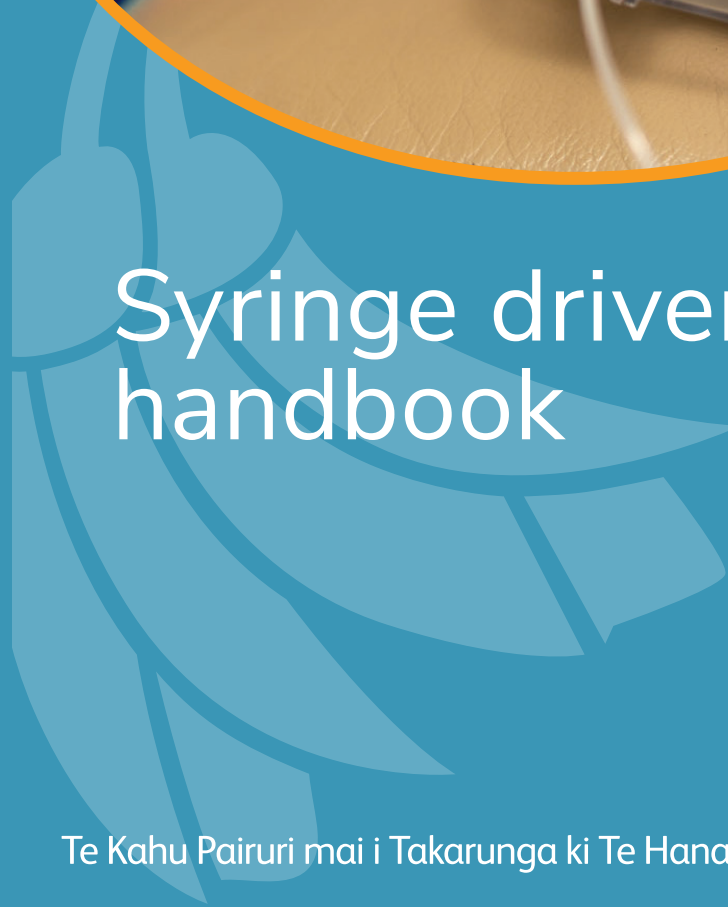




Syringe driver handbook



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CLIN-0922

Te Kahu Pairuri mai i Takarunga ki Te Hana

harbour
hospice



DO NOT GET WET

The syringe driver must **NOT** be worn during showering or bathing or immersed in water.

If the driver does accidentally get wet, **STOP** the infusion and inform Harbour Hospice immediately.



DO NOT EXPOSE TO SUNLIGHT

Exposure to sunlight can make your medication ineffective.

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Your rights and responsibilities

- You have indicated you feel comfortable with changing the pre-filled syringes in this syringe driver and your Hospice nurse appreciates your support in doing so. Before using the syringe driver they will explain everything you need to know.
- Please read this information booklet carefully and refer to it when operating the unit.
- You have the right for support in managing a syringe driver. Please contact hospice staff for any issues day or night. The general rule is **'if in doubt, check it out'**.

24 hour nurse support

A Hospice nurse is available 24/7 to answer your questions or advise you. Call one of the numbers below.

Hibiscus Coast

Community nurses 027 480 5784

Inpatient unit 09 421 9180

North Shore

Community nurses 09 486 1688

Inpatient unit 09 486 1688

Warkworth/Wellsford

8.30am-4pm 09 425 9535

Afterhours and weekends 0800 252 533

What is a syringe driver (CSCI)?

A syringe driver is used to give prescribed medication when a patient:

- Is unable to take medication by mouth.
- Needs a constant level of medication for the best possible symptom control.
- Is too weak or sleepy to take medications at the prescribed time.
- Needs to have relief from nausea and/or vomiting.

The syringe driver (CSCI) consists of a medication filled syringe, attached to a battery-driven 'driver' or 'pump', which ensures the medication is delivered over a given period of time; usually 24 hours.

Having a syringe driver (CSCI) might not be permanent and it may be discontinued once symptoms can be managed in other ways.



What do I have to do?

Change the syringe when indicated. If for any reason the medication in the syringe runs out, **DO NOT PANIC** - the effect of the medication will continue to work for at least one hour.

