

PCA/ NCA Paediatric ordering

Medication Management

Quick reference guide (QRG)

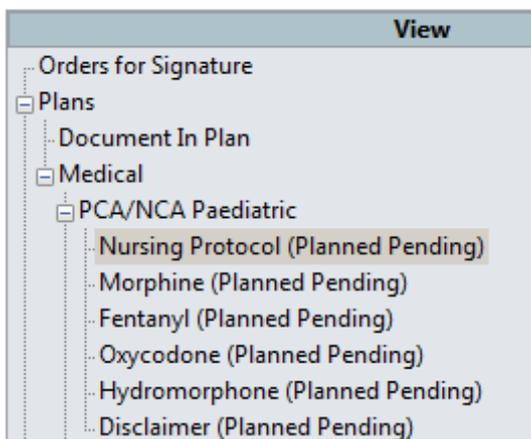
Patient Controlled Analgesia (PCA) and Nurse Controlled Analgesia (NCA) opioid infusions are ordered using the *PCA/NCA Paediatric PowerPlan*.

Refer to the Acute Pain Service Pain Guideline for dosing reference and infusion parameters.

Note: Refer to **page 4** of this QRG to order PCA/NCA infusions for patients requiring **Double Strength / Off Protocol infusions** e.g. oncology / palliative care.

Ordering PCA/NCA Paediatric PowerPlan

- In **Orders** tab, **Add Order** and search for PCA.
Select **PCA/NCA Paediatric PowerPlan** and click **Done**
- Using the **View** panel on the **Orders** tab locate the Powerplan. There are 5 phases listed. The Nursing Protocol phase will be highlighted.

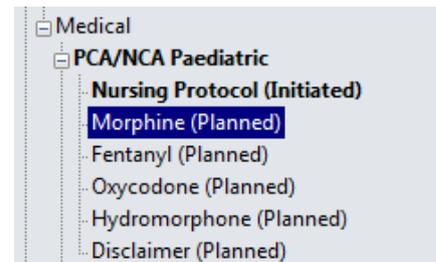


- Select the **Initiate Now** button for Nursing Protocol phase (bottom right corner)

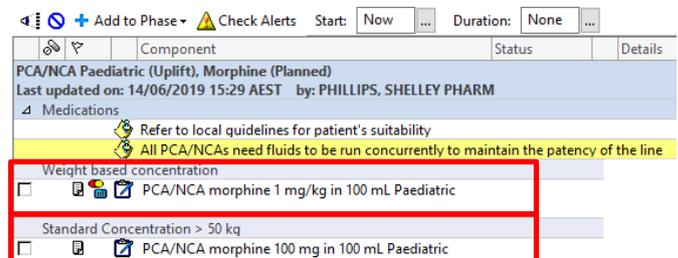


Click **Orders for Signature** and then **Sign**

- Registered Nursing staff may initiate Nursing Protocol phase if needed.
 - Observations in Nursing Protocol can be adjusted for palliative care patients.
- Next select the required opioid phase by clicking on the phase name in the **View** panel e.g. morphine



- Two orders are available within the specific opioid phase:
 - Weight-based concentration** - order to be used **for patients less than 50 kg** (dose based per kg of body weight in 100 mL)
- Dosage Calculator fires
 - Standard Concentration** - order to be used **for patients 50kg and greater** (e.g. morphine 100 mg in 100 mL)



Click on icon to see suggested bolus amount, lockout intervals and local guideline

- Tick the box next to the appropriate order

This QRG contains the following instructions:

- For **Weight-based orders** see page 2
- For **Standard concentration > 50 kg** orders see page 3
- For **Double Strength/ Off Protocol** orders see page 4
- **Modifying** initiated PowerPlan see page 4
- **Ceasing** PowerPlan see page 5



PCA/NCA for patients less than 50 kg –

Use Weight-based concentration

(see page 4 for Double Strength/ Off Protocol Orders)

1. Dosage calculator fires
2. Review Target dose and Final dose

1) Target dose:	1	mg/kg	
2) Calculated dose:	7.986	mg	
3) Dose Adjustment:	7.986	mg	100 %
4) Final dose:	7.986	mg	1 mg/kg
5) Standard dose:	7.9	mg	0.9892 mg/kg

3. Apply a feasible dose to the order
(See Note below)

Note: To ensure the dose ordered is a measurable amount, select:

Apply Standard Dose

for **Morphine** and **Oxycodone**

Apply Dose

for **Fentanyl** and **Hydromorphone**

4. If Order Entry Field (OEF) is not available at bottom of screen, left click on order details to highlight and open up the OEF. This allows review and completion of order parameters.

