SESLHD PROCEDURE COVER SHEET

NAME OF DOCUMENT	Implantable Intrathecal Drug Delivery System
TYPE OF DOCUMENT	Procedure
DOCUMENT NUMBER	SESLHDPR/294
DATE OF PUBLICATION	March 2022
RISK RATING	High
LEVEL OF EVIDENCE	National Safety and Quality Health Service Standards: Standard 1 - Clinical Governance Standard 4 - Medication Safety
REVIEW DATE	March 2024
FORMER REFERENCE(S)	N/A
EXECUTIVE SPONSOR or EXECUTIVE CLINICAL SPONSOR	Clinical Stream Director, Surgery, Perioperative and Anaesthetics
AUTHOR	Bernadette Bugeja CNC Pain Management POWH Bernadette.Bugeja@health.nsw.gov.au
POSITION RESPONSIBLE FOR THE DOCUMENT	CNC Pain Management POWH
FUNCTIONAL GROUP(S)	Surgery, Perioperative and Anaesthetics
KEY TERMS	Intrathecal, Medtronic SynchroMed® II Pump, IsoMed ® Pump
SUMMARY	This procedure refers to direct intrathecal drug delivery via an implantable system, for chronic pain management and severe chronic spasticity.

1. POLICY STATEMENT

This procedure relates to intrathecal drug delivery via an implantable system and may be performed on an inpatient or outpatient. This system is used for management of chronic pain and management of severe chronic spasticity.

The procedure addresses:

a. the process for safe refilling of the implanted system
b. the safety precautions in relation to undergoing Magnetic Resonance Imaging (MRI).

2. DEFINTIONS

Implantable drug delivery: is a system consisting of an infusion pump in a titanium shell (which includes two access ports) and a spinal catheter. The reservoir fill port is used for medication refill. The catheter access port is used for direct access to the intrathecal space for diagnostic purposes. Medications must not be injected via this port**.** The pump is generally implanted subcutaneously in the left or right abdominal wall.

Medtronic SynchroMed® II Pump: an implantable, programmable, battery powered device that stores and delivers medications intrathecally according to instructions received from the programmer.

IsoMed® Pump: a gas-filled chamber provides a constant flow rate within the pump which exerts a constant pressure on the drug reservoir. This pushes a predetermined volume of medication through the catheter into the intrathecal space. The dose of medication can be changed by altering the medication concentration within the pump.

Tesla: is the unit of magnetic field strength or magnetic flux density, commonly denoted as T.

3. RESPONSIBILITIES

- Medical Officers (MO)
- Registered Nurses (RN)
- MRI Medical Radiation Scientists (Radiographers).

4. PROCEDURE

4.1 Indications for refilling an intrathecal pump

- Reservoir volume is low or the pump is empty
- Change to medication prescription

Note: The length of time between each refill depends on drug concentration, drug stability, pump reservoir volume, daily dose, and various treatment considerations.
Refill interval should be no longer than 6 months.

4.2 Medications used

A number of drugs can be used alone or in combination. Any medications administered via the intrathecal route must be free of preservatives. Examples include:

- **Opioids**
  - Morphine
  - HYDROmorphone
  - Fentanyl
  - Methadone

- **Local anaesthetics**
  - Bupivacaine
  - Ropivacaine

- **Adjuvants**
  - Clonidine

- **Antispasmodics**
  - Baclofen

The patients must pick-up medications from pharmacy and keep the medications until the refill procedure commences.

4.3 Prescribing

Intrathecal pump refill must be prescribed in accordance with NSW Health Policy Directive PD2013_043 - Medication Handling in New South Wales Public Hospitals using the **Intrathecal prescription and pump refill record (excluding cytotoxic medications)** (Appendix 4) product code NHSIS0833.

4.4 Equipment Required

- Medtronic refill kit (includes two non-coring 22G needles, extension tubing with clamp, filter and template)
- Use 10 mL and 5 mL Leur-lock syringes for IsoMed pump - depending on volume of pump
- Use 20 mL Leur-lock syringes for Medtronic SynchroMed® II pump - depending on volume of pump
- Antiseptic to swab skin such as 1% chlorhexidine gluconate in 75% ethanol
- Dressing pack
- Drawing up needle
- Three-way tap
- Fenestrated towel
- 21G needle (if clonidine or methadone required)
- Sterile gloves
- Intrathecal medications as ordered by the MO (which the patient must keep with them until given to the RN immediately before procedure), or as per hospital site specific protocol
- Sodium chloride 0.9% ampoules if required
- If local anaesthetic required for local infiltration add 2 mL syringe, drawing up needle, 25G needle, and prescribed local anaesthetic

- Adhesive dressing, e.g. BandAid ®
- Neutral detergent for cleaning trolley
- Sharps disposal bin for immediate disposal at the point of care
- Clinician programmer for the computerised pumps
- Non-sterile template to locate refill access port in SynchroMed® II pump.

