

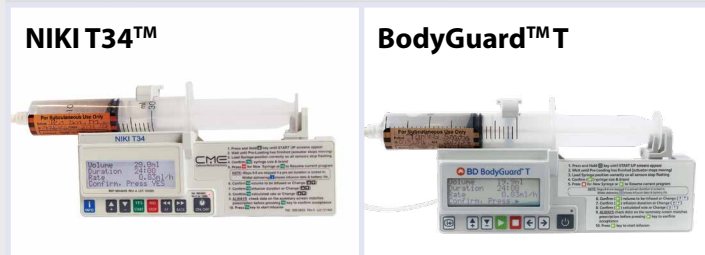
## Setting up and commencing a NIKI T34™, T34™ and BodyGuard™ T syringe pump infusion with a new syringe: A step-by-step guide

- This guide assumes that a subcutaneous cannula has already been inserted into the person.
- All volumes and rates shown in this step-by-step guide are examples only.
- This guide is relevant for use with a NIKI T34™, T34™ or BodyGuard™ T syringe pump. Relevant keys for each pump are included.

**NOTE:** The NIKI T34™, T34™ and BodyGuard™ T syringe pumps are pre-programmed to infuse solutions over 24 hours for palliative care patients. The pumps calculate infusion rates, to the second decimal point, in mL/hour based on the exact volume in the syringe. Consequently, slight variations in syringe volumes will result in slight variations in infusion rates. With a syringe volume of approximately 20 mL, infusion rates will typically vary between 0.77 and 0.86 mL/hr.

### Equipment

- The NIKI T34™, T34™ or the BodyGuard™ T syringe pump
- A 9-volt alkaline disposable battery, inserted into the syringe pump. *For T34™ and BodyGuard™ T, use a 6LR61 battery (see the Handbook for more detailed information)*
- A 30 mL Luer lock syringe
- A 'Medicines added' label
- The medicines order from the prescriber
- Medicine ampoules
- Alcohol wipe
- Diluent
- Blunt drawing up needle
- An extension set
- Sharps container
- Personal protective equipment (PPE) as required by local policy and procedures
- The lockbox for the syringe pump
- A pouch or holster for the syringe pump



### Procedure

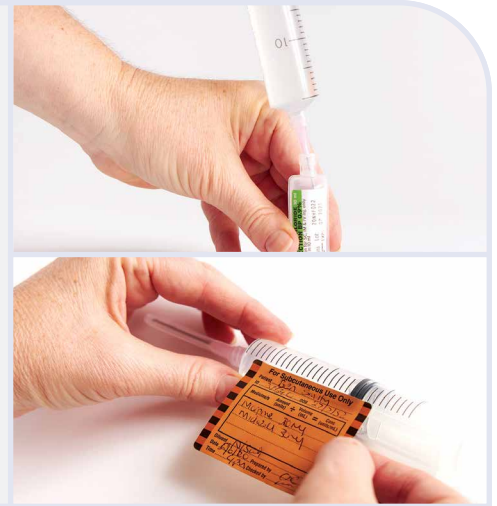
1. Wash hands
2. Complete a 'Medicines added' label



### 3. Prepare the syringe for loading

- Attach the blunt drawing up needle and draw up medicine, as prescribed, into the 30 mL Luer lock syringe
- Fill the syringe to 20 mL (combined volume of medicines and diluent [if required])
- Label the syringe clearly with completed 'Medicines added' label
- Ensure the label is flat and does not interfere with the barrel clamp or obscure the volume measurement gradient
- Recap needle

**\* CAUTION** DO NOT attach extension set to the subcutaneous cannula yet.









### 4. Turn on the syringe pump

- Press   

*\* wait for the actuator to complete its automatic movement sequence*

*\*\* In BodyGuard™ T only: if the syringe pump has not been used for several weeks, you may be prompted to reset the date and time before pump will pre-load.*







