Barts Health NHS
NHS Trust

INTRAVENOUS PATIENT AND NURSE CONTROLLED ANALGESIA (PCA/NCA) FOR THE ADULT PATIENT IN ACUTE PAIN CLINICAL GUIDELINE

APPROVING COMMITTEE(S)	Clinical Policies Group	Date approved:	July 2016 Revised January 2019
EFFECTIVE FROM	January 2019		
DISTRIBUTION	Inpatient Adult Pain Service Pharmacy Wards and Clinical Departments Trust Wide via Barts Health Intranet		
RELATED DOCUMENTS	Infection Control Policies Cleaning and Decontamination- Infection Control Policy Adult PCA/Epidural Observation Chart Adverse Incident Policy Controlled Drugs in Wards and Departments Policy Observation and Escalation Policy Trust Clinical Guideline Acute Pain Management in Adult Patients Intravenous Patient Controlled Analgesia for the Paediatric Patient in Acute Pain-Clinical Practice Policy		
STANDARDS	RCoA 2013 Guidelines for the Provision of Anaesthetic Services - Anaesthesia services for acute pain management RCoA 2012 – Raising the Standard: A compendium of audit recipes Section 11: Acute Pain Services		
OWNER	Inpatient Adult Pain Service Barts Health NHS Trust		
AUTHOR/FURTHER INFORMATION	Inpatient Adult Pain Service Barts Health NHS Trust		
SUPERCEDED DOCUMENTS	CLI/POL/149/2014-001 Intravenous Patient Controlled Analgesia (PCA) for the Adult Patient in Acute Pain		
REVIEW DUE	January 2022		
KEYWORDS	Acute pain, PCA, patient controlled analgesia, scientific evidence, NCA		
INTRANET LOCATION(S)	http://bartshealthintranet/policies/policies.aspx		
CONSULTATION	*Barts Health*	Pharmacy	
	External Partner(s)	*n/a*	
SCOPE OF APPLICATION AND EXEMPTIONS	**Included in guideline:**		
	This guideline applies to any **ADULT** who is receiving PCA/NCA, and to all medical and nursing staff who has received appropriate PCA/NCA training and is involved in the care of patients receiving this mode of analgesia.		
	Exempted from guideline:		
	All non-clinical staff groups are exempt from this guideline. Paediatric & Neonatal Wards.		

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INTRODUCTION

1.1 PCA refers to a method of pain relief that allows a patient to self-administer small doses of i.v or s.c strong opioids as required via a PCA pump. NCA refers to a method of pain relief that allows a nurse (or other health professional licensed and trained to administer medications) to use the handset to deliver the pre-programmed bolus dose of i.v or s.c strong opioids as required via a PCA pump. The delivery for both is immediate and the result is improved individualised pain relief, reduction in medication administration errors and sense of complete control over treatment for patients.

1.2 The aim of this document is to provide support regarding the safe and effective administration of i.v/s.c opioid analgesics to adult patients when PCA/NCA is in use. This guideline conforms to the National Patient Safety Agency (NPSA) safety alert, ensuring safer practice with high dose opioids, and promoting safer use of injectable medicines (NPSA 2007).

1.3 All health care professionals caring for patients with PCA/NCA infusions must read this guideline and ensure they understand its contents. Formal education is available from the inpatient adult pain service at all hospital sites (refer to section 8: Training and Comptency for more information).

2 ABBREVIATIONS

BHAS	Bilingual health advocacy service
PCA	Patient Controlled Analgesia
NCA	Nurse Controlled Analgesia
NEWS	National early warning score
NSAID	Non-steroidal anti-inflammatory drugs
mcg	microgram
mg	milligram
i.v.	Intravenous
IR	Immediate release
s.c	subcutaneous
CNSs	Clinical Nurse Specialists
ODPs	Operating Department Practitioners
PONV	Post-operative Nausea and Vomiting
CVC	Central Venous Catheter
RCoA	Royal College of Anaesthetists
HCP	Health Care Professional

3 DEFINITIONS

PCA	A method of pain relief that allows a patient to self-administer small doses of an opioid analgesic as required. This is achieved by using a programmable infusion pump.
PCA pump	Programmable infusion pump that delivers opioid analgesic i.v. / s.c.
PCA handset	The handset is connected to the PCA pump. The patient presses the button on the handset to demand a PCA bolus dose.
PCA bolus dose	A dose of opioid analgesic delivered via the PCA pump once the handset has been successfully activated.
Demand	Any time the handset is activated, regardless of whether the drug has been successfully delivered or not.
Lockout period	A minimum time interval between two successful PCA/NCA bolus doses. During the lockout period the patient or nurse (if NCA) may make a demand but will not be able to activate the pump.
Clinician bolus dose	A bolus dose administered via the PCA pump which is initiated by authorised personnel. This is often used for the initial titration of opioid analgesia and the dose required is usually greater than the patient-controlled dose. The clinician bolus dose can be repeated at the same minimum interval as the PCA dose until pain is controlled.
Concurrent background	A concurrent background of the opioid analgesic delivered via the PCA pump with the ability to press the PCA handset.
Continuous infusion	A continuous infusion of the opioid analgesic delivered via the PCA pump.
Dose Limits	Limits to the maximum and minimum amount of the bolus dose and background infusion that can be delivered.
NCA	A technique by which the nurse (or other health professional licensed and trained to administer medications) must use the handset to deliver the pre-programmed bolus dose.
Opioid	Opioids are drugs that exert their activity by acting as agonists at endogenous receptors (opioid receptors), and that elicit the characteristic stereospecific actions of natural morphine-like ligands. These receptors are widespread throughout the central and peripheral nervous systems. A number of opioid receptors have been described. Some opioids display differential receptor activity; the clinical relevance of this is not clear. (The British Pain Society, 2010)
Adult	For the purposes of this guideline an adult is a person who is 16 years and over.

4 SUMMARY

4.1 This guideline outlines expected practice for commencing, prescribing, caring and discontinuing PCA/NCA infusions, compliant with relevant legislation and NPSA guidance.

4.2 Establishes requirements for designated areas deemed suitable for care of patients with PCA/NCA infusions and how these can be identified.

4.3 Sets out requirements for training and competency for all HCPs.

4.4 Sets out the expected standards for the management of equipment and monitoring of patients and the duties of particular clinical staff and groups.

4.5 Will be monitored and audited by college tutors for medical trainees and by the inpatient pain service who will conduct ongoing audit throughout the year.

4.6 Breaches of this guideline must be reported using the Trust incident reporting system and investigated by the relevant Consultant or Clinical Manager and communicated to the Pain Service.

