

Intern Education Pain Management

MS NICOLE GAUTHIER CNC

YOU ARE ENTERING



A WORLD OF PAIN

TNH Pain Service



Acute pain service – 24/7

New referrals via telephone/pager referral on #779 or 52779.

A comment in the notes isn't a referral.



Chronic Pain Referrals

Never urgent

Best earlier in the day

Patients seen 2x/week

Clinic referrals best done by GP – the paper faxed with 'Chronic Pain' written on it is not acceptable



Certain Injuries/illnesses/patients we expect an early referral

Rib fractures

Pancreatitis (NBM)

Opioid dependence >100mg OMEDD



TNH Pain Service

All PCA / Ketamine require discussion with us prior to commencement

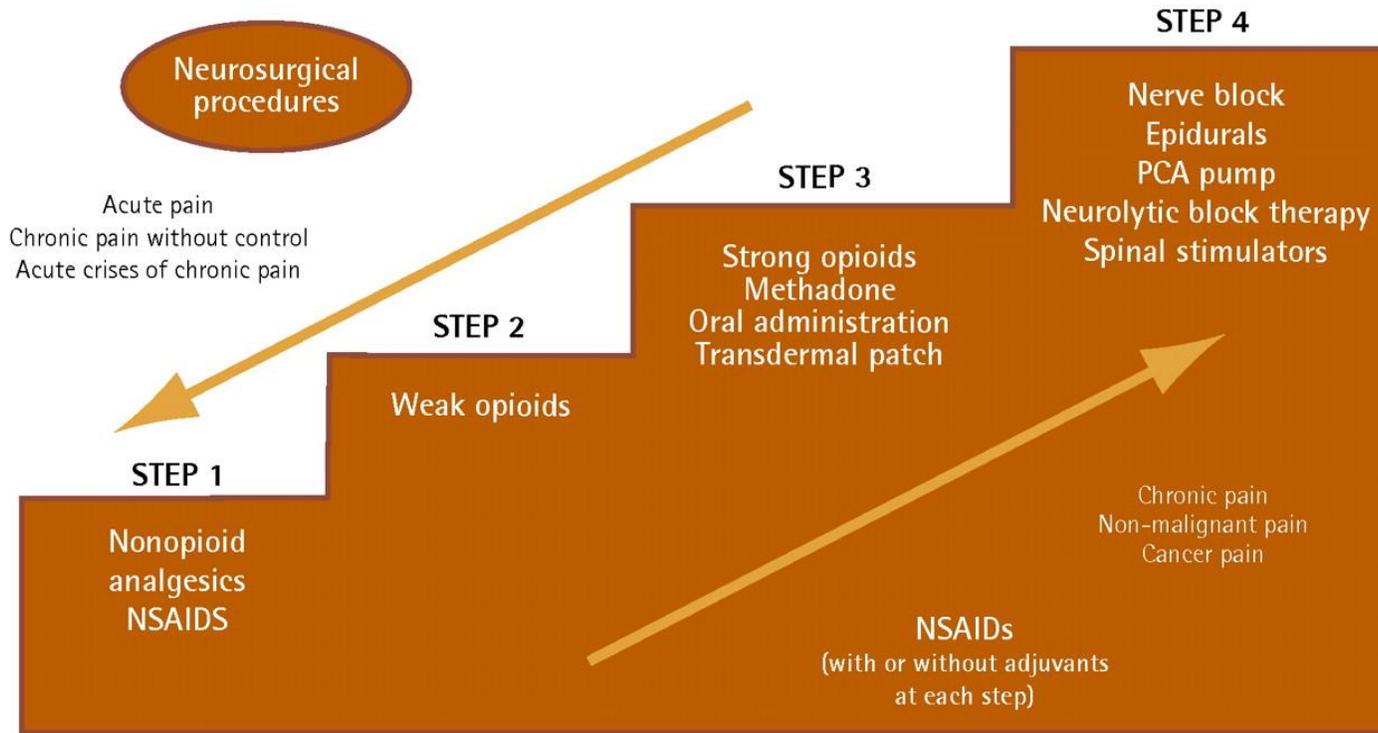
Every PCA / Ketamine / Nerve Catheter is reviewed daily

24/7 Pain coverage

In hours consultant also available

Limited BH coverage (Acute pain only)

Figure 2. New adaptation of the analgesic ladder



NSAID—nonsteroidal anti-inflammatory drug, PCA—patient-controlled analgesia.

