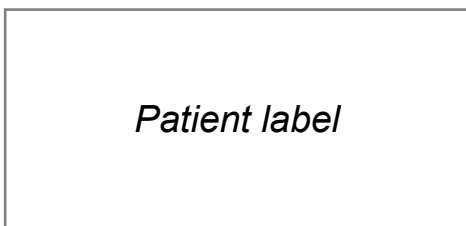


SYRINGE DRIVER HANDBOOK



Information for caregivers

Please keep this booklet inside the syringe driver box
 (and ensure it is returned with the syringe driver)

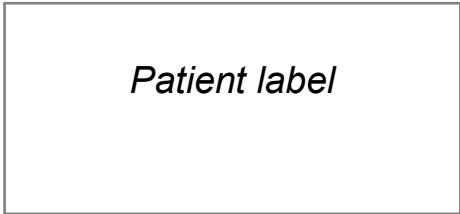


Date issued

Important: This handbook is part of the patient's clinical record and **needs to be returned to Hospice EBOP** when no longer in use.

CONSENT FOR MANAGING SYRINGE DRIVER AT HOME

Date of consent:
.....



Nominated family members:

Print name

Signature

Next of kin Guardian Legal representative

Print name

Signature

Next of kin Guardian Legal representative

Print name

Signature

Next of kin Guardian Legal representative

I/we have been taught how to operate the syringe driver and give additional 'as needed' medication and feel able to do this.

I/we have had my/our questions answered.

I/we understand I/we can contact Hospice EBOP at any time if I have concerns.

Print nurse name

Nurse signature

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The contents of this handbook are designed to help caregivers understand how to use the syringe driver and how to care for it at home.

WHAT IS A SYRINGE DRIVER?

You will see a picture of a syringe driver on page 7 of this handbook. It is used to give prescribed medication when a patient:

- Is unable to swallow medication
- Needs a constant level of medication for the best possible control of symptoms
- Is too weak or sleepy to take medications
- Needs to have relief from nausea and/or vomiting

The NIKI T34 syringe driver is a battery-operated 'driver' or 'pump', which gives medication in a syringe, through a line under the skin, over a period of time - usually 24 hours. The nurse or pharmacist will prepare the syringe containing the medication.

Sometimes, a syringe driver may be stopped if the patient becomes able to swallow their medications again, eg in the case of nausea and/or vomiting.

YOUR RIGHTS AND RESPONSIBILITIES

We appreciate your willingness to help with managing the syringe driver.

The Hospice nurse will explain everything you need to know, so please ask any questions you have, even if you are worried that they may sound silly.

This information booklet is to guide you and help you to remember what to do. If you have any worries or forget how to do something, you can page the Hospice nurse at any time of the day or night. Our pager number is 0800 322 9618. The general rule is 'if in doubt, check it out'.

You have the right to change your mind at any time and choose NOT to continue changing the syringes.

WHAT DO I HAVE TO DO?

Change the syringe in the syringe driver on a daily basis. 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 medications from your pharmacy. Your doctor will prescribe the medication required and discuss any changes with your Hospice nurse.

Ensure medications are stored securely, out of the reach of children.

Check 3 times a day to make sure the syringe driver is still working.

Check the insertion site – this is the area where the line has been inserted under the skin. The site needs to be checked whenever you change the syringe or give extra ‘as needed’ medication. Make sure there is no swelling, redness or soreness. If there is, phone the Hospice nurse before proceeding.

Keep a record of each time you change the syringe. Write this on page 10 of this handbook.

Keep a record of when you give ‘as needed’ medication. Write this on the form the nurse gives you.