5 PATIENT SELECTION

Inclusion criteria:

5.1 PCA/NCA is indicated for the control of pain following surgery, trauma, and for non-surgical severe acute pain.

5.2 Patients suitability for PCA/NCA analgesia must be assessed and documented on the anaesthetic chart or health care records and only by the anaesthetist, inpatient pain service or managing team (RCoA et al, 2004). The assessment must include:

- Procedure planned
- Patient's choice
- Physical and mental status
- Ability to understand and follow instructions
- Comprehension of PCA device
- Consideration must be given to cultural beliefs.

5.3 The anaesthetist or managing team must obtain verbal informed consent from all patients regarding the use of PCA/NCA. HCPs must remember it is the patient's right to refuse this type of analgesic.

5.4 Patients aged 15 years old (and weigh over 50kg) who are admitted to an adult ward must be given an adult PCA/NCA pump and managed in the same way as an adult. If a 16 or 17 year old patient is admitted to a paediatric ward he/she must be treated as a paediatric patient and refer to the Paediatric PCA Policy if using a paediatric PCA pump.

5.5 The anaesthetist/HCP must ensure a PCA/NCA pump is available to use before prescribing the PCA/NCA. If there is no pump available, another analgesic route will need to be prescribed e.g. oral/s.c.

Exclusion criteria:

5.6 Patients who cannot understand the use of the handset or the concept of PCA (if this is the case consider starting an NCA; refer to section 6: Nurse Controlled Analgesia).

5.7 Allergy to the opioid used in the PCA/NCA.

5.8 Patient unable to use the PCA handset due to physical impairment (if this is the case consider starting an NCA; refer to section 6: Nurse Controlled Analgesia).

5.9 A language barrier is **NOT** a contraindication to PCA/NCA usage. An interpretor can be arranged by the ward nurses if needed.

5.10 Patients who are admitted into hospital with a flare up of their usual chronic pain.

Special considerations: PCA/NCA should be used with caution in:

5.11 Pregnant women who are not in labour.

5.12 Patients with respiratory problems.

5.13 Patients with renal or hepatic impairment / failure.

5.14 Patients with sleep apnoea syndrome.

5.15 Elderly or frail patients; the dosage may require adjustment.

5.16 Cognitively impaired patients and patients with learning disabilities. For this group of patients NCA must be considered.

6 NURSE CONTROLLED ANALGESIA (NCA)

6.1 An anaesthetist and medical team can make the decision to commence an NCA. The patient handset is operated by the named HCP on the basis of a request for analgesia, pain severity scoring or in anticipation of pain e.g. prior to movement or physiotherapy. NCA is typically used in exceptional circumstances.

6.2 NCA training is covered in PCA training. Further advice is available from the inpatient pain service.

6.3 NCA must be considered for patients who are cognitively impaired and/or have difficulties in understanding or operating the PCA button. The anaesthetist or inpatient pain service are the only HCPs responsible for assessing patient's cognitive ability. Patient's cognitive ability must be assessed twice a day. If this is required out of hours please contact the on call anaesthetist or hospital at night team where appropriate.

6.4 NCA must only be used on dedicated wards where 80% of HCPs are competent in using PCA/NCA devices. Note: avoid locating these patients in side rooms ; these patients need to be visable from the nursing station.
Refer to appendix 1 for list of designated wards that care for patients with PCA/NCA.

Book training for RLH and SBH sites via the intranet WESHARE: Your Career tab / Clinical Course / Book On A Course / Courses tab/ Clinical Courses / General Pain, PCA (adult)).
Book training for WCH site by emailing the pain CNSs: PainNurseWCH@bartshealth.nhs.uk
Book training for NUH site by emailing the pain CNSs: PainNurseNUGH@bartshealth.nhs.uk

6.5 One designated trained HCP per shift must be responsible for administering the bolus doses required (not carers or relatives).

6.6 NCA must be clearly prescribed on the prescription chart and selected at the front of the Adult PCA/Epidural Observaton Chart. The Abbey Pain Scale or PAINAD Scale is the recommended pain assessment tool and must be used for cognitively impaired patients. Refer to appendix 2 for copies of The Abbey Pain Scale and PAINAD Scale.

6.7 For prescribing an NCA refer to Section 9: Prescription. Note: there is a dedicated NCA prescription sticker (refer to appendix 3: prescription stickers for PCA/NCAs).

6.8 For all NCAs lengthen the lock out period to 10-20 minutes rather than the default 5 minutes.

6.9 The named HCP or medical team responsible for the patient must inform the inpatient adult pain service if a patient is prescribed an NCA and this must be clearly documented in the patients healthcare records.

7 APPROPRIATE ENVIRONMENT FOR PATIENTS WITH PCA / NCA

7.1 PCA / NCA must only be used in a designated environment where agreement for its use has been authorised. Note: avoid locating these patients in side rooms ; these patients need to be visable from the nursing station. A list of the designated wards is provided in appendix 1. Anaesthetists must ensure the allocated ward can manage and are trained to care for patients on PCAs/NCAs.

7.2 If there is no HCP trained in managing a PCA/NCA, this will need to be escalated to the site manager.

7.3 Patients must be approached prior to use, given a full explanation on the use with the option of being provided with a written PCA/NCA information leaflet.

7.4 The clinical area must have:

- 80% of HCPs competent in using PCA/NCA devices.

  Book training for RLH and SBH sites via the intranet WESHARE: Your Career tab / Clinical Course / Book On A Course / Courses tab/ Clinical Courses / General Pain, PCA (adult)).
  Book training for WCH site by emailing the pain CNSs: PainNurseWCH@bartshealth.nhs.uk
  Book training for NUH site by emailing the pain CNSs: PainNurseNUGH@bartshealth.nhs.uk

- A named HCP who has achieved competency in IV drug administration and has attended the trust's mandatory PCA/NCA training for the duration of the PCA/NCA use.

- The Trusts Adult PCA and Epidural Observation Chart- this must replace the general NEWS Observation Chart used on all wards while a PCA/NCA is in progress. Contact the inpatient pain service to find out how to order these specifc

  charts.

- Oxygen needs to be available.

- Naloxone, anti-emetics, and non-opioid analgesics need to be available within the ward or department.

  If the environment does not comply to the criteria listed above then that area cannot accept patients with PCAs/NCAs.

8 TRAINING AND COMPETENCY

8.1 Each IV accredited HCP must achieve and maintain their clinical competencies in practice regarding the safe and effective management of a patient receiving PCA/NCA. They must attend PCA training every two years to maintain competency.

8.2 Training sessions are provided on a monthly/bimonthly basis.

Book training for RLH and SBH sites via the intranet WESHARE: Your Career tab / Clinical Course / Book On A Course / Courses tab/ Clinical Courses / General Pain, PCA (adult)).
Book training for WCH site by emailing the pain CNSs:
PainNurseWCH@bartshealth.nhs.uk
Book training for NUH site by emailing the pain CNSs:
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There must be a minimum of two trained HCP in the clinical area at all times who are competent to manage a patient with a PCA/NCA.

