IPQ Nurse Training

Syringe Drivers in End of Life Care

Competency record: preparation, set-up, monitoring and escalation

Version 1.1, September 2026. Review due September 2027.

Complete this record alongside the e-learning, during supervised practice in your workplace. It covers continuous subcutaneous infusions for adults using an ambulatory syringe driver. It does not cover prescribing, intravenous or epidural infusions, paediatric practice, or specialist infusions such as ketamine.

Step 1	Step 2	Step 3	Step 4	Then
E-learning passed	Orientation to the driver model	Supervised practice and assessment	Independent practice	Reassessment at your employer's interval

Practitioner and session details

Name		**Job title and band**	
NMC PIN		**Setting (hospital, hospice, community)**	
Organisation		**Facilitator**	
Date e-learning passed		**Driver make and model used**	

Before the practical assessment

Requirement	Date	Confirmed by
E-learning completed and final assessment passed at 80% or above (certificate seen)		
Local policy checklist (Appendix C of the e-learning) completed with a supervisor		
Device orientation completed on the driver model used here: parts, loading, programming, alarms, keypad lock and lock box, battery, service date		
Read local syringe driver, controlled drugs and palliative care policies and the local palliative care formulary		
Medicines administration and aseptic non-touch technique competence current		
Understands that sign-off in section 5 does not authorise independent practice		

How to use this record

The practitioner is observed performing each part of the procedure in practice, under supervision, while the supervisor or assessor records the criteria. Where an opportunity has not arisen, the practitioner talks through what they would do and this is recorded as discussed. Up to three observed attempts are recorded in columns 1, 2 and 3 using the scale below. Every criterion must reach level I before the final assessment.

Level	Descriptor	What this looks like
N	**Not yet demonstrated**	The step was omitted, performed unsafely, or the practitioner could not explain it.
P	**Demonstrated with prompting**	The step was performed correctly, but only after a cue, correction or question from the assessor.
I	**Demonstrated independently**	The step was performed correctly, safely and unprompted, and the practitioner explained why.

Safety criteria are absolute. Starting an infusion against an incomplete or unchecked prescription, an unlabelled syringe, an infusion left running without a check, a rate or drug changed without a prescription, or adding anything to a running syringe stops the attempt. It is recorded as N and repeated.

This record does not authorise independent practice. Every set-up and check is supervised until the final assessment in section 7 is signed. Competence is device specific: a change of driver model needs orientation and reassessment.

Section 1A. Prescription, controlled drugs and preparation

Observed under supervision in practice, or discussed where the opportunity has not arisen. The supervisor initials and dates each completed group.

Performance criteria	1	2	3	Assessor initials and date
A. Prescription and safety checks				
1. Confirms the indication for a continuous subcutaneous infusion and that it has been discussed with the patient or, where capacity is lacking, decided in their best interests				
2. Checks the prescription is complete: patient identity, each drug in full, dose over 24 hours, route, diluent, duration, start date and time, prescriber signature				
3. Checks units are written in full and that no unsafe abbreviations are used				
4. Recognises a dose that needs querying, including conversions from oral opioids and transdermal patches still in place				
5. Confirms as-required subcutaneous doses are prescribed and available before leaving the patient				
6. Checks allergies and renal function, and knows when to seek specialist palliative care advice				
B. Controlled drugs				
7. Follows local policy for checking, witnessing and recording controlled drugs				
8. Checks stock balance, expiry and the amount drawn up, and records the amount used and discarded				
9. Disposes of waste correctly and completes the register or record with the witness				
10. Describes controlled drug management in a patient's own home, including the record kept at each visit and what happens to medicines after death				
C. Preparing the syringe				
11. Prepares in a clean area using aseptic non-touch technique, with hand hygiene and appropriate PPE				
12. Selects the correct syringe type and size for the driver in use				
13. Checks each ampoule against the prescription with the second checker: drug, strength, volume, expiry				
14. Draws up accurately and adds the prescribed diluent to the correct total volume				
15. States which diluent is used and why, including that cyclizine is diluted with water for injection				
16. Checks compatibility of the combination against local guidance before mixing				

Performance criteria	1	2	3	Assessor initials and date
17. Inspects the syringe for cloudiness, crystals or colour change, and states the action if present				
18. Labels the syringe with patient details, drugs and doses, diluent, total volume, date, time and signature				

Section 1B. Driver set-up, site and documentation

Observed under supervision in practice. The supervisor initials and dates each completed group.

