

Guidelines for Prescribing Opioids in Palliative Care

Owner:	HDFT Palliative Care Team
Author:	Dr V Barros D'Sa, Consultant in Palliative Medicine
Issue date:	February 2018
Review date:	February 2020
Ratified and approved by:	Area Prescribing Committee
On:	23 rd February 2018
Distribution:	All H&RD staff caring for adult palliative care patients

CONTENTS

1.	SCOPE	3
2.	ABBREVIATIONS	3
3.	PRINCIPLES OF PAIN MANAGEMENT AND ANALGESIA	4
4.	WEAK OPIOIDS FOR MILD TO MODERATE PAIN	6
5.	STRONG OPIOIDS FOR MODERATE TO SEVERE PAIN.....	7
6.	GENERAL PRINCIPLES OF OPIOID PRESCRIBING.....	12
7.	OPIOID SIDE EFFECTS.....	17
8.	OPIOID TOXICITY.....	18
9.	IF THE OPIOID IS NOT WORKING	20
10.	OPIOID CONVERSION CHART.....	21
11.	CONSULTATION, APPROVAL AND RATIFICATION PROCESS	22
12.	DOCUMENT CONTROL	22
13.	DISSEMINATION AND IMPLEMENTATION	22
14.	MONITORING COMPLIANCE AND EFFECTIVENESS	22
15.	REFERENCE AND ASSOCIATED DOCUMENTS.....	22
16.	APPENDICES.....	22
	16.1. Consultation Summary	23
	16.2. Monitoring, Audit and Feedback Summary	24

1. SCOPE

This guidance applies to all clinical staff in Harrogate and Rural District (H&RD) who care for adult palliative care patients.

For further advice, please contact:

- Palliative Care Team (PCT):
 - Monday-Friday 08:30-16:30: 01423 553464
 - Out of hours: Saint Michael's Hospice 01423 872658. Medical advice is available after review of the patient by a doctor of specialist trainee grade or above

- Pharmacy:
 - Ward pharmacist
 - Main pharmacy:
 - Monday-Friday 08:30-19:00,
 - Saturday and Sunday 10:00-14:00 01423 553080
 - Outside the hours above: contact on call pharmacist via switchboard

2. ABBREVIATIONS

BD	twice a day
cap	capsule
CNS	central nervous system
CSCI	continuous subcutaneous infusion
GFR	glomerular filtration rate
HDFT	Harrogate and District NHS Foundation Trust
HaRD	Harrogate and Rural District
inj	injection
IR	immediate release
IV	intravenous
MR	modified release
OD	once a day
PCT	Palliative Care Team
PO	orally
PRN	as required
QDS	four times a day
SC	subcutaneous
SD	syringe driver
tab	tablet
TD	transdermal
TDS	three times a day

3. PRINCIPLES OF PAIN MANAGEMENT AND ANALGESIA

Pain management

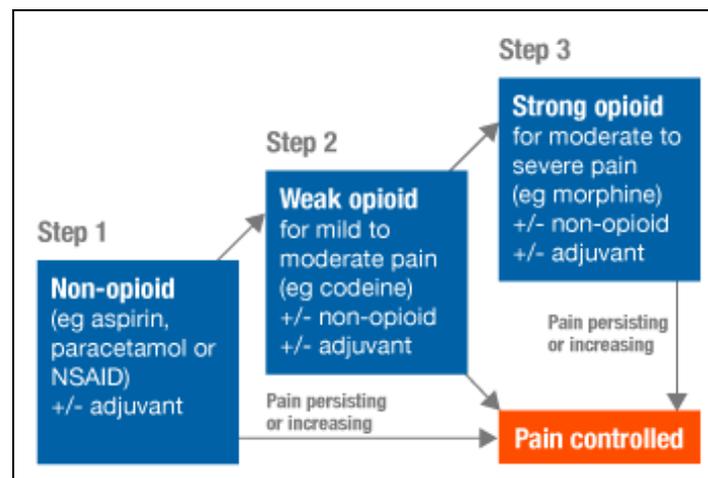
- Pain is common in palliative care patients with both advanced cancer and non-malignant conditions.
- Pain is a total, personal experience with physical, psychological, social and spiritual dimensions. Management requires a multidisciplinary approach.
- Regular review of the pain, effect and side effects of analgesics, and how the pain is affecting the patient and their family is vital for good pain control.
- Not all pain experienced by a patient with cancer is caused by the cancer itself. Often several pains coexist.
- Good history taking, examination and appropriate investigations are essential as analgesic options will be determined by the specific cause, type and severity of pain.