8.3 If there are no registered HCP on duty who are trained and competent to look after patients with PCA, the following applies:

During office hours:

8.4 The inpatient pain service must be contacted during office hours to offer support to the HCP. If there are no HCP trained to manage a patient with a PCA/NCA then the patient must be moved to an environment where there are appropriately trained staff if the patient cannot be converted to alternative analgesics.

Out of office hours:

8.5 The site manager must be informed and must either arrange suitable cover or, attend the ward to support the HCP to carry out any PCA/NCA arrangements, if trained and competent to do so.

8.6 If a non-Trust agency HCP works on a ward where a patient is receiving PCA/NCA, that patient **MUST** be cared for and all PCA observations attended by a HCP who has attended PCA training within the last two years. Should the agency HCP work on a regular basis on areas accepting patients with PCA/NCA, they must attend PCA/NCA training.

8.7 HCPs caring for patients with PCA/NCA must be trained and assessed as competent prior to its use.

8.8 Anaesthetic trainees must also demonstrate competency through formal assessment prior to entering the on-call rota.

9 PRESCRIPTION

9.1 The PCA/NCA must be prescribed on the "as required prescription" side of the prescription chart. It must be the decision of the anaesthetist, inpatient adult pain service or a senior member of the patients medical team, as to whether the PCA/NCA is initiated. Should this be the case, the inpatient adult pain service must be notified as a follow-up review may be required.

9.2 The opioid analgesic drugs used in PCA/NCA in this Trust are listed below:

- Morphine Sulphate
- Fentanyl (preferred in patients with renal impairment)
- Oxycodone

Refer to appendix 3: prescription stickers PCA/NCAs. Note: there is a dedicated NCA prescription sticker.

Additional analgesia

9.3 Non-opioids: Paracetamol, NSAID and adjuvant analgesics can be prescribed and administered in addition to PCA/NCA, unless contra-indicated. This multimodal approach provides balanced analgesia, may be opioid sparing and aids the stepping down from PCA/NCA when the patient is ready for oral analgesia (ANZCA, 2010).

9.4 Opioids: Additional opioids are not recommended with PCA/NCA. However, in some circumstances e.g. patients with a history of chronic opioid use, they may be considered. There must be clear instructions by the prescribing anaesthetist, inpatient pain service or doctor on the prescription chart should this be the case. Always contact the inpatient pain service or anaesthetist for advice.

9.5 **Background infusion** is not routinely used on PCAs/NCAs as this can increase the risk of opioid side-effects. However, in some circumstances such as opioid-tolerant patients or patients requiring high dosages of opioids, this may be considered. If at all uncertain when a background infusion is appropriate please discuss this with the inpatient adult pain service or on-call anaesthetist. Note: Fentanyl is partciularly short acting and frequently requires a low dose background infusion commencing on the PCA/NCA.

9.6 **Loading dose / clinician bolus** may be considered when the patient's opioid requirements are higher than the set bolus dose. Opioid loading dose(s) must be prescribed on the once only administration section of the drug chart. The administration of the loading dose(s) is limited to the anaesthetist, inpatient pain

service and critical care staff who have achieved the appropriate competency in delivering them.

9.7 **Oxygen** must not be routinely prescribed and given to patients with PCA/NCA in progress. Oxygen only to be used if clinically indicated with low saturations (after discussion with medical team).

9.8 **Antiemetics** must always be prescribed for patients with PCA/NCA in progress: Ondansetron 4-8mg TDS being first line and Cyclizine 50mg TDS as second line.

9.9 **Naloxone** is stored in the ward IV medication cupboard.

- Administer low dose Naloxone intravenously 100mcg to 200mcg bolus.
- Reassess in 2 minutes if response inadequate give subsequate dose of 100mcg every 2 minutes
- Please refer to section 15.2 of this guideline for guidance for administering low doses of Naloxone for postoperative respiratory depression (UK medicines Information 2015).

9.10 **Combined continuous epidural infusion and PCA/NCA** can be considered in situations where the epidural infusion is effective but is not covering all of the pain area(s). When combining these two methods of analgesia, the continous epidural infusion must not contain an opioid component – only local anaesthetic.

9.11 **NCA** – the prescriber must ensure there is a specific NCA prescription. An NCA prescription sticker should be used.

10 ADMINISTRATION

10.1 A dedicated giving set with an anti-syphon valve is used for a PCA/NCA.

10.2 Once the pump has been programmed and the administration line primed, this must be attached directly to the hub of the cannula or CVC line, ensuring good practice as per trust policy on infection control (ANTT).

10.3 The giving set must be clearly labelled with the date of commencement.

10.4 Two HCPs must check the prescription corresponds with the PCA/NCA pump settings.

10.5 The prescription must be signed as given by the person connecting the PCA/NCA.

10.6 The settings on the pump must be checked against the prescription before pressing the start button.

10.7 To attach a PCA/NCA the HCP must have a valid IV certificate.

10.8 Two HCPs must sign the prescription for administration.

10.9 Dedicated PCA/NCA givings sets for morphine and fentanyl must be changed every 72 hours if the drug is manufactured by pharmacy.

10.10 Dedicated PCA/NCA giving sets for oxycodone must be changed every 24 hours if the drug is made up on the ward.

11 MANAGEMENT OF PCA/NCA ON THE WARD

11.1 It is essential to observe the patient closely to ensure the analgesic is both effective and safe. Pain intensity along with the respiratory rate and the level of sedation must be recorded regularly as indicated on the PCA/NCA chart.

11.2 In addition, document the total volume infused, the current bolus dose and background infusion rate as indicated on the dedicated Adult PCA/NCA and Epidural Observation Chart.

12 FREQUENCY OF PCA/NCA ASSESSMENTS

Documentation of observations:

12.1 It is essential to observe the patient closely to ensure that the analgesia is both effective and safe. The following must be recorded on the Adult PCA/NCA and Epidural Observation Chart:

- Blood pressure
- Respiratory rate
- Temperature
- Percentage of oxygen saturation
- Pain intensity (Numeric Rating Scale: 0-10) rest and movement
- Level of sedation (AVPU)
- PONV (0-2)
- Pruritus
- NEWS score
- Bolus dose (mg or mcg)
- Background infusion (mg/hr or mcg/hr)
- Total dose infused (since PCA/NCA pump set up)
- Any additional bolus doses (clinical boluses via PCA/NCA pump)