4.5 Refill Precautions

- Refill procedure must be performed by trained MO or RN who has been assessed as competent in the refill procedure. A MO should be present whilst refill is being undertaken. In the absence of MO, the more experienced RN will access the pump and second RN will witness and assist.
- Check patients Intrathecal prescription and pump refill record (excluding cytotoxic medications) form for specifications of the pump, i.e. pump model, flow rate and reservoir size
- Injection of the medication during the refill procedure must be done only through the centre reservoir fill port
- The timing of refill intervals must be carefully calculated to prevent depletion of drug reservoir and drug withdrawal
- Strict aseptic technique to be maintained at all times.

4.6 Refill Procedure

- MO or RN does the procedure with another MO or RN as a witness
- Prepare patient in accordance with Level 2 pre-procedure requirements as per NSW Health PD2017_032 - Clinical Procedure Safety
- The 5 Moments of Hand Hygiene must be observed throughout the procedure
- Perform telemetry/interrogate the pump to check current pump status and determine the volume remaining in the reservoir
- Palpate the pump area to confirm the general pump location and catheter access port orientation. For SynchroMed® II pump use the clean, non-sterile template to outline the pump's position
- Check medication with second RN or MO against prescription
- Open dressing pack, adding equipment required for refill procedure
- Person attending the refill to perform procedural hand wash using antiseptic liquid soap and water prior to donning sterile gloves
- Swab pump site with skin disinfectant, 15cm area using a circular motion. Do not go over the same area twice with the same swab
- Allow at least 20 seconds for skin to completely dry naturally
- Assemble the needle, extension tubing, three-way tap and empty 10 mL syringe
- Close the extension tubing clamp and turn the 3 way tap to close
- Draw up required medications into appropriate syringe size. Attach the 0.22 micron filter to the syringe and prime the filter with the prescribed medication
- Confirm that the volume of the prescribed fluid does not exceed the reservoir capacity of the pump
- Place sterile fenestrated towel over the patient, exposing the pump site
- Place and centre the sterile template over the marked area. Confirm pump's position by palpating around the pump area and aligning the edges of the template with the edges of the pump. Locate the refill port septum at the centre of the template

- **Inform the patient to be aware and report any unusual signs or symptoms during or after the refill, especially any burning or unusual sensations in the area of the injection site during the refill**
- Insert needle through the centre of the refill port until the needle touches the needle stop. This metal needle stop will damage the needle tip if excessive force is used. Be certain the centre reservoir fill port is being accessed and not the side catheter access port
- Do not apply tension to the tubing because the needle may be pulled out of the resvoir
- For SynchroMed® II pumps use gentle negative pressure to withdraw the fluid from the reservoir and empty completely eg, until bubbles are present in the extension tubing. For IsoMed pumps the pressurised backflow will automatically empty the residual volume, wait approximately five seconds to ensure all fluid is removed and the pump is empty
- During injection, periodically withdraw fluid as to confirm placement of needle. If the fluid returned is not consistent with the prescribed medication (i.e. blood stained) this could indicate incorrect placement.
- If the patient moves during the refilling procedure recheck the needle position in case it has dislodged from the septum
- The amount withdrawn should approximately equal the reservoir volume on the pump status screen (SynchroMed® II) or the calculated residual dose (IsoMed) ± 25% of the expected reservoir volume. Failure to withdraw all residual solution from the pump may lead to overpressurisation of the pump reservoir
- If there is no or minimal fluid withdrawn eg, < 1 mL, the placement of the needle must be checked by injecting 10 mL sodium chloride 0.9%. Withdrawing back the same amount confirms the needle is placed is the pump's reservoir. This can also be done if there is any concern regarding needle placement
- Close the clamp and remove the syringe used to obtain residual pump medication. Discard the withdrawn medication
- The witnessing clinician must record the amount of medication withdrawn on the Intrathecal prescription and pump refill record (excluding cytotoxic medications) form **Note:** if decreasing concentration or changing medications, rinse the reservoir twice with 10 mL sodium chloride 0.9% using the refill and empting procedures described
- Attach the syringe with the prescribed medication and filter to the extension tubing set
- Open the clamp and slowly (no faster than 1 mL/3 seconds) inject the fluid into the reservoir. Do not force the injection
- When filling is complete close the tubing clamp and carefully remove the needle from the pump
- Remove the template and apply pressure to injection site for a few seconds with a gauze pad
- Remove excessive cleansing agent from the skin and apply adhesive dressing
- Keep gloves on and dispose of all sharps into sharps bin. Remove gloves and repeat hand hygiene
- Terminate procedure as per Level 2 post-procedure requirements NSW Health Policy Directive PD2017_032 - Clinical Procedure Safety
- For SynchroMed® II pumps program the appropriate new parameters and perform telemetry to update the pump