*Follow the on-screen prompts, then press (green play symbol)*

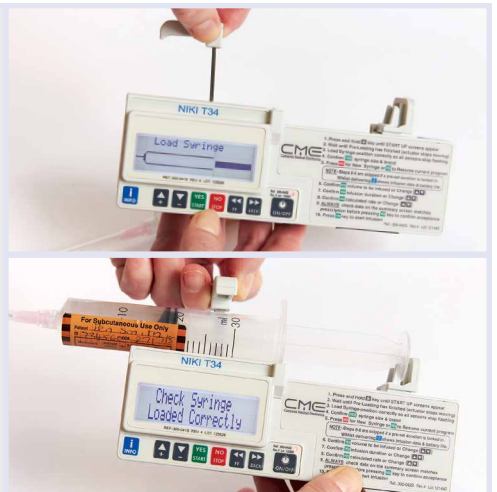
- Screen: **PRE-LOADING** until actuator stops
- Screen: **LOAD SYRINGE**
- Using the syringe as a guide, adjust the position of the actuator **after** it stops moving by pressing either    or    to align syringe collar to the collar sensor and the plunger sensor to the syringe plunger






**\* CAUTION** DO NOT use force to try to move the actuator manually as this could damage the device.

### 5. Load the syringe

- Lift the barrel clamp arm gently as far as it goes, turn the arm 180° and slowly lower it to the down position
- Load the syringe into the pump ensuring the syringe collar is sitting vertically in the collar sensor and the syringe plunger is centred in the plunger sensor
- Lift and turn the barrel clamp arm to hold the syringe in place
- Check the position of the syringe in the three sensors to ensure the syringe has remained in position
- Select the syringe brand using    keys, then press    when the correct brand is displayed



### 6. Review infusion settings

- Check and review data on screen: **Volume, Duration, Rate** (e.g. 20 mL, 24 hrs, 0.84 mL/hr)
- Confirm settings by pressing   

**\* CAUTION** DO NOT commence infusion as the extension set must be primed first (see Step 8).

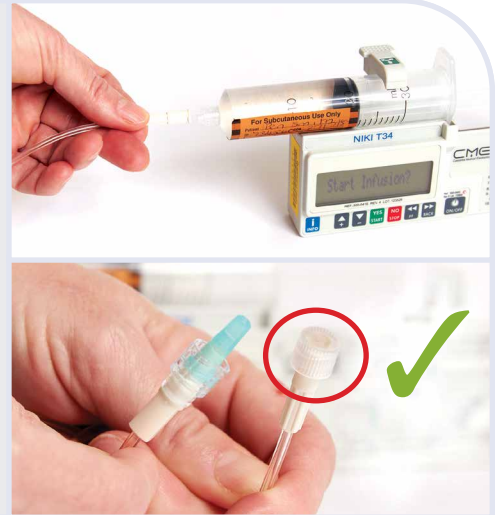
**\* NOTE:** The NIKI T34™ syringe pump is pre-programmed to infuse the syringe contents over 24 hours.

- Screen: **START INFUSION?**



## 7. Attach the extension set

- Remove the drawing up needle and place it in the sharps container
- Screw the extension set onto the end of the syringe
- \* **Only one end of the extension set can correctly connect to the syringe, as shown.**



## 8. Prime extension set tubing

- Press **FF** **←** **←** key
- Screen: **PURGE. DISCONNECT PATIENT**
- Confirm by pressing **YES** **▶** **▶**
- Prime the extension set tubing by pressing and holding **FF** **←** **←** until approximately 2 mL of fluid goes into the tubing and some drops of fluid come out of the other end of the extension set

Screen: **PURGE COMPLETED**

- \* **If you use less than 2 mL volume to purge, the PURGE COMPLETED screen will not display. This is OK as long as drops of fluid come out of the other end of the set.**
- \* **Because you have primed the extension set with approximately 2 mL of volume, the pump will not run for a full 24 hours. It will finish approximately two hours early. This will only occur on day 1 of the infusion. On subsequent days, the pump will run for the full 24 hours.**

\* **NOTE:** On subsequent days, the extension set will not need to be primed.





