BD BODYGUARD™ T Syringe Pump Protocol

NB:

Use a **30ml** BD Luer-Lok Plastipak syringe filled to **22ml**

Use a Saf-T-Intima 24 gauge cannula

Use a CME infusion set (0.5ml filling volume) (or equivalent)

Reference Number	Version	Status	Executive Lead(s) Name and Job Title	Author(s) Name and Job Title	
318	**1.1**	Current	Jennifer Hill Medical Director (Operations)	Ms Alison Humphrey, Clinical Nurse Specialist, Palliative Care Ms Fiona Stephenson, Advanced Clinical Pharmacist, Palliative Care Mrs Rebekah Matthews, ICT Manager	
Approval Body		Infusion Devices Working Group		**Date Approved**	07.09.2022
Ratified by		TEG		**Date Ratified**	07.09.2022
Date Issued		27/11/2023		**Review Date**	07.09.2025
Contact for Review (Name and Job Title): Dr Kevin Sadler, Chair – Infusion Devices Working Group.					

Associated Documentation:

Trust Controlled Documents

STH Cleaning/Decontamination of Medical Devices Policy

STH Incident Management Policy

STH Management of Reusable Medical Equipment Policy

STH Safe Use of Medical Devices Policy

STH Medicine Code

STH Mobile Phone Guidelines

STH Waste Management Policy

STH Waste, Spillage and Disposal of Controlled Drugs SOP

External Documentation

BD (2021) *BD BODYGUARD™ T Syringe Pump Directions for Use*

Dickman, A et al. (2016) *The Syringe Driver: Continuous Subcutaneous Infusions in Palliative Care.* 4th edition. Oxford: Oxford University Press

MHRA 2021 (04) *Managing Medical Devices: Guidance for Healthcare and Social Services Organisations*.

MHRA (2014) *Devices in Practice: A Guide for Professionals in Health and Social Care.*

NPSA/2008/RRR05 Reducing Dosing Errors with Opioid Medicines.

NPSA/2010/RRR019 Safer Ambulatory Syringe Drivers.

Version history

Version	Date Issued	Brief Summary of change	Owner's Name:
1	09.09.2022	New Policy	Dr Kevin Sadler, Chair, Infusion Devices Working Group.
1.1	27.11.2023	Minor amendment - Added Pink Card Appendix 2	Fiona Stephenson

Document Imprint

Executive Summary

BD BODYGUARD™ T Syringe Pump

Document Objectives:	Provides users with policy and procedure for the correct and safe use of the BD BODYGUARD™ T Syringe Pump for subcutaneous administration of medicines.
Group/Persons Consulted:	Infusion Devices Working Group, Medical Devices Management Group, Medicines Safety Committee, Pharmacy, Palliative Care Clinicians, Pain Service Clinicians, Clinical Engineering, Directorate based users, Education & Training dept.
Monitoring Arrangements and Indicators:	Directorate Clinical Governance arrangements to ensure that users are trained and competent.
Training Implications:	Training packages have been developed, to be rolled out via the STH Medical Equipment Training Coordinator and clinical educators.
Equality Impact Assessment:	Appendix 7
Resource Implications:	BD BODYGUARD™ T Syringe Pumps have been purchased by MDMG and areas such as St. Luke's Hospice and the Community will continue to be invoiced through an agreed SLA with Clinical Engineering for ongoing maintenance. High users will purchase their own DISPOSABLES, low users will get their disposables via the equipment libraries.
Intended Recipients:	
Who should:-	
➢ be **aware** of the document and where to access it	Qualified nurses, community support workers, medical staff, pharmacists, clinical engineering.

➢ **understand** the document	Qualified nurses, community support workers, medical staff, pharmacists, clinical engineering.
➢ have a **good working knowledge** of the document	Clinical educators, trained and competent users of the BD BODYGUARD™ T Syringe Pumps.

CONTENTS

PROCEDURE FOR SETTING UP THE BD BODYGUARD™ T SYRINGE PUMP FOR DRUG ADMINISTRATION BY THE SUBCUTANEOUS ROUTE IN 'LOCK ON: PRIME & LOAD' MODE

SCOPE:

This protocol applies across Sheffield Teaching Hospitals NHS Foundation Trust & applies solely to administration by the **subcutaneous** route. Other independent healthcare providers in Sheffield (e.g. hospice/care homes) are encouraged to adopt this policy, following local governance approval.

1. Introduction

- The BD BODYGUARD™ T Syringe Pump is a portable, battery operated device, for mechanically delivering drugs.
- It delivers drugs in **millilitres per hour**.
- In Sheffield, a 30 millilitre, Luer-Lok, Becton-Dickinson (BD) brand syringe will be used in order to provide a standard approach city wide.
- The drugs are administered over a 24 hour period.
- The BD BODYGUARD™ T Syringe Pump should not be used where the oral route is available and feasible.
- It has been tradition to call these devices 'syringe drivers' rather than 'syringe pumps' & these terms should be considered synonymous in the context of this policy.

2. Training

Only those staff who have undergone the initial training by either the company trainer or an advanced user, of this device, may operate it. Training is available on-line via PALMS for Clinical Educators/Train the Trainers and STH Staff. See Appendix 6 for the STH BD BODYGUARD™ T Syringe Pump Training Checklist.

As this device has been risk assessed as a HIGH RISK device and due to the infrequent use outside the palliative care area and community nursing, users should undertake an **annual update** in line with the Safe Use of Medical Devices Policy.

The following is available on the STH/clinical guidelines section of the intranet:

- BD BODYGUARD™ T Syringe Pump Protocol (this document).
- BD BODYGUARD™ T Syringe Pump STH & Community Prescription Paperwork (Appendix 1 & 2).
- BD BODYGUARD™ T Syringe Pump Quick User Guide.

- An electronic list of TRAINED users / CLINICAL EDUCATORS can be accessed by the STH Medical Equipment Training Coordinator.

The Training Needs Analysis also gives advice as to frequency of update of medical devices.

3. The prescription / administration record

1. All drugs for administration using a BD BODYGUARD™ T Syringe Pump must be prescribed/transcribed on the appropriate chart.

   Hospital Chart - BD BODYGUARD™ T Syringe Pump Prescription & Observation Chart (Appendix 1)

   In the hospital / hospice setting, this chart must be referenced on the patient's inpatient prescription chart. To reference the chart in the EPMA system, go to 'Inpatient medication' and then search for 'Chart BD BODYGUARD™ T syringe pump'. In hospital, charts can be ordered on the pharmacy stationery order form.

   Community Chart - Community Administered Medication Record Pink Card (Appendix 2).

   This is used in the community and residential / care home setting. Charts are available from the community nursing admin bases.

   The details on the chart must include:

   - The drug name(s) and dose(s) in the appropriate measure, e.g. milligrams (mg) or micrograms.
   - The type of diluent (normally water for injection or 0.9% sodium chloride injection).
   - The duration of administration is over **24 hours.**
   - The total volume to be infused **22mls.**

   N.B. BD BODYGUARD™ T Syringe Pump **is not** for delivery of bolus doses of medication. Please ensure that these are prescribed and administered separately.

2. For information regarding drugs and dosages, drug compatibility or stability, prescribers should:

   - Refer to local guidance (e.g. The Adult Sheffield Palliative Care Formulary).
   - Contact STHFT Medicines Information (NGH 2714371; RHH 2712346) or speak to the on-call pharmacist out of hours.
   - Contact the Palliative Care Team.

4. Equipment & pre use checks

1. The following equipment will be required in order to set up the infusion:

   - Appropriate prescription chart.
   - 9 volt battery.
   - Becton-Dickinson (BD) Luer-Lok 30 millilitre (ml) Plastipak syringe: **only a BD brand syringe must be used**. The BD BODYGUARD™ T Syringe Pump is programmed to only accept a BD brand 30ml syringe.
   - Infusion cannula (e.g. Saf-T-Intima 24 gauge) and 1m infusion line with filling volume of 1ml or less (e.g. extension line 0.4ml filling volume).
   - Transparent adhesive dressing.
   - Drug(s).
   - Diluent (sterile water for injection or 0.9% sodium chloride injection).
   - Needle for reconstituting drug.
   - Drug additive label.

- Lockbox – In hospital, hospice and care homes keys must be held on the controlled drug cupboard bunch. In community, all community nurses will be issued with their own key.
- BD BODYGUARD™ T Syringe Pump available from:
    - Inpatients - NGH & RHH equipment libraries.
    - Community - Firth Park Clinic; Lightwood Clinic; Community nursing bases; GP Collaborative Centre NGH.
    - Care Homes - St Luke's Hospice; NGH & RHH equipment libraries.

NB For areas that use the BD BODYGUARD™ T Syringe Pump occasionally, the cannula, infusion line and battery will be provided with the BD BODYGUARD™ T Syringe Pump by the Equipment Library and charged as appropriate.

2. Users must check the following points before a BD BODYGUARD™ T Syringe Pump is used:
    - That it is the correct model – BD BODYGUARD™ T Syringe Pump.
    - That it has been serviced within the year – check the 'service due' label on the BD BODYGUARD™ T Syringe Pump.
    - That the BD BODYGUARD™ T Syringe Pump is clean and there is no obvious damage.

