absorbed from the gastro-intestinal tract and reaches peak concentration at about 4 hours. It is metabolised by the liver and therefore drugs which induce liver enzymes (e.g.rifampicin, phenytoin, carbamazepine) may reduce the clinical effect of methadone. Similarly, enzyme inhibitors (e.g.cimetidine) may potentiate the effects of methadone.

Methadone is a mu receptor agonist. Pharmacodynamic interactions may involve the potentiation of opioid effects by other opioid agonists. Opioid antagonists such as naloxone or naltrexone reduce the opioid effects of methadone. Interactions which may potentiate the CNS stimulant effects or the respiratory effects of methadone include alcohol, anti-psychotic, tricyclic antidepressants or benzodiazepines. Concurrent use of these substances should therefore be avoided.

The benefits of substitute prescribing with methadone are:

- Improvement in health and social functioning.
- Reduction in opiate related deaths.
- Reduction in illicit heroin use.
- Better retention in treatment.
- Reduction in criminal activity.
- Reduction in transmission of HIV.
- It is cost effective.

The benefits of methadone have a strong evidence base and a number of comprehensive literature reviews support the above findings[8]. The 5-year follow up of the National Treatment Outcome Research Study (NTORS) in the UK, which monitored the progress of 1075 clients recruited into either residential or community treatment services over five years, also supports the findings as above[9].

Taken together over two decades, the randomised studies of methadone maintenance demonstrate consistent, positive results over vastly different cultural contexts. If practitioners are properly trained, methadone maintenance can be effectively and safely delivered in a wide range of settings, including primary care.

In 1993 ACMD (Advisory Committee on Methadone Dispensing, U.K.) concluded that:
"The benefit to be gained from oral methadone maintenance programmes both in terms of individual and public health and cost effectiveness has now been clearly demonstrated and we conclude that the development of structured programmes in the UK would represent a major improvement in this area of service delivery."

2 Commencing and Stabilising on Methadone Treatment

The commencement dose should aim to achieve an effective level of comfort, both physical and psychological, while minimising the likelihood of overdose. In deciding on a starting dose:

- Assess average daily intake of illicit drugs from drug history.
- Start on a low dose i.e. **not greater than 30mg** daily and work up. This minimises the risk of overdose.
- If tolerance is low e.g. in someone with a small or recent habit,10-20mg may be more appropriate.
- Increments should be no greater than 10mg at a time.
- Increments may be made until, there are **no physical withdrawals** and **illicit drug use has ceased**. **Higher doses may be required to eliminate cravings.**
- Do **not** continue to increase the dose if there are signs of intoxication.
- It may be that the patient continues illegal drug use because the dose of the methadone is not sufficient.

Stabilisation doses must be determined individually because of differences in metabolism and body weight**. Patients usually stabilise on doses between 60mg to 80mg.** However some patients can stabilise on lower does particularly if their habit is small. While lower doses may relieve signs and symptoms of withdrawal, higher doses may be required to obliterate cravings. Adequate doses of methadone will block the euphoric effects of heroin.

Higher doses of methadone (>80mg) may be required in patients who are on concomitant medication which induce enzymes involved in methadone metabolism. Typically this includes anti-retroviral and anti tuberculosis medication, which usually reduce serum methadone levels by 50% requiring a similar dose increase.

Remember:

- **It is important to note that commencing a methadone programme can be a risky time for patients as tolerance is uncertain at the early stage of treatment.**

- **Level 1 doctors should not increase patient doses without seeking advice from your GP Co-ordinator.**

- **If a patient requires a dose > 80mg and you have limited experience of treatment consider consulting with your GP co-ordinator for advice.**

3 Dispensing Instructions for Methadone

There are two considerations when methadone dispensing arrangements are being made:

- **Safety of the individual patient**
- **Safety of other patients**
- **Avoiding street diversion of methadone**

Supervised consumption of methadone is recognised as an important element in the delivery of methadone treatment services because it:

- Reduces the risk of a patient ingesting in excess of their recommended dose.

- Reduces the risk of the patient diverting their methadone to other persons or the illegal market.

In the initial stabilisation phase it is recommended that:

- **Consumption of methadone should be supervised <u>daily.</u>**

If a drug user is making satisfactory progress on the programme and you are clinically satisfied that the patient can safely manage their own dosing, the dispensing intervals can be gradually increased to three times weekly, then twice weekly, then weekly. If the patient destabilises, return to more frequent dispensing is recommended. All patients should remain on at least once weekly supervision

Greater caution in allowing take home doses should be exercised where there is suspicion of alcohol abuse, benzodiazepines or other substance abuse. The rationale for this is a safety one. The co- abuse of alcohol or benzodiazepines increases the risk of fatal overdose by potentiating the risk of respiratory depression.

If a pharmacy does not have the facility for supervised consumption this should be brought to the attention of the GP co-ordinator or the liaison pharmacist if this is the case.

Once stable, it is currently recommended that:

- **At least one dose per week is supervised in the chemist.**

The rationale for this is that it minimizes the risk of the patient reducing their prescribed dose and diverting methadone onto the black market. This policy needs to be carefully explained to the patient as they may be exposing themselves to the risk of overdose on the day of supervision due to reduced tolerance.

- **No more than one week's methadone should be dispensed at one time except for holidays. (See special dispensing arrangements)**

There are additional risks of street diversion of methadone when methadone is dispensed in large amounts.

Exceptions to this may be:

- **Stable patients on very low doses (e.g. < 15mls) may not need supervision.**

- **Higher doses (>80mls) are potentially more dangerous if given in large take away doses. It may be prudent to have twice weekly supervision in such cases.**

Remember:

- **It is necessary to specify on the Methadone prescription what level of supervision is required i.e. every day, alternate days etc. There is a special section on the Methadone script where this can be specified. To minimise inconvenience for the patient, consumption should ideally be supervised on the day the patient attends the pharmacy with his/her script.**

See examples of Methadone Prescription Forms **Appendix F.**

The pharmacist is a very valuable member of the care team. Regular communication with the patients' pharmacist should be encouraged as the pharmacist may often have a useful insight into patient progress by virtue of the fact that they are seeing the patient every day.

Summary:

- **All doses supervised until patient stable**
- **Minimum of one dose supervised weekly even if patient stable**
- **Caution with doses > 80mls daily: consider twice weekly supervision**

4 Detoxification and Methadone Reduction Regimes

Stability on methadone offers the opportunity to improve the overall personal, family and social functioning of the individual. It may take months or even years for a drug user to reach the stage where a reduction in their methadone can be considered. Treatment options should be regularly reviewed with the patient and realistic gaols set, which will maximise the patient's health.

All dose reductions whether detoxification or slow reductions, are unhelpful if **imposed** by the prescriber. A reduction in dose should always be negotiated with the individual drug user; if imposed it can lead to a return to street drugs, unsafe injecting and a sense of failure for the patient. The patient needs to feel safe, comfortable and ready to reduce their dose before attempting to do so. It can often cause anxiety for the drug user therefore reassurance that treatment will be available if reduction is unsuccessful is important. There are two types of approaches towards abstinence: detoxification over a defined period or slow dose reductions over months or even years.

4.1 Detoxification

Detoxification is defined as opiate withdrawal which takes place over a defined period of time. Detoxification can take place safely on an outpatient or an inpatient basis. While the overall success rate for detoxification is low, especially at the first attempt, certain criteria can enhance the possibility of success. Careful assessment using the following criteria is essential.

Opiate detoxification is more likely to be successful if there is:

- Strong patient motivation.
- Good psychosocial support.
- Psychosocial stability.
- A defined after-care plan.Places for inpatient detoxification are limited and in most instances should only be considered if the patient has tried a supported community detox in the first instance.

4.2 Slow Reduction of Methadone

For many patients achieving stability on methadone is their first goal. Having reached a level of stability and where there is good psychosocial stability, the patient may wish to consider working towards abstinence by slowly reducing their methadone dose over time. There is no formal evaluation of this approach but clinical experience would suggest that:

- Flexible, separately negotiated dose reductions are best.
- Start with small reductions; large reductions are more likely to fail. See Summary.
- Further reductions can follow when the drug user feels confident and stable on the new dose.
- A return to the previous dose level may be necessary if the drug user does not cope with the initial drop in dose. However dose reduction can be tried again, perhaps in smaller steps.

Advantages of this approach

- Reductions can be planned to take account of other circumstances in the drug user's life.
- Each successful small step will help to reinforce progress and boost the drug user's self esteem.
- The drug users will be able to focus on small reductions rather than feeling anxious about eventually having to cope without drugs.
- The drug user is more likely to succeed in eventually getting off drug and staying off.

Remember:

- **It is usually too difficult for patients to try to reduce from both methadone and other drugs at the same time.**

- **If patient taking more than one drug, aim to reduce one drug at a time. Benzodiazepines ideally should be reduced first once the patient is stable on their methadone.**

- **Before attempting to reduce their methadone dose the patient should be stable on that dose and not abusing other drugs.**

- **Many patients may never be able to achieve total abstinence. It is important that all reductions are by negotiation**

Summary: Methadone Reductions

The dose reductions outlined here are for guidance only; negotiate individual reductions with the drug user. In general, reductions of between 5-10% of the current dose is recommended depending on the individual patient.

Example:

If stable on more than 100mgs methadone
- Reduce by 5-10 mgs at a time

If stable on 40 - 90mgs methadone
- Reduce by 5mgs at a time

If stable on 20 - 40mgs methadone
- Reduce by 2-5mgs at a time

Below 20mgs methadone
- Reduce by 1-2 mgs at a time

5 Monitoring and Review

Drug users on methadone should be seen regularly for review. For most stable patients this is a weekly review. The frequency of the review however, will depend on the stage of their treatment programme:

- At the **start** of their programme when the methadone dose is being determined, the patient should attend daily at their pharmacy or clinic and should be reviewed if possible **twice weekly** by their doctor.

- Once stable i.e. urines samples are negative for opiate, a weekly review by their doctor may be appropriate. Daily dispensing of methadone should however continue until the patient is stable usually for about three months.

- Patients stable on methadone for a period of one year with urine samples free from illicit drugs may be seen fortnightly if it is considered clinically safe to do so.

More frequent review may be appropriate if drug user:

- Is continuing to use illicit substances

- Is chaotic in their behaviour e.g. running out of medication early, missing appointments
- Has ongoing medical or mental health issues
- Is undergoing dose adjustment (either up or down)

Regular patient review should include a discussion with the patient around adequacy of dose, additional drug use, psychosocial issues and a urine screen. Urine is currently the most reliable body fluid for drug screening purposes. Where possible, the urine sample should be directly supervised. However in the primary care setting this may not always be possible for logistical reasons. In these situations all reasonable precautions should be taken to ensure the integrity of the sample e.g. check temperature of sample by having a temperature strip on the urine jar; no coats or bags allowed into toilet; pockets checked or emptied before entering toilet; laboratory testing for methadone metabolites and creatinine. If urine sample results are required for forensic purposes, it is necessary to have more rigorous testing procedures.

6 Destabilisation

It is not uncommon for patients who have been doing well on methadone treatment to have relapses to illicit drug use. Often this will involve isolated incidents. If relapse continues for any length of time the patient may re-experience the difficulties associated with chaotic drug use.

This process of destabilisation may occur as a result of some trauma or set back in the patient's life. Sometimes it may be a gradual deterioration with no obvious cause.

Destabilisation can be caused by a number of factors:

- The perceived boredom of sobriety may cause patients to relapse.
- Stressful life events such as bereavement, court cases and relationship problems.
- Sometimes changes in treatment location may lead to the return to drug use.
- Onset or relapse of a psychiatric problem or illness.

Risks associated with destabilisation include:

- Re-exposure to the risk of viral diseases.
- Relapse to criminal activity.
- Relapse to chaotic lifestyle.
- Deterioration in family relationships.