Paracetamol

- ▶ PO / IV / PR
- ▶ Adults
 - ▶ 1g QID
- ▶ Children and Small Adults
 - ▶ 15mg/kg QID
- ▶ Beware
 - ▶ Prolonged fasting
 - ▶ Liver impairment
 - ▶ Multiple OTC preparations
 - ▶ Dose reduce in elderly / prolonged use
- ▶ Well tolerated / few true allergies

Paracetamol Prescribing

Date 28/3	Medication (Print Generic Name) Paracetamol	Tick if slow release	
Route PO	Dose/Kg		Dose, Frequency & NOW enter times 0800 1200 1800 2200
Indication Pz	Pharmacy		
Prescriber Signature	Print Your Name	Employee No:	

NORTHERN HEALTH

Ward/Unit: height (cm)

REGULAR MEDICATIONS

YEAR 20 DATE & MONTH → 16/12

VARIABLE DOSE MEDICATION

Date	Medication (Print Generic Name)	Drug Level	
Route	Dose/Kg	Time level taken	
Indication	Pharmacy	Dose	
Prescriber Signature	Print Your Name	Time given	
Employee No:		Nurse	

DOCTORS MUST ENTER administration times

Date: 16/12 **VTE Prophylaxis** Nil prophylaxis: state reason in notes
 → Pre / Post Operation: refer to details on front page

Chemical: CLEXANE
 Route: SC Dose: 40mg Freq: BAC → 1600
 Mechanical: A-V Foot pump: R leg L leg 11.00
 IPC (Flowtron): R leg L leg 20.00
 Stockings: R leg L leg

Prescriber Signature: [Signature] Print Your Name: [Name] Contact pager: [Number]

Date: 16/12 Medication (Print Generic Name): PARACETAMOL
 Route: PO Dose/Kg: 1g Q12
 Indication: [Blank] Pharmacy: [Blank]

Prescriber Signature: [Signature] Print Your Name: [Name] Employee No: [Number]

REC ADMINIS GU

Date	Medication (Print Generic Name)	Max dose/24hrs
Route	Dose/Kg	Dose, Hourly Frequency
Indication	Pharmacy	PRN
Prescriber Signature	Print Your Name	Employee No:

Morning

Night

Twice a Day

Three times a day

Regular 6 Hourly

Regular 8 Hourly

Four times a day

WARFARIN I

Patient Educate

Sign: [Signature]

Date: 16/12 Medication (Print Generic Name): GENDON
 Route: PO Dose/Kg: 5mg 24h
 Indication: [Blank] Pharmacy: [Blank]

Prescriber Signature: [Signature] Print Your Name: [Name] Employee No: [Number]

Date: 16/12 Medication (Print Generic Name): AMPAN 5000N
 Route: PO Dose/Kg: 5mg 24h
 Indication: [Blank] Pharmacy: [Blank]

Prescriber Signature: [Signature] Print Your Name: [Name] Employee No: [Number]

Date: 16/12 Medication (Print Generic Name): [Blank]
 Route: [Blank] Dose/Kg: [Blank] Dose, Hourly Frequency: [Blank] Max dose/24hrs: [Blank]
 Indication: [Blank] Pharmacy: [Blank]

Prescriber Signature: [Signature] Print Your Name: [Name] Employee No: [Number]

Tick if slow release

SR = releas tablet Dose

NSAIDs

- ▶ Beware
 - ▶ Renal failure / diabetics / elderly
 - ▶ GI haemorrhage
 - ▶ Bleeding potential
 - ▶ Brittle asthmatics
 - ▶ CCF / IHD
- ▶ Ibuprofen 400mg TDS po
- ▶ Celecoxib 100mg BD po
 - ▶ Safer for bleeding / GI
 - ▶ Renal issues same
- ▶ Multiple OTC, PO, PR, IV