5. Drug preparation

In the inpatient setting, 2 nurses must be involved in the preparation and administration of all prescriptions containing a controlled drug (see STH Controlled Drug Standard Operating Procedures SOPCLINCD11). Refer to the Medicines Code (section 3.1.3) for advice on prescriptions containing no controlled drugs.

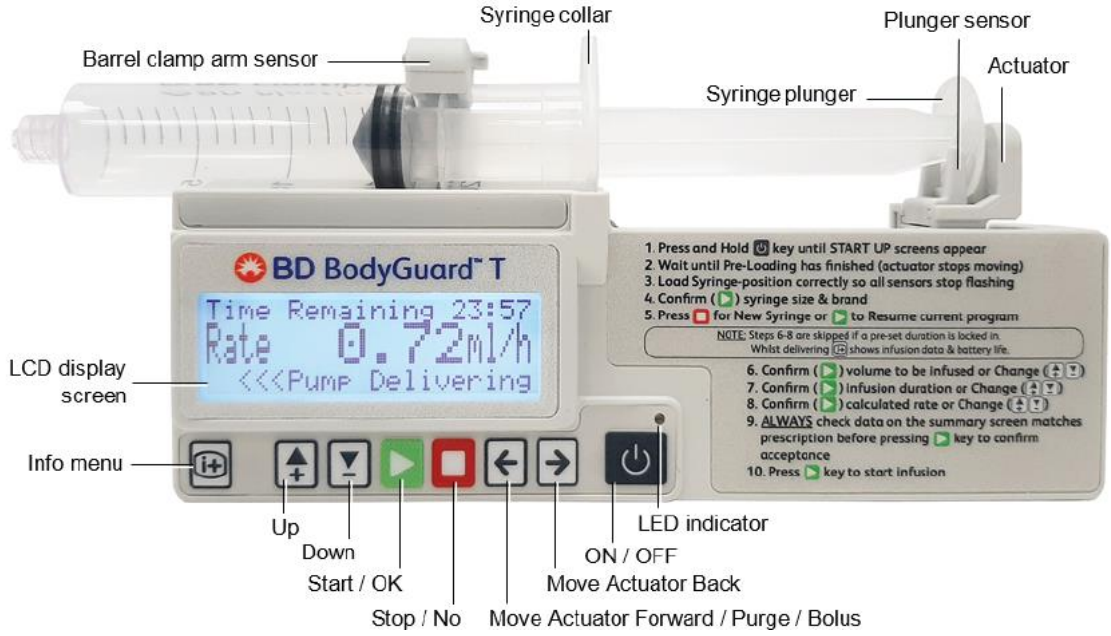
1. Wash hands with soap and water. Use alcohol hand rub.
2. Check the drug(s) to be used with the BD BODYGUARD™ T Syringe Pump Prescription & Observation Chart. Check that the patient is not allergic to any of the drugs contained in the infusion. If the volume of drugs is going to be greater than 22mls, seek advice from the Palliative Care Team.
3. Reconstitute the drug with the prescribed diluent. It may be necessary to measure the drugs in a 1ml or 2ml syringe initially, before adding them to the 30ml syringe. If necessary draw up additional diluent to a volume of 22mls. Mix thoroughly without shaking.
4. Complete and attach a drug additive label, including expiry date (usually 24 hours), to the syringe, ensuring that the scale and end of the plunger is visible along the full length of the syringe.
5. Complete relevant documentation with Batch Number and expiry date of ALL drugs AND the diluent.

6. Priming the infusion line

1. Attach the infusion line to the syringe. Record the time and date of first use in the patient's notes.
2. Gently depress the syringe plunger until the infusion line is primed to the end.
3. It is recommended that the infusion line is changed every 72 hours.

7. Connecting the syringe to the BD BODYGUARD™ T Syringe Pump

Diagram 1. Front view of the BD BODYGUARD™ T Syringe Pump *with syringe correctly connected*



1. Ensure the barrel clamp arm is down & no syringe is in place.
2. Insert battery if necessary.
3. Press  key to power on. The actuator moves through the pre-loading sequence & the following 4 screens display automatically: a) Software version b) Preloading c) Default settings display d) Load syringe

N.B. The pre-loading sequence will not occur if the keypad lock is on when the BD BODYGUARD™ T Syringe Pump was switched off or the barrel arm clamp is raised. In this case, ensure keypad lock is off and barrel clamp arm is in the lower position; turn the pump off and on again. If pre-loading still doesn't occur, return to Clinical Engineering for checking.

4. Check battery level (%) by pressing the  key followed by  . The battery should last for approximately 50 hours.

   In the community, the battery should be changed when it is less than 40%.

   In the hospital, hospice or care homes, the battery should be changed as required.

   See Section 13 for more information about changing the battery.

5. Lift the barrel clamp arm as far as it will go and turn it (left or right) 90 degrees. Load the syringe, placing it into the pump collar and plunger sensors fully. Return the barrel clamp arm to the down position to secure it on the top of the syringe. If the actuator needs to be moved in order for the syringe to be fitted, align syringe to sensors and with the barrel clamp arm lowered, use the  keys to move the actuator so that the syringe can then be fitted.

   N.B. In the event of a finger or foreign object becoming trapped by the actuator, follow instructions in Section 16.5.

6. Confirm that you are inserting a BD Luer-Lok Plastipak 30ml syringe by pressing 

7. Infusion summary is displayed. Check that the volume in the syringe matches the volume displayed: if there is a discrepancy of greater than 0.5mls, the syringe should be removed and the process restarted. Also, check that the duration of infusion and rate displayed are correct. Confirm by pressing 

8. Inserting the infusion cannula

1. Explain the procedure to the patient.
2. Check the patient's details on their wrist label or other approved method against the prescription chart / medication record. Check that they are not allergic to any of the drugs contained in the infusion.
3. Assist the patient into a comfortable position.
4. Expose the site to be used whilst maintaining the dignity of the patient.

   Suitable skin site areas are: lateral aspects of the thighs and upper arms: the abdomen: the anterior chest wall below the clavicle & occasionally, the back.

   Unsuitable skin site areas are: lymphoedematous limbs: skin over a bony prominence: abdomen swollen by ascites: previously irradiated skin areas and areas

near joints: damaged, broken or infected skin. These sites either affect absorption of the drug or there is a danger of cannula displacement due to movement.
5. Wash hands with soap and water. Use alcohol hand rub.
6. Clean the site for a minimum of 30 seconds with a 2% Chlorhexidine/70% alcohol impregnated wipe and allow to dry naturally.
7. Insert subcutaneous cannula: for guidance on insertion of Saf-T-Intima, see Appendix 4. Record the site location and the time and date of insertion in the patient's records.
8. Apply transparent dressing over the insertion site and the wings of the cannula. Ensure the dressing site does not overlap with a medication patch.
9. It is recommended that the cannula is changed every 72 hours.

9. Starting the infusion

1. Remove the bung from the end of the subcutaneous cannula and connect the infusion line.
2. Start infusion by pressing  to commence the infusion when ready to do so.
3. Check that the screen is displaying 'PUMP DELIVERING' and that the green indicator light is flashing approximately intermittently.
4. Activate the key pad lock by holding down the  key until the black graphic moving from left (OFF) to right (ON) fills completely. A bleep is heard, confirming that the lock has been activated. To unlock the key pad lock, hold down the key. The keypad lock prevents the infusion from being switched off. 
5. Check and record all the following on the appropriate BD BODYGUARD™ T prescription chart: • Date • Time • Rate (from pump) • Is light flashing • Volume to be Infused • Slow / Fast / On Time • Check keypad locked • Site check • Signature / Initials • Syringe pump serial number.

10. Fitting the lockbox

1. A lockbox is supplied with the BD BODYGUARD™ T Syringe Pump. The NPSA recommends that a lockbox should be used (NPSA/2010/RRR019). In hospital/hospice/care homes, keys must be held on the controlled drug cupboard bunch. In community, all community nurses will be issued with their own key.

2. Unlock and open the lockbox. Place the BD BODYGUARD™ T Syringe Pump in the lockbox and close the lid. The lockbox lid may need moving to the right to allow it to close. Ensure that the infusion line exits the lockbox via the slot above the lock, and lock the box.