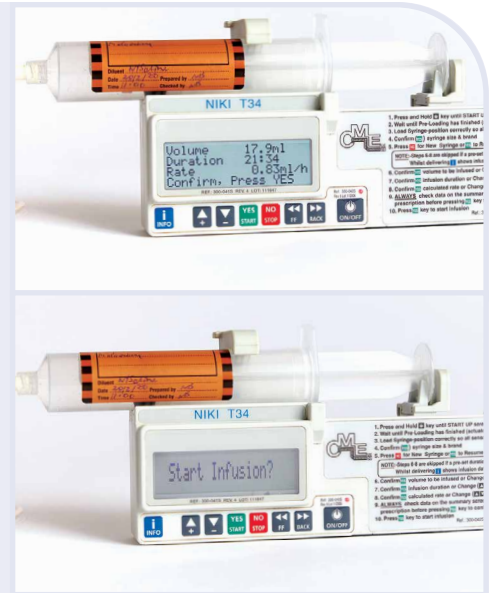
## 9. Reconfirm syringe brand

- Re-select correct brand of syringe
- Press **YES** **▶** **▶** to resume





## 10. Confirm revised infusion data after priming

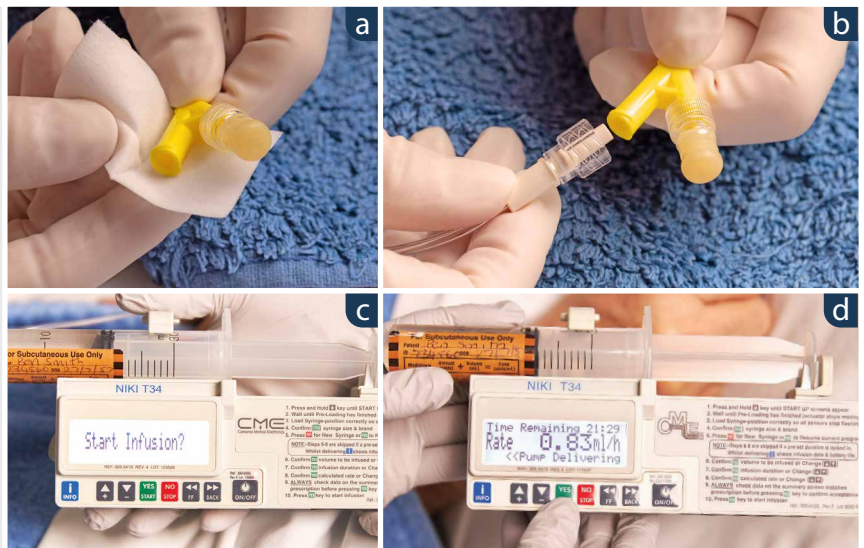
- Screen: **VOLUME (e.g. 18 mL)**  
**DURATION (e.g. 21.30hrs)**  
Rate will remain constant (e.g. 0.84 mL/hr)
- Check that all information on the summary screen is correct and matches the medicines order
- Confirm by pressing **YES START**  
- Screen: **START INFUSION?**



## 11. Take the pump to the person's bedside.

Wash hands again and don PPE as required













- Use an alcohol wipe to swab the end of the subcutaneous cannula
  - Remove the cap from the end of the extension set and connect it to the subcutaneous cannula
  - Screen: **START INFUSION?**
  - Press **YES START**  
- The pump will now begin delivering the medicine to the person.