Tramadol

- ▶ Beware
 - ▶ Epilepsy
 - ▶ SSRI/SNRI
 - ▶ Elderly / confused
- ▶ IR 50-100mg TDS - QID po/IV
- ▶ Slow IV
- ▶ Less sedation / respiratory depression / abuse potential / constipation than other opiates

Tramadol

Prescriber Signature <i>[Signature]</i>	Print Your Name Lemo	Employee No.			
Date 09/11	Medication (Print Generic Name) Trilogy EM 120	100/62.5	Tick if slow release <input type="checkbox"/>		
Route tbl	Dose/Kg 1	Dose, Frequency & NOW enter times T mane	1000	1000 AM	(S) (S)
Indication Reple med	Pharmacy				
Prescriber Signature <i>[Signature]</i>	Print Your Name Lemo	Employee No.			
Date 09/11	Medication (Print Generic Name) TARGIN		Tick if slow release <input type="checkbox"/>		
Route PO	Dose/Kg 195	Dose, Frequency & NOW enter times BD	08		KNWN
Indication	Pharmacy				
Prescriber Signature <i>[Signature]</i>	Print Your Name <i>[Redacted]</i>	Employee No.	20		KNWN
Date 09/11	Medication (Print Generic Name) Tramadol		Tick if slow release <input type="checkbox"/>		
Route PO	Dose/Kg 100mg	Dose, Frequency & NOW enter times BD	08		X KNWN
Indication	Pharmacy				
Prescriber Signature <i>[Signature]</i>	Print Your Name <i>[Redacted]</i>	Employee No.	20		KNWN
Date	Medication (Print Generic Name)		Tick if slow release		

Tramadol

Date	Medication (Print Generic Name)			Date		
4/13	TRAMADOL SR					
Route	Dose/Kg	Dose, Hourly Frequency	PRN	Max dose/24hrs	Time	
PO		200mg Q4 PRN		400mg		
Indication	[Redacted]				Dose	
					Route	
Prescriber Signature	Print Your Name	Employee No:		Sign		
	mm					
Date	Medication (Print Generic Name)			Date		
4/13	ENDONE			5/15		
Route	Dose/Kg	Dose, Hourly Frequency	PRN	Max dose/24hrs	Time	
PO		5-10mg Q4h		60mg.	5:55	
					Dose	PO

Tapentadol (Palexia)



Moderate Atypical analgesic



Works mainly through NA, minimal opiate effects



Minimal risk of serotonergic syndrome

MAO-I is a contraindication



IR 50-100mg 4/24 PRN



SR - BD Dosage up to 500mg daily

Starting 50mg BD (roughly equivalent to 10mg Oxycodone SR)

Total max 600mg /day

Oxycodone

- ▶ More potent than Morphine
- ▶ Immediate Release
 - ▶ **Oxynorm** (capsules) & **Endone** (tablets)
 - ▶ Q4H PRN 5-10mg
 - ▶ 20 minute onset
 - ▶ Use Endone over oxynorm
 - ▶ If after an hour still in pain, can give additional dose
- ▶ Slow Release (Cancer Pain and some chronic Pain Only)
 - ▶ **Oxycontin**
 - ▶ **Targin** (Oxycodone & Naloxone)
 - ▶ Avoid in liver failure
 - ▶ Only necessary for severe pain, likely to last for more than a few days
 - ▶ Strict BD
 - ▶ Equivalent analgesia to IR (eg Endone 5mg Q4H = Oxycontin 15mg BD)
 - ▶ Wean ASAP (addictive, high abuse potential)
 - ▶ Ideally want to underdose to have some breakthrough pain
 - ▶ Only 3 days (6 doses) on discharge (GP to review and wean) ** TKJR