11. Observations

1. The following checks should be made at least every four hours in hospital/hospice/ care homes, or more often if clinical need requires. In the community, observations will be checked at each visit by a qualified nurse, or 4 hourly by an Intensive Home Nursing Service support worker when present. Checks and readings should be recorded on the appropriate observation chart (Appendix 1 & 3). See Section 16 for information on alarms and troubleshooting.
2. Check that the infusion rate is correct, that the light is intermittently flashing green and that '<<PUMP DELIVERING' is displayed.
3. Check that the infusion line is attached and is not kinked or blocked.
4. Check volume to be infused (VTBI) on pump screen by pressing the  button & check this matches the volume of fluid in the syringe. Check the total volume infused (VI) and check that the correct volume has infused since the last check using the formula: *Hours since last check x infusion rate = volume infused since last check*
5. Check the battery life by pressing the  button again. The battery should last for approximately 50 hours. In community, the battery should be changed when it is less than 40%. In hospital/hospice/care homes, the battery should be changed as required. See Section 13 for more information about changing the battery.
6. Inspect the site of the subcutaneous infusion. If there is evidence of inflammation (erythema or reddening) or poor absorption (a hard subcutaneous swelling), or if the patient complains that the site is painful, the infusion cannula should be resited (see Section 14).
7. Inspect the contents of the syringe for evidence of cloudiness / crystallisation or discolouration. This may indicate inactivation of the drug. The infusion should be stopped and advice sought from prescriber/pharmacy.
8. Check that the keypad lock is on, by pressing any grey button.

12. Changing the syringe

1. Make up the new syringe as described in Section 5. If the prescription has changed from the previous infusion, attach and prime a new infusion line as described in Section 6.

2. If the syringe is empty and 'END PROGRAM' is displayed, press  to confirm. To change the syringe before it is empty or has reached the expiry time (usually 24 hours after starting), stop the infusion by pressing the  button. Unlock the keypad lock by pressing & holding the  button. Turn the pump off by pressing and holding  .
3. Lift the barrel arm clamp and remove the syringe from the pump. Replace the barrel arm clamp to the down position.
4. Press  key to power on. The actuator moves (pre-loading) and the following 4 screens display automatically: a) Software version b) Preloading c) Default settings display d) Load syringe.
5. Lift the barrel clamp arm and load the new syringe, placing it into the pump collar and plunger sensors fully. Return the barrel clamp arm to the down position to secure it on the top of the syringe. If the actuator needs to be moved in order for the syringe to be fitted, align syringe to sensors and with the barrel clamp arm lowered, use the  keys to move the actuator so that the syringe can then be fitted.
6. If the prescription is the same, disconnect the empty syringe from the infusion line and connect the new syringe to the infusion line. If the prescription has changed from the previous infusion, ensure that a new cannula and infusion line are used – see Sections 6 and 8. Discard the empty syringe, infusion line and cannula as appropriate. Where a syringe still contains controlled medication, dispose as per STH Medicine Code and STH Waste, Spillage & Disposal of Controlled Drugs SOP. In community, the discarded volume must be recorded on the Pink Card.
7. Confirm that you are inserting a BD Luer-Lok Plastipak 30ml syringe by pressing 
8. Infusion summary is displayed. Check that the volume in the syringe matches the volume displayed, that the duration of infusion and rate displayed are correct. Confirm by pressing  . Press  again to start the infusion.

13. Changing the battery

1. Slide off the battery cover and lift the battery out.
2. Reinsert a new battery and replace the battery cover.

3. Turn the pump on using the  button.
4. Confirm syringe type by pressing  and press  to resume, confirm and start the infusion.

14. Changing the cannula or infusion line during the infusion

1. To change the cannula during an infusion, stop the infusion by pressing the button  .
2. Disconnect the infusion line from the cannula.
3. Remove the cannula from the patient and discard safely.
4. Insert a new cannula – see Section 8.
5. Reconnect the infusion line.
6. Press  to resume the infusion.
7. Document that the cannula has been resited on the appropriate BD BODYGUARD™ T Syringe Pump Chart and in the patient's records.
8. If the infusion line requires changing during an infusion, the contents of the current syringe should be discarded and a new infusion commenced.

15. Routine care, cleaning & maintenance of the BD BODYGUARD™ T Syringe Pump

1. Before and after each patient contact, the BD BODYGUARD™ T Syringe Pump & lockbox should be thoroughly decontaminated as per STH Decontamination of Medical Devices Policy. This should include cleaning inside the battery compartment. Always turn the pump off before cleaning. A decontamination form should be completed following this procedure.
2. Do not allow the BD BODYGUARD™ T Syringe Pump to get wet, as it is not waterproof and the performance may be affected. If it gets wet, **DO NOT USE** even if it appears to be working satisfactorily and return to Clinical Engineering.
3. If there is known or suspected damage or malfunction, or if the BD BODYGUARD™ T Syringe Pump has been dropped, take it out of service and return to Clinical Engineering.
4. Before sending the BD BODYGUARD™ T Syringe Pump for maintenance ensure that it has been thoroughly decontaminated and has a declaration of decontamination status form attached (Department of Health decontamination requirement as described in HSG (93) 26).

16. Alarms, troubleshooting & clinical incidents

When the BD BODYGUARD™ T Syringe Pump detects a problem four things occur:

1. The infusion stops
2. An audible alarm is activated
3. A message appears on the display screen indicating the cause of the alarm
4. The LED indicator turns **RED/YELLOW**

ALARM	POSSIBLE CAUSE	ACTION
Pump paused too long	Pump left on stand-by for more than 2 minutes. Low priority alarm. **Yellow solid visual LED**	Start infusion, continue programming or switch off.
Low battery	Battery is almost depleted (30 minutes left) Low priority alarm. **Yellow solid visual LED**	Prepare to change battery and resume infusion.
End battery	Battery is depleted and pump stops. High Priority alarm. **RED flashing LED**	Change battery and resume infusion.
Program nearly complete	15 minutes from end of infusion. Low priority alarm. **Yellow solid visual LED**	Prepare to change syringe or switch off.
End program	Infusion complete. High Priority alarm. **RED flashing LED**	Turn the pump off and change syringe if infusion is to continue.
Syringe displaced	Syringe has been removed or displaced. High Priority alarm. **RED flashing LED**	Check and confirm syringe is seated correctly and resume infusion.
Occlusion	Cannula / line blocked / kinked or otherwise occluded. High Priority alarm. **RED flashing LED**	Press  to silence alarm. Check that the line is not kinked. Remove any obvious occlusion and restart. If the infusion line is occluded, make up a new syringe and reprime a new infusion line (see Section 12). If no obvious cause found for occlusion, resite with a new cannula and restart (see Section 14).

System error/ Error no. xxx	An internal system error has occurred. High Priority alarm. **RED flashing LED**	Replace the pump with another and send the original pump to Clinical Engineering for servicing stating the nature of the problem.

OTHER PROBLEMS	ACTION
1. Pump running too fast	1. Check that neither the line nor cannula has become disconnected. 2. Check correct syringe size has been selected. 3. Check syringe securely attached to the pump. 4. Check there is no air present in syringe. 5. Check that the pump has not been placed above the height of the patient (risk of siphonage). 6. In the event of a serious over-infusion: stop infusion, check condition of the patient and seek medical advice. Report as a clinical incident, as per STH Incident Management Policy. The BD BODYGUARD™ T Syringe Pump (& the disposables) should be removed from service, identified as unfit for use, not be repaired or returned to the manufacturer and quarantined under lock and key together (in controlled drug cupboard if the syringe contains a controlled drug) with all its peripheral disposables as per STH Management of Reusable Medical Equipment Policy, pending further investigation of the incident. During investigation, the full details must be notified to Clinical Engineering and a Medical Device Incident Form completed.
2. Pump running too slowly	1. Check the syringe pump light is **GREEN** and flashing intermittently. 2. Check the battery level. 3. Check the correct syringe size has been selected. 4. Check the syringe is inserted correctly into the BD BODYGUARD™ T Syringe Pump (actuator is against the plunger). 5. Establish if syringe pump has been stopped and restarted for any reason (i.e. disconnected whilst patient in shower, or occlusion). 6. Check contents of syringe and line for crystallisation / kinking of tube. 7. Check cannula site – is it red, hard, lumpy, sore? Change cannula site if necessary – see Section 14. 8. Recheck the infusion in 30 minutes. If the infusion is still running slowly, stop the infusion and change the entire BD BODYGUARD™ T Syringe Pump for a new one. Report as a clinical incident, as per STH Incident Management Policy. Send the original pump to Clinical Engineering for investigation stating the nature of the problem.
3. Site inflammation/ irritation	1. Certain medications may cause irritation. Change site and use a new cannula. 2. Discuss possible drug changes with prescriber. 3. Consider separating into two BD BODYGUARD™ T Syringe Pumps. 4. Consider other possible routes of drug administration, e.g. rectal.
4. Cloudiness, crystallisation or colour change in syringe contents or line	1. Certain medications may cause crystallisation (e.g. cyclizine) and may lead to occlusion. 2. Certain medications may change colour (e.g. levomepromazine). 3. Stop infusion and inform prescriber / Pharmacy. 4. Prescriber / Pharmacy should check compatibility information and may need to either alter medications, dilute to larger volume or consider separating into two BD BODYGUARD™ T Syringe Pumps. 5. Following discussions as above, commence new infusion at a different site with new cannula and infusion line.

5. Finger or foreign object becomes trapped by the actuator	1. Turn the BD BODYGUARD™ T Syringe Pump off. 2. Raise the barrel clamp arm and turn it left or right to keep it in the raised position. Remove the syringe. 3. Power on. 4. Turn and lower the barrel clamp arm. 5. Use the  key to release the object.