Note: if changing concentration or changing medications program, prescription should include a Bridge Bolus to prevent under dosing or over dosing

- Print out the updated patient session and attach to the patient's medical record
- Document all appropriate information in patient's medical record.

4.7 Post-procedure Care

- Give the patient written information as well as reminding them verbally to stay in the clinic area for 30 minutes following procedure, in order to detect any adverse effects of the pump refill
- Ensure the next refill appointment is booked about one week prior to expected pump warning alarm date. This may vary.

4.8 Investigation of Pump Function

- Investigation of the delivery system function is performed by a MO in the Medical Imaging Department using iodinated contrast
- Catheter aspiration - Before injecting fluids through the catheter access port, aspirate approximately 1 to 2 mL from the catheter. A significant amount of drug may be present in the catheter access port and catheter, and failure to remove the drug during catheter access port injections can result in a clinically significant or fatal drug overdose
- To determine if the aspirated fluid is cerebral spinal fluid (CSF), it can be tested for presence of glucose, by using a urine test strip. If reading at 30 seconds is positive for glucose eg, trace (5.5 mmol/L) or more, the aspirate is positive for CSF
- Contrast medium - When injecting contrast medium into the intraspinal space, use ONLY contrast medium indicated for intraspinal use. Using nonindicated contrast medium can result in adverse events including, but not limited to, extreme pain, cramps, seizures, and death. Inject contrast medium through the catheter access port only.
- Patients with an allergy or contraindication to the contrast may be assessed utilising radiotracer imaging in Nuclear Medicine. [1]

4.9 Patients with intrathecal pump requiring MRI

- Patients with Medtronic SynchroMed® II pump must have the appointment made Monday to Friday 9.00 am and be completed by 3.30 pm, to allow for interrogation of the pump post the MRI scan
- Prior to MRI, the referring MO should determine if the patient can safely be deprived of drug delivery. If the patient cannot be safely deprived of drug delivery, alternative delivery methods for the drug can be utilised during the time required for the MRI scan. If any health concerns arise during MRI procedure then the MRI staff will activate escalation procedure as per hospital policy (Refer to checklist in Appendix 1 for patients with SynchroMed® II pump).
- A MRI Screening Safety Checklist and Checklist for patients with implanted intrathecal system requiring MRI at POWH (appendix 1) must be completed before an appointment can be scheduled
- The details of the type of implant, manufacturer, make, model and serial number for compatibility are required before a booking is made. This will include SynchroMed® II

models, 8637-20 (20mL) or 8637-40 (40mL), as well as the IsoMed model: 8472-35-05 35mL @ 0.5mL/day or, 8472-60-10 IsoMed @ 1.0mL/day.

Management of Patient with Medtronic SynchroMed® II and IsoMed® pump

- SynchroMed® II can undergo a MRI with a 1.5T or 3T closed bore, max spatial gradient of 19T/m, max slew rate 200 T/m/s and First level controlled operating mode however IsoMed® 8472 still has a 1.5T limit
- Prior to MRI, the MRI Radiographer and / or RN should ensure that the pump is not oriented 90° with respect to the z axis of the MRI scanner (see Appendix 2)
- The magnetic field of the MRI scanner will temporarily stop the rotor of the pump motor and suspend drug infusion for the duration of the MRI exposure. The pump should resume normal operation upon termination of MRI exposure; however, there is the potential for an extended delay in pump recovery after exiting the MRI magnetic field.
- While extended delays in pump recovery are unlikely, reports have indicated that there is the potential for a two to 24 hour delay in return to proper drug infusion after completion of an MRI scan
- Medtronic does not recommend programming the SynchroMed® II pump to *"stopped pump mode"* prior to an MRI because of the possibility of an increased delay in the detection of an extended motor stall
- The SynchroMed® II pump detects motor stall and motor stall recovery. These events are recorded in the pump event log and can be reviewed using the clinician programmer. A motor stall will also cause the pump alarm to sound (two tone alarm). **Note**: in some cases, the SynchroMed® II pump event log may not register motor stall recovery until after the pump has been interrogated a second time due to the effect of Electromagnetic Interference (EMI) on the pump.