Prescribing

- ▶ Oxycodone SR ? 5-10mg on regular medication section

ISHERWOOD, SHARON
DOB: 11/15/1971
21 Adelaide Drive
KILMORRICH, WA
Tel: 0411 563 26
MC: 14482 (A&E)
GP (Part-time) Presc: 18/1/18 11:28 AM

1ST PRESCRIBER TO PRINT PATIENT NAME

Ward/Unit: _____ Patient Weight (kg) _____ Height (cm) _____

REGULAR MEDICATIONS

YEAR 2018 DATE & MONTH 18/1 19/1

DATE	Medication (Print Generic Name)	Drug Level	Time	Dose	Time given	Nurse
18/1/18	WARFARIN (Marevan/Coumadin) Indication: _____ Pharmacy: _____ Prescriber Signature: _____ Employee No.: _____	DOSE TIME 1600 (4pm)				
18/1/18	VTE Prophylaxis Chemical: <i>Enoxaparin</i> Route: <i>Subcut</i> Dose: <i>40mg</i> Freq: <i>Daily</i> → 15:00 <i>M</i> Mechanical: A-V Foot pump: <input type="checkbox"/> R) leg <input type="checkbox"/> L) leg 11:00 IPC (Flowtron): <input type="checkbox"/> R) leg <input type="checkbox"/> L) leg 20:00 Stockings: <input type="checkbox"/> R) leg <input type="checkbox"/> L) leg Prescriber Signature: _____ Print Your Name: _____ Contact pager: _____					
18/1/18	<i>Paracetamol</i> Route: <i>PO</i> Dose/Kg: <i>1g</i> Dose, Frequency & NOW enter times: <i>QID</i> → 06, 12, 18, 22 Indication: _____ Pharmacy: _____ Prescriber Signature: _____ Print Your Name: _____ Employee No.: _____	Tick if slow release				
18/1/18	<i>Oxycodone SR</i> Route: <i>PO</i> Dose/Kg: <i>5-10mg</i> Dose, Frequency & NOW enter times: <i>BD</i> → 08, 20 Indication: _____ Pharmacy: _____ Prescriber Signature: _____ Print Your Name: _____ Employee No.: _____	Tick if slow release				
18/1/18	<i>OXTCANTIN S</i> Route: <i>PO</i> Dose/Kg: <i>10mg</i> Dose, Frequency & NOW enter times: <i>BD</i> → 08, 20 Indication: _____ Pharmacy: _____ Prescriber Signature: _____ Print Your Name: _____ Employee No.: _____	Tick if slow release				

NORTHERN HEALTH

Prescribing

If you prescribe 2.5mg daily, how is the max dose 5mg?

Date	Medication (Print Generic Name)	Route	Dose/Kg	Dose, Hourly Frequency	Max dose/24hrs	Date	Time	Dose	Route
6/2	Salbutamol	Inh		1-2 puffs Q4H PRN					
Indication: SOB									
Pharmacy									
Prescriber Signature: [Redacted]									
6/2	OXYNORM	PO		2.5mg Daily PRN	5mg	6/2	7/2	23	14
Indication: Pain									
Pharmacy									
Prescriber Signature: [Redacted]									
6/2	Oxycodone TRAMADOL	PO		50-100mg QID (PRN)		6/2	05	09	



Sometimes...

Ward/Unit: _____

Attach ADR Sticker (See front page for details)

Year 20 _____

1ST PRESCRIBER TO PRINT PATIENT NAME AND CHECK LABEL CORRECT.

Date	Medication (Print Generic Name)	Date	Time	Dose	Route	Sign
22/3	Bupropion	22/3	14:30	5mg	PO	[Redacted]
22/3	Quetiapine	22/3	21:30	40mg	PO	[Redacted]
22/3	Morphine	22/3	08:15	2.5-10mg	PO	[Redacted]

Date	Medication (Print Generic Name)	Date	Time	Dose	Route	Sign
2/5	Oxazepam	2/5/15	23:30	7.5mg	PO	[Redacted]
2/5/19	Targin	2/5/15	21:40	10mg	PO	[Redacted]

Wall of SHAME!