6.1 Managing a patient who has destabilised

A doctor who is seeing a patient weekly may notice a change in that patient if they are destabilizing. The early signs of destabilisation may be:

- Opiate positive urinalysis.
- Missed appointments or late attendance at appointments.
- A change in mood or demeanour.

There are a number of strategies, which offer the patient increased support during a period of destabilisation. It is important to explain to the patient that any changes in their management are designed to be **supportive** rather than **punitive.**

- Methadone dosage may need to be increased if the patient has been using heroin on top of their normal methadone dosage.
- Increase the surgery attendance. To encourage attendance, prescriptions can be written twice weekly during a period of instability.
- Urine testing may be increased in frequency to give a more accurate picture of the patient's drug taking.

A period of destabilisation may, once resolved, present an opportunity to encourage the patient to consider the "bigger picture" of their addiction. Patients should be offered referral to counselling or rehabilitation services.

Remember:

- **Destabilisation does not automatically require re-referring a patient to a clinic. However, if a GP feels that the behaviour of the patient is becoming too difficult or it is unsafe to continue treatment of a patient in a community setting, they should contact their GP Coordinator. Under the terms of the Methadone Treatment Protocol the HSE agrees to transfer unstable, difficult or abusive patients from the community to treatment centres immediately if necessary.**

- **It may be helpful to share case histories of difficult clients with other colleagues. Even the most experienced GP's may have difficulties in managing individual clients.**

Chapter 6 Special Groups and Substitute Prescribing

Substitute Prescribing should be given special consideration in:

1. **Adolescents**
2. **Pregnant Women**
3. **Psychiatric co-morbidity**

1 Adolescents

Only Level II GP's who have access to adequate psychosocial supports should initiate treatment in adolescents. A multidisciplinary team approach is considered best practice when managing underage drug users. Other team members should include a drug counsellor, consultant child and adolescent psychiatrist, family therapist. Interagency work with Social Workers, Probation and Welfare and Housing Authorities is also important aspect of working with adolescents. Engaging the support of the young persons family whenever possible is desirable.

1.1 Parental Consent

The Offences against the Person's Act 1997, empowers 16 years old and older adolescents to give consent to medical treatment. This however is modified by the Constitution, which enshrines the right of moral guardianship of an adolescent, (under the age 18) to the parents and is further modified by the ability of the adolescent to understand the nature of the treatment and the risks involved. Therefore even if an adolescent is capable of consent it is strongly advised that parental consent is obtained before substitute prescribing is commenced in 16-18 year olds. Without such consent a second opinion of a GP Co-ordinator should be sought.

1.2 Treatment

If substitute prescribing is considered appropriate for a particular adolescent, it ideally should be for as brief a time as possible. The aim, where practicable, should be to reduce or detoxify once the adolescent is stabilised and is no longer involved in harmful drug use. However, a balance needs to be struck between continuing treatment and the risks of ongoing drug misuse. Methadone maintenance is unlikely to be the first treatment of choice for most adolescents with opiate misuse problems. However, if there is a clearly defined opiate dependence and if other interventions have failed, longer term substitute prescribing may be the most appropriate intervention for an individual.

Remember:

- **The induction phase of treatment should be taken more slowly than with adults because tolerance is usually lower in the adolescent.**

2 Pregnancy in Opiate Dependant Women

Treatment of opiate dependant women has been shown to have positive influences on pregnancy outcomes[10]. Women attending treatment services have better antenatal care and better outcomes in terms of childbirth and child development[11].

Liaison midwives appointed by the HSE, work in the three Dublin maternity hospitals. Their role is to provide a link between drug treatment services, maternity services and hospital social services. It is important to refer the patient to the liaison midwife as early as possible on entering treatment.

Drug stability while on treatment is important in terms of pregnancy outcomes. Patients who continue to use heroin and fail to stabilise should be offered admission to an inpatient unit for stabilisation. If a woman wishes to detoxify during her pregnancy this can be offered on an out- patient or in-patient basis. It is recommended that detoxification in the middle trimester may be safest as there is a higher risk of miscarriage in the first trimester and premature labour in the third trimester.

Most mothers remain stable during pregnancy and are very capable parents. Some mothers who use drugs chaotically during pregnancy may have difficulty in parenting. Social supports may need to be put in place and the situation monitored by social services. These responsibilities are clearly outlined under 'Children First' (Department of Health, Ireland, 1999)[12].

As with all pregnant women, any prescribed medication should be reviewed at the earliest opportunity. Nicotine, alcohol and benzodiazepine consumption should be given special consideration in opiate dependant pregnant women.

There is evidence of increased risks of miscarriage, intra-uterine growth retardation and pre-term deliveries in drug using women. These effects are multifactorial and are common in woman from the lower-socioeconomic groups and those who smoke. Specific illicit drugs have been shown to have some specific effects e.g .maternal cocaine use increases the risk of placental abruption, stillbirths and sudden infant death syndrome. Heroin has been shown to cause low birth weight babies and premature delivery.

Remember:

- **Attracting and maintaining pregnant women in treatment is therefore important and should always be prioritised.**

2.1 Breast-feeding

Breast feeding should be encouraged in the usual way even if a mother is taking methadone. Breast feeding is contraindicated in HIV positive patients. It is not contraindicated in Hepatitis C positive people or patients with any other form of hepatitis. Specialist advice is available for mothers who are HIV or Hep C positive.

2.2 Neonatal Abstinence Syndrome

Neonatal Abstinence Syndrome (NAS) occurs to a greater or lesser extent in most babies born to opiate dependant women.
It is characterised by:

- Irritability and poor sucking reflex.
- Gastrointestinal symptoms, respiratory difficulties.

Treatment includes supportive swaddling, frequent small feeds and no sudden movement. Pharmacological treatment when indicated is usually with oral morphine or in rare severe cases with phenobarbitone.

There is no direct correlation between methadone dose and NAS. There is a suggestion however with doses less than 40mg the risk of NAS is reduced as long as no other substances are being abused.

The use of benzodiazepines during pregnancy may cause neonatal withdrawals. Their use can cause delayed onset and prolongation of neonatal withdrawals. Symptoms of abstinence may occur at 7-14 days sometimes after the baby has been discharged from hospital.

3 Psychiatric Co-morbidity or Dual Diagnosis

There is a significant incidence of mental health problems in opiate dependent patients particularly anxiety and depression. It is recognised that in excess of 50% of illicit drug users and in excess of 60% of alcohol abusers have a dual diagnosis. Significant improvements in psychological well being have been shown when patients engage in drug treatment. There is evidence of improved overall social functioning when the underlying mental health problem is managed in conjunction with their substance abuse problem. Care planning and multidisciplinary team work is essential with this particularly vulnerable patient group.

3.1 Depression

Depression is common in the drug using population and this should be assessed and monitored closely. Patients who require antidepressants should be prescribed S.S.R.I.s where possible. Tricyclic antidepressants (particulary Dothiepin) should be avoided, as there is a high incidence of abuse in the Irish context.

Managing drug dependent patients who have concomitant severe mental health problems can be very challenging in the primary care setting. It may be appropriate to refer such patients to a Drug Treatment Centre where there is access to regular psychiatric evaluation. Hospital admission may be required in the some cases, particularly patients at risk of suicide.

3.2 Anxiety/Paranoia

Stimulants such as cocaine ecstasy and amphetamines are a significant cause of bith anxiety and paranoia. However any drug if used to excess can cause these symptoms. There is now increasing evidence that cannabis use in vulnerable individuals can cause these symptoms and in some instances may unmask an underlying risk of schizophrenia.

Remember:

- **Patients with significant mental health issues or who have a past psychiatric history should be prioritised for treatment.**

Chapter 7 Drug Related Deaths and Overdose

Drug Related Deaths is an important issue which has been highlighted at the World Health Organization (WHO) and at the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) as being one of the main consequences of drug use and a major cause of death in young people. Drug related deaths have been identified by the EMCDDA as being **preventable** in many instances.

People most at risk include:

1. Male drug users – (75%)
2. Drug users following detoxification
3. Polydrug users – (89% tested positive for more than one substance)
4. Drug users on entry to or on release from prison - 13%
5. Opiates used with alcohol and/or benzodiazepines contributed to many of the deaths
6. Drug users using alone

In 2005 a working group was convened by the Irish College of General Practitioners Drug Misuse Programme to examine the issue of drug related deaths in Ireland.[13] The report makes recommendations which, if implemented could prevent many drug related deaths. These conclusions of the report are that:

- Treatment providers should identify high risk individuals.
- Risky behaviours and situations should be addressed with the individual.
- Education around overdose prevention is important for high risk individuals and referral to an outreach worker/addiction counsellor should be made where appropriate
- Patients being initiated on methadone treatment are at particular risk of overdose due to the cumulative effects of methadone, ongoing use of heroin and low/unknown tolerance. Increasing the dose slowly during the induction phase of treatment helps to ensure that the prescribed methadone dosage does not exceed the tolerance level, particularly when other drugs such as benzodiazepine and alcohol are being used.
- Once on methadone treatment the GP should minimise the risk of diversion of prescribed methadone by arranging supervised consumption. Take away doses should ideally not be provided until patient stable and in most cases for a

period of three months after commencing the programme. When patients are receiving take away doses they should be informed about the safe keeping of methadone i.e. out of reach of children and others.

- Fatal overdose in methadone maintained patients most commonly occur when other drugs such as benzodiazepines and alcohol are being abused. Tricyclic antidepressants, cocaine and heroin are also implicated in overdose if being abused.

- All drug users undergoing detoxification, in both outpatient and inpatient settings should be made aware of the risks of overdose particularly following detoxification. Patients should be requested to consent that they have been informed of the overdose risk associated with detoxing.

- On release from prison, tolerance may be lessened and a patient who resumes the level of heroin use as previously (when their tolerance was higher) may be at risk of a fatal overdose. All known drug users should therefore be facilitated with an early appointment with their GP. This is particularly important for drug users who are **not** on methadone treatment as they are considered a higher overdose risk.

- Opiate naïve persons may acquire methadone for occasional recreational use and are at serious risk of fatal overdose.

Remember:

- **Signs of toxicity/overdose range from slight drowsiness to respiratory depression, coma and death.**

- **Naloxone 1mg/ml should be readily available in all practices providing drug treatment for use in cases of opiate overdoses. Practices should have emergency resuscitation facilities available and be trained in Basic Life Support (BLS)**

<u>WARNING!</u>

Overdose risk following detoxification.
As opiate tolerance will be reduced following detox, it is important to warn patients of the risk of overdose should relapse to heroin use occur following a period of abstinence.

Chapter 8 Problem Section

The problems listed are ones which present from time to time in the management of opiate users on the MTP.

1. **Missing the Chemist**
2. **Giving False Urine Samples**
3. **Special Dispensing Arrangements**
4. **Needle –stick injuries**
5. **Drug driving**

1 Missing the Chemist

Patients miss their dose at the chemist for many reasons. If there are practical reasons why a patient is missing the chemist e.g. opening hours, work commitments or distance to travel, this should be addressed as soon as possible with a view to making alternative arrangements for dispensing.

Missing the chemist may also be a sign of chaos or destabilisation.

A patient who misses 1 day of methadone may not feel any withdrawals due to the long half-life of methadone. By the second day most patients will be experiencing withdrawals and in some cases will resort to heroin to deal with this.

If a patient has missed 2 consecutive days at the chemist it is recommended to:

- Review the patient as soon as possible
- Review a patient's dose of methadone
- To reduce their dose to **30mg** or **half their previous dose** to minimise the risk of opiate overdose.
- After restarting the patient at a lower dose their dose should be titrated upwards, increasing at no more than 10mg methadone every day.
- The community pharmacists should be made aware of this policy in advance.

In some situations it may be acceptable to discuss the patient's condition with the pharmacist if it is not practicable to review the patient in person. However the clinician should be satisfied that whatever action is taken does not put the patient at risk of overdose.

Remember:

- **The pharmacist should always inform the GP if a patient misses a dose**.