Post MRI interrogation instructions

- Upon completion of the MRI scan, or shortly thereafter, clinicians from pain management must confirm that therapy has properly resumed by interrogating the pump with the clinician programmer. For pumps programmed to deliver at least 0.048mL/day, detection of the motor stall should occur within 20 minutes of MRI exposure. Detection of the motor stall recovery and recording of the recovery in the pump event log will typically occur within 20 minutes of the removal of the pump from the magnetic field of the MRI.
- **Note:** both the detection of the *motor stall* and detection of the *motor stall recovery* may each take up to 90 minutes if the pump is programmed to minimum rate mode (0.006 mL/day). In the unlikely event that electromagnetic interference from the MRI scan causes a change to *"safe state"*, the pump will automatically switch to minimum rate mode (infusion at 0.006 mL/day). The pump must be reprogrammed in order for proper drug infusion to resume.
- Patient to wait in Adult Outpatient Department waiting room (if prearranged) for programmable pump to be checked for motor stall recovery
- At least 20 minutes after completing MRI exposure interrogate the pump.
  If using the 8840 N'Vision clinician programmer:
  - select the check box to download event logs (see Appendix 2), press "OK"
  - close the status screen by pressing "X" in the top right corner
  - select the toolkit icon (the last tab on the top of the screen)

- select event log (the last subtab) and press "OK".

If using the Clinician Programmer Tablet:

- Interrogate the pump.
- Tap the Settings button in the action bar (beside home button)
- Select Logs.

- If the event log states *"Motor Stall Occurred"* and *"Motor Stall Recovery Occurred"*, normal function of the pump has returned (see Appendix 4 for 8840 N'Vision)
- If event log **does not** show stall and recovery, wait 20 minutes after the initial interrogation, re-interrogate the pump using the clinician programmer, and review the event logs again. This will address the potential for event logging delays due to Electromagnetic Interference (EMI) from the MRI magnetic field
- If the event log states *"Motor Stall Occurred"* and **does not** state *"Motor Stall Recovery Occurred"*, there is a potential for an extended motor stall due to temporary gear binding. Contact Medtronic Toll Free: 1800 668 670 for further troubleshooting
- In all other cases, the pump has resumed its normal operation.

4.10 Post-Mortem Pump Explant

- Contact Medtronic Toll Free: 1800 668 670 to obtain code (which is date and device specific) to stop and silence intrathecal pump permanently
- If the body is to be cremated the pump must be explanted because the pump will explode at high temperatures.

5. DOCUMENTATION

- Intrathecal prescription and pump refill record (excluding cytotoxic medications)
- Medical record/electronic Medical Record (eMR)
- Implant MRI Compatibility Check, MRI Department.
- MRI Screening Safety Checklist.

6. Key Performance Indicator

- Sites are responsible for reviewing IMs+ in relation to this policy.

7. REFERENCES

- Assessing Intrathecal Drug Delivery Systems with ^{99m} Technetium – DTPA Radiotracer Imaging – Personal Communication
- Shellock Frank G. Reference Manual for Magnetic Resonance Safety, Implants, and Devices: 2007 Biomedical Research Group. Los Angelas, CA
- Medtronic Australasia Pty Ltd, MRI Guidelines for Neurological Products, NTN 04-03 Rev 3, IsoMed® Technical Manual (220666-001) November 2005
- NSW Health Policy Directive PD2013_043 - Medication Handling in New South Wales Public Hospitals
- NSW Health Policy Directive PD2017_032 - Clinical Procedure Safety
- SynchroMed® Programmable Infusion Systems, Clinical Reference Guide, Medtronic. 2014
- SynchroMed® II information for prescribers, Medtronic. 2017

- SynchroMed® II Clinician Programmer, Clinician Programming Guide, Medtronic. 2018
- The Effects of Magnetic Resonance Imaging (MRI) on Medtronic Drug Infusion Systems. Neurological Technical Services Department. August 2008.

