Alberta Health Services

Form Title **PCA Adult Complex Order Set**

Form Number **21656Bond**

Alberta Health Services

PCA Adult Complex Order Set

Last Name *(Legal)*	First Name *(Legal)*
Preferred Name ☐ Last ☐ First	DOB*(dd-Mon-yyyy)*
PHN	ULI ☐ Same as PHN / MRN
Administrative Gender ☐ Male ☐ Female ☐Non-binary/Prefer not to disclose (X) ☐ Unknown	

Select orders by placing a (✓) in the associated box

Prior to utilizing this order set, ensure all previous opioid, sedatives and antiemetic orders are discontinued.

Vital Signs Protocol – PCA

☑ Vital Signs: Monitor every 1 hours x 4 hours, **then** every 2 hours x 8 hours **then** every 4 hours for duration of infusion.
☑ Pain Score: every 1 hours x 4 hours **then** every 2 hours x 8 hours, **then** every 4 hours for duration of infusion.

Patient Care Interventions

☑ Nursing Communication: Prior to starting PCA, review all previous analgesic, antiemetic, antipruritic and sedation orders with ordering service.
☐ In and Out catheter PRN for urinary retention

Respiratory Interventions

Oxygen Therapy Notes:
- *For Acute Stroke and Acute Coronary Syndromes, don't apply supplemental oxygen unless SpO2 is under 90%*
- *For Acute Coronary Syndromes and known CO2 Retainers, use supplemental oxygen conservatively*

Oxygen Therapy:
☐ Titrate Oxygen to maintain Saturation range of 92% to 96%, including Pregnancy and Acute Stroke:

Oxygen Therapy: Known CO2 Retainer
☐ Titrate Oxygen to maintain saturation range of 88% to 92%

Oxygen Therapy: Acute Coronary Syndromes
☐ Titrate Oxygen to maintain saturation range of 90% to 92%

High Flow, High Percentage Oxygen Therapy Required: For Example Carbon Monoxide Poisoning
☐ Treat with high flow, high percent oxygen, preferably 100% by partial non- rebreather mask

Blood Gas

Consider ABG if Patient:
- *Is critically ill*
- *Shows signs of carbon dioxide retention (e.g. acute breathlessness or drowsiness, increased respiratory rate)*
- *Is at risk of metabolic conditions*
- *Unexpected or inappropriate drop below 94% SpO2 while patient is awake*
- *Increased breathlessness or drop of less than or equal to 3% SpO2 when patient with chronic hypoxemia was previously stable*

☐ Blood Gas Arterial
☐ Blood Gas Arterial POCT
☐ Blood Gas Venous
☐ Blood Gas, Venous POCT

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Notify

☐ Notify Attending Service for all problems and orders related to pain, sedation, nausea and vomiting, and pruritus.

OR

☐ Notify Acute Pain Service for all problems and orders related to pain, sedation, nausea and vomiting, and pruritus.

Consults/Referrals

☐ Inpatient consult to Acute Pain Service/Pain Management

IV Maintenance

☑ Intravenous Cannula – Insert: Initiate IV
☐ Saline lock IV

IV Fluid Infusions

☐ lactated Ringers Infusion at _____ mL/hour
☐ sodium chloride 0.9% Infusion at _____ mL/hour

Medications

PCA Bolus + Continuous Infusion +/- Clinician Bolus

Continuous Infusion Rate is not required for most patients. Consider Acute Pain Service (APS) Consult.

Choose One PCA +/- Clinician Bolus option (PCA agent and concentration should be the same as the clinician bolus agent):

Option 1

Recommended Hydromorphone PCA dose 0.2 mg with 8 min lockout
☐ HYDROmorphone 100 mg in NaCl 0.9% 100 mL (1 mg/mL) PCA infusion
PCA dose: _____ mg ☐ 0.1 mg ☐ 0.2 mg ☐ 0.3 mg ☐ 0.4 mg
PCA Lockout: _____ mins ☐ 10 mins ☐ 8 mins ☐ 6 mins
Continuous Rate: _____ mg/hr
Four hour dose limit _____ mg
Admin Instructions: For inadequate analgesia after one hour, increase PCA dose to _____ mg.

AND (Optional linked Clinician Bolus from bag)
☐ HYDROmorphone 1 mg/mL Clinician Bolus from Bag
Dose _____ mg
Route: intravenous
Frequency: every 5 minutes, as needed for severe pain. Maximum of 3 doses.
Admin Instructions: For uncontrolled pain, if sedation level is 0 or 1 and respiratory rate is greater than 12 minute, give a clinician bolus equal to PCA dose every 5 minutes to a maximum of 3 doses. Check respiratory
Continuous Infusion Rate and sedation level 5 minutes, 15 minutes and 1 hour after each dose.
If 3 doses ineffective, call the ordering MRHP.