Inpatient preop



28 y.o well lady for semi-urgent laparoscopic cholecystectomy. Overnight stay in hospital planned. PMHx - Epilepsy



Write up pre & post-operative analgesia

Post Op Lap Chole



Paracetamol 1g QID PO (5 days strict)



Ibuprofen 400mg TDS PO (with food, 5 days)



Endone 10-15mg Q3H PRN PO



Meds ok preop with sips



Not for this pt (Tramadol 50-100mg QID PRN PO / slow IV)



Metoclopramide 10-20mg QID PRN IV/PO



Ondansetron 4mg TDS IV / SL PRN



Coloxyl & Senna TT BD PRN

Joint Replacement



A 65 year old with chronic renal disease (eGFR <40) is admitted for a knee replacement.



NKDA



What are the options for post operative analgesia?

Post Op TKJR

- ▶ Local Anaesthetic (nerve block/LIA/infusion)
- ▶ PCA for 24-48 hrs
- ▶ Oral
 - ▶ Paracetamol 1g QID PO (5 days strict)
 - ▶ NSAIDs? Not for this pt (Ibuprofen 400mg TDS PO 5 days)
 - ▶ Targin 15/7.5mg PO BD or Tapentadol 50mg SR BD (3-7 days then r/v)
 - ▶ Endone 5-10mg Q3H PRN PO (Not with PCA)
 - ▶ Consider Tramadol 50-100mg QID PRN PO / slow IV (ok with PCA)
 - ▶ Not for this patient with CKD



Mr It's Simple



A 45 year old man with a stated past history of chronic pain, informs you that he takes Oxycontin 20 mg BD and a 20mcg/hr Buprenorphine patch presents with a dislocated fractured elbow now relocated and is awaiting ORIF.



Morphine equivalency?



You need to write up his medication chart. Plan?

Mr It's Simple



A 45 year old man with a stated past history of chronic pain, informs you that he takes Oxycontin 20 mg BD and a 20mcg/hr Buprenorphine patch presents with a dislocated fractured elbow now relocated and is awaiting ORIF.



OMEDD = 100mg



Double check with the prescriber!!

Mr It's Simple



A 45 year old man with a stated past history of chronic pain,

He has a previous drug dependence history. Strict prescribing limits by his GP. Actually off all opioids since September 2018.

What will you prescribe now?



When in doubt, ask for advice.

Miss Understood

- ▶ An ex IVDU (heroin) patient who takes 100mg methadone daily for opioid substitution is admitted for an emergency laparotomy.
- ▶ ***Issues following abdominal surgery?***
- ▶ *What will we use to treat her pain?*



Confirm dose with LMO / Pharmacist (ask the patient how much they are actually taking)



Ideally continue Methadone if absorbing orally



If normally on patch, continue – esp Buprenorphine



DACAS – Drug and Alcohol Clinical Advisory Service - 1800 812 804



AOD on x58894 for Drug and Alcohol Service



APS involvement refer via #779

Rib fractures



70 YEAR OLD MAN, CURRENT SMOKER
WITH COAD, MINIMAL TRAUMA
MECHANICAL FALL WITH #RIBS
(MULTIPLE, UNILATERAL) ON X-RAY/CT.



ISSUES?



APPROPRIATE MANAGEMENT?

Multimodal analgesia



**Regular
paracetamol**



**Consider
NSAIDs if no
contraindicat
ion (limited
time frame)**



**Other
modalities**



**PCA +/-
ketamine
infusion**



**Consider
*regional
analgesia***

Paravertebral catheter ideal for unilateral rib# or thoracic epidural for bilateral rib# (unless CI)

Erector Spinae catheter (can consider with anticoagulation)



**ICU r/v if
multiple ribs /
flail segments
? D/W trauma
service as
per trauma
guidelines**



**APS review if
older +/-
multiple ribs
+/- Airways
disease/lung
pathology**

Intrathecal Morphine

- ▶ Used for anticipated severe post op pain
 - ▶ Lower half of body
- ▶ Don't give any extra long acting opiates without discussing with APS, until after time on sticker
 - ▶ May already have PCA – reduced bolus and frequency
- ▶ Risk of delayed respiratory depression therefore increased obs frequency
- ▶ Should have O2 until 24hrs post ITM injection