Performance criteria	1	2	3	Assessor initials and date
D. Driver and line				
1. Identifies the driver in use, its service date, and confirms it is undamaged and working				
2. Fits the syringe correctly, with barrel clamp and actuator seated, and confirms the driver recognises it				
3. Primes the line as local policy directs and records the priming volume				
4. Programmes the driver with the correct volume and duration, and checks the calculated rate against the prescription				
5. Performs and documents a second check of the programming with another registrant, as policy requires				
6. Starts the infusion, confirms it is running, and locks the keypad and lock box				
E. Site selection and insertion				
7. Selects an appropriate site and explains the choice, including patient comfort, mobility and dignity				
8. Avoids unsuitable sites: broken, infected, inflamed or irradiated skin, oedema or lymphoedema, bony prominences, tumour sites, skin folds and areas restricting movement				
9. Uses aseptic non-touch technique and appropriate PPE				
10. Inserts the subcutaneous cannula correctly and secures it with a transparent dressing, dated				
11. Loops and secures the line so movement does not pull on the cannula				
12. Disposes of sharps safely at the point of use				
F. Documentation and handover				
13. Completes the syringe driver monitoring chart: drugs, doses, diluent, volume, rate, start time, site and signatures				
14. Records the batch numbers or ampoules used as local policy requires				

Performance criteria	1	2	3	Assessor initials and date
15. Explains the driver, alarms and who to call to the patient, family or care home staff, and leaves this in writing				
16. Hands over clearly to the next visit or shift, including the expected volume remaining				

Section 1C. Monitoring, troubleshooting and escalation

Observed under supervision in practice, or discussed using the scenarios in section 3.

Performance criteria	1	2	3	Assessor initials and date
G. Monitoring				
1. Assesses symptom control and any signs of opioid toxicity: increasing drowsiness, confusion, myoclonus, pinpoint pupils, slow breathing				
2. Checks the display: infusion running, rate, volume remaining and time left, and compares the volume with the time elapsed				
3. Inspects the syringe for clarity and crystals, and the line for kinks, leaks or disconnection				
4. Inspects the site for redness, swelling, hardness, pain, leakage or a lifting dressing, and acts on findings				
5. Checks battery status and that the lock box and keypad lock are in place				
6. Records every check on the monitoring chart, including volume remaining and actions taken				
H. Troubleshooting				
7. Responds correctly to an occlusion or high-pressure alarm				
8. Responds correctly to an infusion running early or late, including checking programming, syringe size and rate against the chart				
9. Responds correctly to low battery, syringe displaced, end of infusion and paused alarms				
10. States the actions if the driver fails or is damaged or dropped, including how to keep symptom control going				
11. States the four "nevers": never change the rate or drugs without a prescription; never add anything to a running syringe; never restart a driver without knowing why it stopped; never leave a stopped infusion until the next visit				
12. Reports faults, incidents and near misses, and knows the local reporting route				
I. Escalation and care after death				
13. Recognises uncontrolled symptoms and escalates to the prescriber with a clear structured handover (SBAR)				
14. Gives prescribed as-required subcutaneous doses correctly and records the effect				
15. States when to seek specialist palliative care advice, including repeated breakthrough doses, unfamiliar combinations and difficult symptoms				
16. States the actions after death: stop and record the driver, remove the cannula, account for controlled drugs with a witness, and return medicines per policy				

Performance criteria	1	2	3	Assessor initials and date
17. Supports the family sensitively and explains what happens next				

Section 2. Underpinning knowledge

Asked verbally by the supervisor or assessor during supervised practice. Record the answer given, not just a tick.