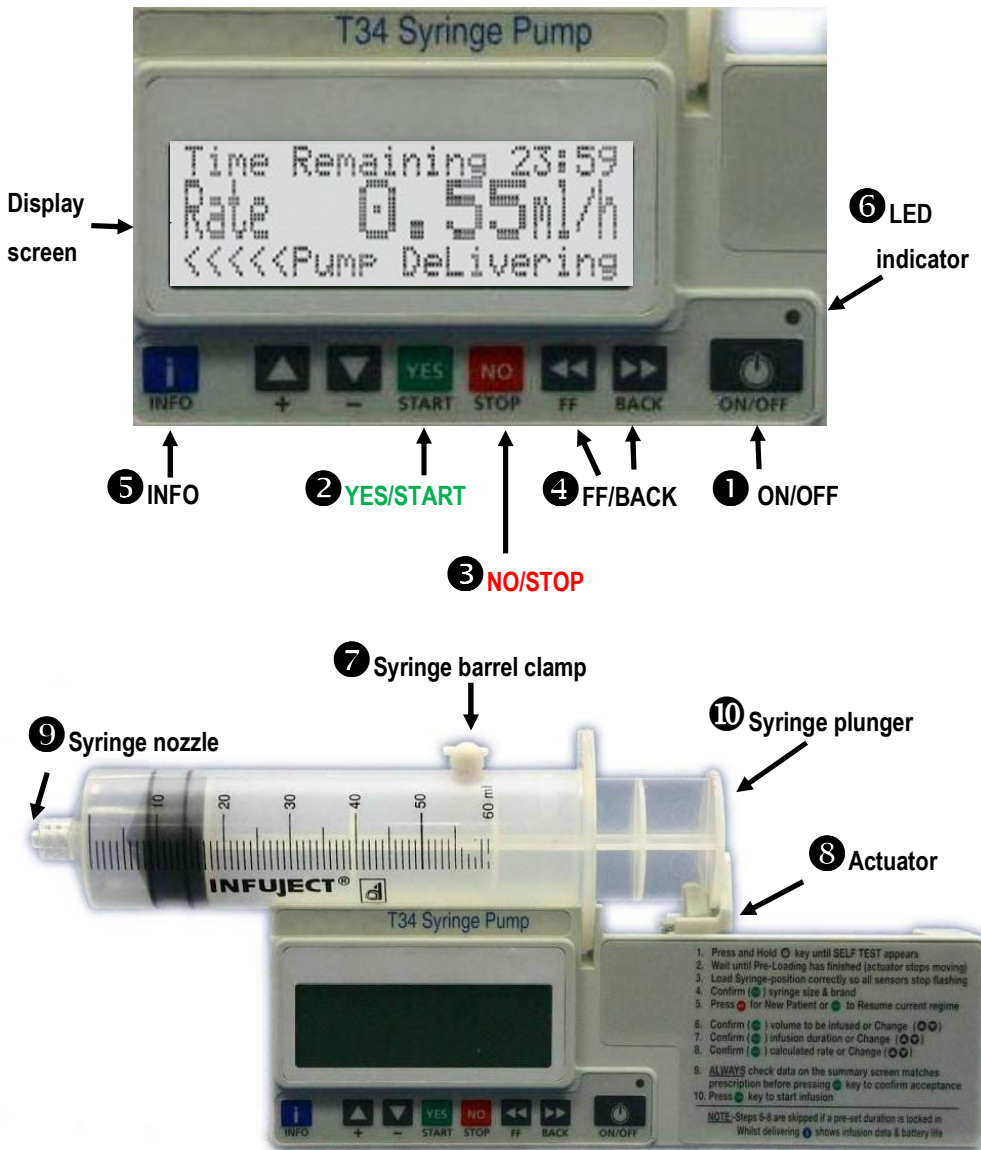
Make sure you understand exactly what the Hospice nurse tells you about operating the syringe driver. Please let them know if there is anything at all that you don’t understand and ask as many questions as you need to.