8. REVISION AND APPROVAL HISTORY

Date	Revision No.	Author and Approval
Nov 2009	1	Susie Kerr NM Pain Management in consultation with SESIAHS Senior Pain Management Nursing and Medical Staff
Feb 2010	1	Forwarded to "Draft for Comment" for consultation / feedback
Mar 2010	1	Approved by the Area Drug Committee
Jul 2010	1	Approved by the Area Patient Safety and Clinical Quality Committee Approved by the Area Clinical Council
Jun 2013	2	Amendments made by Grazyna Jastrzab NM Pain Management in consultation with SESLHD Senior Pain Management Nursing and Medical Staff
Aug 2013	2.5	Amendments made by Grazyna Jastrzab NM Pain Management in consultation with relevant SESLHD Senior Management Nursing and Medical Staff
Oct 2013	2.5	Approved by Executive Clinical Sponsor, Dr Gregory Keogh.
Jun 2014	2.5	Page Number for Chronic Pain Nurse updated as requested by Author.
Feb 2016	3	Review undertaken – Approved by Executive Sponsor, Dr Gregory Keogh
August 2016	3	Submitted to Quality Use of Medicines Committee for approval
October 2016	3	Approved by Quality Use of Medicines Committee
November 2016	4	Minor update endorsed by Executive Sponsor
December 2016	4	Endorsed by Quality Use of Medicines Committee
September 2019	5	Minor review with the main changes to: • Patients with intrathecal pump requiring MRI ○ SynchroMed® II programmable pump can undergo a MRI with a 1.5T or 3T closed bore, max spatial gradient of 19T/m, max slew rate 200 T/m/s and First level controlled operating mode however IsoMed® 8472 still has a 1.5T limit. • Investigation of Pump Function ○ Catheter aspiration - Before injecting fluids through the catheter access port, aspirate approximately 1 to 2 mL from the catheter. A significant amount of drug may be present in the catheter access port and catheter, and failure to remove the drug during catheter access port injections can result in a clinically significant or fatal drug overdose ○ Contrast medium - When injecting contrast medium into the intraspinal space, use ONLY contrast medium indicated for intraspinal use. Using no indicated contrast media can result in adverse events including, but not limited to, extreme pain, cramps, seizures, and death. Inject contrast medium through the

		catheter access port only. • Appendix 3: Access Pump Activity Logs ○ Updated appendix to reflect the new clinician programmer tablet logs • Addition of Appendix 4: Intrathecal Prescription and Pump Refill Record (excluding cytotoxic medication).
September 2019	5	Processed by Executive Services prior to publishing.
November 2019	5	Approved by Quality Use of Medicines Committee. Published by Executive Services.
October 2021	6	Reviewed by Pain CNC group. References and hyperlinks updated.
February 2022	6	Approved by Executive Sponsor. To be tabled at Quality Use of Medicines Committee.
March 2022	6	Approved by Quality Use of Medicines Committee.

Appendix 1- Checklist for patients requiring an MRI- Implantable Intrathecal Drug Delivery System

SESLHDPR/294

Checklist for patients with implanted intrathecal system requiring MRI

1. Referral to MRI - Referring MO to consider the following

The MRI is **not** using greater than 1.5 Tesla horizontal, closed-bore scanners for Isomed® pump and no greater than 3 Tesla for SynchroMed® pump	Yes/No
The pump is not oriented 90° with respect to the z axis of the MRI scanner (see appendix 2)	Yes/No
The patient can safely be deprived of drug delivery	Yes/No
No need for alternative delivery methods for the drug during the time required for the MRI scan	Yes/No
No medical supervision required while the MRI is conducted	Yes/No
Details are provided of the type of implant, manufacturer, make, model and serial number for compatibility check eg, SynchroMed® II models, 8637-20 (20mL) or 8637-40 (40mL) or IsoMed model: 8472-35-05 35mL @ 0.5mL/day or, 8472-60-10 IsoMed @ 1.0mL/day	Yes/No

2. Appointment for MRI is made. Patient completes MRI Safety Checklist

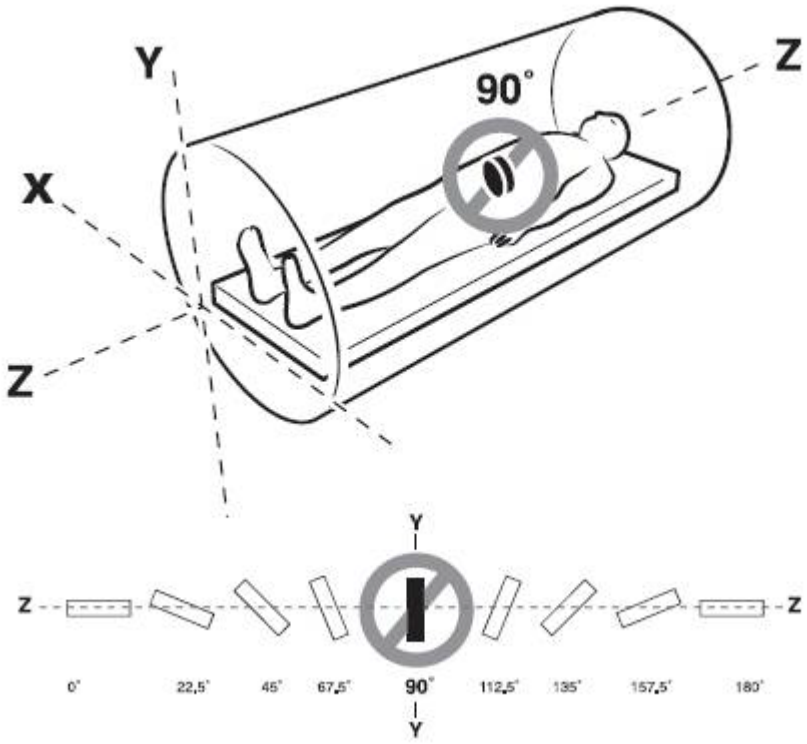
Booking officer	
The anticipated **completion time** of MRI scan is: Monday to Friday 9.00 am to 3.30 pm	Yes/No
One of the following nursing staff has been contacted to confirm suitability of appointment (day and time): Chronic Pain Nurse p.45228, Clinical Nurse Consultant p.44378 or Nurse Manager p.44642	Yes/No
Pain Nurse	
Appointment documented in the Pain Clinic planning diary	Yes/No
Patient's medical records ordered	Yes/No