Ketamine

- ▶ *Noncompetitive NMDA receptor antagonist*
- ▶ Infusion 0.1-0.3 mg/kg/hr
- ▶ Indications
 - ▶ Neuropathic pain
 - ▶ Sedated with opioids and yet have inadequate analgesia
 - ▶ Opioid-tolerant (ketamine is thought to help attenuate this tolerance)
- ▶ Contraindications
 - ▶ Poorly controlled seizure disorder
 - ▶ Psychosis
 - ▶ *Precaution with abnormal LFT*



[This Photo](#)

[CC BY-SA-NC](#)

Pharm use only	Drug, Amount, Diluent (circle mcg or mg)	Total Volume	Final Conc	Sign & Date	Date started	Signatures
	Ketamine 200 mcg (mg) in 100ml	100 ml	2mg/ml	[Redacted]	0210 31/1/19	[Signature]
	in	ml	/ml			
	in	ml	/ml			
	in	ml	/ml			
	in	ml	/ml			

Dosing

PCA

Bolus 8.7 mcg OR (mg) = 4.35 ml

Time & Date ceased Ceased by.....

Lockout

5 mins

Bolus mcg OR mg = ml

Time & Date ceased Ordered by.....

Ceased by.....

Continuous Infusion

Start Rate	Minimum Rate	Maximum Rate
17 mcg/hr OR (mg/hr)	8.5 mcg/hr OR (mg/hr)	25.5 mcg/hr OR (mg/hr)
= 8.5 ml/hr	= 4.25 ml/hr	= 12.75 ml/hr

Nurse Bolus

Only if Sedation Score = 0

Bolus mcg OR mg =

Interval

Ketamine

Weight = 1.27 kg

Solution

Pharm use only	Drug, Amount, Diluent (circle mcg or mg)	Total Volume	Final Conc	Medical Sign & Date	Time & Date started	Nursing Signatures
in	Fentanyl 1000 mcg mg N/Saline 100 ml	100 ml	10 mcg /ml		3/7/18	
in	Fentanyl 1000 mcg mg N/Saline 100 ml	100 ml	10 mcg /ml			
in	mcg mg	ml	/ml			
in	mcg mg	ml	/ml			
in	mcg mg	ml	/ml			

Dosing

PCA

Lockout

Bolus mcg OR mg =ml

Time & Date ceased Ceased by.....

.....mins

Bolus mcg OR mg =ml

Time & Date ceased Ceased by.....