Collect the prefilled syringes from your pharmacy. Your doctor will prescribe the medication required and discuss any changes with your Hospice nurse.

Always keep a spare prefilled syringe on hand. This will have been requested with the prescription. However, you must make sure you have enough to last over a weekend or holiday period.

Check three times a day to make sure the syringe driver is still working.

Check the insertion site(s) whenever you change the syringe or give extra medication. Make sure there is no swelling, redness or soreness. If there is, phone the Hospice before proceeding.

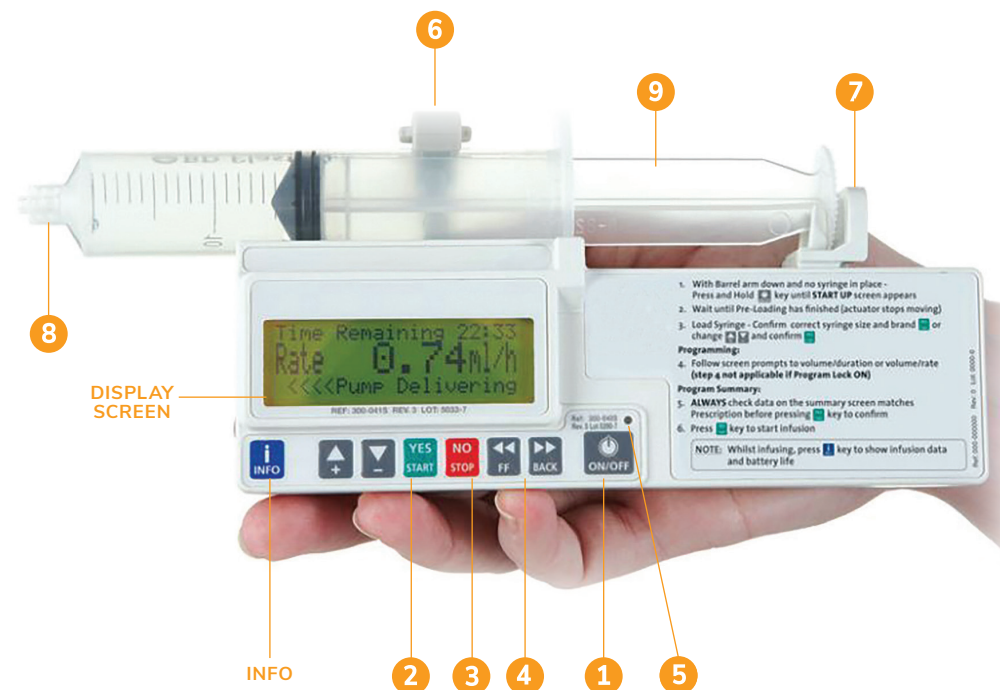
Keep a record of each time you change the syringe or administer PRN (as needed). A syringe driver and PRN (as needed) administration form will be provided by hospice staff to record this.

Make sure you understand exactly what the Hospice nurse tells you about operating the syringe driver. Please let them know if there is anything at all that you don't understand and ask as many questions as you need to.

Call the Hospice nurse if you have any concerns about the syringe driver or how it is working. See page 3.

What do I need to know?

1	ON/OFF	Turns the syringe driver on or off. Hold down for a few seconds to operate.
2	START/YES	Starts the infusion or turns off the noise of the syringe driver alarm.
3	STOP/NO	Stops the syringe driver from operating.
4	OFF/BACK	Moves the actuator when loading the syringe.
5	*LED indicator	<div style="display: flex; align-items: center;"> <div style="width: 15px; height: 15px; background-color: green; margin-right: 5px;"></div> Green - Infusing (flashes every 30 seconds). </div> <div style="display: flex; align-items: center; margin-top: 5px;"> <div style="width: 15px; height: 15px; background-color: red; margin-right: 5px;"></div> Red - Not infusing. </div>
6	Syringe barrel clamp	Sits over the prefilled syringe to hold it in place. Undo when changing the syringe. Re-secure once the replacement is in position. The sensor under the clamp helps the syringe driver to operate correctly.
7	Actuator	Holds and moves the plunger to deliver medication.
8	Syringe nozzle	Ensures the infusion line fits securely onto the syringe.
9	Syringe plunger	Pushes the medication through the syringe barrel via the infusion line to the insertion site.
	Infusion line	Carries medication from the syringe to the insertion site. You may have two lines inserted, so if one line fails you can transfer the syringe driver to the second line.
	Short line	A very fine tube inserted by the nurse and fastened in place. The other end is connected to the infusion line.
	Insertion site	The entry point where the short line goes into the patient.