17. Care of a patient discharged with a BD BODYGUARD™ T Syringe Pump in situ

The following actions should be undertaken by the discharging team:
1. When a patient is transferred or discharged from an inpatient setting, the nurse responsible for the patient's care must contact the team responsible for continued care by phone to provide a verbal handover and to check which Syringe Pump they use. The patient should be sent with the current infusion running and the receiving team should swap the BD BODYGUARD™ T Syringe Pump either for a BD BODYGUARD™ T Syringe Pump from their own supply or for the syringe pump type that they use. Once the receiving team has changed to their own device, they can switch off the BD BODYGUARD™ T Syringe Pump the patient was transferred with by removing the battery and then they should contact the STH Equipment Library (0114 2261161) regarding the safe return of the device. If the patient is being discharged to a Care Home, the nurse responsible for discharging the patient should check if the Care Home requires a lockbox, key and consumables, which are both available from the RHH/NGH Equipment Library. If the patient is being discharged home or into residential care, the nurse responsible for discharging the patient should refer to the community nursing service for ongoing management of the infusion.
2. On discharge, ensure the following are sent with the patient: • Medication and diluent for the infusion, obtained from Pharmacy against a discharge prescription • 30ml BD Luer-Lok syringes • Infusion lines and Saf-T-Intima cannulae • Spare 9v battery • 'You and Your Syringe Driver' leaflet - PIL 2881 (Appendix 5) • Photocopy of the current STH inpatient BD BODYGUARD™ T Syringe Pump Prescription & Observation Chart* • Printed copy of the TTO* • A completed Community Administered Medication Record Pink Card* *These should be placed in a sealed envelope: If the patient is going home, this should be clearly marked 'for the attention of Community Nurse'. If the patient is transferring to another inpatient setting these should be included with the transfer letter.
3. Contact the Equipment Library on 0114 2261161 to inform them whenever a syringe pump moves location, giving the equipment number, patient's name, hospital unit number and new location.
Within Sheffield, the receiving team should note the following:
4. In Community the receiving team can, in the absence of a Pink Card, during the initial

transfer of care, use the BD BODYGUARD™ T Syringe Pump Prescription & Observation Chart and a printed copy of the TTO prescription, as authorisation for the ongoing administration of medication via the Syringe Pump. As required medications can be administered from instructions on the dispensing label of the medication and the TTO prescription.
5. A copy of the hospital BD BODYGUARD™ T Syringe Pump Prescription & Observation Chart should be held in the patient's notes as one of the 2 sources for transcribing. This should be scanned into SystmOne.
6. As soon as practically possible a Community Administered Medication Record Pink Card should be transcribed in full with the medication and doses by a trained and competent transcriber. This must be undertaken following the STHFT Community Transcribing Procedure, the Procedure for use of the Community Administered Medication Record Pink Card and guidance on the Pink Card.
7. Transcribing should be undertaken only where medication and doses are clear. Any ambiguity must be clarified with the prescriber before transcribing.
8. In the event that a copy of the BD BODYGUARD™ T Syringe Pump Prescription & Observation Chart and TTO are not sent with the patient, the receiving team should contact the area from which the patient was sent and request that the BD BODYGUARD™ T Syringe Pump Prescription & Observation Chart and TTO are scanned and emailed via an NHS email.
9. A list of all current MAR charts should be clear in the patient's paper and electronic notes including any put in place by care agencies.
10. Where a GP visits the patients at home following discharge from hospital, or to review and change medication doses, the card must be completed by the GP.
11. Once the BD BODYGUARD™ T Syringe Pump is no longer required, it should be decontaminated as per STH Decontamination of Medical Devices Policy, a decontamination form completed and collected by equipment library if being returned by Sheffield Community Nurses, or in a padded envelope via the post if from out of area (internal if possible).

18. Care of a patient admitted with a non-STH BD BODYGUARD™ T Syringe Pump in situ

1. If a patient is admitted with a BD BODYGUARD™ T Syringe Pump in situ (or other model) NOT belonging to Sheffield Teaching Hospitals, this must be changed to an STH BD BODYGUARD™ T Syringe Pump within 4 hours of admission and returned to the Sheffield Community Nurses via equipment library or by post to out of area teams.
2. An STH BD BODYGUARD™ T Syringe Pump Prescription & Observation Chart must be completed.
3. The nurse responsible for the patient's care must ensure that a BD BODYGUARD™ T Syringe Pump is available and ready for use.
4. The BD BODYGUARD™ T Syringe Pump must be commenced as soon as it is available and the other device disconnected.
5. The other syringe pump must be decontaminated as per STH Cleaning / Decontamination

of Medical Devices Policy and a decontamination certificate completed prior to despatch.
6. Contact the owner of the other syringe pump to inform them that their syringe pump has been disconnected and ask how they wish their syringe pump to be returned. The syringe pump may be collected / delivered, or may be sent via the post (internal if possible) in a padded envelope.

Appendix 1

St Luke's Sheffield's Hospice

Sheffield Teaching Hospitals NHS
NHS Foundation Trust

BD BodyGuard™ T Syringe Pump Prescription & Observation Chart

Name:
Date of birth:
Hospital number:
NHS Number:
Consultant: Ward:

ALLERGIES/ADRs/SENSITIVITIES - document below
Also check against main EPMA/drug chart.

Signature:
Print name: Date:

Syringe pump_____of_____

PRESCRIPTION - To be completed by prescriber

Ensure reference is made to this chart on the inpatient prescription (electronic as placeholder or paper prescription).

Approved Name Of Medicine	Dose	Route	Total volume of fluid in syringe = 22ml
		Subcutaneous	Infusion time = 24 hours
			Prescriber's signature:
			Print Name:
			Bleep No:

Name of DILUENT:	Start date:	Pharmacy:

ADMINISTRATION - To be completed by nurse when infusion commences
N.B The same prescription can be used for up to 3 days

OBSERVATIONS - To be recorded by nurse AT LEAST EVERY 4 HOURS

Time	Rate from pump (ml/hour)	Is light flashing Green? (Y/N)	Volume of fluid in syringe (ml) (VTBI from pump)	Slow/fast/ on time	Check keypad locked (tick)	Site checks & comments	Initial
				NEW			

Date commenced:
Set up by: Checked by:
Syringe pump serial no:

Drug(s)/Diluent	Batch	Expiry
Drug 1		
Drug 2 (if prescribed)		
Drug 3 (if prescribed)		
Diluent		

Date commenced:
Set up by: Checked by:
Syringe pump serial no:

Drug(s)/Diluent	Batch	Expiry
Drug 1		
Drug 2 (if prescribed)		
Drug 3 (If prescribed)		
Diluent		

Date commenced:
Set up by: Checked by:
Syringe pump serial no:

Drug(s)/Diluent	Batch	Expiry
Drug 1		
Drug 2 (if prescribed)		
Drug 3 (If prescribed)		
Diluent		

SH019182

See Syringe Pump Chart Guidelines overleaf

PRC no. 029/13b rev 4 *Issue Date: August 2022* *Review Date: August 2025*

Inpatient BD BodyGuard™ T Syringe Pump Chart Guidelines

Please refer to the BD BodyGuard™ T protocol for information on setting up & using this equipment for drug administration by the subcutaneous route.

Notes for prescribers

- Check the compatibility of all drugs prescribed. Compatibility information can be found in the BNF (indexed 'Continuous subcutaneous infusions') or you can contact Medicines Information or Pharmacy.
- NAME OF DILUENT: Use **water for injections** with most drugs - exceptions include furosemide, granisetron, octreotide, ondansetron, ketamine & ketorolac, which should be diluted in 0.9% sodium chloride for injection.
- **The prescription must be rewritten if altered in any way** – it is not acceptable to change the dose or medications without rewriting the whole chart.

Initial checks when setting up the syringe pump

- Check prescription details and check allergy status. For the drug octreotide ensure that only Hospira/Pfizer or Sandostatin (Novartis) brands are used. **DO NOT USE** SUN Pharma brand.
- Mix the drugs with the diluent in a 30ml Luer-Lok syringe. Check you have the prescribed volume of fluid in the syringe in millilitres **before** priming the line.
- Record the batch number & expiry date of all drugs & diluent in the space provided.
- Check that the light is intermittently flashing green.
- Record the date, time, rate, site & remaining volume in millilitres (VTBI from pump) **AT THE TIME OF SET UP**. When starting a new infusion, write 'NEW' in the slow/fast/on time column & sign in the space provided.
- Record the syringe pump serial number at each set up. This is essential in order to identify which device a patient used in the event of a fault or recall.
- As the prescription chart can last for 3 days if the pump is recorded 4 hourly, space is provided to record the details of 3 infusions.

Instructions for checks in use

The following checks must be made & recorded at least every 4 hours. If any problems are found, refer to the troubleshoot checklist below & record in the nursing documentation:

- Check that the rate is correct, that 'PUMP DELIVERING' is displayed & that the light is flashing green.
- Check that the infusion is running to time by measuring the volume of fluid remaining in millilitres (VTBI from pump) & comparing this with the previous measurement. Record as slow/fast/on time.
- Check keypad locked.
- Check the infusion site for signs of inflammation, swelling or pain.
- Check the contents of the syringe & tubing for cloudiness, crystallisation, colour change, kinks or blockage.