Question	Assessor notes	Answered
1. What must be on a syringe driver prescription before you can start the infusion?		
2. A patient takes 60 mg of oral morphine over 24 hours. What subcutaneous morphine dose would you expect, and why?		
3. What is a breakthrough dose, and how is it usually calculated?		
4. Which diluent is used for cyclizine, and why does this matter?		
5. Name three signs of opioid toxicity and state your immediate actions.		
6. Which sites would you avoid, and why?		
7. What do you check at every monitoring visit?		
8. The infusion is 4 mL ahead of where you expect at 12 hours. What do you do?		
9. What does an occlusion alarm usually mean, and how do you respond?		
10. The syringe looks cloudy with fine crystals. What do you do?		
11. A family asks whether the driver will shorten life. How do you answer?		
12. What happens to the driver, the cannula and the controlled drugs after the patient dies?		

Section 3. Discussion scenarios

Worked through with the supervisor or assessor: at least four, including one driver problem and one conversation with a family member. They cover situations that may not arise during supervised practice.

Scenario	Assessor record of the practitioner's response
Running early *The syringe is almost empty 12 hours after it was set up. Talk through your checks and actions.*	
Occlusion at 2am *You are called to a home at night: an occlusion alarm and the person is settled. What do you do?*	

Scenario	Assessor record of the practitioner's response
The cloudy syringe *At the morning check the syringe contains fine crystals. Respond and explain.*	
The sore site *The site is red, hard and painful 24 hours after set-up, on cyclizine and diamorphine. Manage it.*	
"Are you giving up?" *A daughter believes the driver will shorten her mother's life. Respond.*	
Driver failure at night *The driver stops and cannot be restarted. The person has pain. Describe your actions and escalation.*	

Section 4. Reflection and action plan

What went well, and what felt most difficult?

What will you do differently at your first supervised set-up on a patient?

Area identified	Action agreed	Review by

Section 5. Sign-off: supervised practice

Preparation and set-up

I confirm that the practitioner named in this record has been observed in practice and has demonstrated every criterion in sections 1A and 1B at level I, and has answered the underpinning knowledge questions satisfactorily. They are ready to proceed to final assessment.

Assessor name and role	
Assessor signature and PIN	
Date	
Practitioner signature	

Monitoring, troubleshooting and escalation

I confirm that the practitioner named in this record has demonstrated every criterion in section 1C at level I in practice or through the discussion scenarios, including alarm management, recognition of uncontrolled symptoms and opioid toxicity, escalation, and care after death.

Assessor name and role	
Assessor signature and PIN	
Date	
Practitioner signature	

Section 6. Supervised practice log

Record each supervised set-up and monitoring visit, including any problems and how they were managed.

Syringe driver set-up log

Date	Clinical area	Drugs (no doses needed)	Attempts	Outcome	Supervisor name, signature, PIN

Minimum three supervised set-ups before final assessment, or more if your organisation requires. Number required here: _____

Monitoring, alarm and escalation log

Date	Clinical area	Check or problem managed	Attempts	Outcome	Supervisor name, signature, PIN

Minimum three supervised monitoring checks before final assessment, including at least one alarm, site problem or escalation managed, or worked through with the assessor. Number required here: _____

Section 7. Final assessment of competence

By an assessor who is competent in the skill and authorised to assess it.

Syringe driver set-up

I confirm that the practitioner named in this record has completed the required supervised practice and has been directly observed checking a prescription, preparing the medicines with a second checker, programming the driver, siting the infusion and documenting it safely and independently on a patient, and is assessed as competent to do so without direct supervision in line with organisational policy.