Analgesia

- Analgesics can be divided into three classes:
 - Non-opioid simple analgesics eg paracetamol
 - Opioids
 - Adjuvants or co-analgesics eg NSAIDs, amitriptyline, pregabalin
- Medicines from different classes are used alone or in combination according to the type of pain and response to treatment.
- Most opioid medications act via μ receptors in the CNS. Some also have effects on other receptors, giving them a different side effect profile. Some are mixed agonist-antagonists eg buprenorphine. Naloxone is an antagonist at all opioid receptors.
- Morphine is the most commonly used opioid in advanced cancer and other end-stage conditions, although non-opioids (eg paracetamol), a weak opioid (eg codeine) and/or an adjuvant may suffice. Alternative opioids may be required in patients with renal and liver impairment or in those who develop side effects (see p15-16 or seek specialist advice).
- Some pains are only partially opioid-responsive. These include bone pain, nerve damage/compression, visceral distension, tenesmoid pain, activity provoked pain, chemotherapy-induced neuropathy and pains unrelated to the underlying illness, such as tension headache and post-herpetic pain. These may require other measures including adjuvants, nerve blockade or oncological treatments, if cancer related. Please refer to '[A Guide to Symptom Management in Palliative Care](#)', Yorkshire and Humber Palliative and End of Life Groups, for guidance, or discuss with the PCT.

- The principles governing analgesic use are summarised in the WHO Method for Relief of Cancer Pain:
 - **By mouth**, where possible
 - **By the clock**: prescribe both regularly and PRN
 - **By the ladder**

WHO analgesic ladder



- After assessing the severity of pain, the analgesic ladder can be used to identify appropriate analgesics for the level and nature of pain
- In some situations it is appropriate to go straight from step 1 to step 3
- The patient should be reassessed regularly and analgesia prescribed, working up the ladder, until pain is managed
- Titrate dose against effect, with no rigid upper limit for most opioids except buprenorphine, codeine and tramadol
- Alternative analgesia, adjuvants and non-pharmacological interventions should be considered at each level of the ladder

4. WEAK OPIOIDS FOR MILD TO MODERATE PAIN

1. Codeine

- This is a pro-drug of morphine: its analgesic effect is via conversion to morphine. This varies between patients and in about 10% of the population codeine is ineffective.
- Co-codamol contains paracetamol and codeine and is much more effective than codeine alone (number needed to treat 2 vs 17). It is available in three strengths containing either 8mg, 15mg (not stocked by HDFT) or 30mg of codeine. In elderly or frail patients a lower strength may be required.
- The maximum dose is 240mg in 24hrs- a ceiling effect exists above this ie higher doses do not give any further analgesic effect.
- It should be used with caution in patients with renal impairment (see p15) as its metabolites are renally excreted and therefore accumulate in renal failure.
- Codeine is particularly constipating, so it is important to prescribe a laxative with it.
- Preparations available in HDFT:
 - Codeine tabs: 15mg, 30mg; 15mg/5ml linctus
 - Co-codamol 8/500 tab, 8/500 effervescent tab, 30/500 tab

2. Tramadol

- This is not usually used in palliative care because of its cognitive side effects in frailer patients. However if it is being taken with no adverse effects, it may be continued.
- The maximum dose is 400mg per day
- It should be used with caution in patients with renal impairment (see p15) as its metabolites are renally excreted and therefore accumulate in renal failure.
- Preparations available in HDFT:
 - Tramadol 50mg cap, 100mg MR tab, 50mg soluble tab

5. STRONG OPIOIDS FOR MODERATE TO SEVERE PAIN

A. Oral

- This is the preferred route for the majority of patients.

1. Morphine

- This is the first line strong opioid used in H&RD.
- It should be used with caution in patients with renal impairment (see p15) as its metabolites are renally excreted and therefore accumulate in renal failure.
- It is metabolised in the liver so in severe hepatic impairment the dose may need to be reduced, or given less frequently than usual (see p16). Seek specialist advice in this situation.
- It is available in:
 - Immediate release (IR) tablets and liquids which are usually effective after 20-30 minutes and to last up to 4 hours.
 - Modified/slow release (MR) tablets, granules and capsules which are usually effective after 4 hours and to last for 12 hours.
- Preparations available in HDFT:
 - Morphine sulphate
 - IR solution 10mg/5ml, 20mg/ml (generic)
 - IR tab 10mg (Sevredol)
 - Morphine sulphate
 - MR tabs: 5mg, 10mg, 15mg, 30mg, 60mg, 100mg, 200mg 20mg (MST/Morphgesic)
 - MR sachets: 20mg, 30mg, 60mg, 100mg (MST)