.....mins

Continuous Infusion

Start Ratemcg/hr OR mg/hr =ml/hr

Minimum Ratemcg/hr OR mg/hr =ml/hr

Maximum Ratemcg/hr OR mg/hr =ml/hr

Nurse Bolus

Only if Sedation

Bolusmcg OR mg =ml

Intervalmins

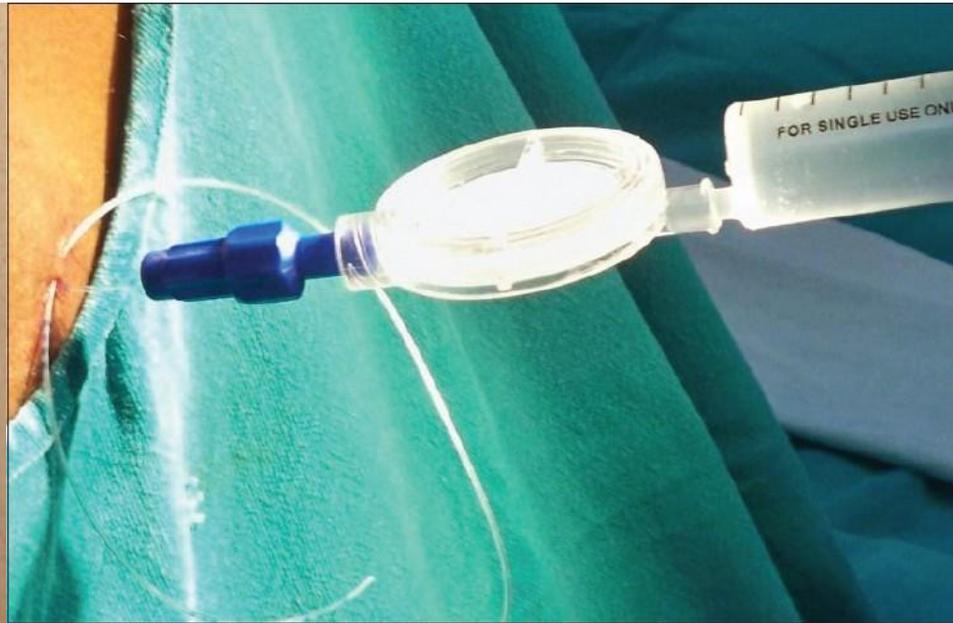
PCA



Troubleshoot

Epidurals

- ▶ Simple analgesics are ok
- ▶ Can use PCA with Epidural (though generally not if Epidural has Fentanyl)



EPIDURAL ANALGESIA

- ▶ Aim: to provide 3-5 days post-op analgesia after major abdominal or thoracic surgery
- ▶ Provides optimal analgesia
 - ▶ Larger cases (thoracoabominal)
 - ▶ Labour
- ▶ Pain team reviews patient at least daily if not twice daily

Epidural Issues

- ▶ Hypotension – Fluids / Vasopressor
 - ▶ NOT usually due to the epidural itself and may **unmask** untreated hypovolaemia or other surgical problem.
- ▶ Inadequate analgesia – Call APS
 - ▶ Bolus and increase rate
- ▶ High block (>T4)
 - ▶ Sit up, pause Epidural until resolved, restart at lower rate
- ▶ Headache
- ▶ Contact APS immediately pg 779 or x52779 if:
 - ▶ Disconnection
 - ▶ Back pain
 - ▶ Fever
 - ▶ Unexpected increasing Motor block or motor weakness (unless recent bolus)

Epidural Notes

- ▶ Anticoagulation
 - ▶ No Warfarin at any stage
 - ▶ Check coags daily with Epidural
 - ▶ INR <1.2 prior to removal
 - ▶ BD Heparin or prophylactic Clexane only
 - ▶ WH 12 hrs prior to moving catheter / removal
- ▶ Only APS to order removal of catheter
- ▶ Nerve catheters managed mostly by APS

Slow release opioids

Slow-release opioids are not recommended for use in the management of patients with acute pain

The most appropriate initial treatment of acute pain using oral opioids is by titration of immediate-release opioids on a PRN basis

Most immediate-release opioids will reach peak effect within one hour

The peak effect of slow-release opioids will not be seen for some hours

The planning of weaning and ceasing the opioid remains the responsibility of the person who initiated it