Troubleshoot checklist: see Section 16 of BD BodyGuard™ T protocol for further guidance

• Is the pump alarming or light not flashing green?	YES	See display panel for reason & follow actions in Section 16 of BD BodyGuard™ T protocol
• Is the pump running too fast?	YES	Discontinue, inform doctor
• Is the pump running too slowly?	YES	Check light is flashing green, check battery level
• Is the site inflamed?	YES	Resite
• Is there evidence of cloudiness/ crystallisation/discolouration?	YES	Discontinue, seek advice from prescriber & pharmacy
• Is infusion line kinked?	YES	Unkink

If the above actions do not resolve the problem then change the syringe pump & return it to Clinical Engineering for investigation.

Appendix 2

Community Administered Medication Record Pink Card

Community Administered Medication Record Pink Card

NHS South Yorkshire Integrated Care board

St Luke's Sheffield's Hospice

NHS Sheffield Teaching Hospitals NHS Foundation Trust

Card: _____ of _____

Card initiated by (signature): _____

Clinician name: _____

Role: _____

Organisation: _____

Date: _____

Guidelines for completion of a Pink Card as well as details of other medicines management support resources can be found on pages 2 and 3 of this document.

Please refer to the Sheffield Teaching Hospitals NHS Foundation Trust protocol for the use of the BD BodyGuard™ T Syringe Pump when setting up and using this equipment.

Patient Name: _____

DOB: _____

NHS Number: _____

Address: _____

_____

_____

GP Practice: _____

_____

GP Contact Number: _____

Community Nursing Team Contact Number:

_____

Allergies (including latex) - please list:

OR **No known allergies** ☐ (please tick if none known)

Clinician name:

Role:

Signature:

Date:

SEEK IMMEDIATE MEDICAL ADVICE FOR ANY MEDICATION ERRORS
(e.g. consider the need for Naloxone, dial 999)

If the Pink Card is written in advance of need, a prescriber review may be required to ensure that medication is still appropriate at the point of need. Please use the table below to record when a review has been undertaken:

Review 1	Review 2
Date:	Date:
Clinician name:	Clinician name:
Role:	Role:
Signature:	Signature:

Syringe Pump A	Serial Number:
Syringe Pump B	Serial Number:

SH019223

GUIDELINES FOR COMPLETION AND USE OF THE PINK CARD

Please refer to the Sheffield Teaching Hospitals NHS Foundation Trust (STHFT) 'BD BodyGuard™ T Syringe Pump Protocol' and the 'Use of the Community Administered Medication Record Pink Card' procedure.

- Check this is the most up-to-date Pink Card. Cross through and remove any Pink Cards no longer in use, in line with the 'Use of the Community Administered Medication Record Pink Card' procedure.
- Completion of this Pink Card may be undertaken by a prescriber or trained transcriber. When transcribing is undertaken, the names of the drugs, dose, route, frequency and maximum in 24 hours must be checked from the original prescription (e.g. Hospital Discharge Summary / FP10) and any previous Community Administered Medication Record Pink Card. If there are any concerns the prescriber should be contacted for clarification.
- Multiple Pink Cards must not be used for a patient except when more than two syringe pumps are in use.
- The Pink Card must be completed in black ink. Use block capitals (other than signatures).
- The prescriber / transcriber must date and sign each entry.
- It is good practice for the prescriber to write their GMC number or NMP PIN when signing the Pink Card. A prescriber does not need a second check to be completed on the card, however this is viewed as best practice.
- The transcribed record must be checked by a second trained transcriber before the next dose is administered (checker to complete the 'Transcribing checked by' box for each medication).
- Check all of the patient's medication administration charts (e.g. MAR chart, 'Drug Administration Record for Community Nursing') for duplications, drug interactions and doses last taken. Prescribers should stop medications where appropriate. Transcribers should contact a prescriber to review.
- Prescribers are expected to check the compatibility of all drugs prescribed (see 'Resources and Support' section on page 3).
- Where the same drug is prescribed both regularly and on a 'when required' basis (PRN), prescribers must specify on the Pink Card in the 'Additional instructions' box of the 'when required' section whether the PRN maximum in 24 hours does or does not include the regular dose.
- Seek specialist advice (see 'Resources and Support' section on page 3) when unsure about the appropriate management of the patient (e.g. regarding medication use, dose, frequency or maximum).
- Approved names should be used for all drugs unless the drug requires a brand name for clarity.
- Never use a trailing zero, e.g. write 5mg NOT 5.0mg. Doses in micrograms must always be written in full and never as mcg.
- Prescribing of the dose to be administered via a BD BodyGuard™ T Syringe Pump should always be a specified dose and NEVER be a dose range.
- Use water for injections as a diluent with most drugs – exceptions include furosemide, granisetron, octreotide, ondansetron, ketamine and ketorolac, which should be diluted in 0.9% sodium chloride for injection.
- For the drug octreotide ensure that only Hospira/Pfizer or Sandostatin (Novartis) brands are used. DO NOT USE SUN PHARMA brand.
- The 'Oral / Buccal / Sublingual / Nasal Medications' section on pages 8 and 9 is NOT to be completed by Hospital prescribers. It is ONLY for the administration of medications by the STHFT Intensive Home Nursing Team. The transcription of medications onto page 8 can be completed by a Community prescriber / trained transcriber. Ensure that the dose in milligrams (or micrograms if appropriate) is completed and that in the 'Additional instructions' box the volume of liquid in ml, or the number of tablets/capsules to be given, is clearly stated. Support workers cannot administer unless these are both completed.

- Any change in dose or frequency MUST be authorised and a NEW entry written on the Pink Card. DO NOT alter existing instructions. For dose changes authorised under written instruction follow the guidance on page 12.
- Discontinue a drug by drawing a single line through BOTH the drug name and the unused recording panels. Enter the stop date and initial the final column. Write the reason and authorisation for stopping / discontinuation over the remaining administration record section. The drug and administration record must remain legible for review and audit purposes. Also, for syringe pumps complete the 'Discontinuation date' in the grey box. The person who physically disconnects the syringe pump must complete the grey 'Discarded by' information section. Record the volume remaining even if this is zero (this is a legal requirement).
- When completing or transcribing a new Pink Card for a patient, the previous card must be crossed through on each page with a single line without obscuring the details of the doses administered. Page 1 of the card must be annotated 'discontinued' and must be signed and dated.
- When rewriting a Pink Card remember to rewrite the ORIGINAL start date of each drug and NOT the date of rewriting.
- All medicines should be administered in accordance with the prescribing instructions and the STHFT Medicines Code. Timeliness is crucial for those medicines included in the STHFT Critical Medicines List.
- Medication incidents outlined in section 4.9 of the STHFT Medicines Code must be reported in line with the STHFT Incident Management Policy.

RESOURCES AND SUPPORT

Medicines compatibility information can be found via:

- The BNF / eBNF (Prescribing in Palliative Care section): www.medicinescomplete.com/mc/bnf/current/
- STHFT Medicines Information Service: **NGH 0114 2714371 / RHH 0114 2712346** (9-5 Mon to Fri).
- www.pallcare.info (access syringe pump compatibility information by selecting 'Go to PANG Guidelines' and clicking on 'SD drug compatibility' in the index).

For support from the Palliative Care Team:

Hospital

- In-hours (8-5 Mon to Fri & 8-4 Sat and Sun) – contact Hospital Specialist Palliative Care Team: bleep **4223** or **x14940** for NGH; bleep **3277** or **x65260** for RHH/WPH.
- Out-of-hours – contact STHFT on-call Palliative Medicine Registrar: **0114 2434343**

Community

- In-hours (9-5 Mon to Sun) – contact St Luke's Hospice Community Team (Rapid Response): **0114 2369911**
- Out-of-hours – contact STHFT on-call Palliative Medicine Registrar: **0114 2434343**

Information for nurses administering drugs via a Syringe Pump:

- Refer to STHFT 'BD BodyGuard™ T Syringe Pump Protocol' for use of the Syringe Pump.
- Only use a 30 millilitre Luer-Lok, Becton-Dickinson (BD) brand syringe.
- Check battery level (%). Battery should be changed when less than 40%.