2 False Urines

It can be difficult to know when someone is giving a false urine. Directly supervising the urine or using temperature urine bottles may overcome this. Other practical alternatives to direct supervision which may suit some practices include emptying all pockets, leaving jackets, bags etc in consulting room prior to giving sample.

Patients may be tempted to provide a false urine sample for a variety of reasons:

- They may be continuing to take heroin
- They may be taking another substance and may not wish to disclose this.
- They may not be taking methadone as prescribed.
- To maintain a good urine record for the purposes of court.
- They may not want to disappoint the doctor.

By far the commonest reason for the false urine is heroin or other illicit drug use.

Some patients may provide a false urine because they have not been taking their methadone dose as prescribed. In this scenario they may be diverting or selling their methadone. This can have serious consequences with regard to the patient's tolerance and the risks need to be highlighted with the patient. Management of this situation should be discussed with the GP co-ordinator, as each situation may be managed differently.

3 Special Dispensing Arrangements

All efforts should be made to ensure that a patient on a maintenance script does not have their treatment interrupted unnecessarily. Circumstances, which may cause a change to normal arrangements, are:

3.1 Public Holidays and Bank Holidays

Special provision for Christmas, Easter and bank holidays may be required depending on local dispensing arrangements. Discuss the opening hours of the pharmacy in advance and negotiate take away doses with the patient. The number of take away doses will depend on the patient's level of stability

3.2 Holidays

At the commencement of treatment all patients should be made aware of dispensing arrangements for periods of travel. The patient should provide proof of travel in

advance which allows time for any special arrangement to be made with the pharmacist. It also provides an opportunity to discuss issues around safe carriage and use of methadone while away.

There are currently no restrictions or legal requirements regarding carrying methadone for one's personal use. It may be prudent however to provide the patient with a letter confirming it is for personal use. If the patient is travelling for an extended period of time involving large quantities of methadone, it may be necessary to arrange treatment with a prescriber abroad.

Take-away doses may be provided for a holiday period provided a patient is stable and capable of managing a take away dose safely. When a patient is not stable, careful consideration should be given before allowing patient take away doses. It is at the discretion of the prescriber whether he/she feels it is safe to give the patient take away doses however, ultimately it is the patient's responsibility to take their medication safely.

Remember:

- **Current restrictions on carrying liquids in hand luggage is limited to 100mls. Patients should be reminded of this restriction prior to travel. There is no restriction on the amounts carried in checked in luggage.**

3.3 Prison

Methadone treatment as delivered in the Prison Service is beyond the scope of this document. However as there are maintenance programmes in some of the prisons, a patient can now continue their treatment if they find themselves detained. Ideally there should be no interruption to treatment on admission or discharge from prison. In practice this is not always the case and strenuous efforts are being made to improve the system. Inter-agency communication is vital if unnecessary interruptions to treatment are to be avoided. On entry to prison, a letter from the treating GP outlining current clinical and virology status should be sought by the prison services. Also, on release, confirmation of continued treatment while in custody and other relevant details should be forwarded to the patient's GP.

3.4 Hospital

Patients should be continued on their methadone treatment while in hospital unless there are medical grounds for stopping it. It is more common for patients to be admitted to hospital with complications of their drug use due to non compliance with their treatment programme. In most cases treatment will be re-commenced in this situation and the patient discharged to the relevant methadone agency for continuation of treatment.

4 Needle-Stick Injuries

Needle stick injuries are rare but can happen as a result of any of the following:

- Accidental injury during phlebotomy or disposal of sharps
- Assault/mugging with a syringe and needle
- Inoculation of an open wound

The risk is dependent on the degree of penetration and the amount of blood inoculated.

The risk of transmission for blood borne viruses following a needlestick injury:

Hepatitis B = 30%
Hepatitis C = 1.8%
HIV = 0.3%

4.1 Hepatitis B

Hepatitis B has the highest risk of transmission following needlestick injury but is eminently preventable. All health care workers should be fully vaccinated. The risk to a fully immunised worker who has shown an adequate immune response is virtually zero.

Any **non-immune** person exposed to hepatitis B virus should be given hepatitis B immunoglobulin prophylaxis as soon as possible. This should be done preferably within 48hours but not later than one week after exposure. An accelerated hepatitis B vaccination programme should then be commenced.

4.2 Hepatitis C

The risk of hepatitis C is increasingly problematic due to the high prevalence in the drug using population. There is currently no vaccine or immunoglobulin available.

4.3 HIV

Higher transmissions rates are likely following needlestick injury if the:

- Needle has been used intravenously
- Source person has a high viral load
- Penetrating injury is deep
- Needle is visibly contaminated with blood

Remember:

- **Re-sheathing needles remains a common and avoidable cause of needle stick injury.**

- **Universal precautions should be adopted in all situations where blood spillage may be likely**.

- **In the case of needlestick injury all patients should present to the nearest hospital with an Infectious Diseases Department for appropriate management. The viral status of the source person should be ascertained. Follow -up blood samples should be taken at 6 weeks and 6 months to account for the "window period" for sero-conversion.**

5 Drug Driving

The ethical issues surrounding whether or not a doctor should disclose information regarding a patient who is driving under the influence of a substance are complex. While the onus is on the licence holder to report use of any substance, prescribed or otherwise, which may impair their ability to drive, doctors may find themselves in a position where a patient is putting themselves and other road users at risk. In such situations it is good practice to make the patient aware of your concerns and advise them to stop driving until they are safe to do so. A thorough assessment of the risks involved should be clearly documented in the patient record before a decision to breach confidentiality is made. Before disclosing any information regarding an impaired driver, it is advisable for the doctor to discuss the situation with their medical defence organisation

The induction phase of methadone treatment needs particular attention with regard to driving. It is prudent to advise patients that they should not drive while being commenced on methadone treatment and until their dose is stabilised. This is because the patient may feel sedated in the early stages of their methadone programme. However, patients who are stable on a regular methadone dose and who are adhering to a monitored programme are considered at low risk of being sedated and unfit to drive.

All psychoactive drugs have the potential to impair driving. When combinations of drugs are used (i.e. with other medications, with illicit substances or with alcohol) the risks are further increased.

The complex issues surrounding drug driving will be addressed under action points 32,45,75,76,77 and 78 of the Road Safety Strategy 2007-2012 (www.rsa.ie)

Chapter 9 Management of other Drugs of Misuse

Many patients who are addicted to heroin also regularly abuse other prescribed or illicit drugs. If not currently using them they may well have used them in the past.

The use of other substances may become apparent due to:

- Patient disclosure
- Patient behaviour
- On urinalysis

Drugs commonly misused are:

- Alcohol
- Benzodiazepine
- Cannabis
- Cocaine
- Amphetamines/ecstasy
- Tricyclics

General principles of management include:

- Take a full history
- Assess whether the drug user acknowledges a problem
- Ask them to keep a drug diary
- Giving information about the effects and dangers of drugs
- Encourage them to reduce their intake by setting realistic goals together
- Explore any underlying problems

1 Alcohol

Patients on methadone treatment commonly abuse alcohol. A number of factors make this particularly high risk for drug users:

- Alcohol use in combination with methadone and other drugs increase the risk of overdose
- There is lower retention in treatment when patients are also abusing alcohol
- High rates of Hepatitis C increase the risk of cirrhosis

The general principles of managing of patients with an alcohol problem remain the same as the general population. The option of transferring a patient to a treatment centre should be considered if the alcohol problem is unmanageable in the community setting

For most patients inpatient detoxification for alcohol is not routinely required; outpatient or home detoxification is often sufficient. For patients physically dependent on alcohol, planned detoxification may be appropriate.

2 Benzodiazepines

This best practice committee endorses the Benzodiazpeine Report[14] and the Good Practice Guidelines for Clinicians[15].

Benzodiazepine misuse is common in opiate users with one report suggesting 70% of patients in treatment had benzodiazepine positive urine during the past month.[16]

Prescribing benzodiazepines for known opiate users should only be considered if:

- Benzodiazepines are being taken daily – verified by presence in the urine. However it is important to note that benzodiazepines may stay in the urine for up to 6 weeks and it is difficult to quantify the amounts taken on a routine screen. Benzo levels can be checked on request through the laboratory at the Drug Treatment Centre Board[17].
- There is convincing evidence of dependence following clinical evaluation (use ICD10 criteria).

If in doubt discuss the case with your GP Co-ordinator before issuing a script.

When prescribing benzodiazepines, special consideration should be given to patients on methadone treatment:

- Consider daily dispensing of benzodiazepines if there are any concerns re patient stability.

- If a patient is detoxing from their benzodiazepines, the methadone dose should be kept stable throughout the reduction period.

- Concurrent detoxification in the community of both drugs is not recommended.

Diazepam is the drug of choice for benzodiazepine maintenance or detoxification. It is a good idea to convert all benzodiazepines to diazepam using the following conversion chart:

DRUG	DOSE
Chlordiazepoxide	15mg
Diazepam	5mg
Aloprazolam	500 microgram
Lorazepam	500 microgram
Oxazepam	15mg
Temazepam	10mg
Nitrazepam	5mg

The advantage of Diazepam is that it has a relatively long half-life and is available in different strength tablets. The dose needs to be adjusted relative to withdrawal symptoms. Commencement doses should not exceed recommended therapeutic dose. There is no single best detoxification regime for benzodiazepines; discussion and negotiation with the patient is imperative. Goals should be simple and attainable for the patient.

In line with the recommendations of the Benzodiazepine Report patients on benzodiazepine prescriptions should be regularly reviewed on at least a monthly basis because of the long-term dependency effects. Regular communication between prescribers for opiate users is essential (e.g. between treatment clinics and community GPs) to avoid duplicate prescribing.

3 Cannabis

This is used extensively, especially in young people. It is generally considered not to be a physically addictive substance (as in no defined physical withdrawal syndrome) but patients may have a significant psychological dependence. Regular and extensive use, especially if used throughout the day, may be associated with lethargy, low motivation, depression anxiety and paranoia. There is increasing evidence regarding links between schizophrenia and chronic, heavy cannabis use particularly with early onset of use. There is no substitute treatment available for cannabis users. Addiction counselling is the only intervention found to be useful. It is well recognised that some

people with mental health issues may self-medicate with cannabis and other substances. A mental health assessment of these patients is very important.

4 Ecstasy

Ecstasy is a stimulant which is not physically addictive. If used extensively at the weekends it may reduce performance during the week. Regular misusers sometimes use heroin, methadone or benzodiazepines as a means to come down from ecstasy and therefore risk becoming addicted to these substances. Rarely ecstasy can precipitate psychosis. It may be associated with heat exhaustion, Disseminated Intravascular Coagulation (DIC), renal failure, coma and death. This may not be related to the amount ingested; it may be an idiosyncratic response to the drug. There is an increased level of clinical depression in people who use ecstasy due to the interference in serotonin metabolism.

5 Cocaine

Cocaine is a stimulant, which may cause significant psychological dependence. But when used in a prolonged and substantial way may cause physical dependence. The user may experience euphoria, increased energy, heightened sexual pleasure and alertness.

Negative effects such as agitation, anxiety, panic attacks, loss of libido, insomnia, labile mood, paranoia and hallucinations may also be experienced.
Cocaine is commonly snorted, smoked as crack, freebased or injected intravenously. Cocaine use can be confirmed by urinalysis. There is no substitute treatment available for cocaine dependency but counselling, the 12 step AA model, or cognitive behavioural therapy may be useful. Depressed mood is common in users coming off cocaine and clinical depression should be looked for and treated as appropriate.

Peak concentrations are reached after 5 to 20 minutes when inhaled intra-nasally and within seconds when smoked or injected. Intoxication is noted by dilated pupils, tachycardia, tachypnoea and hypertension.