2. Oxycodone

- Oxycodone is a strong opioid with a similar dosing schedule to morphine; it is available in MR tablets which last 12 hours and IR liquid or capsules which last up to 4 hours.
- It may cause less nausea, itch, cognitive impairment and hallucinations than morphine in some patients, so it is a useful second line strong opioid for those who have not tolerated morphine.
- Oral oxycodone is twice as strong as oral morphine. Consult the dose conversion chart (see p20) when converting to oxycodone or ask advice from the Palliative Care Team or pharmacy.

- Its metabolites are renally excreted but cause fewer side effects than morphine, so it may be safer to use than morphine in renal impairment (see p15).
- Preparations available in HDFT:
 - Oxycodone IR caps: 5mg, 10mg, 20mg (Shortec)
 - Oxycodone IR solution: 5mg/5ml (generic), 10mg/ml (Shortec)
 - Oxycodone MR tabs: 5mg, 10mg, 40mg, 60mg, 80mg, 120mg (Oxylan/OxyContin/Longtec)

B. Transdermal (patches)

- Patches should not be offered as first line treatment to patients for whom oral opioids are suitable.
- They may be useful in patients with poor concordance with taking oral opioids, or with swallowing or absorption problems.
- They are suitable for patients who have pain already stabilised on other opioids. They should not be started in unstable pain or in the last days of life due to their long titration period (24-48 hrs) and duration of action.
- Absorption can be affected by skin temperature or vasodilation eg having a long hot bath can cause opioid toxicity.
- Sweating can cause problems with patch adhesion. If this is a persistent problem an alternative route of delivery may be appropriate.
- For patients in last hours and days of life already using a transdermal patch, continue administration of TD patches as prescribed. Give additional opioid via syringe driver if necessary.
- Either morphine IR or oxycodone IR can be used for breakthrough pain.

1. Fentanyl

- Fentanyl is metabolised in the liver. Metabolites are renally excreted but do not usually cause toxic effects when they accumulate in renal failure.
- It is less constipating than morphine, however almost all morphine-induced constipation can be managed with regular use of appropriate laxatives (see p17)
- Beware of small doses: a 25mcg/hr patch = 90mg of morphine per day.
- Fentanyl patches should be used only in people who have previously tolerated opioids as there is a risk of significant respiratory depression in those who are opioid naïve.
- Patches should be changed every 72 hours.

- Doses should not be changed more frequently than every 3 days.
- Preparations available in HDFT:
 - Fentanyl patches 12mcg/hr, 25mcg/hr, 50mcg/hr, 75mcg/hr, 100mcg/hr (Matrifen)

2. Buprenorphine

- Buprenorphine causes less hypothalamic-pituitary axis suppression and immunosuppression than other opioids, so may be more suitable for longer term use.
- Buprenorphine may have an anti-hyperalgesic effect.
- It may be useful for patients who require low dose opioids but cannot tolerate or take codeine.
- The maximum recommended dose is 140mcg/hr.
- BuTrans doses should not be changed more frequently than every 7 days.
- Transtec doses should not be changed more frequently than every 3 days.
- Because buprenorphine has both high receptor affinity and prolonged receptor binding, naloxone in standard doses does not reverse the effects of buprenorphine and higher doses must be used (see page 19).
- Preparations available in HDFT:
 - 5mcg/hr, 10mcg/hr, 20mcg/hr (Butec, Relitrans)
 - change patch every seven days
 - 35mcg/hr, 52.5mcg/hr, 70mcg/hr (Transtec)
 - change twice a week eg Monday and Thursday
 - 35mcg/hr, 52.5mcg/hr, 70mcg/hr (Hapoctasin)
 - change every 3 days

C. Subcutaneous (SC)

- SC preparations can be given either as stat doses or as a continuous subcutaneous infusion (CSCI) via syringe driver (SD).
- This route is indicated if the patient is unable to take oral medication eg in last days of life, or if there are concerns about absorption eg because of vomiting or bowel obstruction.
- It may also be indicated for severe unstable pain: seek specialist advice.
- For patients with a syringe driver in place, the same medication should be used for SC PRN doses.