12.2 For patients receiving PCA/NCA post-operatively, the frequency of observations must be completed as follows:

Recovery room and the ward environment	Every 15mins for the first hour in recovery, HDU/ITU and ward environment. Every 30mins for 4hrs, then hourly thereafter unless a change in clinical condition. After 24 hours of stable observations the frequency may be changed to every 4 hours. Following a clinician bolus dose observations should be carried out every 5mins for 15mins then normal

	observations recommenced if observations are within normal limits
Change in frequency based on change in pain score	
Pain Score 0-3 (None to mild pain)	Every 4 hours
Pain Score 4-6 (Moderate pain)	Every 2 to four hours
Pain Score 7-10 (Severe pain)	Every 30 minutes to 2 hourly until pain score reduced

ALL OBSERVATIONS TO BE PERFORMED MORE FREQUENTLY IF PATIENT PARAMETERS INDICATE

OR

AT THE DISCRETION OF AN ANAESTHETIST OR A MEMBER OF THE INPATIENT PAIN SERVICE

13 TRANSFERRING BETWEEN CLINICAL AREAS

Before leaving the clinical area the HCP must check that:	
ACTION	**RATIONALE**
The drug being administered via the PCA/NCA device corresponds with the drug prescribed on the prescription chart.	To adhere to Trust drug policy and prevent drug errors.
The PCA/NCA is connected to either a CVC or peripheral cannula and is being administered intravenously.	To ensure effective analgesia is established prior to discharge to the ward.
The drug chart has been completed correctly: PCA/NCA and concurrent drugs (e.g. paracetamol +/- NSAID's) are prescribed on the regular side of the chart.	To prevent drug errors and comply with Medicines Management Policy.
Naloxone, chlorphenamine and an anti-emetic are prescribed on the 'as required' section of the drug chart.	To allow for immediate treatment of side effects and complications.
All other opioids and sedatives have been stopped unless indicated otherwise by anaesthetist/inpatient pain team.	To reduce the risk of complications (e.g. sedation and/or respiratory depression).
The pump programming has been checked and corresponds with the programme on the PCA/NCA assessment chart / prescription.	To reduce the risk of error and ensure patient safety
The Adult PCA/NCA observation chart has been completed correctly, including details of loading doses administered.	To ensure accurate records of clinical care relevant to PCA/NCA
The patient is being managed effectively. A	To ensure effective analgesia is

patient must not leave the recovery room with pain score greater than 3 (mild pain) (RCoA).	established prior to discharge to the ward.
The patient is not excessively sedated.	To reduce the risk of complications (e.g. sedation and/or respiratory depression).
The patient is not experiencing nausea, vomiting or pruritus.	To ensure the patient is comfortable and any side effects are well controlled.
The cannula dedicated to the PCA/NCA is functioning and secured to the skin or the s/c butterfly site is not red or inflamed.	To allow for uninterrupted delivery of analgesia via PCA/NCA.
The line clamps on the PCA/NCA giving set are released and open.	To allow for uninterrupted delivery of analgesia via PCA/NCA.

14 REVIEW / COMMUNICATION / HANDOVER

Review

14.1 Patients with PCA/NCA will not be reviewed every day by the inpatient adult pain service. However, patients with complex pain issues will be reviewed by the inpatient adult pain service if referred to us (Monday-Friday 09.00-17.00) and as required out of hours by the on call anaesthetist.

14.2 The inpatient adult pain service will visit all wards where patients with PCA/NCA are being cared to ensure standards of care are maintained. If requested by a HCP or if deemed necessary due to complexity of a patient's case; individual patients may be reviewed regularly if referred to us. Such a review should complement and enhance, not replace nursing care provided by ward-based nurses.

14.3 The on-call anaesthetist and Hospital at Night team must review patients if requested by the inpatient adult pain service or by a HCP during out of hours. If unable to do this personally, the anaesthetist must arrange for an appropriate colleague to do so at the earliest opportunity.

14.4 Overnight, during weekends and bank holidays, the on-call anaesthetist must routinely review patients if requested by the inpatient adult pain service.

Communication and Handover

14.5 Recovery areas must keep a record of patients who have received PCA/NCA. If a patient is transferred directly to ITU or HDU it is the responsibility of the ITU/HDU team to ensure the patient is highlighted to the inpatient pain service or anaesthetic team (out of hours) if a review is required.

14.6 Monday to Friday, at the end of the day shift, a written handover of patients likely to require input is produced by the inpatient pain service. On-call anaesthetic / Hospital at Night team support must be available to review these patients.

14.7 Monday to Friday mornings, at the end of the night shift, the on call anaesthetist and Hospital at Night team must handover to the inpatient adult pain service any

changes to the status of the patients reviewed and inform them of any complex patients where PCA/NCA set up on the wards has occured.

14.8 If the patient's pain is not managed despite the PCA/NCA, contact the inpatient adult pain service or on call anaesthetist for review.

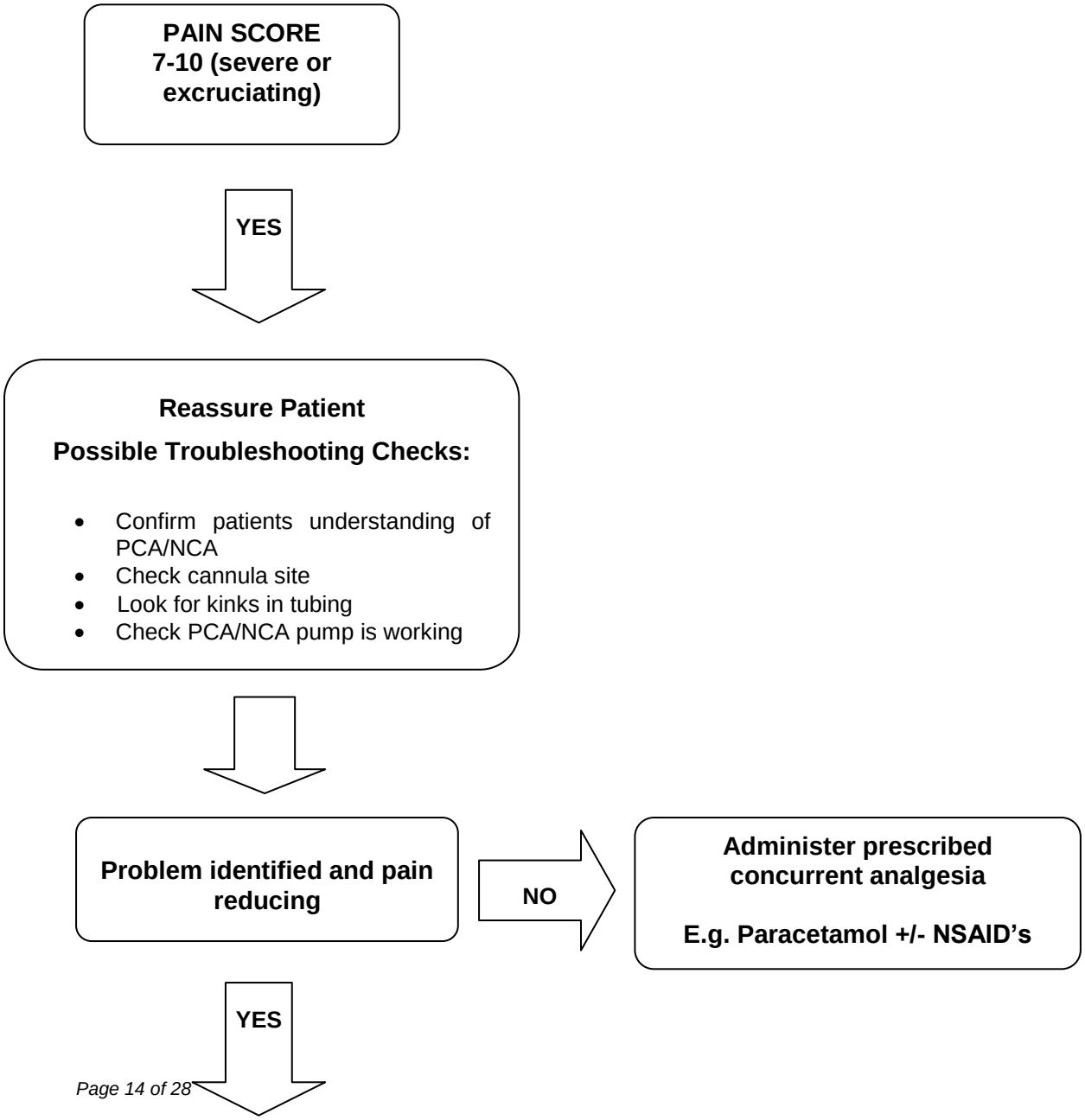
14.9 Should severe side effects of PCA/NCA occur please see troubleshooting flow charts below.