Medical complications include:

- Cardiac: arrhythmia, arrest and infarction
- CNS: seizures, stroke and subarrachnoid haemorrhage
- Deep vein thrombosis
- Vasculitis and vascular spasm
- Complications in pregnancy

Necrosis of the nasal cartilage and septal perforation may occur when cocaine is snorted. When inhaled as “crack” or freebased, pneumothorax or pulmonary oedema may occur.

When combined with alcohol, cocaine can be a particularly lethal drug. Cocaethylene forms in the blood.

6 Amphetamines

Amphetamines are often used recreationally e.g. at weekend and maybe mixed with other drugs such as ecstasy. They are not physically addictive but psychological dependence is severe.

Chapter 10 Blood Borne Viruses in Opiate Users

1 Hepatitis C

Hepatitis C (HCV) is the most common cause of chronic viral infection in the western world. First described in 1989, HCV is a single stranded RNA virus. At least six genotypes have been identified worldwide but genotype 1 and 3 are commonest in Ireland, United Kingdom and North America. Genotype 3 is currently more amenable treatment than genotype 1.

All patients receiving drug treatment should have screening for Hepatitis C and should be referred as appropriate.

- HCV infection in the drug using community in the Dublin area is widespread with as many as 62 – 80% of intravenous drug users believed to be infected. Those with active viraemia are infected with either genotype 1 or 3 in approximately equal proportions.

- Diagnosis of HCV infection is by enzyme linked immunoabsorbent assay (ELISA) testing looking for antibodies to HCV. This is confirmed by recombinant immunoblot assay (RIBA). Active viraemia and thence infectiousness is documented by the presence in the serum of HCV-RNA, as measured by Polymerase Chain Reaction (PCR). This test must reach the laboratory within 6 hours of testing to be spun down and frozen (check with your local laboratory for details).

- The mode of transmission has been shown to be primarily through intravenous drug use, with needle or paraphernalia sharing. Sexual and vertical transmissions are thought to account for less than 1% and 5% respectively. The infection rate following a high-risk occupational exposure is estimated at 2%.

- Chronic HCV infection is often silent and is frequently discovered only at routine serological testing. Overt clinical illness at sero-conversion occurs in less than 20% as evidenced by a mild viral illness, nausea, shivering or anorexia. Jaundice is reported in less than 10% of those acutely infected and fulminant hepatitis with rash and arthropathy is unusual.

- 80% of patients do not clear the virus spontaneously. Patients who do clear the virus do not have life long immunity against hepatitis C as there are many variant strains and are they are therefore vulnerable to re infection.

- Patients whose HCV RNA is not detected may be retested annually if appropriate. Patients whose HCV-RNA is detected should be referred for specialist review and liver biopsy to determine the extent of liver damage if appropriate. Treatment is offered to those with chronic active disease (persistent viraemia). It is recommended that it be offered to those patients stabilised on methadone maintenance programmes and not using illicit drugs. Alcohol consumption is contraindicated in HCV infected patients.

- HCV infection is self-limiting in a percentage of infected individuals. The prognosis in chronic infection varies greatly but it would appear that 30% of patients ultimately develop cirrhosis within 30 years. Of those with cirrhosis, hepatic carcinoma develops in approximately 6%. Factors affecting disease progression include age at time of infection, alcohol abuse, co-existing HIV and/or HBV infection.

- Currently treatment of HCV is with pegylated interferon and ribavirin. Pegylated interferon is modified interferon polyethylene glycol (PEG) covalently bound to interferon alpha with enhanced pharmacokinetic properties. The half-life of interferon is extended. The pegylated interferon is administered subcutaneously once a week and ribavirin is taken orally twice a day. Treatment duration is genotype dependant: 24 weeks for genotype 3 and 48 weeks for genotype 1. A sustained viral response is documented by a viral clearance, an undetected HCV-RNA six months after treatment completion.

- Response rates of up to 76-88% have been reported using combination pegylated interferon alpha and ribavirin for 24 weeks with genotype 2/3 and 46-48% for 48 weeks with genotype 1.

- The most frequently reported side effects of treatment with interferon are 'flu-like' symptoms. Alopecia, insomnia, nausea, diarrhoea and psychiatric disorders in particular depression and irritability are also commonly reported. Anaemia, neutropenia, thrombocytopenia and altered thyroid function may also be experienced. The depression associated with interferon may lead to relapse in drug use for some patients; hence appropriate selection is critical and close psychiatric follow up is essential.

- Ribavirin treatment can result in a severe haemolytic anaemia. Ribavirin is also teratogenic and all female treatment candidates must guarantee contraception, by 2 methods for the duration of treatment. All male treatment candidates must guarantee contraception with their female partners for the duration of the treatment and for a follow up period of 7 months.

Summary: Hepatitis C

- **Present in 62- 80% of drug users – including 'heroin smokers'.**
- **80% of patients who acquire hepatitis C don't clear the virus spontaneously.**
- **PCR test identifies the 80% who have not cleared the virus.**
- **Patients who are not using illicit drugs and are PCR positive should be referred to a Consultant Hepatologist.**

- **Up to 80% respond to treatment depending on genotype.**
- **Alcohol consumption has a critical influence on outcome and patients should be advised to consume alcohol very moderately or to abstain entirely.**

Remember:

- **There are a number of Hepatitis C Liaison nurses appointed by the HSE to link between the Hepatology departments in the major Dublin Hospitals and the drug treatment services.**

2 Human Immunodeficiency Virus

The human immunodeficiency virus (HIV) is an RNA virus. Infection results in progressive loss of immune function and to the development of the acquired immunity deficiency syndrome, AIDS. Median time from infection to AIDS without treatment is 10 to 14 years.

2.1 Immunopathogenesis

CD4 is a cell receptor for HIV, found on T-helper lymphocytes. The gp120/41 complex on HIV binds to CD4 to facilitate viral entry. Once inside the cell, viral RNA is converted to DNA and is incorporated into the host genome. The virus uses the cell's 'machinery' to replicate and kills the cell in the process. The normal CD4 range is 350-1500 cells/mm3. CD4 and viral load are surrogate markers of HIV disease. As the disease progresses CD4 falls. The viral load is highest at extremes of infection, seroconversion and late stage disease

2.2 The milestones in the history of HIV disease

- 1978-9 Recognition of AIDS
- 1983-4 Isolation of HIV – 1
- 1984 Advent of diagnostic testing
- 1987-88 Introduction of zidovudine
- 1996 Introduction of HAART (highly active antiretroviral therapy)
- 1996-7 Availability of viral load testing

2.3 Natural history of HIV disease

The HIV positive patient's illness progresses through different stages. With treatment however, this progression can be halted and even reversed. As the T-cell population is depleted different signs/symptoms can be elicited.

2.4 Initial HIV infection

HIV is transmitted through certain body fluids and enters the body through mucous membranes or direct contact with blood, semen, vaginal fluid, breast milk or other body fluids containing blood.

2.5 Routes of HIV transmission

- Sharing needles.
- Unprotected vaginal/anal intercourse, increasing with concomitant STIs.
- Oral sex (less risky).
- Recipients of contaminated blood and blood products.
- Vertical transmission/breast feeding.
- Needle stick injuries.

Primary infection is usually asymptomatic but patients have mononucleosis like illness (seroconversion illness) 2-6 weeks after exposure. At this stage the viral load is high but declines. The CD4 count drops then rises again but does not reach pre-infection level. In early disease with a CD4 of >500 the majority are well but may develop, seborrheic dermatitis, oral hairy leukoplakia or apthous ulceration. There is a slow progressive decline in CD4 – 48 to 80 cells/mm3/year/

In middle stage disease with a CD4 of 200-500 **e**ven with falling CD4, many at this stage are well. Skin conditions predominate, seborrhoeic dermatitis, oral hairy leukoplakia, apthous ulceration, recurrent Herpes simplex, varicella zoster and oral or vaginal candidiasis. Most clinicians would initiate treatment as the CD4 drops below 350.

In late stage disease with a CD4 of 50-200 patients may develop one of the AIDS defining illnesses. These illnesses include:

- Oesophageal candidiasis
- Pneumocystis jiroveci pneumonia (PCP)
- Cerebral toxoplasmosis
- Cryptosporidium
- Tuberculosis
- Cytomegalovirus retinitis
- Lymphoma (EBV)/Kaposi's sarcoma (HHV8)

Prophylaxis against PCP is usually offered at this stage. With advanced HIV disease and a CD4 count of <50 death is likely within 2 years. Prophylaxis against mycobacterium avium complex (MAC) is offered.

2.6 Treatment of HIV disease

HAART (highly active antiretroviral therapy/triple therapy) is a combination of usually 3 or more antiretroviral medications. The medications include nucleoside reverse transcriptase inhibitors, nucleotide reverse transcriptase inhibitors, non nucleoside reverse transcriptase inhibitors, protease inhibitors and fusion inhibitors.

Reverse transcriptase inhibitors (NRTI) are nucleoside or nucleotide analogues which compete with natural nucleoside or nucleotide substrate for binding to the active site of reverse transcriptase.

- **The nucleoside reverse transcriptase inhibitors** include abacavir (ABA), didanosine, lamivudine, stavudine, zalcitabine and zidovudine. **The nucleotide (phosphorylated nucleoside) analogues** include tenofovir.

- **Non nucleotide reverse transcriptase inhibitors (NNRTI)** act by non competitive inhibition of reverse transcriptase. They include efavirenz, neverapine and delavridine.

- **Protease inhibitors (PI)** bind to the active site of HIV protease enzyme and prevent cleavage of polyproteins transcribed during HIV replication. Only non infectious virus particles are produced. The protease inhibitors include ritonavir, saquinavir, nelfinavir, amprenavir atazanavir and indinavir.

- **Fusion inhibitors** inhibit membrane fusion between HIV and the T cell. Enfuvirtide (Fuseon) is a fusion inhibitor administered sub cutaneously, twice daily and is used as salvage therapy when all else has failed

2.7 When is HAART initiated?

Therapy is not routinely initiated at seroconversion except for the resolution of severe symptoms. It is usually started with a CD4 count of <350, if the viral load is very high or if the patient is symptomatic. Therapy is also recommended in pregnancy to reduce vertical spread of the virus. It is used for post exposure prophylaxis, occupational or non occupational. Problems with HAART include side effects, resistant strains, poor compliance, drug interactions, and methadone doses.

NRTI side effects include the class side effect of lactic acidosis, pancreatitis and peripheral neuropathywith didanosine, zalcitabine and stavudine, lipodystrophy with zidovudine and stavudine D4T, and a hypersensitivity reaction with abacavir. The NNRTI side effects include vivid dreams or a ‘feeling out of it’ with efavirenz and rash/hepatitis (especially in pregnant women with T cell>250) with neverapine. The PI side effects include lipodystrophy/hyperlipidaemia/diabetes, nausea and vomiting, hepatitis and nephrolitiasis with indinavir.

Methadone is metabolised primarily by Cyp3A4 system. As all PPIs are CYP 3A4 inhibitors, the patient's methadone level may increase and the daily methadone dose may therefore need to be decreased. As Efavirenz, Ritonavir, Abacavir and Neverapine all promote methadone metabolism by CYP3A4, the patient's methadone level may decrease and the daily methadone dose may therefore need to be increased.

2.8 Psychological aspects of HIV disease

Psychiatric disorders/substance misuse can be independent risk factors for HIV infection. HIV is neuropathic and opportunistic infections or antretriviral drugs may cause psychiatric symptoms. Psychiatric disease may affect adherence with antiretroviral medications. Receiving a positive HIV diagnosis may cause understandable feelings of loss, mood change, sexual/relationship issues, family issues. More extreme responses could result in substance misuse, chronic distress/, attempts at self harm or attempted suicide. It is important to watch for suicidal ideation and to realise that the impact of diagnosis goes beyond the patient and may involve loved ones, including partners, family members or care staff.

Psychological stress may be transitory and usually responds over a 6-12 month period. In some cases may be more permanent and the prognosis is worse in those suffering from social deprivation/isolation, poor coping skills, previous pre-morbid psychiatric illness, personality disorder, previous sexual abuse or those in ethnically marginalised groups. Many drug users belong to one or more of the above groups.