Name: ______________________ Date of Birth: ____________ NHS Number: ____________

SYRINGE PUMP A - SUBCUTANEOUS INFUSION MEDICATION RECORD

Approved name of medication	Dose	Total volume of fluid in syringe = 22ml Infusion time = 24 hours
Drug 1:		Transcriber / Prescriber (signature): Print Name: Role: Date:
Drug 2 (if needed):		
Drug 3 (if needed):		Transcribing checked by (signature): Print Name: Role: Date:
Name of DILUENT:	Start date:	Discontinuation date:

Approved name of medication	Dose	Total volume of fluid in syringe = 22ml Infusion time = 24 hours
Drug 1:		Transcriber / Prescriber (signature): Print Name: Role: Date:
Drug 2 (if needed):		
Drug 3 (if needed):		Transcribing checked by (signature): Print Name: Role: Date:
Name of DILUENT:	Start date:	Discontinuation date:

Approved name of medication	Dose	Total volume of fluid in syringe = 22ml Infusion time = 24 hours
Drug 1:		Transcriber / Prescriber (signature): Print Name: Role: Date:
Drug 2 (if needed):		
Drug 3 (if needed):		Transcribing checked by (signature): Print Name: Role: Date:
Name of DILUENT:	Start date:	Discontinuation date:

Approved name of medication	Dose	Total volume of fluid in syringe = 22ml Infusion time = 24 hours
Drug 1:		Transcriber / Prescriber (signature): Print Name: Role: Date:
Drug 2 (if needed):		
Drug 3 (if needed):		Transcribing checked by (signature): Print Name: Role: Date:
Name of DILUENT:	Start date:	Discontinuation date:

Name: ______ Date of Birth: ______ NHS Number: ______

SYRINGE PUMP A - NURSE ADMINISTRATION RECORD

CHECK ALLERGY STATUS

ADMINISTRATION			Date commenced	Time	Rate from pump (ml/hour)	Site	Signature
Medicine/Diluent	Batch No.	Expiry					
Drug 1:			Print name:				
Drug 2 (if needed):			Calculations:				
Drug 3 (if needed):			Discarded by:		Date & Time:		
Name of DILUENT:			Volume remaining:		Signature:		

ADMINISTRATION			Date commenced	Time	Rate from pump (ml/hour)	Site	Signature
Medicine/Diluent	Batch No.	Expiry					
Drug 1:			Print name:				
Drug 2 (if needed):			Calculations:				
Drug 3 (if needed):			Discarded by:		Date & Time:		
Name of DILUENT:			Volume remaining:		Signature:		

ADMINISTRATION			Date commenced	Time	Rate from pump (ml/hour)	Site	Signature
Medicine/Diluent	Batch No.	Expiry					
Drug 1:			Print name:				
Drug 2 (if needed):			Calculations:				
Drug 3 (if needed):			Discarded by:		Date & Time:		
Name of DILUENT:			Volume remaining:		Signature:		

ADMINISTRATION			Date commenced	Time	Rate from pump (ml/hour)	Site	Signature
Medicine/Diluent	Batch No.	Expiry					
Drug 1:			Print name:				
Drug 2 (if needed):			Calculations:				
Drug 3 (if needed):			Discarded by:		Date & Time:		
Name of DILUENT:			Volume remaining:		Signature:		

Name: ______ Date of Birth: ______ NHS Number: ______

SYRINGE PUMP B - SUBCUTANEOUS INFUSION MEDICATION RECORD

Approved name of medication	Dose	Total volume of fluid in syringe = 22ml Infusion time = 24 hours
Drug 1:		Transcriber / Prescriber (signature): Print Name: Role: Date:
Drug 2 (if needed):		Transcribing checked by (signature): Print Name: Role: Date:
Drug 3 (if needed):		
Name of DILUENT:	Start date:	Discontinuation date:

Approved name of medication	Dose	Total volume of fluid in syringe = 22ml Infusion time = 24 hours
Drug 1:		Transcriber / Prescriber (signature): Print Name: Role: Date:
Drug 2 (if needed):		Transcribing checked by (signature): Print Name: Role: Date:
Drug 3 (if needed):		
Name of DILUENT:	Start date:	Discontinuation date:

Approved name of medication	Dose	Total volume of fluid in syringe = 22ml Infusion time = 24 hours
Drug 1:		Transcriber / Prescriber (signature): Print Name: Role: Date:
Drug 2 (if needed):		Transcribing checked by (signature): Print Name: Role: Date:
Drug 3 (if needed):		
Name of DILUENT:	Start date:	Discontinuation date:

Approved name of medication	Dose	Total volume of fluid in syringe = 22ml Infusion time = 24 hours
Drug 1:		Transcriber / Prescriber (signature): Print Name: Role: Date:
Drug 2 (if needed):		Transcribing checked by (signature): Print Name: Role: Date:
Drug 3 (if needed):		
Name of DILUENT:	Start date:	Discontinuation date:

Name: ______________________ Date of Birth: ______________ NHS Number: ______________

SYRINGE PUMP B - NURSE ADMINISTRATION RECORD

CHECK ALLERGY STATUS

ADMINISTRATION		
Medicine/Diluent	Batch No.	Expiry
Drug 1:		
Drug 2 (if needed):		
Drug 3 (if needed):		
Name of DILUENT:		

Date commenced	Time	Rate from pump (ml/hour)	Site	Signature
Print name:				
Calculations:				
Discarded by:		Date & Time:		
Volume remaining:		Signature:		

ADMINISTRATION		
Medicine/Diluent	Batch No.	Expiry
Drug 1:		
Drug 2 (if needed):		
Drug 3 (if needed):		
Name of DILUENT:		

Date commenced	Time	Rate from pump (ml/hour)	Site	Signature
Print name:				
Calculations:				
Discarded by:		Date & Time:		
Volume remaining:		Signature:		

ADMINISTRATION		
Medicine/Diluent	Batch No.	Expiry
Drug 1:		
Drug 2 (if needed):		
Drug 3 (if needed):		
Name of DILUENT:		

Date commenced	Time	Rate from pump (ml/hour)	Site	Signature
Print name:				
Calculations:				
Discarded by:		Date & Time:		
Volume remaining:		Signature:		

ADMINISTRATION		
Medicine/Diluent	Batch No.	Expiry
Drug 1:		
Drug 2 (if needed):		
Drug 3 (if needed):		
Name of DILUENT:		

Date commenced	Time	Rate from pump (ml/hour)	Site	Signature
Print name:				
Calculations:				
Discarded by:		Date & Time:		
Volume remaining:		Signature:		

Name: ______________________ Date of Birth: ______________ NHS Number: ______________

ORAL / BUCCAL / SUBLINGUAL / NASAL MEDICATIONS

CHECK ALLERGY STATUS

1: Patient refused dose 2: Dose not available 3: Dose not given at nurse's discretion 4: Dose not given at doctor's request 5: Self administered

Approved name and strength and formulation of medication:	Dose	Date									
Additional instructions (include ml for liquids / include number for tablets/capsules etc.):	Route	Time									
Transcriber / Prescriber (signature): Print Name: Role: Date:	Min. interval	Dose Given									
	Max/24 hours	Batch									
Transcribing checked by (signature): Print Name: Role: Date:	Start date	Expiry									
		Initials									

Approved name and strength and formulation of medication:	Dose	Date									
Additional instructions (include ml for liquids / include number for tablets/capsules etc.):	Route	Time									
Transcriber / Prescriber (signature): Print Name: Role: Date:	Min. interval	Dose Given									
	Max/24 hours	Batch									
Transcribing checked by (signature): Print Name: Role: Date:	Start date	Expiry									
		Initials									

Approved name and strength and formulation of medication:	Dose	Date									
Additional instructions (include ml for liquids / include number for tablets/capsules etc.):	Route	Time									
Transcriber / Prescriber (signature): Print Name: Role: Date:	Min. interval	Dose Given									
	Max/24 hours	Batch									
Transcribing checked by (signature): Print Name: Role: Date:	Start date	Expiry									
		Initials									

Approved name and strength and formulation of medication:	Dose	Date									
Additional instructions (include ml for liquids / include number for tablets/capsules etc.):	Route	Time									
Transcriber / Prescriber (signature): Print Name: Role: Date:	Min. interval	Dose Given									
	Max/24 hours	Batch									
Transcribing checked by (signature): Print Name: Role: Date:	Start date	Expiry									
		Initials									

8 of 12

Name: _____ Date of Birth: _____ NHS Number: _____

Pages 8 and 9 are ONLY for the administration of medications by the STHFT Intensive Home Nursing Team. The transcription of medications onto page 8 can be completed by a Community prescriber / trained transcriber; it is NOT to be completed by Hospital prescribers.

