

**LINDSEY LODGE HOSPICE & HEALTHCARE**

# **Management of Opioid Overdose Guidelines**

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## 1. Introduction

Consider opioid toxicity if the patient has experienced:

- A drug error (e.g. inadvertent dose increase) or rapid escalation of opioid
- Unexplained drowsiness, unconsciousness or deterioration in any patient receiving an opioid
- Confusion/hallucinations, myoclonic jerks, drowsiness, pinpoint pupils

The most immediate threat to life is respiratory depression from suppression of the respiratory centres. If threat to life is suspected, then reversal of the opioid is required using opioid antagonist, Naloxone. Naloxone should not be used for drowsiness and/or delirium, which is not life threatening, because of the danger of reversing the opioid analgesia and precipitating a major physical withdrawal syndrome. Instead, omit or reduce the next dose or consider switch of opioid.

For oral opioid overdose, where there is threat of serious harm, Charcodote (activated charcoal in suspension form) can be used to bind the gastric opioids and prevent absorption. Charcodote comes with a risk of aspiration, due to emetogenic properties, therefore should only be used if the patient is rousable and able to swallow. An antiemetic should be administered before Charcodote to reduce the risk of vomiting and aspiration. A clinical assessment of the patient should be carried out and risks versus benefits considered and discussed with relevant others (patient/relatives) before prescribing Charcodote.

## 2. Assessment

Full set of clinical observations is required, including oxygen saturations and respiratory rate.

If the patient has respiratory rate  $\geq 8$  breaths/min and the patient is rousable and not hypoxic/cyanosed, adopt a 'wait and see' policy, with close observation of the patient. Consider reducing or omitting next regular dose of opioid.

For carefully selected patients (those who are able to swallow and are at lower risk of aspiration), where the opioid has been taken orally, consider the use of Charcodote 250ml orally after administering an antiemetic (preferably Metoclopramide if not contraindicated, owing to the pro-kinetic properties).

If the patient develops a respiratory rate  $< 8$  breaths/min, and the patient is comatose/unconscious and or cyanosed/hypoxic, Naloxone should be used as per the box below:

### Naloxone use for emergency reversal of opioid

- Administer Naloxone 400 microgram iv (if iv access not available, give im or sc)
- Consider whether a call to emergency services, 999, is appropriate. Notify doctor.
- Reassess after 1 minute, if no response, deliver Naloxone 800 microgram.
- Reassess after 1 minute, if no response, deliver further Naloxone 800 microgram.
- Reassess after 1 minute, if no response, deliver Naloxone 2-4mg.
- If no response consider alternative diagnosis
  
- Once there has been a response, patient will still need review by doctor to review opioid prescription. Consider whether Naloxone infusion is required to deliver an hourly dose which is 50-100% of the total dose needed to get a response (see notes below). Remove any opioid transdermal patches pending medical review.

Figure 1

### 3. Ongoing Treatment

After the last dose of naloxone, monitor level of consciousness and respiratory rate every 15 mins for 2 h, then hourly:

- For 6 hours after immediate release opioid
- For 12 hours after modified release opioid
- For 24 hours after methadone

If more than three bolus doses of naloxone are required, consider IVI of naloxone for up to 24hours.

### 4. Naloxone - How to Administer Continuous Infusions

**Caution 1** – naloxone is cleared more quickly than many opioids, acting for 15 mins to 90mins; thus further doses or a continuous infusion may be needed.

**Caution 2** – buprenorphine will require higher doses of naloxone – 2mg stat over 90 secs, set up IVI naloxone 4mg/hr. Naloxone has been reported to be only partially effective in tramadol overdose (in a case series of tramadol toxicity 7 out of 11 had good response to naloxone, one patient had no response).