14.10 If a patient is unrousable and has a respiratory rate of 8 or less, the cardiac arrest team must be called on 2222.

15 TROUBLE SHOOTING

Management of Adult Patients

15.1 Management of uncontrolled pain



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CONTACT:

Inpatient adult pain service or on-call anaesthetist out of hours

Continue to encourage patient/nurse to use PCA/NCA frequently until pain level is mild at rest and movement (0-3). Repeat cycle if pain returns

15.2 Management of Sedated or Respiratory Depressed patient.

INCREASED SEDATION and/or RESPIRATORY DEPRESSION

YES

Administer oxygen therapy

CHECK

IS THE PATIENT RESPONSIVE?

YES

NO

CONTACT:

1. Patient's medical team

2. Inpatient adult pain service

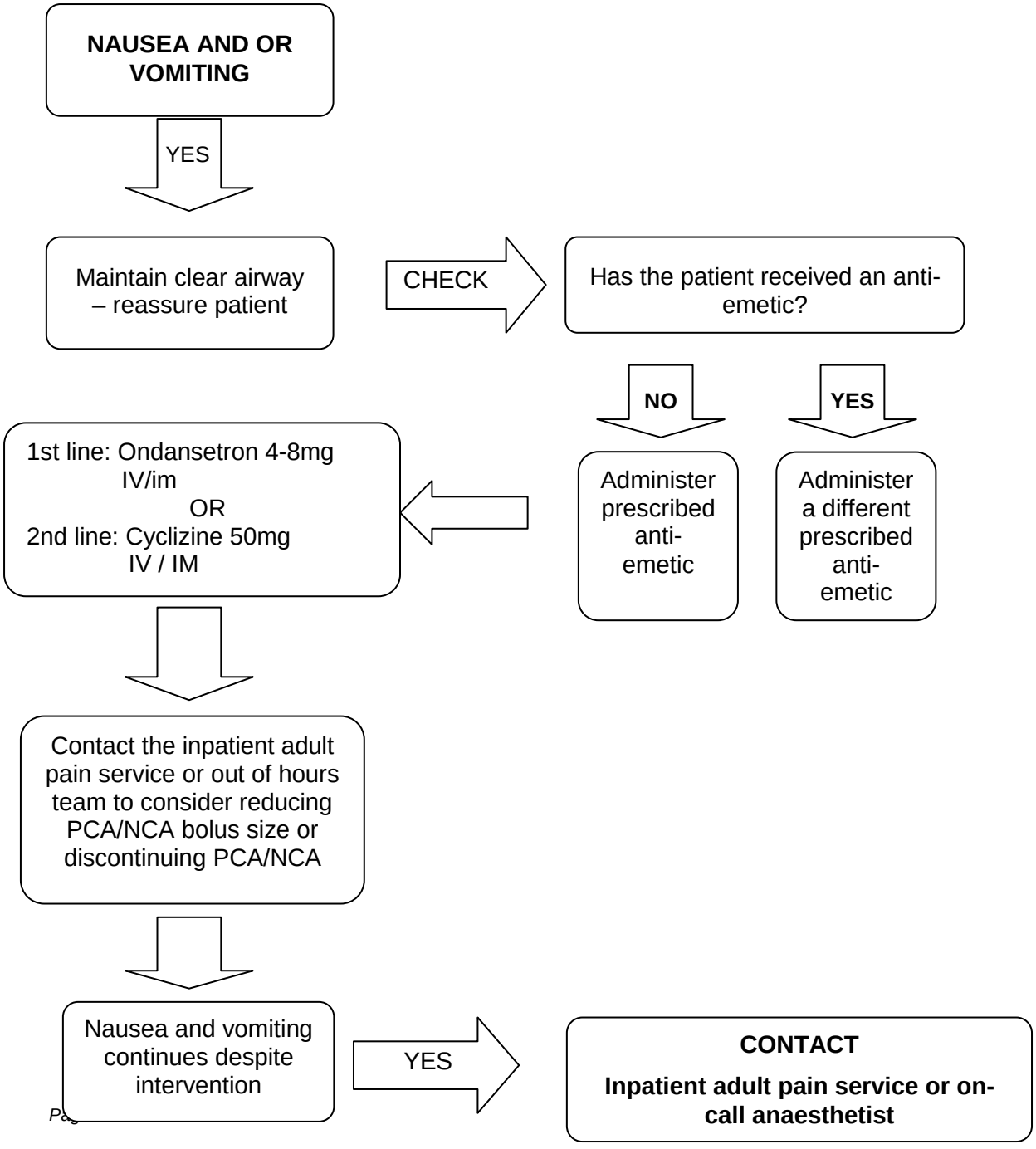
Remove PCA/NCA button/stop any background infusion