Name: ______________________ Date of Birth: ______________ NHS Number: ______________

Subcutaneous Injections - when required

(Use 'Drug Administration Record For Community Nursing' for Transdermal Medication and Subcutaneous Fluids)

CHECK ALLERGY STATUS

Approved name of medicine:	Dose	Date	Time	Dose	Site	Batch No.	Expiry	Signature
Additional instructions:	Route SC							
	Min. interval							
Transcriber / Prescriber (signature): Print Name: Role: Date:	Max/24 hours							
Transcribing checked by (signature): Print Name: Role: Date:	Start date							

Approved name of medicine:	Dose	Date	Time	Dose	Site	Batch No.	Expiry	Signature
Additional instructions:	Route SC							
	Min. interval							
Transcriber / Prescriber (signature): Print Name: Role: Date:	Max/24 hours							
Transcribing checked by (signature): Print Name: Role: Date:	Start date							

Approved name of medicine:	Dose	Date	Time	Dose	Site	Batch No.	Expiry	Signature
Additional instructions:	Route SC							
	Min. interval							
Transcriber / Prescriber (signature): Print Name: Role: Date:	Max/24 hours							
Transcribing checked by (signature): Print Name: Role: Date:	Start date							

Approved name of medicine:	Dose	Date	Time	Dose	Site	Batch No.	Expiry	Signature
Additional instructions:	Route SC							
	Min. interval							
Transcriber / Prescriber (signature): Print Name: Role: Date:	Max/24 hours							
Transcribing checked by (signature): Print Name: Role: Date:	Start date							

Approved name of medicine:	Dose	Date	Time	Dose	Site	Batch No.	Expiry	Signature
Additional instructions:	Route SC							
	Min. interval							
Transcriber / Prescriber (signature): Print Name: Role: Date:	Max/24 hours							
Transcribing checked by (signature): Print Name: Role: Date:	Start date							

Name: ______________________ Date of Birth: ______________ NHS Number: ______________

Subcutaneous Injections - when required

(Use 'Drug Administration Record For Community Nursing' for Transdermal Medication and Subcutaneous Fluids)

CHECK ALLERGY STATUS

Approved name of medicine:	Dose	Date	Time	Dose	Site	Batch No.	Expiry	Signature
Additional instructions:	Route SC							
Transcriber / Prescriber (signature): Print Name: Role: Date:	Min. interval							
	Max/24 hours							
Transcribing checked by (signature): Print Name: Role: Date:	Start date							

Approved name of medicine:	Dose	Date	Time	Dose	Site	Batch No.	Expiry	Signature
Additional instructions:	Route SC							
Transcriber / Prescriber (signature): Print Name: Role: Date:	Min. interval							
	Max/24 hours							
Transcribing checked by (signature): Print Name: Role: Date:	Start date							

Approved name of medicine:	Dose	Date	Time	Dose	Site	Batch No.	Expiry	Signature
Additional instructions:	Route SC							
Transcriber / Prescriber (signature): Print Name: Role: Date:	Min. interval							
	Max/24 hours							
Transcribing checked by (signature): Print Name: Role: Date:	Start date							

Approved name of medicine:	Dose	Date	Time	Dose	Site	Batch No.	Expiry	Signature
Additional instructions:	Route SC							
Transcriber / Prescriber (signature): Print Name: Role: Date:	Min. interval							
	Max/24 hours							
Transcribing checked by (signature): Print Name: Role: Date:	Start date							

Approved name of medicine:	Dose	Date	Time	Dose	Site	Batch No.	Expiry	Signature
Additional instructions:	Route SC							
Transcriber / Prescriber (signature): Print Name: Role: Date:	Min. interval							
	Max/24 hours							
Transcribing checked by (signature): Print Name: Role: Date:	Start date							

Name: _____ Date of Birth: _____ NHS Number: _____

RECORD OF A DOSE ADMINISTERED UNDER WRITTEN INSTRUCTION

CHECK ALLERGY STATUS

- This section must only be used for a medication that has already been prescribed and is on the Pink Card.
- This section must only be used when an adjustment in dose is urgently required and the new dose cannot be transcribed onto the Pink Card at the point of need.
- Written instructions are only acceptable when provided by the appropriate prescriber involved in the patient's care.
- **Only one dose may be administered** following written instruction. The prescription **must** be reviewed and the medication re-transcribed onto the Pink Card before a further dose is administered.
- **Before administration** of a dose, the written instruction **must** have been received either in the patient's electronic record or by secure nhs.net to nhs.net e-mail.
- **Before administration** of a dose, the patient's allergy status **must** be checked.
- **Before administration** of a dose, the table below **must** be completed in full.
- The administration of a medication by written instruction (dose / route / date / time) **must** be documented in the patient's electronic record (SystmOne) or paper notes (care record), as well as information about the prescriber who provided the written instruction.
- Follow-up arrangements to review the medication before the next dose must be planned and documented in the patient's electronic record (SystmOne) or paper notes (care record).

Please complete the table in block capitals (other than signatures):

Date	Time	Approved Name of Medicine	Dose	Route	Authorising Prescriber: record name, role & contact number	Record Source of Written Instruction: (patient electronic record or secure email)	Nurse Administering: signature & print name

Appendix 3

Sheffield Teaching Hospitals NHS
NHS Foundation Trust

Name _____ **Date of birth** _____

COMMUNITY BD BODYGUARD™ T SYRINGE PUMP OBSERVATION CHART

See overleaf for guidelines

Date	Time	Rate from pump (ml/hour)	Is light flashing GREEN? (Y / N)	Volume to be infused (ml) (VTBI from pump)	Check battery level (%)	Slow/fast/ on time	Check keypad locked	Site checks and comments	Initial

BD BodyGuard™ T Syringe Pump Chart Guidelines

Community

Please refer to the BD BodyGuard™ T protocol for information on setting up & using this equipment for drug administration by the subcutaneous route

Notes for prescribers

- Check the compatibility of all drugs prescribed. Compatibility information can be found in the BNF (indexed 'Continuous subcutaneous infusions') or you can contact Medicines Information or Pharmacy.
- NAME OF DILUENT: Use **water for injections** with most drugs - exceptions include furosemide, granisetron, octreotide, ondansetron, ketamine and ketorolac, which should be diluted in 0.9% sodium chloride for injection.
- The **prescription must be rewritten if altered in any way** - it is not acceptable to change the dose or medications without rewriting the whole chart.

Initial checks when setting up the syringe pump

- Check prescription details and check allergy status. For the drug octreotide ensure that only Hospira/Pfizer or Sandostatin (Novartis) brands are used. **DO NOT USE** SUN Pharma brand.
- Mix the drugs with the diluent in a 30ml Luer-Lok syringe. Check you have the prescribed volume of fluid in the syringe in millilitres **before** priming the line.
- Record the batch number and expiry date of all drugs and diluent in the space provided.
- Check that the light is intermittently flashing green.
- Check that the battery is at least 40%, in the community the battery should be changed if less than 40%.
- Record the date, time, rate, site & remaining volume in millilitres (VTBI from pump) **AT THE TIME OF SET UP**. When starting a new infusion, write 'NEW' in the slow/fast/on time column & sign in the space provided.
- Record the syringe pump serial number at each set up. This is essential in order to identify which device a patient used in the event of a fault or recall.
- As the prescription chart can last for 3 days if the pump is recorded 4 hourly, space is provided to record the details of 3 infusions.

Instructions for checks in use

This observation chart must be completed at each visit by Community staff or every 4 hours when Intensive Home Nursing Service are present. If any problems are found, refer to the troubleshoot checklist below & record in the nursing documentation:

- Check that the rate is correct, that 'PUMP DELIVERING' is displayed & that the light is flashing green.
- Check that the infusion is running to time by measuring the volume of fluid remaining in millilitres (VTBI from pump) and comparing this with the previous measurement. Record as slow/fast/on time.
- Check keypad locked.
- Check the infusion site for signs of inflammation, swelling or pain.
- Check the contents of the syringe & tubing for cloudiness, crystallisation, colour change, kinks or blockage.

Troubleshoot checklist: see Section 16 of BD BodyGuard™ T protocol for further guidance

• Is the pump alarming or light not flashing green?	YES	See display panel for reason & follow actions in Section 16 of BD BodyGuard™ T protocol
• Is the pump running too fast?	YES	Discontinue, inform doctor
• Is the pump running too slowly?	YES	Check light is flashing green, check battery level
• Is the site inflamed?	YES	Resite
• Is there evidence of cloudiness/ crystallisation/discolouration?	YES	Discontinue, seek advice from prescriber & pharmacy
• Is infusion line kinked?	YES	Unkink

If the above actions do not resolve the problem then change the syringe pump & return it to Clinical Engineering for investigation.

Appendix 4

Insertion of the Saf-T-Intima cannula

1. Hold the wings on the Saf-T-Intima cannula between the index & middle fingers extending the tubing straight whilst holding the port with the thumb & ring finger (see diagram). Rotate the white base through 360 degrees (i.e. one full turn) in order to break the seal over the “needle introducer” within the subcutaneous catheter – you should see the needle rotate within the catheter. 
2. Grasp pebbled side of wings of the Saf-T-Intima pinching wings firmly together to lock the needle in place.
3. Insert the Saf-T-Intima needle subcutaneously.
4. Open the wings flat against the skin (pebble side down).
5. Apply transparent dressing over the insertion site & the wings of the cannula.
6. Apply firm fingertip pressure over the wings of the cannula (avoiding the centre where the needle retracts) & simultaneously grasp the pebbled end of the safety barrel & pull in a straight continuous motion until the needle has fully withdrawn into the yellow cylinder.
7. Gently remove the yellow cylinder from the cannula port (if it has not released spontaneously) exposing the adaptor with the rubber bung.
8. Place the needle shield in the sharps container.
9. Remove white clamp from the cannula line.

Appendix 5

Sheffield Teaching Hospitals NHS
NHS Foundation Trust

You and your syringe driver

Information for patients
Palliative Care

What is a syringe driver?

A syringe driver is a small, portable, battery operated pump. It can be carried about in a locked box and pouch attached to a belt or worn over the shoulder. The pump is fitted with a syringe, which gives your medicines through a needle just under the skin. The pump runs 24 hours a day, avoiding the need for repeated injections.