2.9 Prevalence

Recent statistics from the Health Protection Surveillance Centre show that the cumulative total of HIV cases reported to the end of December 2006 is 4,419.

2.10 HIV positive tests

- 30.0% intravenous drug users
- 21.9% homosexuals
- 18% heterosexuals/risk unknown
- 17% haemophiliacs/children and others

It is clear from these findings that intra-venous drug users (IVDUs) are at the high risk of HIV infection and policies around drug treatment and harm minimisation must take this into account.

2.11 HIV Testing

Some at risk individuals self -refer for HIV testing. Others, particularly IVDUs should have opportunistic screening. There was a reluctance to test, in the past, because of the limited treatment options and the poor outcomes of treatment. With the advances in treatment modalities, this is no longer valid. The initial screening test is an Elisa test. If positive this is followed by an immunoblot line assay (Western blot). The advantages of testing include resolving uncertainty about HIV status, facilitating the prevention of further transmission and to assist in informed decision making.

Disadvantages include psychological stress; a positive result may trigger depression or suicide especially in the poor, IVDU or those with pre-existing psychiatric disease. Some may need to defer testing until skills and supports are optimised. There is also an anxiety in keeping the result from friends and family and in negotiating sex.

There are certain issues, which should be discussed with a patient before a HIV test is taken.

Pre-test discussion should include:

- The likelihood of a positive result
- Financial implications of testing and/or a positive result
- Identifying their support network
- What treatments are now available
- Confidentiality issues
- Results should be given by the person who organised the test

The timing of the test is important. A HIV test is rarely urgent. A period of three months should elapse from the time of the risk behaviour and the testing time. This will allow for an accurate result in 99% of cases. A baseline test may be warranted following and occupational exposure or sexual assault or to allay anxiety.

Following the test result:

- If negative, reassure and advise about minimising future risk taking behaviour.
- If positive, clear directives and appropriate referral. ***HIV is not a notifiable disease.***

3 Hepatitis B

The hepatitis B virus (HBV) is a double stranded DNA virus. Under electron microscopy a number of particles are seen. The whole virus is the Dane particle, which consists of an inner core and an outer surface coat. The inner core contains genetic material (DNA), DNA polymerase, an enzyme essential for reproduction, the core antigen and the e antigen. The outer surface coat contains the surface antigen.

HBV infects more than 350 million people world-wide. It has an incubation period of 60-180 days. It is transmitted by the parenteral route, sexually and by blood to blood contact. Intravenous drug users are at a high risk due to sharing needles or other parts of the drug using paraphernalia. Of those infected, 95% usually recover fully, with lifelong immunity against infection. In 2-5% the disease becomes chronic: fulminant hepatitis occurs in 1%.

Chronic HBV infection is a serious liver disorder that may lead to the development of hepatic failure, cirrhosis and hepatocellular carcinoma. It results in premature death in 15% to 25% of individuals infected. All patients found to have active infection should be referred to a hepatologist for further evaluation.

3.1 Hepatitis B serological markers

There are three antigenic determinants (foreign antigenic particles) in the hepatitis B virus:

HBsAg – Surface coat antigen. This antigen appears in the blood from about 6 weeks after an acute infection usually before jaundice is clinically evident. It may disappear or persist. Its presence indicates current infection or a chronic infection as well as a carrier state. A carrier is defined as someone who is HBsAg positive on at least two occasions, at least six months apart.

HBcAg – Core particle antigen. This antigen is not usually seen in the blood and does not appear on the laboratory results.

HBeAg – e antigen. This antigen is only detected in serum of patients in whom HBsAg is also present. This rises early and declines rapidly. HBeAg is a measure of viral replication. It correlates with increased severity and infectivity and its persistence correlates with the development of chronic liver disease or the Carrier State.

Similarly, there are three antibodies which appear in response to the each of the above antigens, Anti-HBs, Anti-HBc and Anti-HBe.

Anti-HBs - Anti surface antibody. This antibody is present in the serum of convalescent patients, vaccinated subjects or carriers. It appears late and indicates immunity.

Anti-HBc – Anti core antibody. The presence of this antibody suggests resolved hepatitis B infection or low-level infection of minor clinical significance. It may persist for many years if not for a lifetime.

Anti-HBe – Anti e antibody. This antibody appears in the blood after the disappearance of HBeAg and correlates with low infectivity.

If the anti-HBc (core antibody) is positive it means that the patient has had past exposure to hepatitis B and may or may not have active infection at the time of phlebotomy. If there is an antibody response to the core antigen there will be a similar response to the surface antigen. The Anti-HBs may be positive too. If the HBsAg (surface antigen) is positive it indicates that the patient is actively infectious and the infection may be acute or chronic. Remember a hepatitis B carrier (chronic infection) is defined as someone who is HBsAg (surface antigen) positive on at least two occasions, at least six months apart (2% to 5%). The patient has a 95% chance of clearing the virus and in these cases the HBsAg (surface antigen) will be negative. The anti-HBc (core antibody) will however remain positive indicating past infection. Vaccination is not indicated in this case. If the anti-HBc (core antibody) IgM is positive it will distinguish between acute and chronic hepatitis B infection. A positive anti-HBc IgM indicates acute infection.

In the event of a positive HBsAg result further serological tests, the HBeAg and the anti-HBe should be performed. These tests indicate the degree of infectivity or active viral replication. A positive HBeAg and a negative Anti-HBe suggests active viral replication, that the patient is highly infectious and the likelihood of viral clearance is small. Similarly, a negative HBeAg and a positive Anti-HBe indicates that the active infection will most likely clear and the patient may recover fully.

The hepatitis B vaccine differs from the natural hepatitis virus in that the host (patient) is not injected with the complete hepatitis B virus but with the spherical surface antigen. Because it is free of genetic material which is in the core it is not infectious and vaccination does not result in infection. The body however reacts against the foreign body hepatitis B surface antigen (HBsAg) by making antibodies to this surface antigen so when natural exposure occurs i.e., the intact virus, the body recognises the surface antigen component of the virus and already has antibodies to hand to fight the infection immediately.

Anti-HBs on its own will only tell you the presence and the amount of Anti-HBs. It will not differentiate between past natural exposure and vaccination. It is not a useful test on it's own for differentiating between past natural exposure and the need for vaccination. The Anti-HBc if positive will indicate past exposure: it could not be positive following vaccination alone.

4 Vaccination Schedules

Current recommendations[18] suggest that all drug users, irrespective of their Hepatitis C status, should be immunised against Hepatitis A and Hepatitis B (whether through past exposure or by vaccination).

- If a patient is Hepatitis A antibody positive they will not require Hepatitis A vaccine and in these cases Hepatitis B vaccine alone should be offered.

- If the patient is Hepatitis B positive, Hepatitis A vaccine alone should be offered.

The combined HepA/HepB vaccine, the Hepatitis B vaccine and the Hepatitis A should be available from the HSE to all GPs managing patients on the MTP.

The recommended schedule for either vaccine:

- **At entry to treatment.**

- **At one month.**

- **At six months after the start of the program.**

Post vaccination anti-HIB titres should be performed eight weeks after the last vaccine.

Titre greater than 100 – patient is immune for life. A single booster against Hepatitis A should be offered at ten years.

Titre (Miu/ml) between 10 than 100 – patient is termed a "poor responder" and needs a **booster** of hepatitis B vaccine and a titre recheck at two months.

Titre (Miu/ml) less than 10 – patient deemed to be a "non-responder" and should receive a full course of another brand vaccine, a double dose of a vaccine 9one injection into each arm) or both.

We need to ensure that all patients are offered vaccination as soon as they enter treatment.

Chapter 11 Non-Methadone Alternative Therapies

While methadone treatment remains the mainstay of our treatment services there are alternative substitute treatments available.

1 Buprenorphine (Subutex) and Buprenorphine/Naloxone (Suboxone)

Buprenorphine and the Buprenorphine/Naloxone combination has a considerable evidence base in its favour as a substitute treatment[19]. The evidence suggests that buprenorphine is:

- As effective as methadone when given in equivalent doses
- Safer in overdose than methadone

In studies to date patients report feeling more alert and "clear headed" on buprenorphine and it may suit patients who have a short addiction history. It may also be useful in patients who have difficulty in detoxifying from a low methadone dose. As with methadone either product should be administered under strict supervision especially in the early stages of treatment. Caution needs to be exercised in patients who are also abusing alcohol and benzodiazepines as there is a risk of overdose from respiratory depression.

Currently buprenorphine is **not** available in primary care and is only available in a limited way in treatment clinics

2 Lofexidine

Lofexidine does not have a full license in this country. It can be prescribed on a named patient basis only. It is similar pharmacologically to Clonidine but does not have the significant hypotensive effects. It has been found to be effective in patients wishing to gain abstinence from heroin or from methadone and is useful in managing the withdrawal syndrome. It can be used in the outpatient setting safely.

Appendix A

Standards Required for the Care of Opiate Dependant Persons

Audit Criteria

Outlined below is the evidence required for the care of Opiate Dependant Persons as part of the Methadone Treatment Protocol. These criteria are based on the ICGP Best Practice Guidelines. To assist you in meeting these minimum standards, we outline below the evidence, which is sought by our Audit Nurse.

Patient Recruitment

1. Initial Assessment/Transfer Documentation

Criteria	*Evidence Required*
1. Completed assessment form	Present in the Patient Record
2. Pre prescribing urinalysis where appropriate	Original test results (x3), in the patient record

Ongoing Care and Maintenance Treatment

1. Record Keeping

Criteria	*Evidence Required*
1. Readily retrievable key information	Flow chart or other specific charting system

2. Virology Assessment

Criteria	*Evidence Required*
1. Documented Testing of Hep A, B, C & HIV 2. Documented Vaccinations of HepA & B 3. Documented Post Hep Vaccine antibodies 4. Hepatology referral	Defined and confirmed in the patient record as appropriate. *(or indication of patient refusal)*

3. Appropriate Supervision of Patient

Criteria	*Evidence Required*
1. Regular patient contacts with designated treating doctor	Recorded contacts by designated doctor

4. Methadone Supervision

Criteria	*Evidence Required*
1. Documented current dose	Record of dose at each visit
2. Adequate dosing which is responsive to clinical conditions	Variance in dose defined and confirmed in record

5. Dispensing Arrangements

Criteria	*Evidence Required*
1. Frequency of dispensing which is responsive to clinical conditions	Defined and confirmed in record
2. Supervision of dispensing responsive to clinical conditions	Defined and confirmed in the record *(minimum required of one supervised dispense/week)*

6. Urinalysis

Criteria	*Evidence Required*
1. Frequency of urine testing	Reports corresponding to every test *(minimum requirement of one per week)*
2. Supervision of urine testing	Defined and confirmed in record *(temperature jars/personal supervision)*

7. Other Psychoactive Drugs Prescribed

Criteria	*Evidence Required*
1. Reason for prescribing	Clinical condition defined and confirmed in record
2. Dose of psychoactive drugs prescribed	Dose within therapeutic range
3. Frequency of prescribing	Defined and confirmed in the record

* Patient employment details are not compulsory for the audit. However such a record could be an indicator of patient stability.

** Shared care with practice nurse may be appropriate in certain circumstances. Refer to Best Practice Guidelines. If an MTP trained GP is absent from his practice for more than 4 weeks then the GP Coordinator should be contacted with a view to arrange adequate training and supervision in the event of a locum not being trained for MTP.