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Medications Continued

Option 2

Recommended morphine PCA dose 1.5 mg with 8 min lockout
☐ morphine 500 mg in NaCl 0.9% 100 mL (5 mg/mL) PCA bolus infusion
PCA dose: _____ mg ☐ 0.5 mg ☐ 1 mg ☐ 1.5 mg ☐ 2 mg
PCA Lockout: _____ mins ☐ 10 mins ☐ 8 mins ☐ 6 mins
Continuous Rate: _____ mg/hr
Four hour dose limit _____ mg
Admin Instructions: For inadequate analgesia after one hour, increase PCA dose to _____ mg.

AND (Optional linked Clinician Bolus from bag)
☐ morphine 5 mg/mL Clinician Bolus from Bag
Dose _____ mg
Route: intravenous
Frequency: every 5 minutes, as needed for severe pain. Maximum of 3 doses.
Admin Instructions: For uncontrolled pain, if sedation level is 0 or 1 and respiratory rate is greater than 12 minute, give a clinician bolus equal to PCA dose every 5 minutes to a maximum of 3 doses. Check respiratory Continuous Infusion Rate and sedation level 5 minutes, 15 minutes and 1 hour after each dose.
If 3 doses ineffective, call the ordering MRHP.

Option 3

Recommended fentanyl PCA starting PCA dose 15 mcg with 6 min lockout
☐ fentaNYL 1,250 mcg in NaCl 0.9% 50 mL (25 mcg/mL) PCA bolus infusion
PCA dose: _____ mcg ☐ 10 mcg ☐ 15 mcg ☐ 20 mcg ☐ 25 mcg
PCA Lockout: _____ mins ☐ 10 mins ☐ 8 mins ☐ 6 mins ☐ 5 mins
Continuous Rate: _____ mcg/hr
Four hour dose limit _____ mcg
Admin Instructions: For inadequate analgesia after one hour, increase PCA dose to _____ mcg.

AND (Optional linked Clinician Bolus from bag)
☐ fentaNYL 25 mcg/mL Clinician Bolus from Bag
Dose _____ mcg
Route: intravenous
Frequency: every 5 minutes, as needed for severe pain. Maximum of 3 doses.
Admin instructions: For uncontrolled pain, if sedation level is 0 or 1 and respiratory rate is greater than 12 minute, give a clinician bolus equal to PCA dose every 5 minutes to a maximum of 3 doses. Check respiratory
Continuous Infusion Rate and sedation level 5 minutes, 15 minutes and 1 hour after each dose.
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Medications Continued

High Concentration PCA Bolus + Continuous Infusion + Clinician Bolus

Choose One PCA +/- Clinician Bolus option (PCA agent and concentration should be the same as the clinician bolus agent):

Option 1

☐ HYDROmorphone 200 mg in NaCl 0.9% 100 mL (2 mg/mL) PCA infusion
PCA dose: _____ mg ☐ 0.1 mg ☐ 0.2 mg ☐ 0.3 mg ☐ 0.4 mg
PCA Lockout: _____ mins ☐ 10 mins ☐ 8 mins ☐ 6 mins
Continuous Rate: _____ mg/hr
Four hour dose limit _____ mg
Admin Instructions: For inadequate analgesia after one hour, increase PCA dose to _____ mg.

AND (Optional linked Clinician Bolus from bag)
☐ HYDROmorphone 2 mg/mL Clinician Bolus from Bag
Dose _____ mg
Route: intravenous
Frequency: every 5 minutes, as needed for severe pain. Maximum of 3 doses.
Admin Instructions: For uncontrolled pain, if sedation level is 0 or 1 and respiratory rate is greater than 12 minute, give a clinician bolus equal to PCA dose every 5 minutes to a maximum of 3 doses. Check respiratory
Continuous Rate and sedation level 5 minutes, 15 minutes and 1 hour after each dose.
If 3 doses ineffective, call the ordering MRHP.

Option 2

☐ fentaNYL 2,500 mcg in 50 mL (50 mcg/mL) PCA infusion
PCA dose: _____ mcg ☐ 10 mcg ☐ 15 mcg ☐ 20 mcg ☐ 25 mcg
PCA Lockout: _____ mins ☐ 10 mins ☐ 8 mins ☐ 6 mins ☐ 5 mins
Continuous Rate: _____ mcg/hr
Four hour dose limit _____ mcg.
Admin Instructions: For inadequate analgesia after one hour, increase PCA dose to _____ mcg.

AND (Optional linked Clinician Bolus from bag)
☐ fentaNYL 50 mcg/mL Clinician Bolus from bag
Dose _____ mcg
Route: intravenous
Frequency: every 5 minutes, as needed for severe pain. Maximum of 3 doses.
Admin Instructions: For uncontrolled pain, if sedation level is 0 or 1 and respiratory rate is greater than 12 minute, give a clinician bolus equal to PCA dose every 5 minutes to a maximum of 3 doses. Check respiratory
Continuous Rate and sedation level 5 minutes, 15 minutes and 1 hour after each dose.
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Medications Continued

Analgesics and Antipyretics - Adjuvants

Recommend starting at low doses and/or increased time intervals for elderly and opioid naïve patients

Acetaminophen

Recommended standard dosing: 325 to 1000 mg.