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

***The syringe driver cannot get wet.
It must NOT be worn during showering or bathing.***

GUIDE TO SYRINGE DRIVER PARTS

- | | |
|------------------------|--|
| ① ON/OFF key | Used to turn the syringe driver on or to turn it off completely. It has to be <u>held down for a few seconds to operate.</u> |
| ② YES/START key | Used to start the infusion or to turn off the noise when the syringe driver alarms. |
| ③ NO/STOP key | Used to stop the syringe driver from operating. |
| ④ FF/BACK keys | FF=Fast forward. Used to move the actuator when loading the <u>syringe.</u> |
| ⑤ INFO key | Press twice to check battery level. |
| ⑥ LED Indicator | Flashing green once every 30 seconds: the syringe driver is infusing
Solid red: not infusing |
| ⑦ Syringe barrel clamp | A clamp that sits over the prefilled syringe to hold it in place. It has to be undone when the syringe is being changed and then re-secured once the new syringe is in place. Under the clamp is an import sensor, which helps the syringe driver to operate correctly. |
| ⑧ Actuator | Holds and moves the syringe plunger to deliver the medication. |
| ⑨ Syringe nozzle | The connection that ensures the infusion line fits securely onto the syringe. |
| ⑩ Syringe plunger | Moved by the actuator to push the medication through the syringe barrel into the infusion line and to the insertion site. |
-
- | | |
|----------------|--|
| Infusion line | Carries medication from the syringe to the insertion site. Some people will 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. |



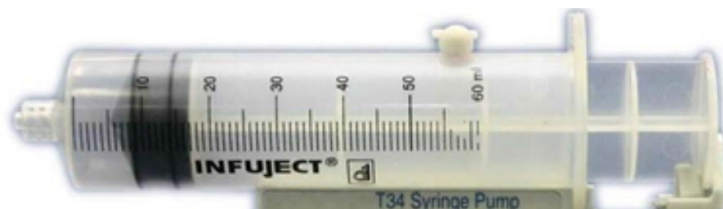
Flashing green light: It is normal for a green light to flash on the right hand side of the machine (LED indicator) when the syringe driver is in 'running' mode.

Solid red light: The LED indicator is red when it is in 'stop' mode or if the pump is alarming.

Alarm: An alarm will sound when if there is any interruption to the flow of the infusion. See page 11 'Alarms and Alerts' for information on what to do in this situation.

HOW TO CHANGE THE SYRINGE

Steps	Action
1	Have the new prefilled syringe available. Check that the mixture inside is clear and does not look cloudy or have crystals in it.
2	Check the label. Make sure the medication is the same as stated on the 'Authority for Administration of Subcutaneous Medication Form' given to you by your Hospice nurse. Check date has not expired.
3	Unlock the clear plastic cover with the key the nurse has given you and take out the syringe driver.
4	Stop the existing infusion by pressing the STOP/NO key.
5	Turn the syringe driver off by pressing and holding the ON/OFF key until the line moves across the screen.
6	Lift up and twist (away toward the back) the barrel clamp that secures the syringe. 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 the ON/OFF key for several seconds. Wait for the syringe driver actuator to move to the right. The syringe driver screen should now read 'load syringe'.
9	Check the battery level by pressing the INFO key twice. If the level is below 30%, fit a new battery. Refer to page 12 for instructions on how to do this.
10	Hold the new prefilled syringe over the syringe driver and check the actuator 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 the FF and BACK arrow keys.



Steps	Action
11	Slot the syringe into place. Make sure the labels are facing away from the barrel. The syringe collar should be straight up and down.
12	Secure the syringe with the barrel clamp.
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. Note: It can be difficult to unscrew.
15	Transfer the tubing to the new syringe. Note: It is acceptable to have a small amount of air in the tubing. 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 key 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. The first row shows the syringe volume so check that the amount of solution in the syringe is the same as the amount stated on the screen. The second row shows the duration so ensure this states 24 hours. The third row shows the rate which is automatically set so you don't need to do anything. The fourth row asks if you wish to proceed so once you are sure everything is correct, press YES to confirm.
18	Press YES key again to start the infusion.
19	Check the syringe driver is running: 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' (page 9).

SYRINGE DRIVER MEDICATIONS RECORD

Record details each time you change a syringe
(*Not* to be used for 'as needed'/PRN medications. Use the separate forms.)

DATE	✓ SITE CHECK	SIGNATURE	NEXT DUE
			Date: Time:
			Date: Time:
			Date: Time:
			Date: Time:
			Date: Time:
			Date: Time:
			Date: Time:
			Date: Time:
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ALERTS AND ALARMS

The syringe driver will let you know when there is a problem.

Alert: intermittent alarm, infusion continues, display screen shows reason for alert, alternating with 'infusion running' message.