Appendix B

HSE Treatment Centres & Local Co-ordinators

Drug Co-ordination Unit Health Services Executive 1st Floor, Beech House Cove Roundabout Dunmore Road Waterford Tel: 051 846720	Co-ordinator of Services for Drug & Alcohol HSE Southern Area Community Services Office St. Finbarr's Hospital Cork Tel: 021 4923135
Regional Drug Co-Ordination Unit HSE Mid-Western Area Unit 4, Richmond Court Mount Kenneth Dock Road Limerick Tel: 061 483571	HSE Addiction Service LHO Dublin North Central Floor 2 Phibsboro Tower Dublin 7 Tel: 01 8820300
Midland Health Board Health Centre Longford Road Mullingar Co. Westmeath	Regional Drug Co-ordinator HSE Western Area West City Centre Seamus Quirke Road Galway Tel: 091 561299
Health Service Executive 1st Floor, Centenary House 35 York Road Dun Laoghaire Co. Dublin Tel: 01 2807852	Health Promotion Department HSE North East St. Brigids Hospital Ardee Co. Louth Tel: 041 6850660

Health Service Executive 1st Floor, Centenary House 35 York Road Dun Laoghaire Co. Dublin Tel: 01 2807852	Health Promotion Department HSE North East St. Brigids Hospital Ardee Co. Louth Tel: 041 6850660

GP Co-Ordinators

National GP Co-ordinator
Dr. Ide Delargy, ICGP, 4-5 Lincoln Place, Dublin 2
Phone: 01 6763705 Fax: 01 6346078 e-mail: niamh.killeen@icgp.ie

Appendix C

Sample Agreement

Name: _____ Date: _____

You are now receiving a regular prescription for addictive medication and we ask you to accept the following conditions and behave respectfully towards practice staff.

1. I agree to attend appointments promptly and quietly.
2. I agreed to attend my appointments unaccompanied whenever possible.
3. I agree not to upset the Receptionist or other patients in the waiting room.

Behaviour outside these limits may result in the Receptionist or Doctors asking you to leave the Surgery premises.

Prescription, Medication and Appointment:

1. I agree to be responsible for making my appointments and checking that my appointment is correct in our appointment book.
2. I accept responsibility for turning up for my appointment on time.
3. I agree to attend on the Doctors mentioned below, on this form, and to discuss my prescription with them.
4. I agree to use emergency appointments or house calls to discuss my prescription.
5. I agree to be responsible for my prescription and medication and recognise that these cannot be replaced.
6. I agree that no alteration will be made to my prescription without my own Doctor's permission.

My Doctor is Dr. _____ his/her half day is: _____

In his/her absence I will consult Dr. _____

I have read the above conditions, I understand what they mean and I agree to abide by them. If I do not abide by these rules then I understand that certain sanctions may be imposed. I understand that these sanctions are at the discretion of the Doctor man may include:

1. Withdrawal of privilege e.g. take-away medication, supervision of medication ingestion.
2. Transfer to another Doctor/Treatment Centre.

Signature: _____ (Patient) Date: _____

Signature: _____ (Doctor) Date: _____

Appendix D

ADDICTION ASSESSMENT FORM

First Name: _____

Last Name: _____

Male ☐ Female ☐

D.O.B. ☐☐ ☐☐ ☐☐
Day Month Year

Community/Family
General Practitioner _____

Address: _____

_____

Tel: _____

Date of Assessment ☐☐ ☐☐ ☐☐
Day Month Year

Age first took drugs: _____

First Drug: _____

Age first took opiates: _____

First Opiate: _____

Current Opiate: _____

Route: _____

How Long: _____

How Much: _____

How often in the past Month

Daily ☐ Every 2nd Day ☐

2-3 Days ☐ Weekends Only ☐

If not daily, are you getting withdrawals
Yes/ No

Are you currently injecting Yes/ No

Ever Shared Yes/No

Currently Sharing Yes/No

Substance Use

Substance	Previous Mth	Past	Route	Frequency	Quantity
Heroin					
Methadone					
Morphine Tabs					
Cocaine					
Benzodiazepines					
Tricyclic					
Amphetamines					
Ecstasy					
Alcohol					
Cannabis					
Nicotine					
Other Addictions - Gambling - Eating Disorder					

ICD 10 Criteria

Difficulty in controlling heroin intake ☐

Has experienced withdrawal symptoms ☐

Evidence of tolerance ☐

Neglect of commitments ☐

Persistent heroin misuse in spite of evidence of harmful effects ☐

Currently in treatment Yes ☐ No ☐

Social History

Married ☐ Single ☐ Separated/Divorced ☐

Stable Relationship ☐ Lone Parent ☐

Living With:

Partner ☐ Partner Taking Drugs ☐

Parents ☐ Parents Taking Drugs ☐

Siblings ☐ Siblings taking drugs ☐

Living Alone ☐ Living with children ☐

Homeless ☐

Living with other drug users ☐

Family History of Alcohol Yes/No

If Yes, Mother ☐ Father ☐ Siblings ☐

Mother Alive Yes/ No
If no, patient age at time of death _____

Father Alive Yes/ No
If no, patient age at time of death _____

Parents Together Yes/ No
If no, patient age at time of separation _____

EDUCATION

Still at school Yes/ No

Age left school _____

Examinations Passed _____

POST SCHOOL
Rehabilitation Course ☐ Fas ☐

Apprenticeship ☐ CE Schemes ☐

Third Level ☐ Pre employment ☐

Other ☐

Employment Status

Full Time ☐ Part Time ☐

Unemployed ☐

Student ☐

SOURCE OF INCOME		SOURCE OF FUNDING HABIT	
Employment	☐	Employment Partner	☐
Unemployment Benefit	☐	Shop Lifting	☐
Unemployment Assistance	☐	Serious Robbery	☐
Lone Parent Allowance	☐	Drug Dealing	☐
Disability Benefit	☐	Sex Worker	☐
Supplementary Welfare	☐	Other	☐
Other	☐		

FORENSIC HISTORY

Every in prison: **Yes/ No**

On Probation: **Yes/ No**

Case Pending: **Yes/No**

Outstanding Warrant: **Yes/ No**

HISTORY (PAST & PRESENT) OF PHYSICAL ILLNESS)

General Health **Yes/ No** _____

Pregnant **Yes/ No**

DATE OF TEST

HIV status : Never Tested ☐ Positive ☐ Negative ☐

Hepatitis A status : Never Tested ☐ Positive ☐ Negative ☐

Hepatitis B status : Never Tested ☐ Positive ☐ Negative ☐

Hepatitis C status if known: Never Tested ☐ Positive ☐ Negative ☐

VACCINATIONS IF KNOWN

PSYCHIATRIC EVALUATION:

During the past 3 months you have felt:

Sad	Yes/ No	Hopeless	Yes/No
Anxious	Yes/ No	Do you think life is worth living	Yes/ No
Frightened	Yes/No	Do you think about suicide	Yes/No
Guilty	Yes/No	*If yes,* have you planned to take your life	Yes/No
No Interest	Yes/No	*If yes,* have you attempted to take your life	Yes/ No
Worthless	Yes/No		

URINE INVESTIGATION

DATE OF SAMPLE Opiates	Benzodiazepine	Methadone	Cocaine	Amphetamines	Tricyclic

PATIENTS GOALS & AIMS

Motivation on a scale of 1-5

MANAGEMENT PLAN

Refer to Central Services	Yes/No
Treatment	Yes/No

If yes, *Stabilisation

- Detox in Patient ☐
- Detox out Patient ☐
- Slow reduction ☐
- Maintenance ☐

Appendix E

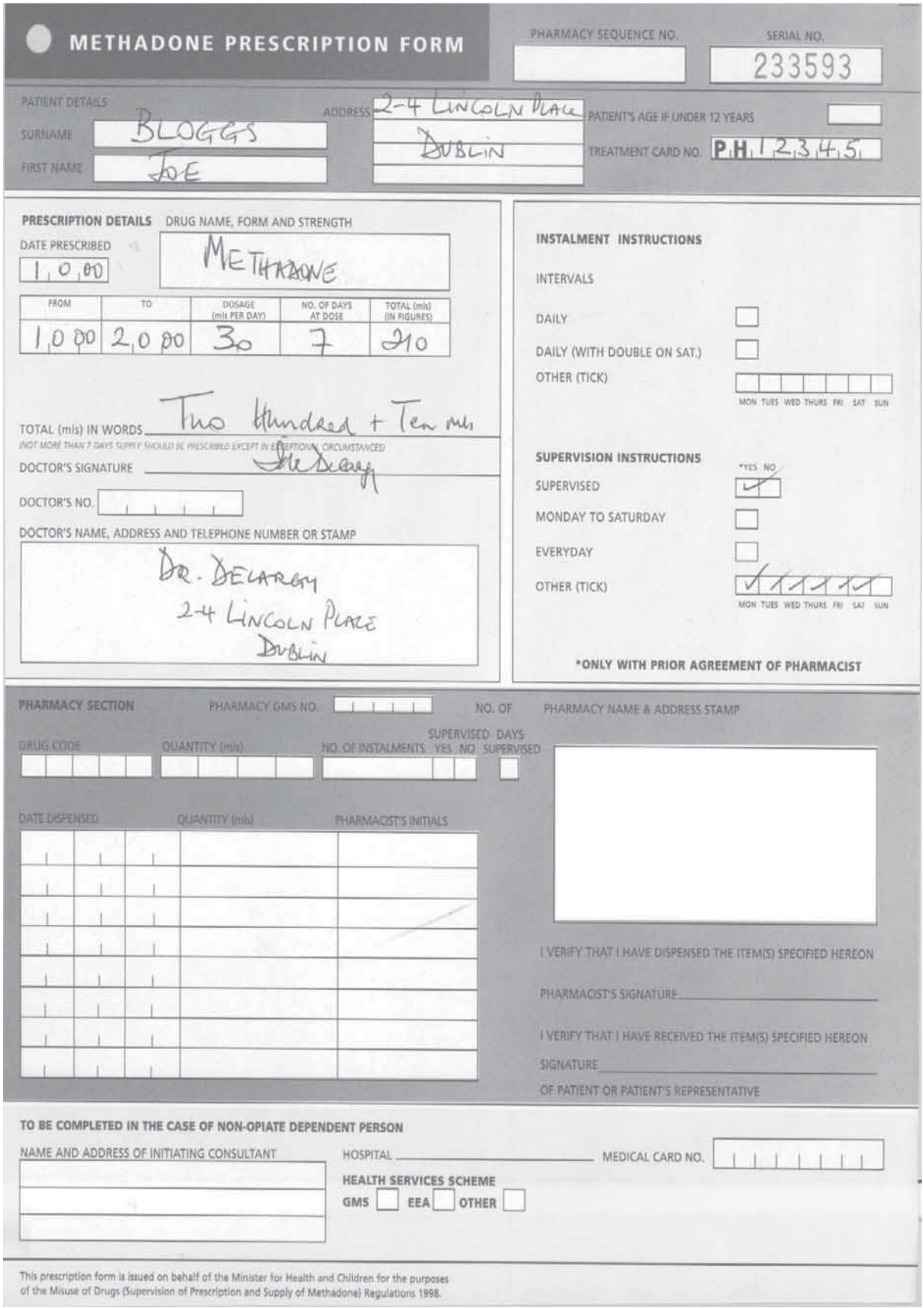
All relevant information regarding urine sampling, transport of samples, cross reactivity and excretion times are available through the Drug Analysis Laboratory: A Guide to Service Users (Nov 2005): Drug Treatment Centre Board

Excretion Times

Substance	Duration of Detectability
Amphetamines	**3 days**
Methamphetamine	**3 days**
Benzodiazepines Ultra-short-acting (half-life 2hrs) (Eg Midazolam) Short-acting (half-life2-6 hrs) (Eg Triazolam) Intermediate-acting (half-life 6-24hrs) (Eg Temazepam/Chlordiazepoxide) Long-acting (half-life 24hrs) (Eg Diazepam/Nitrazepam)	**2-28 days** **12 Hours** **24 Hours** **40-80hrs** **7 days**
Cocaine Metabolities	**2-3 days**
Methadone (maintenance dosing)	**3 days**
Codeine/Morphine/Propoxyphene (Heroin is detected in urine as the metabolite morphine)	**48 Hours** **(May be detected up to 7 days)**
Cannabinoids (Marijuana) **EDDP Methadone metabolite** **6-AM Heroin metabolite**	**3-8 days (up to 4 weeks)**

Appendix F

1. Daily Supervised Dispensing: Unstable Patient



METHADONE PRESCRIPTION FORM

PHARMACY SEQUENCE NO.

