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Title: Naloxone use in Palliative Care Adult Patients

Guidance

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Purpose:	The aim is for guidance for the administration of Naloxone for the reversal of respiratory depression in patients receiving prescribed opioids in a clinical setting for pain control and breathlessness management (long term use for chronic pain management and for patients with life limiting incurable disease)				

Applies to:	Palliative care patients receiving prescribed opioids in a clinical setting
Exclusions:	Management of Acute opioid overdose Patients who are dying as a natural result of their disease progression and are taking prescribed opioids

Writing / reviewing a policy or procedure - QUICK GUIDE **Click the icon to access guidance on using / following this template** **(Delete this box when final)**	 Writing a policy or procedure - Quick Gu

CONTENTS

Other related documents: **(delete if not relevant):**

1.0 FLOW CHART / KEY STEPS QUICK REFERENCE SUMMARY

OPIOID TOXICITY IN PATIENT ON LONG-TERM OPIOIDS ACUTE HOSPITAL

RESPIRATORY RATE (RR) ≤ 8 BREATHS MINUTE, OXYGEN SATURATIONS <85%, OR CYANOSED

OPIATE TOXICITY IN PATIENT ON LONG-TERM OPIOIDS (NOT BUPRENORPHINE)

DISCONTINUE OPIOID, REMOVE FENTANYL PATCH if present.

ADMINISTER HIGH FLOW OXYGEN, monitor RR and SaO2

Dilute 400micrograms (1 ampoule) of NALOXONE up to 10mls using Sodium Chloride 0.9%

ADMINISTER 100micrograms (2.5ml) as SLOW IV BOLUS DOSE CHECKING FOR RR every 2 minutes until RR >8

This may require repeated doses and syringes as above.
Flush the cannula with sodium chloride 0.9% between naloxone doses.

Please document dose amounts given and their effect on RR/GCS/Pain.

Patients usually respond after 2-4mls of diluted naloxone with deeper breathing and improved GCS.
A few patients need 1-2mg naloxone.
If no response to this dose consider other causes e.g. sedatives, acute renal failure, intracerebral event.
Closely monitor RR and O2 sats, as above, as further doses may be needed. Duration of action of many opioids exceeds that of naloxone (15-90 mins) and impaired liver and renal function will slow clearance of opioid.

ONCE RR > 8 BREATHS/ MINUTE CONTINUE TO MONITOR SaO2, GCS and RR, every 15 minutes for 2 hours then hourly for 6 hours after immediate release opioid, 12 hours after modified release opioid and 24 hours after transdermal opioid.

IF RR ≤ 8 BREATHS MINUTE – REPEAT ALGORITHM

Contact Specialist Palliative Care Team for Advice – MPH Bleep 2014 YDH call 6201 – Mon-Fri 8-6, weekends 8-4.

OOH –01823 333822 St Margaret's hospice 24-hour adviceline Prolonged, or recurrent, opioid-induced respiratory depression.

- If repeated naloxone doses are required, start a continuous IV infusion of naloxone via a volumetric infusion pump.

1. Add 1mg of naloxone (= 2.5ml of 400 micrograms/ml naloxone injection) to 100ml of sodium chloride 0.9% to give a concentration of 10 micrograms/ml.
2. Calculate the dose requirement per hour by totalling the naloxone bolus doses and dividing by the time period over which all the doses have been given.
3. Start the IV infusion of naloxone at half this calculated hourly rate.
4. Adjust the naloxone infusion rate to keep the respiratory rate above 8 (do not titrate to the level of consciousness).
5. Continue to monitor the patient closely with RR, SaO2 and GCS every 30 minutes.
6. Continue the infusion until the patient's condition has stabilised and RR >10 and SaO2 >92% on air (dependent on underlying condition and O2 scale).

- Additional IV boluses may need to be given using naloxone diluted in sodium chloride 0.9%. Refer to dose & administration section above.

BUPRENORPHINE

Reversal of buprenorphine induced respiratory depression Acute Hospital

Buprenorphine has a very strong receptor affinity, reflected in its high relative potency with Morphine, therefore Naloxone in standard doses does not reverse the effects of Buprenorphine and higher doses maybe needed.