INITIATE ARREST CALL **(2222)**

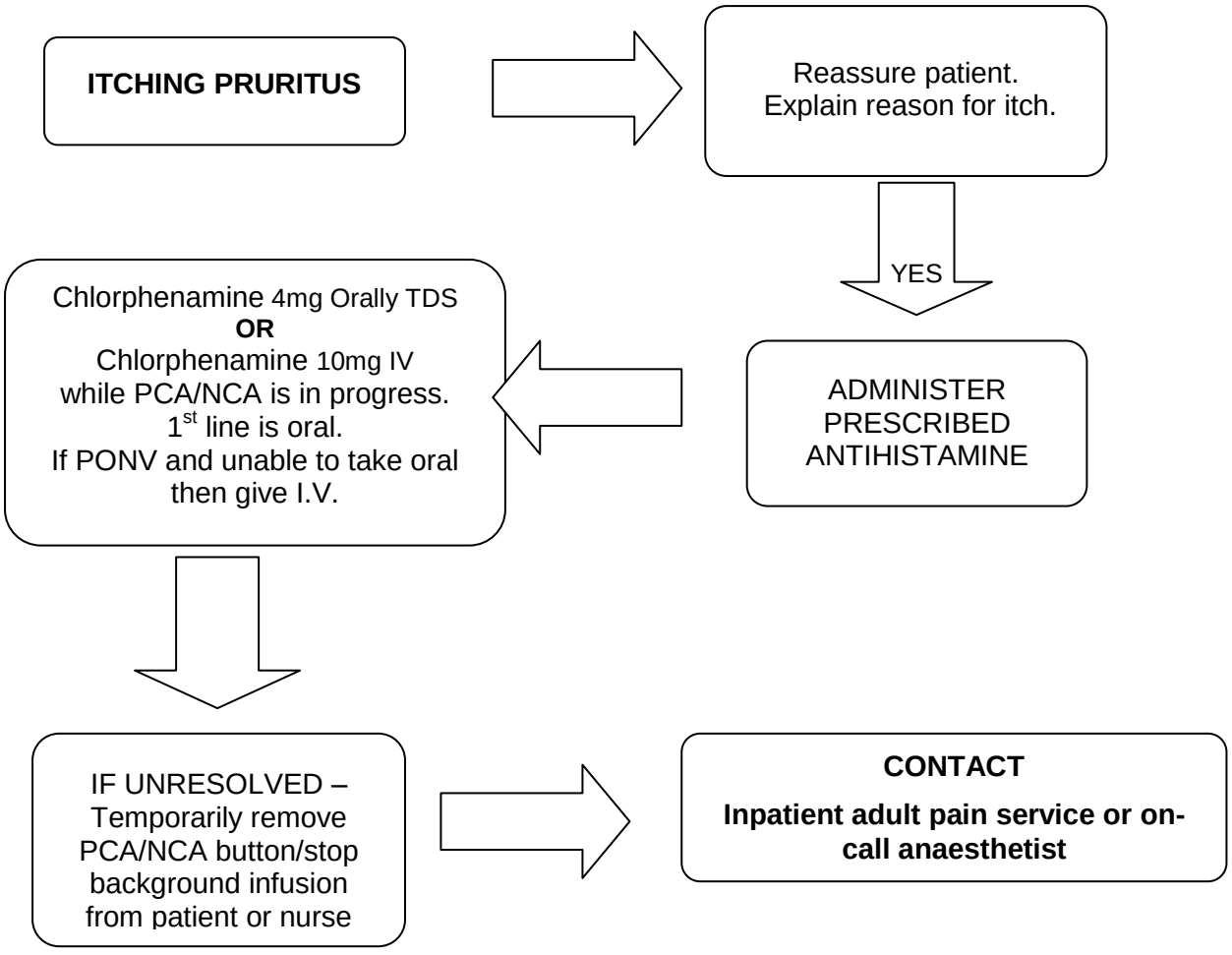
Administer Low dose Naloxone intravenously 100mcg to 200mcg bolus Reassess in 2 minutes if response inadequate further doses of up to 100mcg can be given every 2 minutes until respiratory function improves

Whilst naloxone use can be life–saving in respiratory depression and respiratory arrest, patients that receive high doses of the drug especially those on long term opioids or not clinically indicated, it can cause a rapid reversal of the physiological effects for pain control, leading to intense pain and distress, and an increase in sympathetic nervous stimulation and cytokine release precipitating an acute withdrawal syndrome. Hypertension, cardiac arrhythmias, pulmonary oedema and cardiac arrest may result from inappropriate doses of naloxone being used for these types of patients. This guidance has been taken from the Patient Safety Alert (NHS /PSA 2015)