1. Morphine

- NICE guidance recommends either morphine or diamorphine as first line parenteral strong opioid. Previously, diamorphine was used first line in HaRD. In January 2019, this was changed to morphine. This change was made because of repeated supply issues with diamorphine, the wish to prescribe in the same way as neighbouring areas which use morphine, and cost savings.
- Morphine is less soluble than diamorphine and therefore takes up more volume in a syringe driver. This can occasionally be a problem, depending on doses and other medications included in the driver. If volume is an issue, please contact the Palliative Care Team for advice. Diamorphine may be suggested as an alternative.
- Morphine should be used with caution in patients with renal impairment (see p15).
- In opioid naïve patients, start with morphine 2.5-5mg SC PRN or 5mg-10mg SC/24hrs via CSCI.
- Preparations available in HDFT:
 - Morphine inj: 10mg/ml, 15mg/ml

2. Diamorphine

- This is used first line in some areas.
- Use under advice of Palliative Care Team only. May be suggested if volume of morphine in a syringe driver is problematic.
- It should be used with caution in patients with renal impairment (see p15).
- Preparations available in HDFT:
 - Diamorphine inj: 5mg, 10mg, 30mg, 100mg

3. Oxycodone

- Patients on oral oxycodone can be converted to a subcutaneous infusion of parenteral oxycodone.
- As with oral oxycodone, it is suitable for some patients with renal impairment (see p15).
- Preparations available in HDFT:
 - Oxycodone inj: 10mg/ml, 20mg/2ml, 50mg/ml

4. Alfentanil

- Specialist use only: please contact the Palliative Care Team.
- Alfentanil is a synthetic derivative of fentanyl which is only available parenterally.
- It is safe to use in renal failure.
- Beware of small doses: 1mg = 30mg oral morphine.
- It has a half-life of only approximately 90mins so stat injections don't last long and oxycodone is usually used instead.
- Preparations available in HDFT:
 - Alfentanil inj: 1mg/2ml, 5mg/ml

D. Other routes

Formulations of sublingual, buccal and nasal IR fentanyl are available and are for use only on recommendation of the Palliative Care Team.

Preparations and brands available in HDFT are correct in February 2018. Current information can be found in netFormulary on the intranet or by contacting Pharmacy.

Preparations available in the community are listed in the BNF.

6. GENERAL PRINCIPLES OF OPIOID PRESCRIBING

1. Initiation

- For the majority of patients, oral morphine is the first line strong opioid. This can be prescribed either as immediate release (IR) or modified release (MR), whichever is most suitable for the patient.
- IR oral morphine has a rapid onset of action (about 20 minutes) but it requires administration every 4 hours to maintain a continuous analgesic effect. Consequently, it is difficult to cover pain throughout 24 hours, unless the person is being closely monitored.
- MR preparations have a slower onset of action (1–2 hours) and later peak levels (4 hours) than IR preparations, and last up to 12 hours.
- For patients with no renal or hepatic comorbidities, start with 10–30mg of oral morphine per day (eg 5–15mg oral morphine MR BD, or 2.5-5mg oral morphine IR QDS), plus an appropriate dose of oral morphine IR for breakthrough pain (see point 3. PRN medication below).
- Lower the starting dose if the patient is elderly or frail.
- If prescribing liquids, prescribe in mg rather than ml as differing strengths are available.
- Prescribe regular laxatives and PRN anti-emetics (see p17).

2. PRN medication

- All patients taking regular opioid analgesics (oral, subcutaneous or transdermal) should also have immediate release opioids prescribed for breakthrough pain to take PRN.
- This is usually approximately 1/6 of the total daily dose, but a range may be appropriate (eg 1/10 to 1/6).
- The maximum frequency and dose of PRN opioids in 24 hours should be clearly stated.
- Advise the patient to take breakthrough analgesia before the pain gets severe, as liquid morphine and oxycodone take 20-30 minutes to have their full effect.
- When changing the background dose, the PRN dose should be changed accordingly.
- If the person's background pain is satisfactorily controlled but they experience incident pain (pain on movement or particular events, such as wound dressing, being washed, weight-bearing):

- Give a breakthrough dose of an immediate-release opioid approximately 30 minutes before the precipitating factor occurs
 - Do not keep increasing the 24-hour dose of opioid.
 - Do not include the breakthrough doses administered for incident pain when reassessing maintenance opioid analgesia requirements.
- See the conversion chart on page 20 for breakthrough doses of morphine for fentanyl and buprenorphine patches.