*LED indicator

- It is normal for a green light to flash on the right hand side of the machine when the syringe driver is in 'running' mode. (Infusing)
- The light is red when the pump is in 'stop' mode, or if the alarm is sounding. (Not infusing).

An alarm will sound when if there is any interruption to the flow of the infusion. See page 10 'Alarms and Alerts' for what to do in this situation.

How to change the pre-filled syringe

1	Have the new prefilled syringe available. Check the solution inside does not contain crystals and that it is clear, not cloudy.
2	Check the label. Make sure the medication is the same as stated in the CSCI Medication Authority Form given to you by your Hospice nurse. Check the date has not expired.
3	If in place, unlock the clear plastic cover and take out the syringe driver.
4	Stop the existing infusion by pressing STOP/NO .
5	Turn the syringe driver off by pressing and holding the ON/OFF key for several seconds, until the screen goes grey.
6	Lift up and twist the Syringe barrel clamp (6) clockwise. Ensure it is in the 'down' position.
7	Remove the empty syringe with the tubing attached and place it on a flat surface.
8	Turn the syringe driver back on by pressing ON/OFF for several seconds. Wait for the Actuator (7) to move to the right. The syringe driver display should now read 'load syringe'.
9	Check the battery level by pressing INFO twice. If the level is below 40%, fit a new battery. Refer to page 12 for instructions.
10	Hold the new prefilled syringe over the syringe driver and check the Actuator (7) is in the correct position to hold the syringe plunger. If it is not, ensure the barrel clamp is in the down position and move the actuator by pressing FF or BACK .
11	Slot the syringe into place. Make sure the labels face away from the barrel and the syringe collar is straight up and down.
12	Secure the syringe with the Syring barrel clamp (6)

13	Take the cap off the syringe. Do not touch the end of the syringe or let it touch anything as this may cause contamination.
14	Take the tubing off the empty syringe (it may be hard to detach)
15	Transfer the tubing to the new syringe. It is fine to have a small amount of air in the tubing and this will be absorbed without causing any harm.
16	Check the syringe size and brand against the information on the display screen. If correct, press YES to confirm. If incorrect use the +/- arrow keys to change, then press YES .
17	You will now see 4 rows of information on the screen: <ul style="list-style-type: none"> • Row 1 - shows the syringe volume Check the amount of solution in the syringe is the same as the amount stated • Row 2 - shows the duration. Ensure it states 24 hours • Row 3 - shows the rate which is automatically set - you don't need to do anything • Row 4 - asks if you wish to proceed. When you are sure everything is correct, press YES to confirm.
18	Press YES again to start the infusion.
19	Check the syringe driver is running: <ul style="list-style-type: none"> • The LED indicator should be flashing green every 30 seconds. • The display screen should be showing <<<<<< pump delivering..
20	Record the time of this infusion and sign on the Syringe Driver Medications Record Sheet on pages 16-17.
21	If the medication in the syringe is changed, ensure you discard any previous syringes or return to pharmacy.

Alarms and alerts

The syringe driver is designed to let you know when there is a problem. There are 2 types of warning systems:

ALERTS

- An alarm will sound intermittently.
- The infusion will continue.
- A message appears on the display screen indicating the cause.
- This message will alternate with the normal 'infusion running'.

ALARMS

- An alarm will sound continuously.
- The infusion will stop.
- The LED indicator turns to red.
- A message appears on the display screen indicating the cause.

The table opposite shows you what action to take for each problem.

NOTE

It is a good idea to get into the habit of checking a few times each day that the LED indicator is flashing green and the display screen is displaying 'pump delivering'. It is not necessary to check overnight.