Reversal of buprenorphine induced respiratory depression
1. Discontinue buprenorphine (remove transdermal patch) 2. Give Oxygen by mask. 3. Give IV naloxone 2mg stat over 90 seconds. 4. Commence naloxone 4mg/hour by CIVI. 5. Continue CIVI until the patient's condition is satisfactory (probably y <90min) 6. Monitor the patient frequently for the next 24h, and restart CIVI if respiratory depression recurs. 7. If the patient's condition remains satisfactory, restart buprenorphine at a reduced dose, e.g. half of the previous dose

MANAGEMENT OF OPIOID TOXICITY IN PATIENT ON LONG-TERM OPIOIDS WITHIN A COMMUNITY HOSPITAL WARD

RESPIRATORY RATE (RR) ≤ 8 BREATHS MINUTE, OXYGEN SATURATIONS <85%, OR CYANOSED

PATIENT ON LONG-TERM OPIOIDS (NOT BUPRENORPHINE)	PATIENT ON BUPRENORPHINE
DISCONTINUE OPIOID, REMOVE FENTANYL PATCH if present. **ADMINISTER HIGH FLOW OXYGEN, monitor RR and SaO2.** **Dilute 400micrograms (1 ampoule) of NALOXONE up to 10mls using 0.9% Sodium Chloride.** **ADMINISTER 100micrograms (2.5ml) as IM DOSE CHECKING FOR RR every 2 minutes.** **Whilst RR remains ≤8 this dose can be repeated every 2-5 minutes.** **Please document dose amounts given and their effect on RR/GCS/Pain.** **Patients usually respond after 2-4mls of diluted naloxone with deeper breathing and improved GCS level.** **A few patients need 1-2mg naloxone.** **If no response to this dose consider other causes e.g. sedatives, acute renal failure, intracerebral event.** **Closely monitor RR and O2 sats, further doses may be needed as the duration of action of many opioids exceeds that of naloxone (15-90 mins) – see section 5.1, impaired liver and renal function will also slow clearance of opioid.** **ONCE RR > 8 BREATHS/ MINUTE CONTINUE TO MONITOR SaO2, GCS and RR, every 15 minutes for 2 hours then hourly for 6 hours after immediate release opioid, 12 hours after modified release opioid and 24 hours after transdermal opioid.** **IF at any point RR is reduced again to ≤ 8 BREATHS MINUTE – REPEAT ALGORITHM.** **For prolonged or recurrent respiratory depression consider escalating patient to acute hospital for IV infusion naloxone.** **01823 333822 St Margaret's hospice 24-hour adviceline** **Ensure there is a plan in place if additional doses and/or monitoring are likely to be required in the absence of medical cover e.g. evenings, weekends, bank holidays.**	**DISCONTINUE BUPRENORPHINE and REMOVE PATCH** **Dial 999 and escalate patient ASAP to acute hospital.** **Buprenorphine has a high affinity for receptors, response to naloxone may be less predictable and higher doses of naloxone maybe required.**

KEY POINTS QUICK REFERENCE SUMMARY

1.1

- This guidance is to be intended to provide information about the use of Naloxone, an opioid antagonist, in patients receiving prescribed opioids in a clinical setting.
- **The use of naloxone in this clinical situation is with the intent of reversing opioid-induced respiratory depression** which is immediately life threatening (i.e. requires intervention to prevent death from opioids rather than disease) and not reversing the analgesic effect.
- It is **not** relevant in the management of acute opioid overdose.
- Naloxone should only be used when opioid induced toxicity is causing severe respiratory depression.
- It should not be used in patients who are dying as a natural result of their disease progression and are taking regular opioids.
- Naloxone cannot reverse symptoms induced by non-opioids, e.g., benzodiazepines.
- The process is different for buprenorphine than any other opioid because of its high receptor affinity and prolonged receptor binding

2.0 INTRODUCTION

This guideline was initially produced in response to the National Patient Safety Agency recommendation (May 2006) that naloxone is available in all clinical locations where morphine and diamorphine injections are administered or stored.1 Subsequent patient safety alerts NHS/PSA/W/2014/016 2 and NHS/PSA/Re/ 2015/009 3 recommended that naloxone must be given with great caution to patients who have received longer-term opioid/opiate treatment for pain control or who are physically dependent on opioids/opiates. It acknowledges that the BNF doses recommended for acute opioid/opiate overdose may not be appropriate for the management of opioid/opiate induced respiratory depression and sedation in those receiving palliative care and in chronic opioid/opiate use.
This guidance on the use of naloxone for overdose of prescribed opioids in palliative care patients has been developed to address this. They are based on information in PCF 8 – Palliative Care Formulary accessed February 2024

Preparation: NALOXONE 400mcg/ml injection (1ml ampoule)

2.1 Naloxone is a potent opioid antagonist and is effective in the reversal of opioid-induced respiratory depression.

2.2

The risk of respiratory depression in a patient who has already been on a regular opioid dose (for even a few days) is very small.

- Naloxone is not indicated for opioid-induced drowsiness and/or delirium that are not life threatening.