Discharge scripts

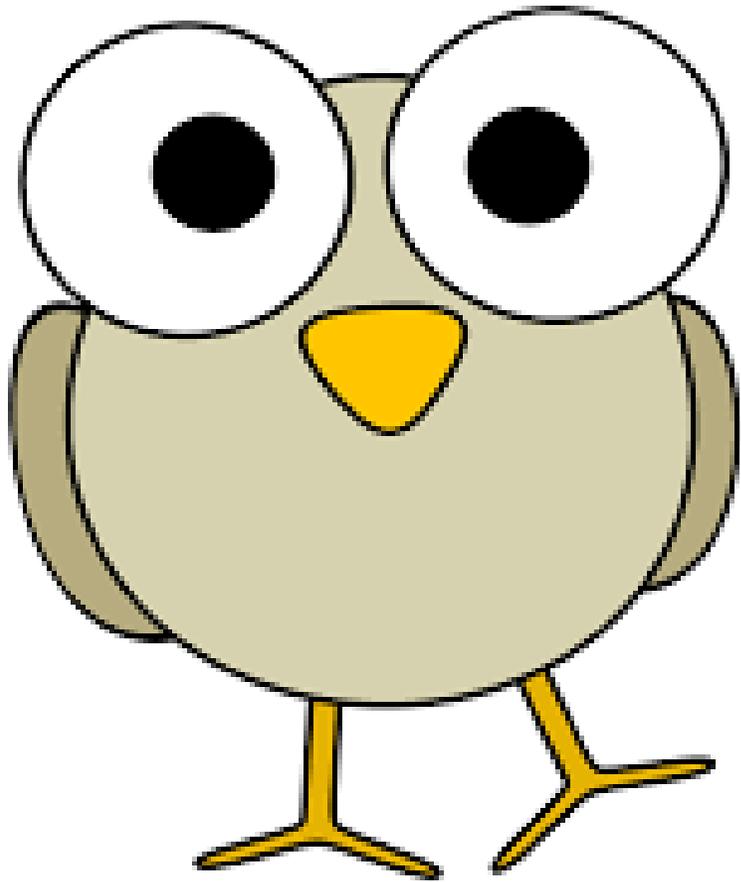
Opioid substitution

 FH936676	Northern Health PHARMACY MAINTENANCE PHARMACOTHERAPY FOR OPIOID DEPENDENCE	AFFIX PATIENT IDENTIFICATION LABEL HERE U.R. NUMBER: _____ SURNAME: _____ GIVEN NAME: _____ DATE OF BIRTH: ____/____/____ SEX: _____	PHARMACY - MAINTENANCE PHARMACOTHERAPY FOR OPIOID DEPENDENCE 30676
	This form is for the maintenance pharmacotherapy of opioid dependent patients who are on an opioid replacement program in the community.		
<input type="checkbox"/> Methadone		<input type="checkbox"/> Suboxone® (buprenorphine/naloxone)	<input type="checkbox"/> Subutex® (buprenorphine)
ON ADMISSION Pharmacist: _____ Signature: _____ Ward: ____ Date: __/__/__			
Reason for Admission: _____			
Community Pharmacy Details		Name: _____ Phone no: _____ Fax no: _____ Script expiry date: __/__/__	
Prescriber Details		Name: _____ Phone no: _____	
Dose Details		Dose: _____ mg Date of last dose in community pharmacy: __/__/__ <i>**If doses have been missed refer to recommended dosing at the back of this form**</i>	
Take Away Doses		Supplied: <input type="checkbox"/> Yes <input type="checkbox"/> No Quantity supplied: _____ Date of last takeaway dose consumed: __/__/__ No. of takeaway doses remaining: ____ Location of remaining takeaway doses: _____ Destroyed: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Dosing in Hospital		Date first dose is required: __/__/__ Dose: _____ mg	
Notification of Drug Dependent Person Form		Completed by prescribing doctor: <input type="checkbox"/> Yes <input type="checkbox"/> No Faxed: <input type="checkbox"/> Yes <input type="checkbox"/> No	
ON DISCHARGE Pharmacist: _____ Signature: _____ Ward: ____ Date: __/__/__			
Dose Details		Date of last dose given in hospital: __/__/__ Dose given: _____ mg	
Community Pharmacy Contacted		Notified of discharge: <input type="checkbox"/> Yes <input type="checkbox"/> No Valid script available at pharmacy: <input type="checkbox"/> Yes <input type="checkbox"/> No <i>**If script has expired, advise patient to go see prescribing doctor ASAP for new script**</i>	
Notification of Termination Form Completed		Completed by prescribing doctor: <input type="checkbox"/> Yes <input type="checkbox"/> No Faxed: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Prompt Doc No: NHS0005661 v3.0 DO NOT DOCUMENT IN THIS MARGIN		Last Updated: Due for Review: 03/05/2021	
Page 1 of 2 UNCONTROLLED WHEN DOWNLOADED			

Useful contacts

- ▶ DACAS – 1800 812 804 (24 hours)
- ▶ AOD – Joby Philip (Senior Clinician)
 - ▶ x58894
- ▶ Medication Support and Recovery Service
 - ▶ 1800 931 101
 - ▶ msrs.org.au





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Questions