Guidelines for Community Dose Induction and Assessment

This is the process by which the initial dose (usually 30-40mls for methadone and 4-8mg for buprenorphine) is increased under Supervised Consumption until stability of drug use and lifestyle is achieved. Community Dose Assessment (at a local pharmacy) should be the norm for the vast majority of patients in the early stages of prescribing *ie approximately the first 3 months*

Our aim in this document is to define the criteria by which we judge the **'optimal dose'** in the individual and also to discuss the distinction between **'Dose induction'** and **'Dose Assessment'** for **METHADONE** –*see below for a discussion of buprenorphine dose assessment.* The 'Dose Induction' period refers to the first 2 weeks of prescribing.

OPTIMAL DOSING COMBINED WITH GOOD QUALITY SUPPORT FROM A DRUG WORKER ARE TWO OF THE MOST IMPORTANT FACTORS IN ACHIEVING QUALITY OUTCOMES FOR OUR PATIENTS

Dose induction of methadone:
Because some individuals may accumulate methadone in tissues unpredictably, initial monitoring using methadone needs to be more rigorous but this should not prevent us moving some patients to significant doses more quickly. Treatment populations vary and for patients using heroin by inhalation (smoking, 'chasing') the appropriate route is to follow a more cautious **'Dose Induction'**. It is people using (and tolerant to) large doses of heroin by the intravenous route who are more likely to benefit from a more rapid **'Dose Induction'** involving moving to the dose range 60-70mg in the initial period of prescribing. ***More rapid dose inductions need to be tailored to the individual and monitored through liaison with the pharmacist involved.***

Please remember:

- Methadone induction deaths are rare
- Most deaths occur in the first 2-3 days
- In excess of 20% of all deaths in treatment are within 2 weeks of commencement of prescribing
- Most deaths occur during sleep – *during induction avoid patients taking methadone during the evening. Peak methadone level is 2-4hrs after a single dose*
- Daily assessment by a pharmacist using Supervised Consumption is the best safeguard against over-sedation in a patient going undetected
- Patients should be informed of 'increasing effect of a dose' as steady state is achieved so that they do not excessively 'top up' with street drugs

Patients who may benefit from more rapid induction:

- Long history of use including past and current injecting heroin use
- Higher levels of drug use
- Clear evidence of high tolerance in a patient well known to the service(s)

The rationale for using a more rapid induction is that such patients when put on 'inadequate' initial doses use street drugs with their methadone in a way which puts them at an unnecessarily high risk of overdose.

Patients benefiting from a more cautious approach:

- Non-injecting drug use
- Shorter history of drug use
- Lower levels of drug use
- Lack of or unclear evidence of high tolerance
- Other illness – *eg airways disease (eg bronchial asthma) and infections (HIV, hepatitis and others)*

Psychological symptomatology:
During induction psychological factors and psychiatric morbidity/illness need to be taken into consideration on the premise that depression may contribute to suicidal ideation.

Managing increments subsequent to initial Dose Induction:
Both methadone and buprenorphine have long half-lives and steady state in many people may not be reached for 5-10 days. Most patients will have started in the dose range 30-40mg with monitoring by supervised consumption pharmacist daily and review by the prescriber after 1 week. Liaison between prescriber and dispenser is essential at script initiation and highly desirable subsequently.

Methadone (Likely optimal dose range 60-120mg):
The Orange book guidelines state that the dose increase in any 1 week period should not exceed 30mg. Dose increments in most cases can be made by 10mg weekly, perhaps split into 2 (5mg) increments weekly and tailing off to 5mg increments as the likely optimal dose is approached. During the Dose Assessment period the prescriber should be seeing the patient at least weekly to assess the response and will liaise with the dispenser as appropriate. It seems logical if a higher likely dose range is anticipated (heavier, perhaps injecting use) that, after the first 2 week 'Dose induction' period, it may be beneficial to move more quickly through the dose range, perhaps using 10mg increments twice weekly. Final dose is partly decided on the basis of patient comfort – see detail below.