- Naloxone is not indicated for patients on opioids who are dying. It is important to recognise that breathing patterns change as a person is in the final hours of life, and this is clinically separate to a consistent low RR as a result of opioid toxicity. Naloxone should not be administered in this situation.
- Patients on regular opioids for pain and symptom control are physically dependent; naloxone given in too large a dose or too quickly can cause an acute withdrawal reaction and an abrupt return of pain that is difficult to control.
- Patients with pre-existing cardiovascular disease are at more risk of side effects.

Total antagonism will result in severe pain with hyperalgesia and, if physically dependent, severe physical withdrawal symptoms and marked agitation. Opioid withdrawal syndrome: anxiety, irritability, muscle aches; nausea and vomiting can include life-threatening tachycardia and hypertension. Cardiac arrhythmias, pulmonary oedema and cardiac arrest have been described. It is important to avoid total reversal for this reason.

3.0 DIAGNOSIS OF OPIOID TOXICITY

3.1 Is the patient showing signs of toxicity?

These are drowsiness, confusion, myoclonic jerks and hallucinations. If these are the only symptoms and the patient is easlily rousable and there is NO repiratory depression then:

- If the patient has no pain, reduce the opioid dose by a third to a half or consider an opioid rotation
- If the patient still has pain, consider whether the pain is opioid responsive and contact the palliative care team for advice

3.2 Is the patient showing the above signs of opioid toxicity? Do they have a reduced respiration rate, ≤8 breaths/min, oxygen saturation <85%, cyanosed with a reduced GCS. Then you will need to reverse some but not all of the effect of the opioid. You only want to reverse the repiratory depression and not the analgesia.

4.0 PROCESS DESCRIPTION

4.1 Please follow Flow diagram (pages 4-7) if Opioid induced respiratory depression is diagnosed

4.2 Intravenous Naloxone is the preferred route of administration for naloxone but can be given intra-muscularly (IM) or if venous access is difficult or not possible (see Community hospital flow diagram). Onset of action will be slower with IM administration.

4.3 Buprenorphine has a very strong receptor affinity, reflected in its high potency compared to morphine, therefore naloxone in standard doses does not reverse the effects of buprenorphine. (Please see flow diagram pages 4-7)

4.4 The duration of action of many opioids exceeds that of naloxone (which acts for, anything between 15-90 minutes). Therefore, repeated doses are often required.Impaired liver or renal function will slow clearance of the opioid. It is essential that respiratory rate and O2 sats should be closely moniotored until patient is stable. Minimum times are:

6 hours for IR preparations
12 hours for MR preparations
24 hours for Fentanyl patches and methadone

5.0 MONITORING

Note - The monitoring arrangements are required for any Trust Policy. This can also be used as an option for other types of documents.

Element of policy for monitoring	Section	Monitoring method - Information source (e.g. audit)/ Measure / performance standard	Item Lead	Monitoring frequency /reporting frequency and route	Arrangements for responding to shortcomings and tracking delivery of planned actions
Number of people with respiratory depression from opioids		Audit using bettermeds search to confirm flow chart has been followed	Acute pall care teams	Annually	Monitoring via EOL governance group

8.0 REFERENCES

NHS patient safety alert: Risk of distress and death from inappropriate doses of naloxone in patients on long term opioid/ opiate treatment 20.11.14.

Scottish Palliative Care Guidelines April 2020 https://www.rightdecisions.scot.nhs.uk/shared-content/palliative-care/palliative-care/naloxone

SPAGG Guidelines-for-the-Use-of-Naloxone-in-Palliative-Care-Adult-Patients- final March 25

The Palliative care Handbook, A Good Practice guide, Wessex Palliative Physicians, 9th Edition. 2019.

Vandenburg.M. medico legal report on The Risks in Use of Naloxone with Patients Dependent on Opiates for Analgesia Especially for Those who have Cardiac Problems, 2012.

Wilcox.A, Howard.P & Charlesworth S. Palliative care Formulary (8th edition) 2022

9.0 APPENDIX A

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Monitoring post-Naloxone administration

Patient name: NHS no: DOB:

When to check	Date	Time	Resp Rate	Consciousness level	Length of monitoring dependent on drugs/ formulations		
					Immediate release	Modified Release	Patches Methadone Buprenorphine
Baseline							
+15 mins							
+30 mins							
+45 mins							
+1 hour							
+ 1 hour 15mins							
+ 1 hour 30 mins							
+ 1 hour 45 mins							
+ 2 hours							
+ 3 hours							
+ 4 hours							
+ 5 hours							
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