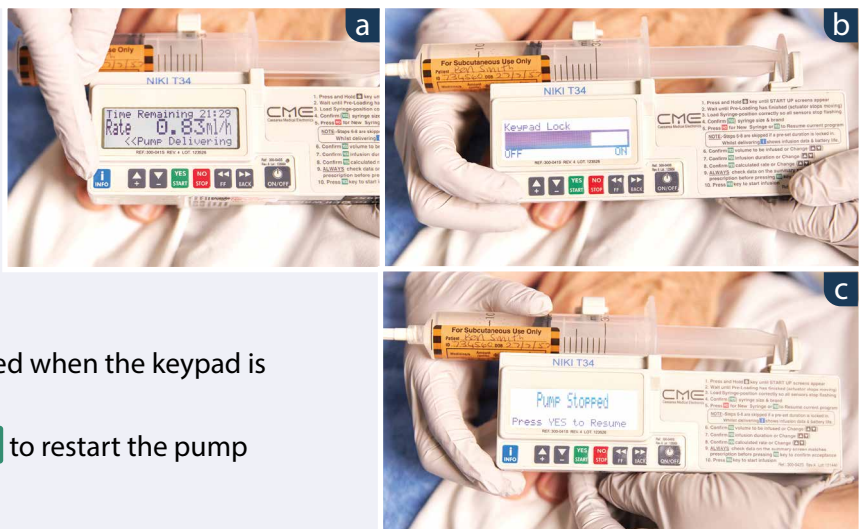


### Screen during infusion

- Whilst infusing, the screen shows key infusion parameters including: Time remaining of infusion, infusion rate and syringe brand and size
- The delivery of medicine is indicated by a message on the display **'<<<Pump Delivering'** and a green LED light on the keypad that flashes approximately once every 30 seconds

## 12. Activate the keypad lock

- Press and hold **INFO**    until a bar is displayed moving from left to right
  - Hold **INFO**    down until the bar has moved completely across the screen and a beep sounds to confirm the lock has been activated
  - For safety, **NO STOP**   can still be activated when the keypad is in locked mode
- \* If you press **NO STOP**  , press **YES START**   to restart the pump again if required.



**13. Place the syringe pump in the lockbox, lock it with the key and then place it in a pouch or holster if needed**



**14. Complete documentation according to local policy and procedures**

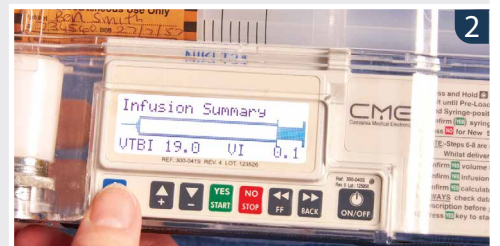
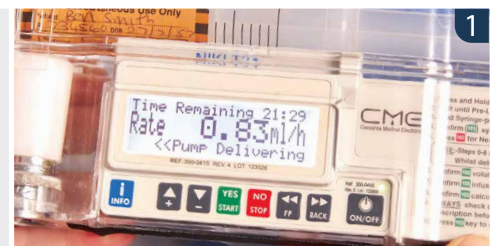


**15. Monitor the infusion and pump over time**

*This step is completed while the syringe is in the lockbox.*

At regular intervals:

1. Check the screen to confirm:
    - the syringe pump is still running at the same infusion rate as originally set
    - Check the screen is intermittently showing the **<<< Pump delivering** and syringe information animation
    - Check for signs of physical damage to the syringe pump and accessories
  2. Press **INFO** **i+** **i+** once to check Volume to Be Infused (VTBI) and Volume Infused (VI). The syringe graphic shows VTBI and VI in graphical form
  3. Press **INFO** **i+** **i+** twice to check for battery life remaining shown as a percentage and in graphical form on the screen.
- \* The syringe pump will alert/alarm to indicate if there is a need to replace the battery.**



## Subsequent infusions

### a. When a syringe is nearly empty

The pump will sound an alert 15 minutes and 7 minutes and before the syringe will be empty

Screen: **Program Nearly Complete**






### b. When a syringe has emptied

The syringe pump will stop automatically when the syringe is empty, and an alarm will sound.

1. Turn keypad lock off.  
Hold **INFO** **i+** **i+** down until the bar has moved completely across the screen and a beep sounds to confirm the lock has been deactivated
2. Screen: **End Program PRESS 'YES' to confirm**  
Press **YES START** **▶▶**



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3. Press and hold    to turn the pump off