3. Communication and information

- When offering analgesia with strong opioids to a patient, ask them about concerns such as:
 - addiction
 - tolerance
 - side effects
 - fears that treatment implies dying
- Provide verbal and written information on strong opioid treatment to patients and carers (using HDFT patient information leaflet: '[Information for patients about opioid therapy](#)', also available on the intranet under <http://nww.hdft.nhs.uk/long-term-and-unscheduled-care/palliative-and-end-of-life-care/patient-information/>) including:
 - when and why strong opioids are used to treat pain
 - that opioids are not addictive when used to treat pain
 - opioids are being prescribed because of the level of pain they are experiencing, not because they are near to the end of life
 - how effective they are likely to be
 - how, when and how often to take strong opioids (for background and breakthrough pain)
 - how long pain relief should last
 - side effects and signs of toxicity (see p18)
 - safe storage
 - follow-up and further prescribing
 - information on who to contact out of hours
- Offer patients access to frequent review of pain control and side effects

4. Driving

- Since March 2015 it has been an offence to drive whilst taking certain specified controlled drugs, including some opioids, if these drugs cause driving to be impaired.
- All patients who are prescribed opioids should be advised that the police are able to test and prosecute drivers who they suspect may have impaired driving due to taking such drugs.

- Patients should be advised that it is **their responsibility** to consider whether they believe their driving is, or might be impaired on any given occasion, eg, if they feel sleepy, or if in any doubt, they should NOT drive.
- Patients should be advised that when driving they should carry suitable evidence to show that the controlled drug is prescribed medication.
- **Patients must be warned that driving with impaired concentration due to medication they are taking, even if that medication is prescribed, is a criminal offence.**
- Discuss the potential impact on driving and give the patient the HDFT patient information leaflet: '[Information for patients about the law on driving having taken certain drugs](#)' (also available on the intranet under <http://nwww.hdft.nhs.uk/long-term-and-unscheduled-care/palliative-and-end-of-life-care/patient-information/>).
- Further information is available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/325275/healthcare-profs-drug-driving.pdf

5. Titration

- Reassess pain and the response to analgesia regularly.
- If the pain is inadequately controlled and opioid responsive, the background dose of opioid should be increased, taking the PRN requirements into account, after assessment of the effect and side effects of these.
- Use the opioid dose conversion chart on page 20 when prescribing, reviewing or changing opioid prescriptions to ensure that the total dose of opioid taken in a 24-hour period is considered.
- It is not usually advisable to increase the 24 hour dose by greater than 30%. This is occasionally indicated for escalating severe pain but only under specialist advice.

6. Opioid switching

- There is no evidence for differing analgesic efficacy between morphine, oxycodone, fentanyl and buprenorphine.
- Some patients may experience fewer adverse effects with oxycodone, fentanyl or buprenorphine than with oral morphine.
- It is appropriate to switch from one opioid to another if:
 - the pain is opioid sensitive but side effects prevent the dose from being increased further despite treatment
 - an alternative method of administration is needed eg TD, SC

- A switch is **not** indicated for poorly controlled pain only.
- Take into consideration the total amount of opioid that is being taken in 24 hrs. Patients may be on more than one opioid eg co-codamol and morphine sulphate IR solution.
- People metabolise opioids differently, so conservative conversions are recommended, especially at high doses, and it may be appropriate to consider a dose reduction.
- Ensure that PRN medication is prescribed, review frequently and titrate up as necessary.
- It is advisable to double check and document calculations in the patient record, including calculation of the PRN dose.
- Opioid withdrawal symptoms can occur when switching. If this occurs, give a small dose of the initial opioid.
- Guidance on timing of switches between different routes of administration:
 - **oral to CSCI**
From IR opioid: start syringe driver immediately.
From 12-hourly MR opioid: start syringe driver 4 hours before next oral dose due.
 - **CSCI to oral**
Stop the SD and give first oral dose at the same time.
 - **oral to transdermal**
From IR opioid: apply patch when convenient and use oral IR opioid as required.
From twice daily MR opioid: apply patch at same time as last dose of MR oral opioid.
 - Seek specialist advice for other switches.
 - Warn the patient that they may need extra PRN doses of medication for the first few days after a switch of route of administration.