Alarm: Continuous alarm, infusion stops, LED indicator turns to display screen shows reason for alert,

This table shows you what to do with alerts and alarms

Display screen message	Problem
Pump paused too long (on hold)	Pump has been left in STOP mode for 2 minutes. Press YES to restart
Low battery	Battery is running out. Change the battery (see page 12)
Near end (nearly empty)	The syringe is almost empty. Prepare to change the syringe.
End battery	Battery is flat. Change the battery (see page 12)
End program	Syringe is empty. Press STOP then NO and change the syringe (see page 8-9)
Syringe displaced	One or more of the syringe sensors has moved or is in the wrong position. Check the syringe and adjust it if possible.
Occlusion/Syringe empty	Tubing is blocked or the syringe is empty. Replace the syringe if necessary. If the syringe is not empty, check the entry site for redness / swelling and check the line to make sure it is not bent or kinked. If the problem continues, contact Hospice.
System error	There is a problem with the syringe driver. Press and hold the INFO key for details. If the problem continues, contact Hospice.

HOW TO CHANGE THE BATTERY

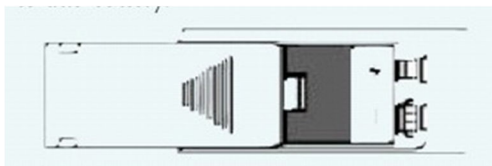


The syringe driver requires a **9 volt alkaline non-rechargeable** battery. (Rechargeable batteries are *not* recommended.)

This Duracell model is recommended & will **last 36-48 hours**.
10% battery remaining = approximately 3-5 hours

Always keep at least 2 spare batteries on hand.

The battery is located behind this slide panel on the back of the syringe driver.



To replace the battery:

- 1 Stop the pump. Turn the syringe driver off.
- 2 Slide out the panel, remove the old battery and fit the new one. Slide the panel back on.
- 3 Press and hold ON key 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 Press YES to confirm remaining volume, duration and rate of infusion.
- 8 Press YES to start the infusion.

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



Fire Warning: If recycling low/dead batteries in a container, put *tape* over the terminals to prevent overheating/fire risk.



SHOWERING AND BATHING

The syringe driver **cannot get wet**.
It must **NOT** be worn during showering or bathing.



Before showering or bathing:

- 1 Press STOP key.
- 2 Press and hold OFF key until a beep is heard – screen will go blank.
- 3 Disconnect line from the syringe, cap both ends with the little blue or white plugs supplied.
- 4 Do not remove the syringe from the syringe driver.

After showering or bathing:

- 1 Remove the white/blue caps from both the short line and the end of the
- 2 Reconnect line to the syringe.
- 3 Press and hold ON key until the light on the display screen comes on.
- 4 Wait until picture of the syringe on the display screen disappears.
- 5 Press YES to confirm syringe brand and size. If incorrect, use the + or — keys to change. Then press YES.
- 6 Press YES to resume infusion.
- 7 Press YES to confirm remaining volume, duration, and rate of infusion.
- 8 Press YES to start the infusion.

If the syringe driver does accidentally get wet,
STOP the infusion and inform the Hospice nurse immediately.

IF SYRINGE DRIVER IS DROPPED

If dropped, the syringe driver is likely to turn itself off. If this happens, check that the battery is correctly in place and ensure the syringe is in place. Turn it back ON and push the YES key to resume.

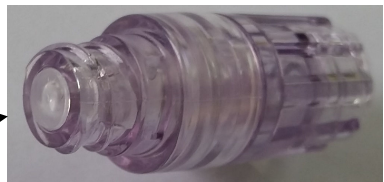
WHAT ARE 'AS NEEDED' MEDICATIONS?

'As needed' medications are given when the patient has symptoms such as:

- Pain
- Nausea and/or vomiting
- Anxiety
- Shortness of breath
- Seizure or convulsion
- A bleed

'As needed' medications are sometimes referred to as 'PRN', 'bolus', or 'top up' medications.

This is the 'valve' that needs to be wiped with an alcohol swab (Step 3) and connected to the syringe (Step 6) to give 'as needed' medication.



Connect 'thread' ends together (Step 6).

HOW TO GIVE ‘AS NEEDED’ MEDICATIONS

The doctor may have prescribed some ‘as needed’ medication when extra medication is needed.

The nurse will draw the medications up in advance for you to give if necessary. The nurse will also draw up saline or sterile water to be used to flush the line after you have given a dose of ‘as needed’ medication.