During dose induction and assessment a pharmacists should report:

- Frequent missed doses or requests to take less than the prescribed dose
- Any intoxication or over-sedation

Buprenorphine (Subutex): Because of the apparent extra margin of safety when using buprenorphine the long half-life does not have clinical relevance in dose induction and assessment and current practice is to move rapidly (within the first 2 weeks) to 'standard' doses of 12-16mg. Subsequently the need to go higher is assessed and the higher dose range up to 32mg daily may be used and doses around 24mg may become common – ***the ease of induction and dose assessment with buprenorphine is not sufficient reason to use this medication exclusively and both medications have their place in maintenance treatment whilst a buprenorphine reduction is the detoxification treatment of choice.***

Principles for assessment of optimal dose – *NB these principles apply to both methadone and buprenorphine*:

Rather than produce a cumbersome protocol we present CDA as a series of principles. Please also see CDA Flow Chart:

- Community Dose Assessment gives prescriber and dispenser the confidence they need in order to provide therapeutic doses of substitute medication as quickly as possible and with optimal safety in mind – *this gives patients access to the dose range 60-120mg (and higher in some cases) for methadone*
- Apart from the exceptions (see below) it is good practice to use Supervised Consumption for all situations where a series of dose increments are considered likely. People should be exempted with care as this may make optimal dosing more difficult
- As long as supervised consumption is available in a manner reasonably accessible to the patient the only likely exceptions to its use during dose induction and assessment will fall into these groups: those who are in regular employment, those with a disability (temporary or permanent), pregnant women and those with childcare responsibilities, usually women with their own children
- Continuing use of drugs on top of a script probably says more about the treatment than the patient and may indicate under-dosing or a lack of engagement of the patient in the care planning process. The most reliable guide to the desirability of a dose increase (apart from the patient's wishes) is a toxicology report indicating continuing street opiate use or a patient report of continued use.
- Continued use of drugs ***other*** than opiates and requests for alternative prescriptions eg cocaine, crack/cocaine, anti-depressants, benzodiazepines and related hypnotics/anxiolytics ('Z' drugs eg Zopiclone) are often influenced by under-dosing with opiate substitute medication.
- If we titrate (assess) the dose simply to 'objective' withdrawal symptoms we will leave our patients with symptoms (specifically **dysphoria, insomnia, anxiety and craving** – ***see easy reference CDA Flow Chart***), which may be treatable with opiate substitution. Titrating the dose to 'patient comfort' is in many people's experience a more reliable guide and may result in desirable outcomes more frequently. The best treatment for opiate sleep disturbance and other subtle, continuing opiate withdrawal symptoms is a substitute opiate at an appropriate dose
- Serum methadone estimation may be helpful in investigating why an individual is not stabilising but it is not a good guide as to the desirability or otherwise of a dose increase
- Published data (though not randomised controlled trials) suggest that psychiatric conditions including major depression and psychosis respond to adequate methadone dosing.
- Patients with significant co-morbidity (Dual Diagnosis) may require significantly higher doses of methadone in order to facilitate control of their drug use and there is evidence that the need for other medications to control their mental illness is reduced by the use of doses of substitute medication which adequately control their drug use

- It is rare for a patient to request inappropriately high doses of substitute opiate during Supervised Consumption
- Once the dose is regarded as optimal or the patient no longer wishes to increase the dose it is good practice to review stability according to established principles and move the patient on to daily dispensing at a named pharmacy, which may or may not mean a move to another pharmacy. Patients may wish to move to a pharmacy closer to where they live

Enzyme induction/inhibition:
Concurrent use of the following drugs may affect plasma levels of methadone:
Enzyme induction (lowered methadone levels) - *alcohol and tobacco*
Enzyme inhibition (increased methadone levels) - *allopurinol, dextropropoxyphene, chloramphenicol, ciproflaxin, disulfuram, isoniazid and enoxacin*

Adapted from **'Slaying the Dragon' – the Birmingham Shared Care Guide**
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