15.3 Management of Postoperative Nausea and Vomiting



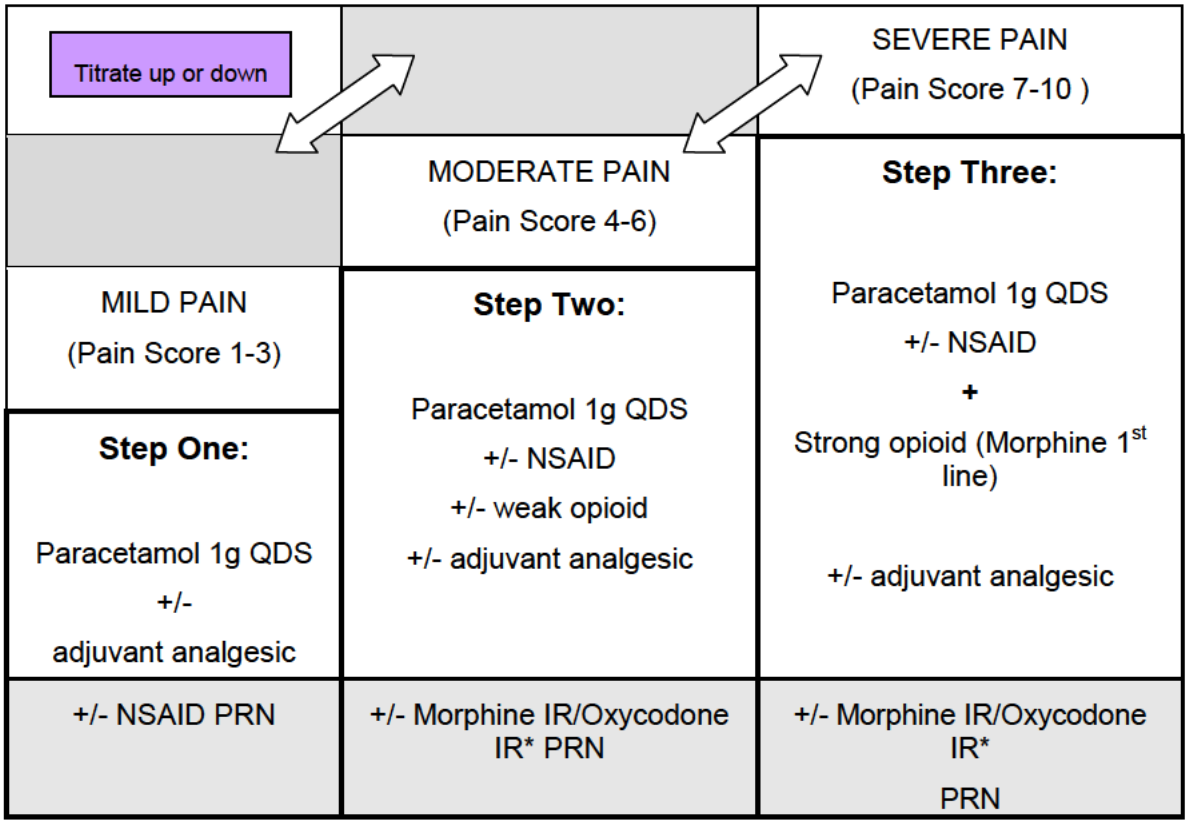
15.4 Management of Pruritus



16 DISCONTINUATION OF PCA/NCA

16.1.1 In addition to the prescribing of regular analgesics, appropriate analgesics must be prescribed on the 'as required' section of the prescription chart for the management of breakthrough pain depending on age and renal function. IM/SC injections must be avoided where possible if the patient can tolerate oral fluids.

Step-Down Analgesia



**Oxycodone IR must ONLY be used if Morphine IR causes intolerable side effects or patient has moderate to severe renal impairment. NB: Targinact or Tapentadol must ONLY be prescribed on advice of the inpatient pain service.*

16.2 Continue regular pain assessment after the PCA/NCA has been discontinued.

16.3 The PCA/NCA pump must be returned clean to theatre department (signed and dated with a green sticker attached).

16.4 PCA/NCA pumps must be cleaned as per Trust policy (Cleaning and Decontamination- Infection Control Policy).

16.5 To dispose of unused medication from a PCA/NCA please refer to the Controlled Drugs in Wards and Departments Policy.

17 DESTRUCTION OR RETURN OF CONTROLLED DRUGS

Please refer to the Controlled Drugs in Wards and Departments Policy on the Trust intranet.

18 DUTIES AND RESPONSIBILITIES

Inpatient Pain Service	To promote education of health care workers in areas accepting PCAs/NCAs. Provide advice and support to clinical staff in the management of patients with PCAs/NCAs. Promote good practice in the care of patients with PCAs/NCAs. Provision of PCA/NCAs devices. Ensure the adult PCA/NCA Guideline is compliant with the National Guidelines on management of PCAs/NCAs.
Director of Nursing, Associate Directors of Nursing,	Ensure the implementation and maintenance of the adult PCA/NCA Policy. To work closely with the inpatient adult pain service. Safety Cost-effectiveness
Ward mangers / Charge Nurses / Sisters	Ensure all HCPs that come into contact with PCAs/NCAs are competent in their use. Ensure all the HCPs have received appropriate training and education on the use of PCA/NCA. Ensure the PCA/NCA machines are cleaned according to the Trust Infection Control Policy and stored appropriately and safely in a dedicated area.
Staff Nurses in areas accepting PCA/NCAs	Ensure their educational requirements regarding PCA/NCA are met. To follow the adult PCA/NCA Guideline at all times. Patients with PCAs/NCAs must not be

	allocated to a member of staff who has not completed the appropriate training.
Bank, Agency and Temporary Staff	Patients with PCAs/NCAs must not be allocated to a member of staff who has not completed the appropriate training. Should the bank, agency or temporary staff work on a regular basis on areas accepting patients with PCA/NCA, they must attend PCA/NCA training.
Pain Link Nurses	To work together with the inpatient adult pain service to promote good practice in pain management, including PCA/NCA.
Anaesthetists / Anaesthetic Trainee Doctors	Ensure appropriate patient selection when PCA/NCA is considered. Ensure the area receiving the patient with PCA/NCA is authorised to accept them. Ensure the PCA /NCA prescription is appropriately completed. Ensure their educational requirements regarding PCA/NCA are met.
Medical/Surgical Teams	To ensure effective communication with the inpatient adult pain service and anaesthetists in relation to the management and or change in condition related to pain or the PCA/NCA.
Medical Devices Team	Maintain medical devices training records and liaise with the inpatient pain service as required, to ensure that training on medical devices includes appropriate instruction in relation to the PCA/NCA pump.

19 MONITORING THE EFFECTIVENESS OF THE PCA/NCA GUIDELINE

Issue being monitored	Monitoring Method	Responsibility	Frequency	Reviewed by and actions arising followed up by
Appropriate PCA/NCA training levels in the wards	Teaching records. Liaise with wards and learning & development department Record keeping and monitoring the training levels on the wards accepting PCAs/NCAs.	Staff, Ward managers, Inpatient adult pain service	2 yearly	Inpatient adult pain service Ward managers Matrons

Implementation of regular observation and documentation	Reviews of the observation charts.	Staff, Ward managers, Matrons, Inpatient adult pain service	Daily	Inpatient adult pain service Ward managers Matrons
Appropriate PCA/NCA training levels of anaesthetists / anaesthetic trainees	Teaching record Liaise with anaesthetic teaching coordinator	Anaesthetists Anaesthetic trainees Inpatient adult pain service	2 Yearly for permanent anaesthetists. On induction week for anaesthetic trainees.	Inpatient adult pain service

APPENDIX 1: LIST OF DESIGNATED WARDS THAT CARE FOR PATIENTS WITH PCA/NCA

RLH	SBH	WCH	NUH
3D	1C	Recovery	East Ham
3F	1D	ITU/HDU	Recovery
4E (ITU)	1E	Primrose ward (General surgery Male)	ITU/HDU
4F (HDU)	4A	Rowan ward (Gynae/ general surgery female)	Becton
10F	4B	Sage ward (Orthopaedic Elective)	Plashet Ward
11C	4C	Sycamore ward (Orthopaedic trauma)	Maple Ward- Gateway Surgical Centre
12C	5B		Larch Ward (Ante-natal and Post-natal)
12D	6A		West Ham
12E	Recovery		
12F			
13C			
13D			

Recovery			
Interventional radiology			

APPENDIX 2: Abbey Pain Scale and PAINAD Scale

Abbey Pain Scale

For measurement of pain in people with dementia who cannot verbalise.

How to use scale : While observing the resident, score questions 1 to 6.

Name of resident : .....

Name and designation of person completing the scale : .....

Date : ..... **Time :** .....