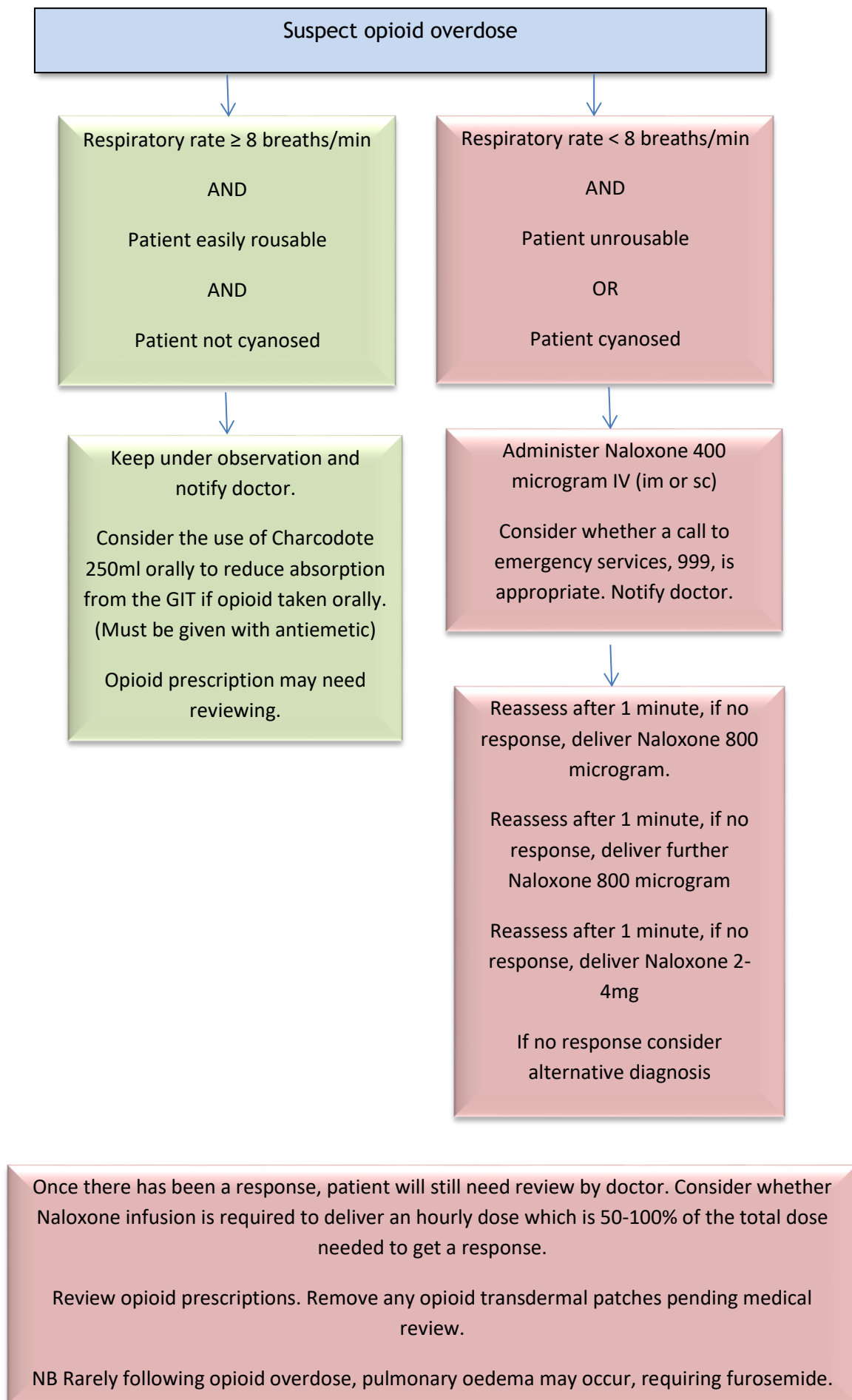
**Caution 3** - analgesic benefit from the opioid will be partially reversed. Consider non-opioid alternative analgesics (e.g. paracetamol, NSAIDs).

## 5. Setting up a Continuous IV infusion of Naloxone

To maintain partial reversal until the opioid is cleared

- A consultant, a senior nurse, and the patient's own wishes should be included when discussing whether to transfer to an acute hospital or remain at the hospice.
- The initial dose required as boluses will approximately guide the infusion dose required.
- Dilute 10 ampoules of 400micrograms (2mg) in 20ml sodium chloride 0.9% to give a concentration of 200 micrograms per ml.
- Administer via a large peripheral vein or central venous catheter.
- A typical hourly dose is 60% (range of 50-100%) of the total stat doses required to maintain satisfactory ventilation RR>8 for >15 mins with subsequent titration according to response/level of respiratory depression.
- Usual infusion rate 0.25ml-0.5ml/hr (50mcg-100mcg/hr) via syringe driver given subcutaneously over 24 hours.
- The infusion of naloxone must not be mixed with any other drug.
- Prepared infusion must be used within 24 hours of preparation or discarded
- Adjust the naloxone infusion rate to keep the respiratory rate above 8 (do not titrate to level of consciousness).
- Patient's respiratory rate and pain level must be monitored closely during infusion
- If remaining at the hospice, ensure PRN IV/SC doses (as above, with doses suitable for likely degrees of respiratory depression) are prescribed in case respiratory depression recurs or the cannula dislodges, respectively.
- If respiratory depression recurs, the doctor should review need for increasing the rate (by increasing the dose of drug delivered over 24hours).
- If pain recurs, the doctor should review need for reducing the rate (by reducing the dose of drug delivered over 24hours).
- Consider writing up an alfentanil infusion (at least 50% dose reduction of opioid) if respiratory rate stable and pain returns as this can be stopped and drug cleared in 30-60 mins, should respiratory function be compromised again.

Rarely an opioid overdose is complicated by pulmonary oedema, but the signs may be absent until the respiratory rate and tidal volume improves. Consider this if hypoxia continues and consider the need for furosemide or nitrates.



REFERENCES: Andrew Wilcock, Paul Howard and Sarah Charlesworth; Palliative Care Formulary, Seventh Edition, 2020.

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Date of Ratification by QA sub Committee: 11<sup>th</sup> November 2019

Review frequency: 2 years

To Be reviewed	Review completed	By	Approved By	Circulation
Oct 2019	Nov 2019	LA	QA Sub-committee	L: Policies, Procedures & Guidelines
Oct 2021	Nov 2021	LA	QA 17/11/2021	L: Policies, Procedures & Guidelines
Oct 2023				