3. Post MRI scan

MRI Nurse / MRI Radiographer	
One of the following nursing staff has been contacted and notified about time patient's scan was completed: Chronic Pain Nurse p. 45228, Clinical Nurse Consultant p.44378 or Nurse Manager p.44642	Yes/No
Patient directed to waiting room in medical imaging department	Yes/No
Pain Nurse	
Interrogates the pump at least 20 min post MRI. **Note:** there is a potential for a two to 24 hour delay in return to proper drug infusion after completion of an MRI scan	Yes/No
Motor stall and recovery detected and documented	Yes/No
Infusion rate checked against previous documentation in medical records	Yes/No

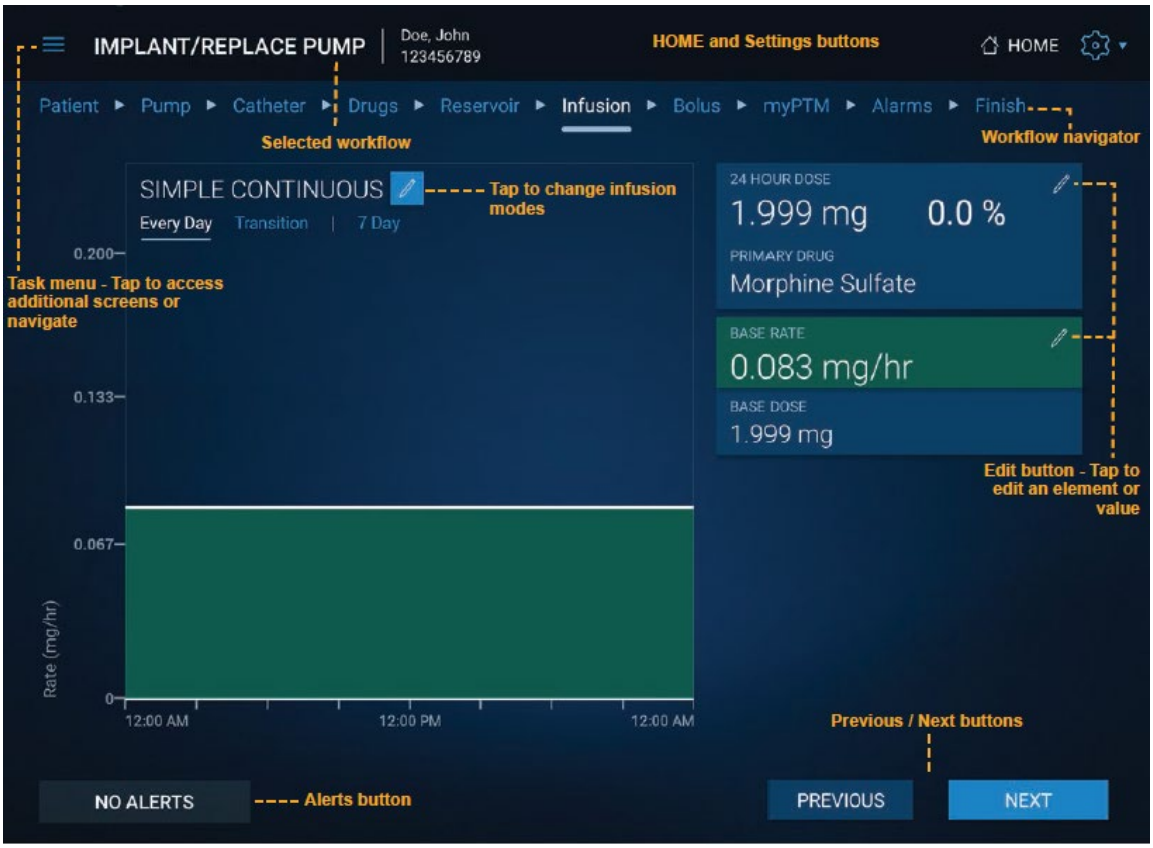
If the answer to any of the above is *NO*, the issue needs to be discussed with the referring MO.