7. Prescribing in renal impairment

- If renal function is impaired, the glomerular filtration rate (GFR) is reduced, meaning renally excreted drugs will take longer to clear. Therefore it may be necessary to alter the dose or frequency of drugs to prevent accumulation.
- Morphine and its active metabolites accumulate in renal impairment and can cause opioid toxicity. The extent to which this affects the patient depends on both the GFR and its rate of change.
- Both fentanyl and buprenorphine are safer than morphine in patients with renal failure.
- When considering whether or not to switch to an alternative opioid, the clinical situation needs to be taken in to account eg how well the patient is tolerating morphine despite reduced renal function, and how rapidly the renal function is likely to deteriorate. For this

reason there are no recommendations for opioid prescribing based on GFR alone, but the following are suggestions:

- Consider switching from codeine, morphine and diamorphine if the GFR is below 50ml/min. This may not be necessary if there are no opioid side effects and renal function is stable, however the use of morphine is not usually recommended below a GFR of 30ml/min.
 - Oxycodone is a suitable alternative, but below a GFR of 10 it can also cause toxicity and use of fentanyl, buprenorphine or alfentanil is recommended instead. See p8-10 for further information.
- Contact the PCT for advice if needed.

8. Prescribing in hepatic impairment

- Hepatic impairment can cause increased bio-availability of medications, accumulation of drugs or metabolites and prolonged half-life. In addition, disruption to the blood brain barrier can lead to higher CNS concentrations of drugs.
- The following are recommended:
 - Low doses with careful monitoring
 - Longer interval between doses than usual
 - Using IR rather than MR preparations
- Contact the PCT for advice if needed.

7. OPIOID SIDE EFFECTS

1. Constipation

- Inform patients that constipation affects nearly all patients receiving strong opioid treatment.
- Prescribe laxative treatment, eg macrogols or senna, to be taken regularly at an effective dose, for all patients.
- Inform patients that treatment for constipation takes time to work and adherence is important.
- Optimise laxative treatment for managing constipation before considering switching strong opioids because of this.

2. Nausea and vomiting

- Advise patients that nausea may occur when starting strong opioid treatment or at dose increase, but that it is likely to be settle within a few days.
- If nausea persists, prescribe and optimise anti-emetic treatment (eg haloperidol 1.5-3mg nocte or metoclopramide 10mg TDS) before considering an opioid switch.

3. Drowsiness

- Advise patients that mild drowsiness or impaired concentration may occur when starting strong opioid treatment or at dose increase, but that it is often transient. Warn patients that impaired concentration may affect their ability to drive (see p13-14) and undertake other manual tasks.
- In patients with either persistent or moderate-to-severe CNS side effects, consider a dose reduction or an opioid switch.

4. Dry mouth

- Try:
 - Cold, unsweetened drinks
 - Frequent sips or sprays of cold water
 - Ice cubes, crushed ice, or ice lollies
 - Lubricant on the lips
 - Sugar-free products eg chewing gum, mints, boiled sweets, or pastilles

If side effects remain uncontrolled despite optimising treatment, consider seeking specialist advice.

8. OPIOID TOXICITY

- All patients being titrated on morphine should be monitored for side effects and signs of CNS toxicity (confusion, drowsiness, agitation, hallucinations, myoclonic jerks, respiratory depression).
- Management will depend on the situation, but the following should be considered:
 - Omitting next dose of opioid
 - Checking renal function
 - Reducing dose
 - Switching opioid
 - Other methods of analgesia
- Naloxone
This is rarely needed: see below

Naloxone

In palliative care patients receiving opioids for pain relief, naloxone should **not** be used for drowsiness or delirium which is non-life threatening, because of the dangers of reversing the analgesia and precipitating hyperalgesia and acute physical withdrawal, which, in some cases, may be fatal. The aim is to increase the respiratory rate, not the conscious level.

The doses of naloxone advised in the BNF for treatment of acute opioid toxicity may NOT be appropriate for the management of opioid-induced respiratory depression and sedation in those receiving palliative care and in chronic opioid/opiate use.

(Patient Safety Alert November 2014)

If respiratory rate ≥ 8 /min, patient easily rousable and not cyanosed:

- Reduce opioid dose; may require omission of next dose (see above)

If respiratory rate < 8 /min and the patient is unconscious:

- Stop opioid eg remove patch, stop syringe driver
- Dilute naloxone 400mcg/ml (1ml ampoule), to 10ml using 0.9% saline for injection
- Give 0.5ml (20mcg) IV every 2 mins until respiratory rate > 8 /min
- Further boluses may be required as the half-life of naloxone is shorter than many opioids
- With very long acting opioids eg fentanyl or buprenorphine patch, it may be necessary to set up a 24 hour IV infusion of naloxone based on the bolus requirements. Seek specialist advice.