Latest pain relief given was.....**at**.....**hrs.**

Q1. Vocalisation
eg whimpering, groaning, crying
Absent 0 Mild 1 Moderate 2 Severe 3
Q1 ☐

Q2. Facial expression
eg looking tense, frowning, grimacing, looking frightened
Absent 0 Mild 1 Moderate 2 Severe 3
Q2 ☐

Q3. Change in body language
eg fidgeting, rocking, guarding part of body, withdrawn
Absent 0 Mild 1 Moderate 2 Severe 3
Q3 ☐

Q4. Behavioural Change
eg increased confusion, refusing to eat, alteration in usual patterns
Absent 0 Mild 1 Moderate 2 Severe 3
Q4 ☐

Q5. Physiological change
eg temperature, pulse or blood pressure outside normal limits, perspiring, flushing or pallor
Absent 0 Mild 1 Moderate 2 Severe 3
Q5 ☐

Q6. Physical changes
eg skin tears, pressure areas, arthritis, contractures, previous injuries
Absent 0 Mild 1 Moderate 2 Severe 3
Q6 ☐

Add scores for 1 - 6 and record here ⇨ **Total Pain Score** ☐

Now tick the box that matches the Total Pain Score ⇨

0 - 2 No pain	3 - 7 Mild	8 - 13 Moderate	14 + Severe

Finally, tick the box which matches the type of pain ⇨

Chronic	Acute	Acute on Chronic

Abbey, J; De Bellis, A; Piller, N; Esterman, A; Giles, L; Parker, D and Lowcay, B.
Funded by the JH & JD Gunn Medical Research Foundation 1998 - 2002
(This document may be reproduced with this acknowledgement retained)

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PAINAD SCALE

The Pain Assessment in Advanced Dementia (PAINAD) scale was designed to assess pain in patients with dementia by looking at five specific indicators: breathing, vocalisation, facial expression, body language, and consolability.

Each of these indicators is scored on a scale of 0 to 2.
Scores are documented in the table according to the observed behaviour of the patient.

When these five scores are added the patient's score can range from 0 (no pain) to 10 (severe pain).

ITEMS	0	1	2	SCORE
Breathing, independant of vocalisation	Normal	Normal	Noisy laboured breathing	
Negative vocailsation	None	Occasional Moan or groan. Low level speech with negative or disapproving quality.	Repeated calling out. Loud moaning or groaning. Crying.	
Facial Expression	Smiling or inexpressive	Sad Frightened Frown	Facial grimacing	
Body Language	Relaxed	Tense Distressed Pacing Fidgeting	Rigid, Fists clenched. Knees pulled up. Striking out. Pulling or pushing away.	
Consolability	No need to console	Distracted, reassured by voice or touch.	Unable to console, distract or reassure.	
			TOTAL	

PAINAD should be used in isolation; it is just one tool and should be informed by other assessment techniques, such as knowing the patient and changes in their behaviour.

Above information adapted from:
http://painanddementia.wiki.usfca.edu/PAINAD+assessment+tool

Barts Health NHS Trust

APPENDIX 3: Prescription stickers PCA/NCAs

PCA stickers:

stick on prn side of drug chart pharmacy

Intravenous PCA prescription

MORPHINE 100mg in 100ml normal saline (1mg/ml)

PCA bolus ..... to ..... mg Starting bolus ..... mg

Lockout time ..... mins

Continuous infusion ..... to ..... mg/hr Starting rate ..... mg/hr

Usual prescription ranges: *Bolus 1–3mg | Lockout time 5 mins | Continuous infusion 0–3mg/hr*

Signature ..... Date .....

No other opiates to be given with PCA unless agreed by the Pain Service (or on-call anaesthetist)

stick on prn side of drug chart pharmacy

Intravenous PCA prescription

FENTANYL 1000mcg in 100ml normal saline (10mcg/ml)

PCA bolus ..... to ..... mcg Starting bolus ..... mcg

Lockout time ..... mins

Continuous infusion ..... to ..... mcg/hr Starting rate ..... mcg/hr

Usual prescription ranges: *Bolus 10–30mcg | Lockout time 5 mins | Continuous infusion 0–20mcg/hr*

Signature ..... Date .....

No other opiates to be given with PCA unless agreed by the Pain Service (or on-call anaesthetist)

stick on prn side of drug chart pharmacy

Intravenous PCA prescription

Drug ..... Concentration .....

PCA bolus ..... to ..... Starting bolus .....

Lockout time ..... mins

Continuous infusion ..... to ...../hr Starting rate ...../hr

Signature ..... Date .....

No other opiates to be given with PCA unless agreed by the Pain Service (or on-call anaesthetist)

NCA sticker:

stick on prn side of drug chart pharmacy

Intravenous NCA prescription

Drug ..... Concentration .....

PCA bolus ..... to ..... Starting bolus .....

Lockout time ..... mins (lockout time normally 10–20 mins)

Continuous infusion ..... to ...../hr Starting rate ...../hr

Signature ..... Date .....

No other opiates to be given with NCA unless agreed by the Pain Service (or on-call anaesthetist)

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APPENDIX 6: INPATIENT PAIN CONTACT DETAILS FOR INDIVIDUAL HOSPITALS

Whipps Cross Hospital

- Routine Referrals: 9am - 5pm Monday - Friday, Pain CNS [redacted]

  Pain CNSs email: PainNurseWCH@bartshealth.nhs.uk
- Out of hours, including weekends: Anaesthetic CT1/2, [redacted]
- Daily pain ward rounds Monday- Friday
  - Consultant-led pain ward rounds Monday, Wednesday, Friday.
  - Pain CNS ward rounds Mon-Fri

Newham General Hospital

- Routine Referrals: 8am - 4pm Monday - Friday

  Main Site: Pain CNS, Bleep 4176

  Gateway Surgical Centre: Pain CNS. [redacted]

  Pain CNSs email: PainNurseNUGH@bartshealth.nhs.uk
- Out of hours, including weekends:

  Main Site: Anaesthetic CT 1/2, [redacted]

  Gateway Surgical Centre: RMO, [redacted]
- Daily pain ward rounds Monday - Friday

  Consultant-led pain ward rounds Monday AM, Tuesday PM, Friday PM

  Pain CNS ward rounds Mon-Fri

Royal London Hospital

- Routine Referrals: 8am - 5pm Monday - Friday, Pain CNS [redacted]

  Pain CNSs email: PainNurseRLHSBH@bartshealth.nhs.uk
- Out of hours including weekends: Anaesthetic CT1/2 [redacted]
- Daily Pain ward rounds Monday- Friday

  Consultant-led ward rounds Mon PM, Tue AM, Wed AM, Thurs PM, Fri PM

  Pain CNS ward rounds Mon-Fri

St Barts Hospital

Routine referrals: 9am- 5pm Monday – Friday, Pain CNS via mobile [redacted]

Pain CNSs email: PainNurseRLHSBH@bartshealth.nhs.uk

- Out of hours, including weekends: Anaesthetist On-Call [redacted]

/ hospital at night

- Daily Pain ward rounds Monday- Friday

  Consultant-led ward rounds Tue PM

  Pain CNS ward rounds Mon-Fri