To administer ‘as needed’ (PRN) medication:

- 1 Check the site where it is going into the skin. Please ensure that the skin is not red, hot, blanched (white), tender, hard, swollen or oozing. If any of these signs are present, please phone the Hospice nurse for further advice.

- 2 Remove syringe from paper bag and check label to ensure you are giving the right drug.

- 3 Wipe valve with an alcohol swab (valve site labeled on page 14) and wait a few seconds for it to dry.

- 4 Take the cap off the syringe.

- 5 Do not touch the end of syringe or let it touch anything.

- 6 Connect syringe by pushing into valve (pictured on page 14) and turn clockwise. Once in place, slowly push plunger to administer medication.

- 7 Once the syringe is empty, unscrew and remove it. Repeat the process with a syringe of the saline or sterile water to flush the line.

- 8 Discard any unused medication by washing down the sink or returning to any pharmacy.

The person(s) trained to give ‘as needed’ medication must **write down the medication given on the *Record of Subcutaneous Medications Administered by Caregiver Form*** (not in this handbook—these are separate pages for each type of ‘as needed’ medication left by Hospice nurse).

FAMILY TRAINING CHECKLIST

Area of training:

SYRINGE DRIVER AND 'AS NEEDED' (PRN) DRUG ADMINISTRATION

Patient is willing for nominated family member(s) or caregiver(s) to administer subcutaneous medication.

Patient understands reasons for medication administration and when they can be given.

Nominated person(s) is/are willing to administer the subcutaneous medication.

Nominated person(s) can identify where the 24 hour Hospice phone number is available.

There is a clear PRN prescription in the home stating: medication, dose, route, specific symptom it is used for, minimum time between doses, number of times it can be administered in 24 hours before contacting a doctor.

Nominated person(s) demonstrated competence in flushing line using needleless system.

Nominated person(s) understand(s) importance of recording medications given on Hospice forms.

Nominated person(s) understand(s) medications to be kept in fridge until used or returned to pharmacy.

SYRINGE DRIVER ONLY ADMINISTRATION: The nominated person(s) can...

Demonstrate they can locate, read & understand information contained in this Syringe Driver Handbook.

Verbalise what to expect, responsibilities of syringe driver use and their role.

Demonstrate:

A basic knowledge of the syringe driver use.

The reasons for starting the syringe driver.

The care of the syringe driver.

Demonstrate the areas to be checked on the syringe driver:

Display screen

LED indicator

Battery level

Infusion line

Insertion site

Verbalise the safe storage and disposal of medications and syringes.

Understand that any unused medication is to be returned to pharmacy. (Hospice nurse cannot do this.)

Demonstrate how to ID the correct syringe and then change the pre-filled syringe in the syringe driver.

Accurately complete the Syringe Driver Medications Record (pg 10) every time the syringe is changed.

Demonstrate ability to troubleshoot solutions to the following problems:

*Occlusion alarm

*End of syringe alarm

*Low battery level alarm

Important: This handbook is part of the patient's clinical record and **needs to be returned to Hospice EBOP** when no longer in use.

Our vision

Living well when time is limited.

Our mission

Provide excellent, compassionate palliative care for everyone throughout the Eastern Bay of Plenty.

Our values

Respect	We treat others the way we like to be treated
Whakaaro nui	Whakaaro nui ki ētahi atu – Ōrite te whakaaro nui kia mātau
Excellence	We strive for excellence and do our best
Taumata teitei	Whaia ana te taumata teitei, ki to mātau kaha
Collaboration	We are in this together
Ngātahi	Mahi ngātahi ana tātau
Compassion	We treat others with kindness & empathy
Arohanui	He arohanui, te manaaki, te atawhai i te katoa
Integrity	We are honest, sincere and open
Ngākau pono	He ngākau pono, he tika, he tuwhera

We welcome your support

Hospice EBOP provides quality end-of-life care to Eastern Bay of Plenty residents at no cost. Only 55% government funded, we rely on donations and bequests to enable us to continue providing care to anyone who needs it.

To make a donation or for more information about how you can support Hospice EBOP, please visit our website at www.hospiceebop.org.nz.