Reversal of buprenorphine-induced respiratory depression

Because buprenorphine has both high receptor affinity and prolonged receptor binding, naloxone in standard doses does not reverse the effects of buprenorphine and higher doses must be used:

1. Remove buprenorphine patch
2. Give oxygen by mask
3. Give IV naloxone *2mg* stat over 90sec
4. Commence naloxone *4mg/h* by IVI
5. Continue CIVI until the patient's condition is satisfactory (probably <90min)
6. Monitor the patient frequently for the next 24h, and restart IVI if respiratory depression recurs
7. If the patient's condition remains satisfactory, restart buprenorphine at a reduced dose, eg half the previous dose

9. IF THE OPIOID IS NOT WORKING

Consider:

1. Are opioids the right analgesic?

Not all pain is opioid responsive.

- Reassess and consider the aetiology of the pain.
- Adjuvant medication may be required: refer to '[A Guide to Symptom Management in Palliative Care](#)', Yorkshire and Humber Palliative and End of Life Groups, for guidance.
- Palliative radiotherapy is helpful for bone metastases, and is often given as a single treatment.
- In certain patients a nerve block or other intervention may help. Discuss with the PCT or cancer pain management team in Leeds.
- Consider non-drug measure eg TENS, acupuncture, massage, complementary therapies.

2. Is the dose high enough?

- If there is a partial response or inadequate duration of pain relief, ie if pain returns less than 4 hours after IR oral morphine or less than 12 hours after MR morphine, and there are no side-effects, increase the dose by 30% increments.
- Remember to change the PRN dose when changing the background dose.

3. Is the drug being absorbed?

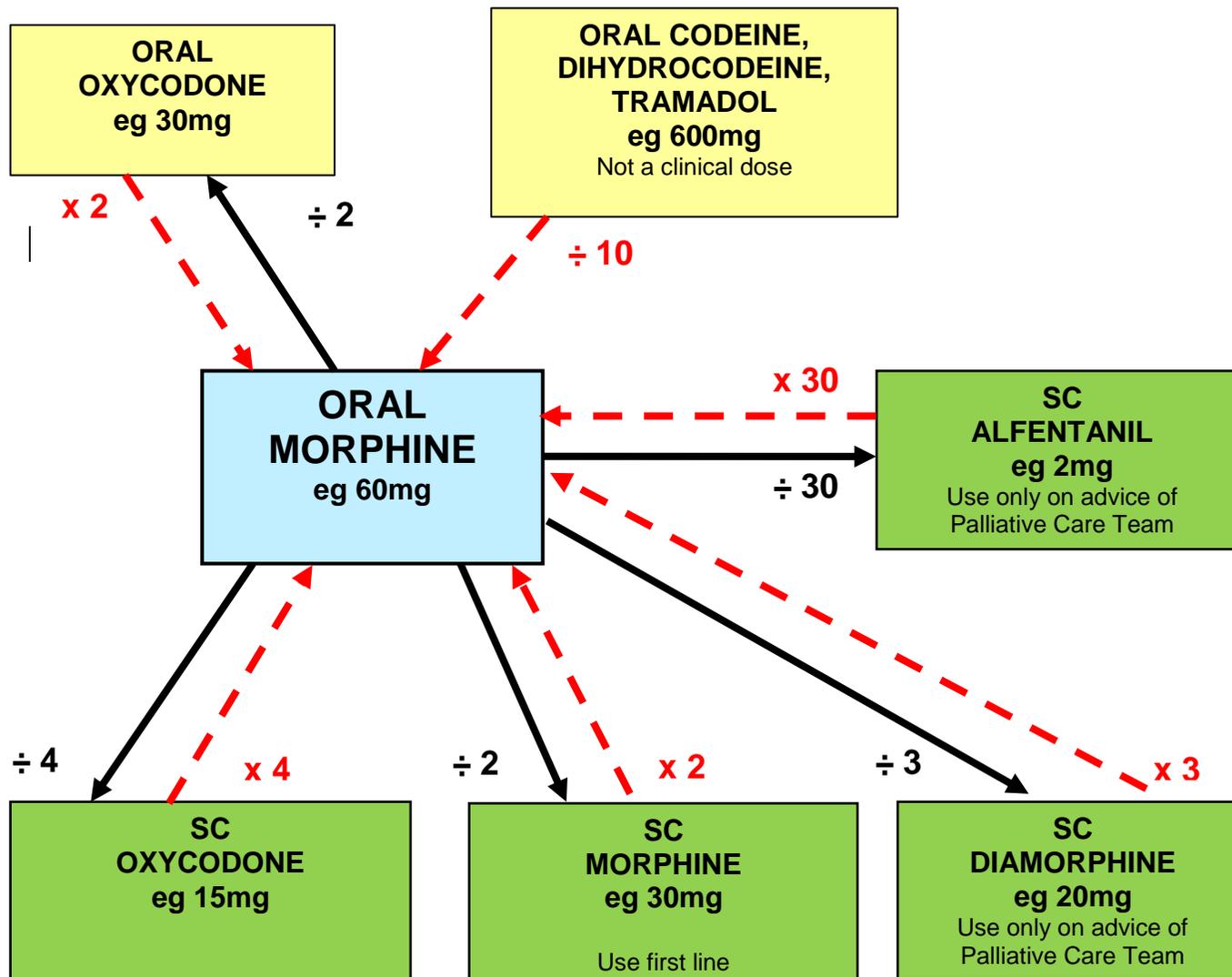
- If there is uncontrolled vomiting, dysphagia, bowel obstruction or a high stoma output, consider alternative routes of delivery, eg SC, TD.