– Unlock the lockbox and remove the pump

4. Remove the empty syringe from the pump with the extension set attached

– Turn the syringe pump on by holding   

5. Load a new filled and labelled syringe into the pump.

**\* CAUTION DO NOT start the infusion yet.**

6. Remove the blunt drawing up needle and safely discard it in the sharps container

7. Disconnect the extension set from the empty syringe and attach it to the new syringe loaded in the syringe pump

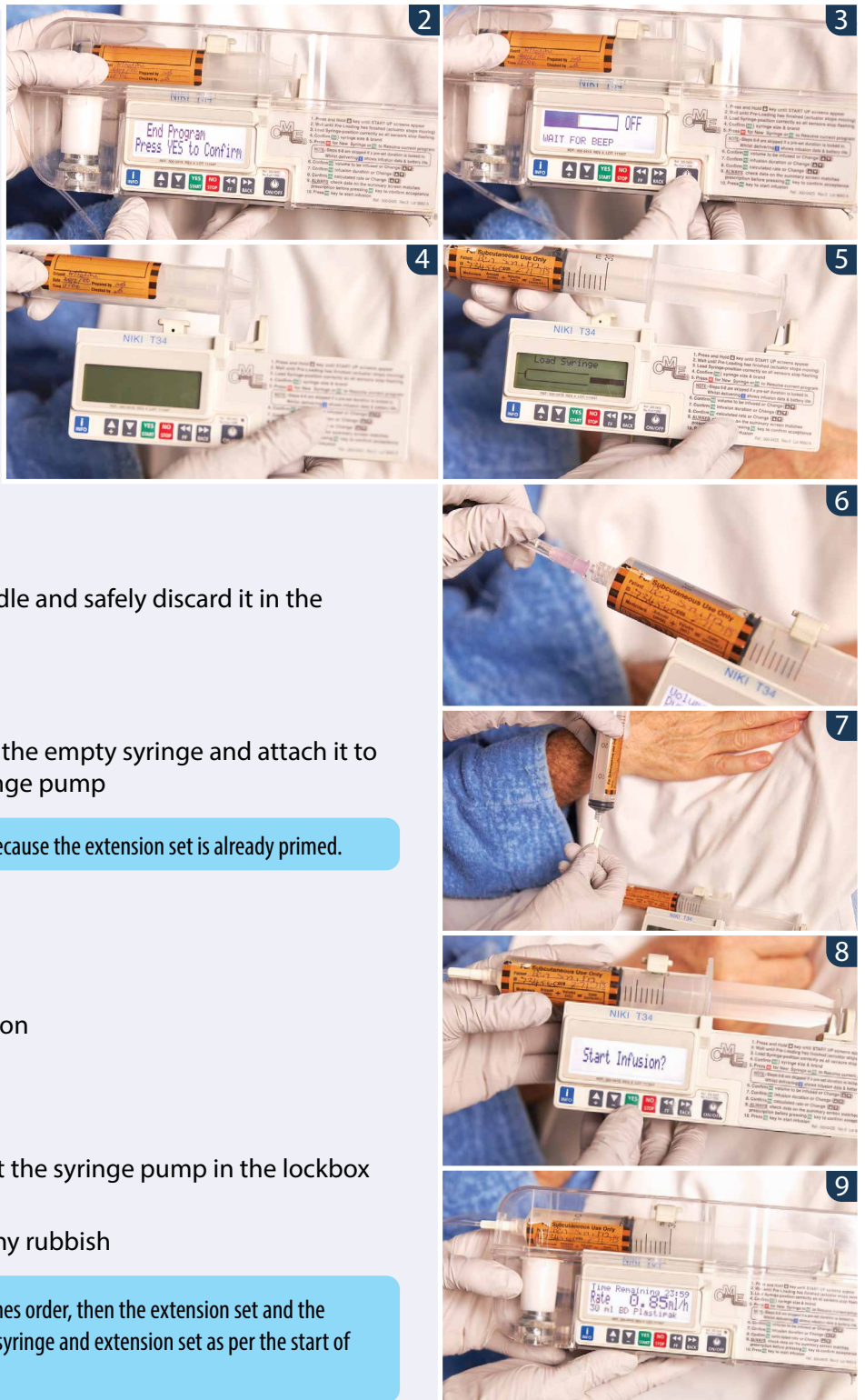
**\* NOTE:** This infusion will now run for 24 hours because the extension set is already primed.

8. Press    to start the infusion

9. Once running, lock the keypad, put the syringe pump in the lockbox and lock it

– Discard the empty syringe and any rubbish

**\* NOTE:** If the prescriber has changed the medicines order, then the extension set and the syringe may need to be discarded. Set up a new syringe and extension set as per the start of this step-by-step guide.



**For more information and educational resources about the NIKI T34™, T34™ and BodyGuard™T syringe pump, visit: [PallConsult.com.au](http://PallConsult.com.au)**