Note: Order parameters need to be completed before order can be Initiated

5. Click on **Details** tab & complete the following order parameters: (see image on page 4)
 - i. **Infusion Technique** – PCA or NCA
 - ii. **Bolus Dose Amount (mL)**
 - iii. **Lockout Time (minutes)**

If a background infusion is required complete:

- iv. **Initial Infusion Rate (mL/hr)**
- v. **Continuous infusion rate range** e.g. 0 - 2
- vi. **Continuous infusion rate range unit** mL/hr
- vii. **Titrate instructions** e.g. 0.5 mL/hr

6. Click on **Continuous Details** tab and review

Details for **morphine weight based additive 45 mg + sodium**

Details | **Continuous Details** | Order Comments | Offset Details | Diagnoses

Base Solution	Bag Volume	Rate
sodium chloride 0.9% for Pain Infusion Paed	100 mL	Pain Infusion
Additive	Additive Dose	Normalized Rate
morphine weight based additive	45 mg	
Total Bag Volume	100 mL	

Weight: Weight Type: Result dt/tm:

7. If required, additional instructions can be added to **Order Comments** tab e.g. PCA/NCA Cessation Protocol from xx/xx/xx (date)

Details for **morphine weight based additive 45 mg + sodium**

Details | Continuous Details | **Order Comments** | Offset Details | Diagnoses

Order comments

Use PCA/NCA Cessation protocol from 22/2/19

Minimum of 60 minutes between rate changes
Target Dose: morphine weight based additive 1 mg/kg 22/Feb/2019 16:21:10

9. **Reversal Orders** - naloxone dose will auto populate based on the patient's weight. If the weight is not current the dose field needs to be completed, all other fields will be prepopulated.

See page 3 for how to complete naloxone if weight is not current

10. **Consult to Acute Pain Service** order is preselected. This sends a referral to APS – untick if not required e.g. oncology or palliative care team to manage
11. Ensure all orders for the phase are completed:
 - PCA/NCA opioid ordered
 - Naloxone
 - Consult to APS
12. Click **Initiate Now**
13. Click **Orders for Signature** with opportunity for final review and then **Sign**
14. Review PCA/NCA and Naloxone orders on the **MAR** (identified with  icon)

NOTE: If you make a mistake you can **Right Click** and reset a single order, a phase or the whole plan before clicking **Sign**



PCA/NCA for Patients 50 kg And Greater – Use Standard Concentration

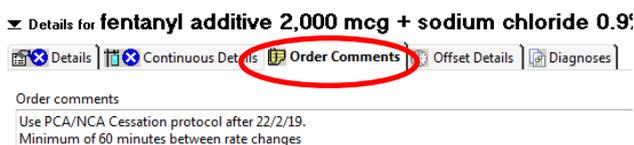
1. Dosage calculator does not fire for Standard Concentration

Note: Order parameters need to be completed before order can be Initiated

2. To review and complete order parameters - highlight order, **Right click** & select **Modify** or **Double click** the 'details' column to open the Order Entry Field
3. Click on the **Details** tab & complete the following order parameters:
 - i. **Infusion Technique** – PCA or NCA
 - ii. **Bolus Dose Amount (mL)**
 - iii. **Lockout Time (minutes)**

If a background infusion is required complete:

- i. **Initial Infusion Rate (mL/hr)**
 - ii. **Continuous infusion rate range** e.g. 0 - 2
 - iii. **Continuous infusion rate range unit** mL/hr
 - iv. **Titrate instructions** e.g. 0.5 mL/hr
4. Click on **Continuous Details** tab and review
 5. If required, additional instructions can be added to **Order Comments** tab e.g. PCA/NCA Cessation Protocol from xx/xx/xx (date)



6. **Reversal Orders** - naloxone dose will auto populate based on the patient's weight. If the weight is not current the dose field needs to be completed, all other fields will be prepopulated.

See page 3 for how to complete naloxone if weight is not current

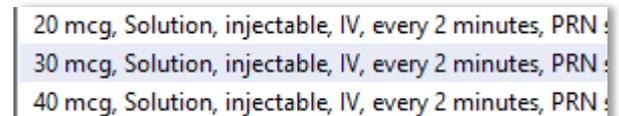
7. **Consult to Acute Pain Service** order is preselected. This sends a referral to the APS – untick if not required e.g. oncology or palliative care team to manage.

8. Ensure all orders for the phase are completed:
 - PCA/NCA opioid ordered
 - Naloxone
 - Consult to APS
9. Click **Initiate Now**
10. Click **Orders for Signature** with opportunity for final review and then **Sign**
11. Review PCA/NCA and Naloxone orders on the **MAR** (identified with  icon)

NOTE: If you make a mistake you can Right Click and reset a single order, a phase or the whole plan before click Sign

Prescribing Naloxone if Weight is Not Current

1. Click the **drop-down arrow** within the naloxone order
2. A list will appear - Select the most appropriate order based on patient's weight



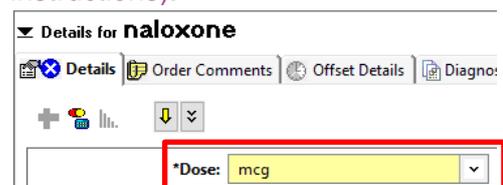
(Scroll right to see weight bands if needed).