4. Are adjuvants required?

- Refer to '[A Guide to Symptom Management in Palliative Care](#)', Yorkshire and Humber Palliative and End of Life Groups, for guidance, and discuss with the Palliative Care Team if necessary.

10. OPIOID CONVERSION CHART

- To convert between opioids, always convert to equivalent dose of oral morphine first.
- These conversions are approximate guides based on product specifications and clinical experience. They may differ from guidance stated in the BNF.
- People metabolise opioids differently, so conservative conversions are recommended, especially at high doses, and it may be appropriate to consider a dose reduction.
- Ensure that PRN medication is prescribed (usually 1/6 of the total daily dose), review frequently and titrate as necessary.
- Leave patches in place in dying patients and give additional opioid via a syringe driver if necessary.



Fentanyl patch mcg/hr	Equivalent 24hr dose of oral morphine	PRN dose of Oramorph required
12	<45mg	5 - 10 mg
25	90mg	15mg
37	90-134mg	15 - 25mg
50	135 - 224mg	25 - 35mg
75	225 - 314mg	40 - 50mg
100	315 - 404mg	55 - 65mg
125	405 - 494mg	70 - 80mg
150	495 - 584mg	85 - 95mg
175	585 - 674mg	100 - 110mg

Buprenorphine 7 day Patch		
Buprenorphine Patch mcg/hr	Equivalent 24hr dose of oral morphine	PRN dose of Oramorph required
5	12mg	2.5mg
10	24mg	5mg
20	48mg	7.5-10mg

Buprenorphine 3 or 4 day patch (check frequency of patch change)		
Buprenorphine Patch mcg/hr	Equivalent 24hr dose of oral morphine	PRN dose of Oramorph required
35	84mg	10-15mg
52.5	126mg	15-20mg
70	168mg	20-25mg

11. CONSULTATION, APPROVAL AND RATIFICATION PROCESS

See 16.1 Appendix 1

12. DOCUMENT CONTROL

Palliative Care Team

13. DISSEMINATION AND IMPLEMENTATION

Staff bulletin
Palliative and EoL section of intranet

14. MONITORING COMPLIANCE AND EFFECTIVENESS

15. REFERENCE AND ASSOCIATED DOCUMENTS

1. A Guide to Symptom Management in Palliative Care, Yorkshire and Humber Palliative and End of Life Groups
2. Opioids in palliative care: safe and effective prescribing of strong opioids for pain in palliative care of adults, NICE CG140 May 2012
3. Palliative Care Formulary, Twycross R, and Wilcock A, Radcliffe Medical Press Ltd and website www.palliativedrugs.com
4. Clinical Knowledge Summaries: Palliative Cancer Care- Pain
5. Patient Safety Alert: Risk of distress and death from inappropriate doses of naloxone in patients on long-term opioid/opiate treatment, 20 November 2014
6. Conservative Management of Uraemia: York Guidelines 2018
7. Information for patients about opioid therapy, HDFT patient information leaflet
8. Information for patients about the law on driving having taken certain drugs, HDFT patient information leaflet

16. APPENDICES

Appendix 1: Consultation Summary

Appendix 2: Monitoring, audit and feedback summary

16.1. Consultation Summary

<p>Those listed opposite have been consulted and any comments/actions incorporated as appropriate.</p> <p>The author must ensure that relevant individuals/groups have been involved in consultation as required prior to this document being submitted for approval.</p>	List Groups and/or Individuals Consulted
	Helen Lyon, Pharmacy
	Palliative Care Team
	Area Prescribing Committee

16.2. Monitoring, Audit and Feedback Summary

KPIs	Audit / Monitoring required	Audit / Monitoring performed by	Audit / Monitoring frequency	Audit / Monitoring reported to	Concerns with results escalated to