Pump positions in relation to z-axis MRI orientations



Access Pump Activity Logs

Clinician Programmer Tablet:



Select Settings button in action bar

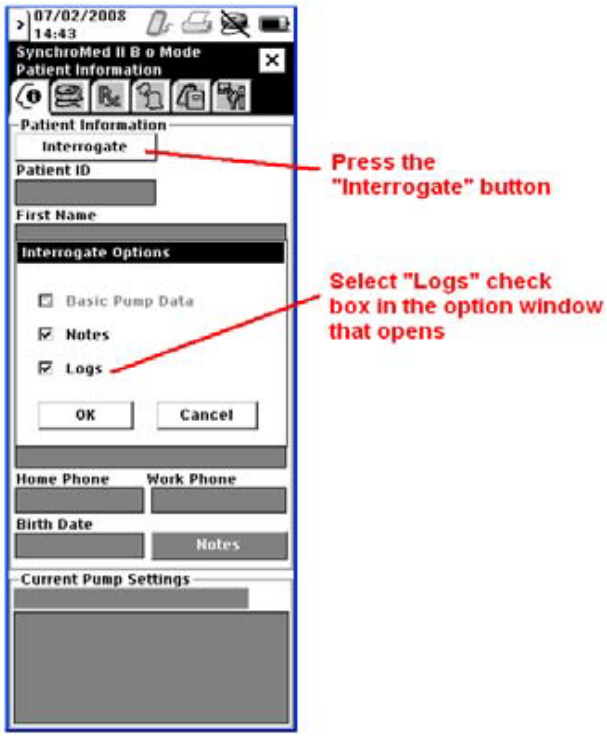
To view the Pump Activity Logs

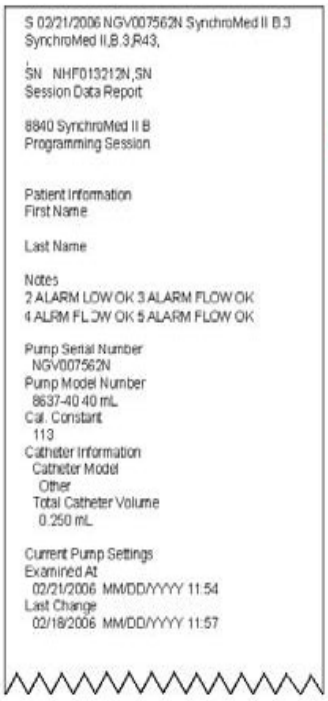
1. Re-interrogate the pump.
2. Tap the **Settings** (⚙) button in the action bar.
3. Select **Logs**.

8/16/18	5:30 PM	1A	Pump Motor Stall Recovery (1A)
8/16/18	5:25 PM	03	Critical Alarm - Pump Motor Stall Occurred (03)
8/16/18	4:35 PM	1A	Pump Motor Stall Recovery (1A)
8/16/18	4:28 PM	03	Critical Alarm - Pump Motor Stall Occurred (03)
8/16/18	3:24 PM	1A	Pump Motor Stall Recovery (1A)
8/16/18	1:47 PM	03	Critical Alarm - Pump Motor Stall Occurred (03)
8/16/18	3:09 AM	1A	Pump Motor Stall Recovery (1A)
8/16/18	12:40 AM	03	Critical Alarm - Pump Motor Stall Occurred (03)
8/16/18	12:28 AM	1A	Pump Motor Stall Recovery (1A)
8/15/18	11:15 PM	03	Critical Alarm - Pump Motor Stall Occurred (03)
8/15/18	10:59 PM	1A	Pump Motor Stall Recovery (1A)
8/15/18	10:54 PM	03	Critical Alarm - Pump Motor Stall Occurred (03)

Motor stall occurred and recovered.