sedation score < 2. Maximum	6 - 11 kg
sedation score < 2. Maximum	11 - 16 kg
sedation score < 2. Maximum	16 - 21 kg

3. If this step is missed a reminder will appear before Sign



4. Click **First Detail** button and complete the Dose field (Dosing guidance is in the **Special instructions**).



PCA/NCA for patients requiring Double Strength / Off Protocol infusions

1. Select required opioid phase.
2. Select **Weight based concentration** regardless of the patient weight. Dosage calculator fires.
3. Adjust **Target Dose** value (leave unit - mg/kg or mcg/kg) required for patient
4. Review **Final dose**

Note: If the **Final Dose** is capped in the Dose Calculator at a lower dose than required, this can be amended later at **Step 7** below

5. Apply a feasible dose to the order (**See Note below**)

Note: To ensure the dose ordered is a measurable amount, select:

Apply Standard Dose

for **Morphine** and **Oxycodone**

Apply Dose

for **Fentanyl** and **Hydromorphone**

6. Check that the order contains the correct dose to be added to the bag both in the order sentence at top of the order entry box and also in **Continuous Details** tab (under Additive dose)
7. If the dose required is **greater than** the capped dose, this can be manually changed by clicking in the **Additive Dose** field.

Details for morphine weight based additive 60 mg + sodium chloride

Details | Continuous Details | Order Comments | Offset Details | Diagnoses

Base Solution	Bag Volume	Rate	Infuse Over
sodium chloride 0.9% for Pain Infusion Paed 100 mL	100 mL	Pain Infusion	
Additive	Additive Dose	Normalized Rate	Delivers
morphine weight based additive	60 mg		
Total Bag Volume		100 mL	

8. Click on **Details** tab and in **Special Instructions** insert: **DOUBLE STRENGTH** or **OFF PROTOCOL** (whichever is most appropriate)
9. Continue to complete order parameters in **Details** tab as per Step 6 on page 2.

10. Complete all other orders required as per Steps 9 – 14 on page 2 of this QRG.

Modifying an Initiated PowerPlan

For all modifications to existing PCA/NCA orders navigate to **Orders** + **Add**

1. Open the **View** pane
2. Select the PCA/NCA Paediatric PowerPlan currently in use and highlight the medication phase containing order to be modified

View

- Orders for Signature
- Plans
 - Document In Plan
 - Medical
 - PCA/NCA Paediatric
 - Nursing Protocol (Initiated)
 - Morphine (Initiated)
 - Fentanyl (Planned)
 - Oxycodone (Planned)
 - Hydromorphone (Planned)
 - Disclaimer (Planned)

A. Modifying parameters for same opioid order

To change: Infusion Technique, Bolus Dose Amount, Lockout Time, Initial Infusion Rate, Continuous infusion rate range or Titration Instructions

1. **Right click** the order to be amended, select **Modify**
2. Navigate to **Details** tab and change required components of the order

Details for **morphine weight based additive 45 mg + sodium chloride 0.9% for Pain Infusion Paed 100 mL**

Details | Continuous Details | Order Comments | Offset Details | Diagnoses

*Infusion Technique: PCA

*Route of Delivery: Intravenous

*Bolus Dose Amount: 2 mL

Lockout Time: 15 minute(s)

Initial Infusion Rate: 0.5 mL/hr

Continuous infusion rate range: 0-2

Continuous infusion rate range Unit: mL/hr

Titration Instructions: 0.5 mL

Special instructions:

Requested start date/time: 14-Jun-2019 16:15

3. Click **Orders for Signature**
4. Then **Sign and Refresh**
5. Navigate to the **MAR** and Review



B. Changing opioid ordered (change medication phase) within an Initiated PowerPlan

e.g. changing from morphine to hydromorphone PCA

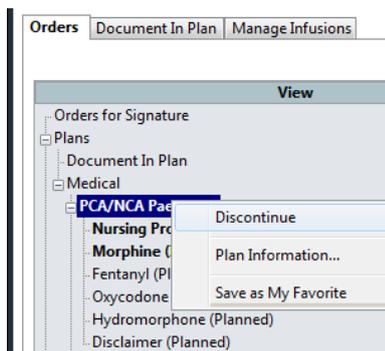
1. Highlight the medication phase to be ceased in **View** panel
2. **Right click** and select option to **Discontinue**
3. Complete mandatory fields requiring **Reason for Discontinuing** (may need to left click on order to open Order Entry Field)
4. Highlight the new medication phase to be ordered and follow steps in earlier section of QRG based on patient's weight
5. Click **Initiate Now** on new medication phase
6. Click **Orders for Signature** then **Sign**

Ceasing a PCA/NCA PowerPlan

1. Navigate to **Orders** 
2. Open the **View** pane
3. Right click on the PowerPlan title: **PCA/NCA Paediatric** and select **Discontinue**

This will cease all active orders associated with the PowerPlan (medications, observations, consults and cares).

4. Complete mandatory fields requiring **Reason for Discontinuing**



5. Click **Orders for Signature** and **Sign**