Assessor name and role	
Assessor signature and PIN	
Date of assessment	
Practitioner signature	
Reassessment due (annually unless local policy states otherwise)	

Monitoring, troubleshooting and escalation

I confirm that the practitioner named in this record has demonstrated safe monitoring of a running infusion, appropriate management of alarms and site problems, recognition of uncontrolled symptoms and opioid toxicity, timely escalation and correct management after death, and is assessed as competent in line with organisational policy.

Assessor name and role	
Assessor signature and PIN	
Date of assessment	
Practitioner signature	
Reassessment due (annually unless local policy states otherwise)	

Appendix. Quick reference

Symptoms and commonly used medicines

Doses are the prescriber's decision. Check every prescription against your local palliative care guidelines.

Symptom	Commonly used	Notes
Pain, breathlessness	Morphine, oxycodone, diamorphine, alfentanil	Oxycodone or alfentanil often chosen in renal impairment. Diamorphine is very soluble, so large doses fit a small volume
Nausea and vomiting	Haloperidol, levomepromazine, metoclopramide, cyclizine	Cyclizine is a common cause of site reactions and precipitation
Agitation and restlessness	Midazolam, levomepromazine, haloperidol	Look for reversible causes first: pain, retention, constipation, fear
Respiratory secretions	Hyoscine butylbromide, glycopyrronium, hyoscine hydrobromide	Hyoscine butylbromide does not cross into the brain; hydrobromide sedates and can cause delirium
Seizures	Midazolam	Specialist advice for established epilepsy

Before you mix

Check the combination and concentrations against local guidance. Most site reactions and precipitation follow high concentrations or difficult combinations, so dilute to the volume your policy allows. Water for injection is the usual diluent; cyclizine must not be diluted with sodium chloride. Inspect the syringe every time: cloudiness, crystals or colour change means stop, do not use, and prepare a fresh syringe. Never add a drug to a syringe that is already running.

Monitoring check

The person	Symptoms controlled? Pain, nausea, agitation, secretions, breathlessness. Signs of opioid toxicity? How many as-required doses have been needed?
The display	Infusion running, rate, volume remaining, time left. Does the volume match the time elapsed?
The syringe and line	Contents clear, no crystals, label correct and readable, syringe seated. No kinks, leaks or disconnection
The site	Redness, swelling, hardness, pain, leakage, dressing intact and dated
The driver	Battery, keypad lock, lock box, alarm history. Record every check and the volume remaining

Alarms

Occlusion	Kinked or clamped line, blocked cannula, site problem, person lying on the line. Trace the line, resite if the cannula is blocked. Never force a flush
Syringe displaced	Syringe not seated, actuator not engaged, driver knocked. Stop, reseat correctly, check the volume, restart and document
Low or flat battery	Replace and confirm the infusion restarts and is running
Infusion complete	Expected at 24 hours. If early, find out why before starting the next syringe

The four nevers

Never change the rate or the drugs without a new prescription. Never add anything to a syringe that is already running. Never restart a driver without knowing why it stopped. Never leave a stopped infusion until the next visit: symptoms return within hours.

Opioid toxicity

New or increasing drowsiness, confusion or hallucinations, muscle twitching (myoclonus), pinpoint pupils, slow breathing. Stop and seek urgent prescriber advice: the dose may need reducing or the opioid changing, particularly if kidney function is falling. Naloxone is rarely appropriate in palliative care and can cause severe pain and distress: it is a prescriber decision.

Standards this record is based on

NMC (2018) The Code. NPSA (2010) Safer ambulatory syringe drivers, RRR019. NICE NG31 Care of dying adults in the last days of life. NICE NG46 Controlled drugs: safe use and management. Palliative care formularies and local palliative care guidelines. Manufacturer instructions for the driver in use. Misuse of Drugs Regulations 2001. Mental Capacity Act 2005. Where local policy differs, local policy applies.