SERIAL NO. 233593

PATIENT DETAILS

SURNAME: BLOGGS

FIRST NAME: JOE

ADDRESS: 2-4 LINCOLN PLACE, DUBLIN

PATIENT'S AGE IF UNDER 12 YEARS

TREATMENT CARD NO. PH 1 2 3 4 5

PRESCRIPTION DETAILS — DRUG NAME, FORM AND STRENGTH

DATE PRESCRIBED: 1,0,00

METHADONE

FROM	TO	DOSAGE (mls PER DAY)	NO. OF DAYS AT DOSE	TOTAL (mls) (IN FIGURES)
1,0 00	2,0 00	30	7	210

TOTAL (mls) IN WORDS: Two Hundred + Ten mls

(NOT MORE THAN 7 DAYS SUPPLY SHOULD BE PRESCRIBED EXCEPT IN EXCEPTIONAL CIRCUMSTANCES)

DOCTOR'S SIGNATURE: Dr Delargy

DOCTOR'S NO.

DOCTOR'S NAME, ADDRESS AND TELEPHONE NUMBER OR STAMP

DR. DELARGY
2-4 LINCOLN PLACE
DUBLIN

INSTALMENT INSTRUCTIONS

INTERVALS

DAILY ☐

DAILY (WITH DOUBLE ON SAT.) ☐

OTHER (TICK) ☐☐☐☐☐☐☐

MON TUES WED THURS FRI SAT SUN

SUPERVISION INSTRUCTIONS

	*YES	NO
SUPERVISED	✓	
MONDAY TO SATURDAY		☐
EVERYDAY		☐
OTHER (TICK)	✓✓✓✓✓✓	☐

MON TUES WED THURS FRI SAT SUN

*ONLY WITH PRIOR AGREEMENT OF PHARMACIST

PHARMACY SECTION

PHARMACY GMS NO.

NO. OF SUPERVISED DAYS

PHARMACY NAME & ADDRESS STAMP

DRUG CODE	QUANTITY (mls)	NO. OF INSTALMENTS	SUPERVISED YES	SUPERVISED NO	NO. OF SUPERVISED DAYS

DATE DISPENSED	QUANTITY (mls)	PHARMACIST'S INITIALS

I VERIFY THAT I HAVE DISPENSED THE ITEM(S) SPECIFIED HEREON

PHARMACIST'S SIGNATURE

I VERIFY THAT I HAVE RECEIVED THE ITEM(S) SPECIFIED HEREON

SIGNATURE

OF PATIENT OR PATIENT'S REPRESENTATIVE

TO BE COMPLETED IN THE CASE OF NON-OPIATE DEPENDENT PERSON

NAME AND ADDRESS OF INITIATING CONSULTANT

HOSPITAL

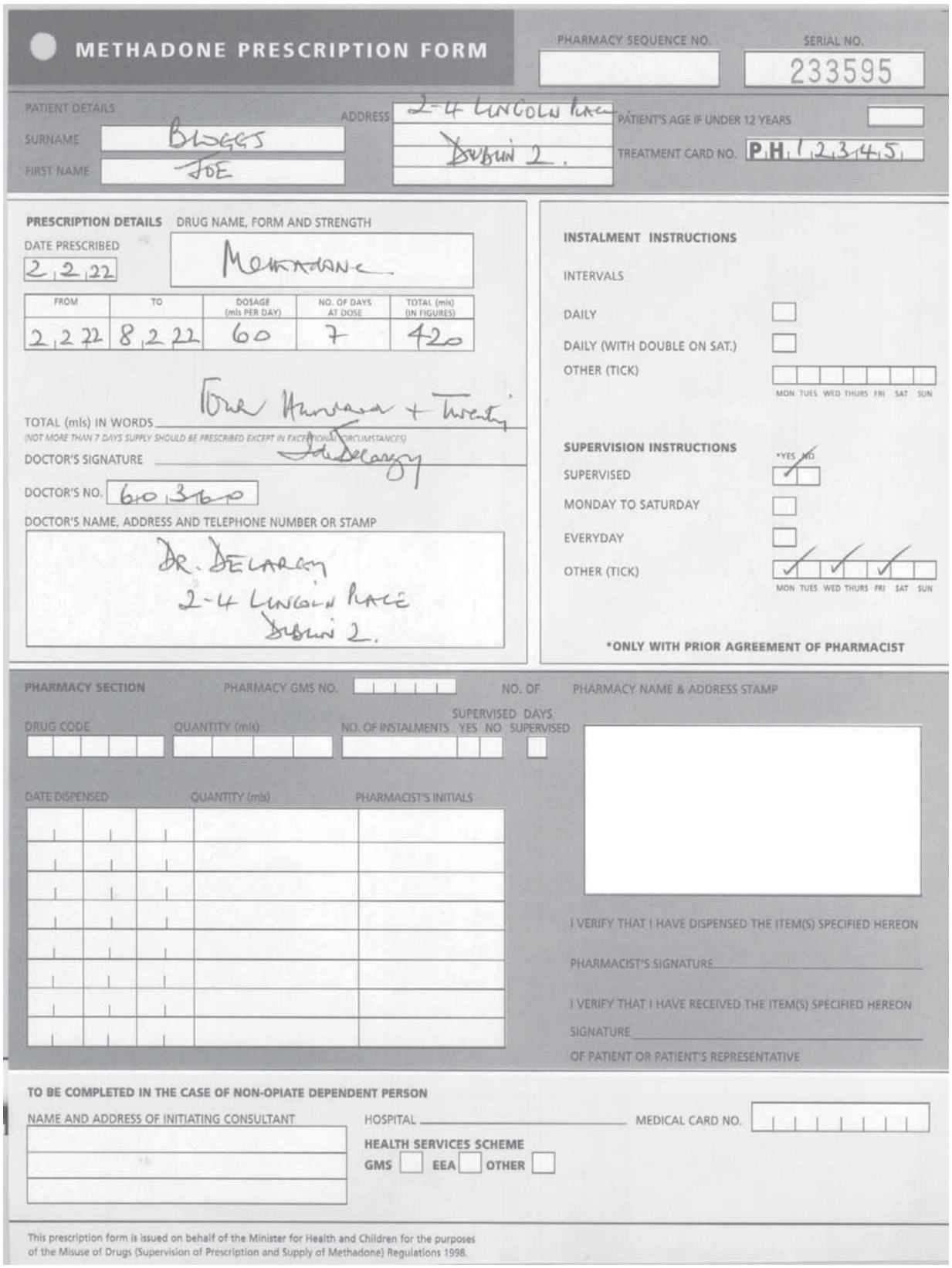
MEDICAL CARD NO.

HEALTH SERVICES SCHEME

GMS ☐ EEA ☐ OTHER ☐

This prescription form is issued on behalf of the Minister for Health and Children for the purposes of the Misuse of Drugs (Supervision of Prescription and Supply of Methadone) Regulations 1998.

2. Three Times Weekly: Supervised Dispensing



METHADONE PRESCRIPTION FORM

PHARMACY SEQUENCE NO.

SERIAL NO. 233595

PATIENT DETAILS

SURNAME BLOGGS

FIRST NAME JOE

ADDRESS 2-4 LINCOLN PLACE, DUBLIN 2.

PATIENT'S AGE IF UNDER 12 YEARS

TREATMENT CARD NO. P.H. 1 2 3 4 5

PRESCRIPTION DETAILS DRUG NAME, FORM AND STRENGTH

DATE PRESCRIBED 2/2/22

METHADONE

FROM	TO	DOSAGE (mls PER DAY)	NO. OF DAYS AT DOSE	TOTAL (mls) (IN FIGURES)
2/2/22	8/2/22	60	7	420

TOTAL (mls) IN WORDS Four Hundred and Twenty

(NOT MORE THAN 7 DAYS SUPPLY SHOULD BE PRESCRIBED EXCEPT IN EXCEPTIONAL CIRCUMSTANCES)

DOCTOR'S SIGNATURE J. DeLacy

DOCTOR'S NO. 60 3760

DOCTOR'S NAME, ADDRESS AND TELEPHONE NUMBER OR STAMP

DR. DELACY
2-4 LINCOLN PLACE
DUBLIN 2.

INSTALMENT INSTRUCTIONS

INTERVALS

DAILY ☐

DAILY (WITH DOUBLE ON SAT.) ☐

OTHER (TICK) ☐☐☐☐☐☐☐

MON TUES WED THURS FRI SAT SUN

SUPERVISION INSTRUCTIONS

*YES NO

SUPERVISED ☑

MONDAY TO SATURDAY ☐

EVERYDAY ☐

OTHER (TICK) ☑☑☑☐☐☐☐

MON TUES WED THURS FRI SAT SUN

*ONLY WITH PRIOR AGREEMENT OF PHARMACIST

PHARMACY SECTION

PHARMACY GMS NO.

NO. OF

PHARMACY NAME & ADDRESS STAMP

DRUG CODE

QUANTITY (mls)

NO. OF INSTALMENTS

SUPERVISED YES NO

DAYS SUPERVISED

DATE DISPENSED

QUANTITY (mls)

PHARMACIST'S INITIALS

I VERIFY THAT I HAVE DISPENSED THE ITEM(S) SPECIFIED HEREON

PHARMACIST'S SIGNATURE

I VERIFY THAT I HAVE RECEIVED THE ITEM(S) SPECIFIED HEREON

SIGNATURE

OF PATIENT OR PATIENT'S REPRESENTATIVE

TO BE COMPLETED IN THE CASE OF NON-OPIATE DEPENDENT PERSON

NAME AND ADDRESS OF INITIATING CONSULTANT

HOSPITAL

MEDICAL CARD NO.