SCREEN MESSAGE	PROBLEM	ACTION
Pump paused too long.	Pump has been left in STOP mode (on hold) for 2 minutes.	Press YES to restart.
Low battery.	Battery is almost depleted.	Change battery (page 11).
Near end (nearly empty).	Infusion will end soon.	Prepare to change syringe or turn off driver.
End battery.	Battery is depleted	Change battery (page 12).
End program.	Syringe is empty.	Press STOP/NO Change syringe (pages 8-9).
Syringe displaced. Check syringe.	One or more of the syringe sensors is not detecting.	Reposition the syringe and connections. Check it is properly loaded.
Occlusion/syringe empty. Check line & syringe Press YES to confirm.	Patient insertion site device blocked or dislodged. Tubing occluded. (i.e. blocked). Check tube not trapped or kinked.	Turn syringe driver OFF and phone Hospice for assistance (page 3).
System error. Press and hold INFO for details. If problem persists, send pump for service.	System error.	Turn syringe driver OFF and phone Hospice for assistance (page 3).

How to change the battery

- 1 Stop the pump. Turn the syringe driver off.
- 2 Simply slide out the panel, remove the old battery and fit the new one. Slide the panel back on.
- 3 Press and hold **ON** until the light in the display screen comes on.
- 4 Wait until the picture of the syringe on the display disappears.
- 5 Press **YES** to confirm syringe brand and size.
- 6 Press **YES** to resume infusion.
- 7 Remove the empty syringe with the tubing attached and place it on a flat surface.
- 8 Press **YES** to start the infusion.



NOTE

The syringe driver requires a 9 Volt alkaline **NON RECHARGABLE** battery. **A Duracell battery is recommended and will last between 36 to 48 hours.**

Keep at least 2 spare batteries at home.

Don't worry if you have incorrectly inserted the battery as this will not damage the driver. Just remove it and re-insert it correctly.

If recycling spent or dead batteries in a container, please ensure you place tape over the terminals to prevent overheating.

Showering and bathing

Before showering or bathing:

- 1 Wash hands with soap and water or with alcohol based hand gel.
- 2 Untwist line from blue plug (refer drawing on page 15).
- 3 Place syringe driver with connected line, in a safe dry area.
- 4 The pump will continue operating while patient is in the shower. A few drops of medication fluid will drip from the tubing. Use a clean glass or fresh paper tissue to collect these.

After showering or bathing:

- 6 Reconnect line to the blue plug.
- 7 Discard the paper tissue or any medication collected in the glass.



DO NOT GET WET

The syringe driver must **NOT** be worn during showering or bathing or immersed in water. If the driver does accidentally get wet, **STOP** the infusion and inform Harbour Hospice immediately.

Cleaning the carry bag

- 1 Machine wash on maximum temperature 50°C
- 2 Use any type of washing powders or liquids EXCEPT bleach based products.
- 3 Tumble dry or air dry.

If the syringe driver is dropped

It is likely to turn itself off. If this happens check the battery is in place and ensure the syringe is in place. Turn it back **ON** and push the **YES** key to resume.

PRN (as needed) medication

Definition PRN means 'as needed'. It refers to a dose(s) of medication that is not scheduled, but instead left to the discretion of a nurse, caregiver or patient.


Administering PRN (as needed) medication

Your doctor and Hospice nurse may have decided to place some additional syringes filled with PRN (as needed) medication in your fridge. These are for you to use if symptoms of pain, nausea or vomiting appear suddenly, become severe or happen during the night.

There will be:

- 3 doses of medication in individually prefilled syringes that can be given over a 24 hour period
- 3 prefilled syringes of sterile water or normal saline to be used after each administration of a PRN (as needed) drug.

How to change the pre-filled syringe

1	There may be one or two sites, check site where it is going into the skin. Ensure the skin is not red, hot, blanched (white), tender, hard, swollen or oozing. If any of these signs are present, please phone the Hospice for further advice (page 3).
2	Remove syringe from plastic bag and check label to ensure you are giving the right drug.
3	Take the cap off the syringe.
4	Do not touch the end of syringe or let it touch anything.
5	Connect syringe by pushing into the centre of the blue plug and turn clockwise. Push plunger slowly to administer medication.
	
6	Once the syringe is empty, unscrew and remove it. Repeat steps 1 to 5 with a syringe of sterile water to flush the line.
7	Discard any unused medication by washing down the sink or return to any pharmacy.
11	The person(s) trained to give the PRN (as needed) medication must enter the details of any injection they administer, on the CSCI Medication Authority Form.

Notes

Notes