Choose One *(if applicable)* →
- ☐ acetaminophen 650 mg PO every 6 hours. Maximum 4000 mg/day.
- ☐ acetaminophen tab 1000 mg, PO every 6 hours Maximum 4000 mg/day.

NSAIDs

Caution is advised if ordering NSAIDs on patients with indwelling neuraxial catheters who are also are receiving subcutaneous heparin

Choose One *(if applicable)* →
- ☐ celecoxib cap 200 mg, PO, BID

Recommended standard dose range: 200-600 mg
- ☐ ibuprofen tab 400 mg, PO, every 6 hours Maximum 3200 mg/day.
- ☐ naproxen tab 500 mg PO BID with meals
- ☐ diclofenac tab 50 mg PO BID with meals

Recommended standard dosing 25 to 50 mg. Suggested maximum 200 mg/day.
- ☐ indomethacin 25 mg PO TID
- ☐ ketorolac 10 mg IV every 6 hours

Antipruritics – PRN

Naloxone recommended standard dose is 0.02 to 0.04 mg.

☐ naloxone 0.02 mg IV every 2 hours PRN for pruritus.

Nalbuphine may cause sedation and/or respiratory depression in the elderly (over the age of 60). Consider limiting the dose to 2.5 mg every three hours or use IV naloxone instead.

☐ nalbuphine 2.5 mg IV every 3 hours PRN for pruritus.

Diphenhydramine recommended standard dose is 10 to 50 mg. Maximum daily dose 400 mg.

☐ diphenhydrAMINE 25 mg IV every 4 hours PRN for pruritus.

Antiemetics – PRN

☐ ondansetron 4 mg IV every 8 hours PRN for nausea & vomiting

☐ haloperidol 0.5 to 1 mg IV every 4 hours PRN for nausea & vomiting. Maximum 6 mg/day.

☐ metoclopramide 10 mg IV every 4 hours PRN for nausea & vomiting.

Dimenhydrinate recommended standard dose is 12.5 to 50 mg. Avoid use in elderly

☐ dimenhyDRINATE _____ mg IV every 4 hours PRN for nausea & vomiting

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Bowel Management

Patient Care
☐ Stool chart
☐ Notify MRHP if patient has not had a bowel movement (BM) for 48 hours
☐ Notify MRHP if diarrhea develops and hold bowel routine. *Consider seepage or overflow diarrhea may occur with severe constipation*

Medications - Laxatives
Goal is to maintain usual bowel habits and encourage adequate fluid intake. If no routine, aim for bowel movement daily/every other day.

Constipation Prevention
Select at least 1 prevention agent
☐ polyethylene glycol 3350 powder for oral solution 17 g PO daily

as long as fluid intake and hydration are adequate:
☐ psyllium mucilloid powder, 1 packet PO daily
☐ sennosides 1-2 tabs PO at bedtime PRN for constipation

☐ fruit laxative 1-3 tabs PO TID with meals PRN for constipation

Constipation Treatment – 1st line
To be given if no BM in the past 24 hours
☐ polyethylene glycol 3350 powder for oral solution 17 g PO daily PRN for constipation

Constipation Treatment – 2nd line
To be given if no BM in the past 48 hours
☐ polyethylene glycol 3350 powder for oral solution 17 g PO BID PRN for constipation

Constipation treatment – 3rd line
Select agent to be given if no BM in the past 48-72 hours
☐ glycerin adult 1 supp RECTALLY daily PRN for constipation
☐ lactulose liquid 15-30 mL PO TID PRN for constipation
☐ tap water enema RECTALLY daily PRN for constipation, until adequate elimination if glycerin suppository ineffective after 24 hours
☐ sodium citrate– sodium lauryl sulfoacetate – sorbitol enema ; 1 enema RECTALLY once PRN for constipation

Consults/Referrals
☐ Inpatient Consult to Nutrition Services, for alternative fiber options

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Naloxone Protocol Adult

Notify

☑ Notify Most Responsible Health Practitioner MRHP when respiratory rate less than 8 per minute and Sedation Level 4.

Vital Signs

☑ Vital Signs: When respirations less than 8 per minute and sedation level 4 as per local Naloxone Protocol monitor pulse, respirations, oxygen saturation, pain score, sedation level, blood pressure every 5 minutes for 30 minutes **and then** every 15 minutes for one hour **and then** PRN.

Central Nervous System Agents

☑ naloxone 0.1 mg Direct IV every 3 minutes PRN for respiratory rate less than 8 per minute and sedation level 4. Maximum 4 doses. Give first dose STAT.

OR

☑ naloxone 0.2 mg SUBCUTANEOUSLY every 10 minutes PRN for respiratory rate less than 8 per minute and sedation level 4 AND No IV access. Maximum 4 doses. Give first dose STAT.

OR

☑ naloxone 0.2 mg intramuscularly (IM) every 10 minutes PRN for respiratory rate less than 8 per minute and sedation level 4 AND No IV access. Maximum 4 doses. Give first dose STAT.

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