HEALTH SERVICES SCHEME

GMS ☐ EEA ☐ OTHER ☐

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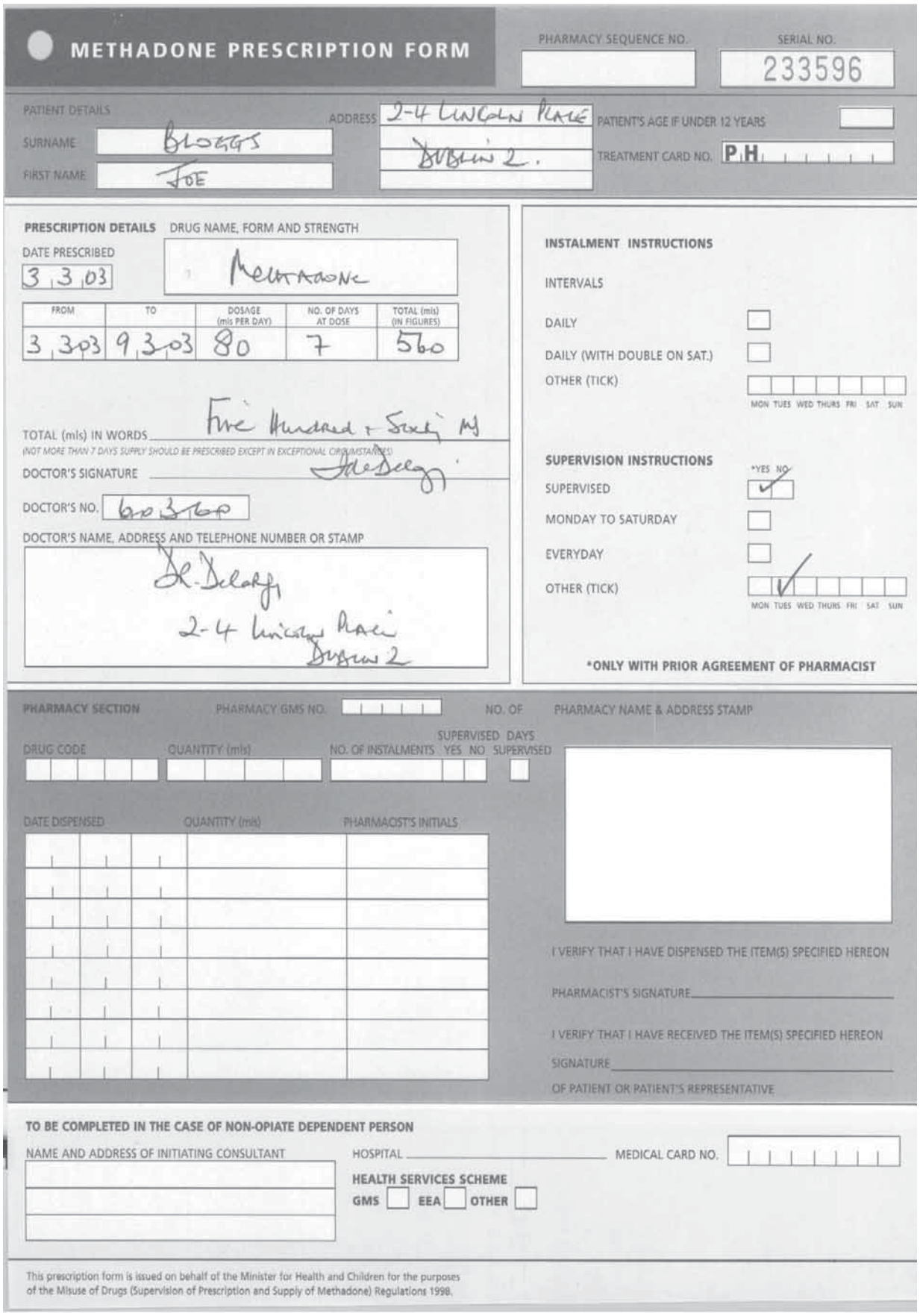
3. Stable Patient. Once Weekly Supervised Dispensing



METHADONE PRESCRIPTION FORM

PHARMACY SEQUENCE NO.

SERIAL NO. 233596

PATIENT DETAILS

SURNAME: BLOGGS

FIRST NAME: JOE

ADDRESS: 2-4 LINCOLN PLACE, DUBLIN 2.

PATIENT'S AGE IF UNDER 12 YEARS

TREATMENT CARD NO. P.H

PRESCRIPTION DETAILS — DRUG NAME, FORM AND STRENGTH

DATE PRESCRIBED: 3.3.03

METHADONE

FROM	TO	DOSAGE (mls PER DAY)	NO. OF DAYS AT DOSE	TOTAL (mls) (IN FIGURES)
3.3.03	9.3.03	80	7	560

TOTAL (mls) IN WORDS: Five Hundred + Sixty Mls

(NOT MORE THAN 7 DAYS SUPPLY SHOULD BE PRESCRIBED EXCEPT IN EXCEPTIONAL CIRCUMSTANCES)

DOCTOR'S SIGNATURE: J. deBarra

DOCTOR'S NO. 60360

DOCTOR'S NAME, ADDRESS AND TELEPHONE NUMBER OR STAMP

J. deBarra
2-4 Lincoln Place
Dublin 2

INSTALMENT INSTRUCTIONS

INTERVALS

DAILY ☐

DAILY (WITH DOUBLE ON SAT.) ☐

OTHER (TICK) ☐ MON TUES WED THURS FRI SAT SUN

SUPERVISION INSTRUCTIONS

	*YES	NO
SUPERVISED	✓	
MONDAY TO SATURDAY		
EVERYDAY		
OTHER (TICK)	✓ (TUES)	

*ONLY WITH PRIOR AGREEMENT OF PHARMACIST

PHARMACY SECTION

PHARMACY GMS NO.

DRUG CODE

QUANTITY (mls)

NO. OF INSTALMENTS

SUPERVISED DAYS YES NO

NO. OF SUPERVISED

PHARMACY NAME & ADDRESS STAMP

DATE DISPENSED	QUANTITY (mls)	PHARMACIST'S INITIALS

I VERIFY THAT I HAVE DISPENSED THE ITEM(S) SPECIFIED HEREON

PHARMACIST'S SIGNATURE

I VERIFY THAT I HAVE RECEIVED THE ITEM(S) SPECIFIED HEREON

SIGNATURE OF PATIENT OR PATIENT'S REPRESENTATIVE

TO BE COMPLETED IN THE CASE OF NON-OPIATE DEPENDENT PERSON

NAME AND ADDRESS OF INITIATING CONSULTANT

HOSPITAL

MEDICAL CARD NO.

HEALTH SERVICES SCHEME

GMS ☐ EEA ☐ OTHER ☐

This prescription form is issued on behalf of the Minister for Health and Children for the purposes of the Misuse of Drugs (Supervision of Prescription and Supply of Methadone) Regulations 1998.

Further Appendices you may find useful

Appendix G

Glossary of Terms

Charge:
Once a Garda decides that he has sufficient evidence to prosecute (he may take advice from the DPP) he formally reads the charge to the client.
Warrant:
If a person fails to turn up at court whilst on bail the judge issues a bench warrant, which orders the Garda to arrest, and bring the person directly to court.
TR; Temporary Release:
An institution may release a person on license with instructions to present back to the institution at a given time, usually weekly. Proof that the person is legally out of prison is his TR form.
At large:
The person has failed to return to prison on time and can be arrested on sight and returned to the institution.
Strung Out/or "sick"
Physically addicted but withdrawing
Bang Up, Shoot, Use
Inject IV
Skin Pop
Inject subcutaneously
Needle Buzz, Smac, H
Addicted to act of injection rather than the drug
Gear, Smac, H
Heroin
Roche (Yellas, Blueys)
Diazepam
Spike
Needle
Barrel
Syringe
Works
Paraphernalia, spoon, filters, etc
Snow
Cocaine
Bag
1/8 ounce of Heroin

Appendix H

Conversion Table

Drug	Dose	Methadone equivalent
Street Heroin	Cannot accurately be estimated because street drugs vary in purity, though 1g of heroin are roughly equivalent to 50-80-mg oral methadone. Titrate dose against withdrawal symptoms.	
Morphine **MST**	10mg ampoule	10mg
Dihydrocodeine (DF118)	30mg tablet	3mg
Pethidine	50mg tablet 50mg ampoule	5mg 5mg
Buprenorphine hydrochloride (Temgesic or Subutex)	200 microgram sublingual tablet 400 microgram sublingual tablet 300 microgram ampoule New formulations – 2mg and 8mg sublingual tablets	5mg 10mg 8mg Methadone equivalents are not currently available
Codeine linctus 100ml	300mg codeine phosphate	20mg
Codeine phosphate	15mg tablet 30mg tablet 60mg tablet	1mg 2mg 4mg

These conversions do not necessarily suffice for daily requirements because of the different half-lives of drugs.

Appendix I

Recommended Reading List

Ward, J.; Mattick, R.; Hall, W: (1998) Methadone Maintenance Treatment and other Opioid Replacement Therapies, Harwood Academic Publishers. Amsterdam, The Netherlands.

Farrell, M.; Ward, J.; Hall, W.; Stimson, G.V.; Gossop, M.; Strang, J: (1994) 'Fortnightly review: Methadone maintenance treatment in opiate dependence: a review,' BMJ, 309: pp 997-1001.

Department of Health and Children Ireland: (August 2002) Report of the Benzodiazipine Committee, Dublin, Ireland.

Department of Health UK; The Scottish Office Department of Health; Welsh Office; Department of Health and Social Services, Northern Ireland; (1999) Drug Misuse and Dependence Guidelines on Clinical Management, London, HMSO.

Verster, A.; Buning, E.: (June 2000) Methadone guidelines, Euro-Methwork, Amsterdam, The Netherlands.

Appendix J

Useful Websites

www.alcoholicsanonymous.ie	Self help group for alcohol dependence
www.anew.ie	Self help group for women with alcohol dependence
www.aware.ie	Aware – Support organisation for patients/families with elation/depression. Support groups/Literature/Lectures
www.icgp.ie	ICGP website
www.nacd.ie	National Advisory Committee on Drugs: useful review articles on drug issues in Ireland including Dual Diagnosis
www.narcoticsanonymous.ie	Self help group for drug dependence
www.nida.nih.gov/	US National Institute on Drug Abuse; wide ranging site on all aspects of substance abuse
www.phepa.net	
www.rcpsych.ac.uk	Excellent user friendly information on alcohol, drugs and mental health
www.sign.co.uk	Excellent guidelines
www.smmgp.org.uk	National newsletter on substance misuse management in primary care

References

1. Verster, A.; Buning, E.: (June 2000) Methadone guidelines, Euro-Methwork, Amsterdam, The Netherlands.

2. Department of Health UK; The Scottish Office Department of Health; Welsh Office; Department of Health and Social Services, Northern Ireland; (1999) Drug Misuse and Dependence Guidelines on Clinical Management, London, HMSO.

3. The Methadone Briefing. Available on: www.drugtext.org/library/books/methadone/intro.html

4. Methadone and Buprenorphine for Managing Opioid Dependence. Available on: www.nice.org.uk/guidance/TA114

5. The Methadone Treatment Services Review Group, Department of Health and Children, January 1998.

6. Irish College of General Practitioners website www.icgp.ie

7. National Documentation Centre on Drug Use www.ndc.hrb.ie

8. Dole, VP; Nyswander, ME: (1965) 'A Medical Treatment for Diacetyl-Morphyne (Heroin) Addiction,' JAMA 193:646. Farrell, M; Ward, J; Mattick, R; Hall, W; Stimson, G; Des jarlais, D; Gossop, M; Strang, J: (1994) 'Methadone Maintenance Treatment in Opiate Dependence: a review,' BMJ, 309: pp. 997-1001.

9. Gossop, M; Marsden, J; Stewart, D: (1998) 'The National Treatment Outcome research Study. Changes in Substance Use, Health and Criminal Behaviour One Year after Intake,' NTORS- At One year.

10. Finnegan, LP: (2000) 'Women, Pregnancy and Methadone,' Heroin Addiction and related Clinical problems, 2(1): pp 1-8

11. Boghdadi, MS; Henning, RJ: 'Cocaine Pathophysiology and Clinical Toxicology,' Heart and Lung, the Journal of Acute and Critical Care, 26 (6) Nov/Dec 1997, pp 466-485.

12. Department of Health and Children Ireland; (September 1999) 'Children First,' National Guidelines for the Protection and Welfare of Children, Dublin Stationary Office, Dublin Ireland. ISBN 0707662648

13. Irish College of General Practitioners, Drugs Misuse Programme 'Drug Related Death and Strategies for Prevention' 2007

14. Department of Heath and Children Ireland: (August 2001) Report of the Benzodiazipine Committee. Dublin Stationary Office, Dublin, Ireland.

15. Good Practice Guidelines for Clinicals, Department of Health Children, August 2000

16. Report to the National Advisory Committee on Drugs: (2002) Use of Buprenorphine as an intervention in the treatment of opiate dependence syndrome, Dublin Stationary Office, Dublin, Ireland. ISBN 0755713087

17. Drug Treatment Centre Board, Drugs Analysis Laboratory A Guide to Service Users. (November 2005)

18. Farrell, M; Ward, Gerarda, C.; Marsden, J.: (2000) External Review of Drug Services for the Eastern Health Board, National Addiction Centre, Institute of Psychiatry, London, England.

19. www.dh.gov.uk/publications. Immunisation against infectious disease. The Greenbook.

Notes

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4/5 Lincoln Place, Dublin 2
T: 01 676 3705/6 **F:** 01 676 5850/676 4064 **E:** info@icgp.ie **W:** www.icgp.ie