8840 N'VISION





S 02/21/2006 NGV007562N SynchroMed II B.3
SynchroMed II,B.3,R43,

SN NHF013212N,SN
Session Data Report

8840 SynchroMed II B
Programming Session

Patient Information
First Name

Last Name

Notes
2 ALARM LOW OK 3 ALARM FLOW OK
4 ALRM FLOW OK 5 ALARM FLOW OK

Pump Serial Number
NGV007562N
Pump Model Number
8637-40 40 mL
Cal. Constant
113
Catheter Information
Catheter Model
Other
Total Catheter Volume
0.250 mL

Current Pump Settings
Examined At
02/21/2006 MM/DD/YYYY 11:54
Last Change
02/18/2006 MM/DD/YYYY 11:57

Event Log
System
MM/DD/YYYY h:m

02/18/2006 13:09 (1A)
Motor Stall Recovery Occurred

02/18/2006 12:38 (03)
Motor Stall Occurred

02/18/2006 11:58 (16)
Pump Restarted Due to Restart Command

02/18/2006 11:58 (26)
Infusion Bolus Command Received

02/18/2006 11:58 (23)
Infusion (Prescription) Change Occurred

02/18/2006 11:58 (24)
Patient Configuration Change Occurred

02/18/2006 11:58 (14)
Pump Stopped Due to Stop Command

02/18/2006 11:58 (21)
Pump Refill Occurred

==========
PA
88 = PA Request
89 = Rejected PA Request

'Event Log' section

stall recovery on 2/18/2006 at 13:09

stall detected on 2/18/2006 at 12:38

Intrathecal Prescription and Pump Refill Record (excluding cytotoxic medication).

Holes Punched as per AS2828.1: 2012

BINDING MARGIN - NO WRITING

SEI130037

S0833 290617

Health
South Eastern Sydney Local Health District
Illawarra Shoalhaven Local Health District

Facility:

INTRATHECAL PRESCRIPTION AND PUMP REFILL RECORD
(EXCLUDING CYTOTOXIC MEDICATION)

Attach ADR Sticker

ALLERGIES & ADVERSE DRUG REACTIONS (ADR)
☐ Nil known ☐ Unknown (tick appropriate box or complete details below)

Drug (or other)	Reaction/Date	Initials

COMPLETE ALERT SHEET IN MEDICAL RECORD

Sign ..... Print ..... Date .....

FAMILY NAME	MRN
GIVEN NAMES	☐ MALE ☐ FEMALE
D.O.B. ____/____/____	M.O.
ADDRESS	
LOCATION / WARD	

COMPLETE ALL DETAILS OR AFFIX PATIENT LABEL HERE

DO NOT PRINT

Prescription

Date	Time	Medication (Print Generic Name)	Dose (mg or microg)	Volume (mL)	Route	Final Concentration per mL	Prescriber Signature & Print Your Name
					Intrathecal		
					Intrathecal		
					Intrathecal		
					Intrathecal		
					Intrathecal		
Pump Type	☐ IsoMed ☐ SYNCHROMED II			Total Volume (mL)			

Local Anaesthetic Skin Infiltration

Date	Medication and Strength	Volume(mL)	Route	Prescriber Signature & Print Your Name

Program

☐ Simple Continuous Infusion

Primary Drug	Daily Dose microg Or mg/24 hours	Daily Dose microg Or mg/24 hours	Daily Dose microg Or mg/24 hours
Prescriber Signature & Name: Date:			

☐ Patient Activated Bolus dose

Bolus Dose	Bolus Duration	Lock Out Interval	Maximum 24 hour boluses
Prescriber Signature & Name: Date:			

☐ Flex Infusion

From____hrs	To ____hrs	Dose:
From____hrs	To ____hrs	Dose:
Prescriber Signature & Name: Date:		

Page 1 of 2

SEI130.037 INTRATHECAL PRESCRIPTION AND PUMP REFILL RECORD (EXCLUDING CYTOTOXIC MEDICATION)

SD833 290617

Health
South Eastern Sydney Local Health District
Illawarra Shoalhaven Local Health District

Facility:

INTRATHECAL PRESCRIPTION AND PUMP REFILL RECORD
(EXCLUDING CYTOTOXIC MEDICATION)

FAMILY NAME	MRN
GIVEN NAMES	☐ MALE ☐ FEMALE
D.O.B. _____/_____/_____	M.O.
ADDRESS	
LOCATION / WARD	

COMPLETE ALL DETAILS OR AFFIX PATIENT LABEL HERE

Date	Confirm current prescription Signature & Print Your Name	Expected Residual Volume	Actual residual Volume	Refilled By, Signature & Print Your Name	Assisted By, Signature & Print Your Name	Alarm Date	Next appointment Date

Page 2 of 2

SEI13003J

BINDING MARGIN - NO WRITING

Holes Punched as per AS2828.1: 2012