Why do I need one?

Sometimes it is easier for you to have some of your medicines this way. This may be because:

- You have been vomiting, and find it difficult to keep your medicine down. Medicines to help reduce or stop the vomiting can be given in the syringe driver, along with medicines to help other symptoms such as pain. Once the vomiting has settled you may be able to go back to having your medicines by mouth.
- You have so many medicines to take that you are finding it difficult to swallow them all. Putting some of the medicines in the syringe driver can reduce the number of medicines you need to take by mouth.
- You are unable to swallow medicines. Medicines to help your symptoms can be put into the syringe driver.

Living with your syringe driver

- The medicines in the syringe driver will be absorbed into your body throughout a 24 hour period, to aim to control your symptoms. Any adjustments of the medicines will be made by your GP/Community Nurse or ward team. Do not interfere with the syringe or the pump.
- **You must keep the syringe driver and the needle site dry, especially when washing or bathing**. If you drop the pump into water, contact your nurse, as you will need a new syringe driver to be sure that your medicines are being given correctly.
- The syringe in the pump should not be exposed to direct sunlight.
- The syringe driver should not be exposed to extremes of heat. Avoid placing the syringe driver next to a heat pad, electric blanket or hot water bottle.
- You can go out and about with the syringe driver as it can be carried in the pouch supplied. **Please note: you should ask your doctor if your medicine in the syringe driver allows you to drive.**

PD7247-PIL2881 v5

Issue Date: February 2019. Review Date: February 2022

- If possible, eat and drink as normal. Always check with your doctor or pharmacist to see if your medication allows you to drink alcohol if you wish.
- It is advisable **not** to use a mobile phone near a syringe driver as it may affect the way the pump works. Try to keep mobile phones that are switched on about an arm's length away.

How do I know that my syringe driver is working?

- The light above the 'ON/OFF' button will flash green about every 30 seconds and the display will show 'PUMP DELIVERING'. If it turns red, there is a problem with the pump – contact your nurse as soon as possible.
- Sometimes it is necessary to take some additional medicines even though your syringe driver is in place. If you are at home and are still able to swallow medicines, you should be prescribed 'as needed' medicines for symptoms such as pain, sickness or anxiety. Let your community nurse or GP know if you have taken any such medicines over the course of the day/previous 24 hours.

Who will look after my syringe driver?

If you are at home, the community nursing team will come in each day to refill the syringe, check that the needle is comfortable and that there are no problems with the medicines.

Community Nurse contact number: _____

If you are in hospital, a hospice or care home, the staff will change the syringe each day and regularly check that the pump is working correctly. They will make sure that the needle is comfortable and that you are not having any problems with the medicines.

If you notice any of the following, tell your Community Nurse, GP or the ward/care home team:

- The colour of the medicines in the tubing or syringe has changed
- There is a cloudiness or sediment in the tubing or syringe
- The skin around the needle is red, swollen or painful
- The alarm on the pump sounds
- Any leakage of liquid/fluid at the injection site
- The needle comes out

This leaflet is based on one produced by Nottingham University Hospitals NHS Trust, and is amended with their kind permission for use here.

Produced with support from Sheffield Hospitals Charity – working together we can help local patients feel even better

To donate visit www.sheffieldhospitalscharity.org.uk Registered Charity No 1169762

PD7247-PIL2881 v5

Issue Date: February 2019. Review Date: February 2022

Appendix 6

STH BD BODYGUARD™ T Syringe Pump Training Checklist

Certificate of attendance and training record

BD Bodyguard™ T syringe pump device user workshop

Name	
Designation	
Venue	

Confirmation of attendance to the workshop for device users

I confirm I have been trained in the use and understanding of the device. I am aware of my professional responsibilities for continuing professional development and I am accountable for my own actions. I will undertake further practice and/or training on the device to achieve full competency if necessary.

Attendee signature		Date attended	

BD

Learning Checklist

Complete this checklist at the end of training. This will help you consolidate learning and self-assess your level of competency. Answer the questions on how your pumps are used in your clinical area.

Tick the answer(s) you think are correct.

1. The pump is set up to deliver drugs:
Intravenous □ Subcutaneously □ All common infusion routes □

2. You will be priming the administration set:
Manually □ Via the pump □ Either way □

3. The actuator can only be moved with the FF/Back keys with:
Power on, barrel clamp arm down and no syringe in place □ Power on and a syringe in place □
An infusion running □

4. After Pre-Loading and before fitting the syringe, the INFO key is pressed to:
Verify sufficient battery life □ View volume infused □ Activate keypad lock □

5. The pump can be used with syringe sizes ranging from (default)
2 to 30mL □ 10 to 30mL) □ 2 to 50/60mL □

6. Syringe brands and sizes are identified by:
2 point syringe detection □ 3 point syringe detection □ Pump Event Log □

7. When loading a syringe, if no syringe brand/size can be identified, this indicates:
Incorrect syringe brand □ Incorrect positioning □ Incorrect syringe size □

8. Why might the device incorrectly identify a syringe brand?
The device is faulty □ Syringe dimensions are within(+/-) 1mm of other brands □ It selects by "guessing" □

9. How do you know the infusion is in progress?
Green LED light flashes □ The infusion running screen is visible ("Pump delivering") □ Both □

10. When the INFO key is pressed twice during an infusion, what information is available to the user?
VI/VTBI □ % battery life remaining □ Event Log history □

11. The keypad lock is applied by pressing and holding down the:
START/YES key □ STOP/NO key □ INFO key □

12. Re screen prompt Press YES to Resume, NO for New Syringe. If the user presses "YES"
The current programme resumes □ User can access the event log □ The current programme deletes □

13. Re screen prompt Press YES to Resume, NO for New Syringe. If the user presses "NO"
The current programme resumes □ User can access the event log □ The current programme deletes □

14. Alerts for "Program Nearly Complete" activate approximately:
30 minutes before end alarm □ 15 minutes before end alarm □ 3 minutes before end alarm □

15. When an alarm activates the LED light turns red, flashes and a screen message displays. What else happens?
The pump stops □ The pump stops and alarms continuously □ The pump continues to run and alarms continuously □

16. A "pump pause too long" alarm is activated after:
5 minutes □ 2 minutes □ 10 minutes □

17. An occlusion alarm can be activated by:
A fully or partially occluded set or cannula (e.g. clot formation) □
Kinking of the set or leaving a roller clamp or a tap closed □ Any □

18. How do you access the Event Log if the infusion is running?
Press STOP key then INFO key □ Press the FF key □ Press STOP key then BACK key □

19. What does the Event Log record?
Patient specific events □ Date and time-stamped events □ Both □

Self-assessment of Theory Knowledge

Do you know? (If not applicable, state n/a)	Covered in training
Pump use • Where your local policy/guidelines, operation manual and user guides are kept? • The risk classification, advantages, disadvantages and limitations of the pump? • How to use the lock box and carry pouch appropriately (if used)?	
Pump set up • The mode of operation that the pump is set up for in relation to the clinical application? • Is the pump to be used on adults or paediatric patients? • What the pump occlusion pressure is, in relation to the drug delivery route? • What the terms "purge" and "mechanical slack" mean and when to activate purge?	
Administration sets • The correct infusion line to use and why the line priming volume should be considered? • Why valve features of anti-siphon (free flow) and backflow are important?	
Syringes • The types and sizes of syringes that will be used (including use of luer lock syringes)? • The importance of confirming the correct syringe brand/size?	
Battery use and management • The type of battery to be used with the pump? • How to insert/remove a battery and how to check the battery level (%)? • What the indications are for battery change and the average battery life?	
Starting, managing and closing down infusions • The functions associated with the individual keys on the keypad • What the purpose of Pre-Loading is? • How to release a trapped object from the actuator? • How to correctly load, detect and confirm the correct syringe • The implications of pressing "YES" ▶ and "NO" ■ ("YES to Resume"/"NO for New Syringe") • The actions to take for alerts, alarms and screen messages and how to troubleshoot? • What the event log can be used for, how to access it? • What to do in the event of a device failure and how to report adverse incidents? • How to disconnect, clean and store the pump after use according to local policy? • How to dispose of the syringe and administration set safely according to local policy?	

Self-assessment of Practical Skill

Practical skill: start and monitor an infusion Can you demonstrate and complete the steps below?	Covered in training
1. Prepare the syringe, attach set and manually prime line	
2. Check the pump	
3. Insert the battery	
4. Power on and observe Pre-Loading	
5. Check battery level (%)	
6. Load and confirm the correct syringe	
7. Pump programming **Complete this section for programme Lock On** Review and confirm programme summary screen □ Purge (tick if purging system) □ **Complete this section for programme Lock Off (duration or mL/hour)** Change/enter/confirm individual programming screens (volume/duration/rate/titration) □ Review and confirm programme summary screen □ Purge (tick if purging system) □ Rate titration (tick if enabled) □	
8. Connect cannula/set to patient. Start infusion and confirm infusion is in progress	
9. Activate/deactivate keypad lock	
10. Press INFO key during infusion to check VI/VTBI and battery level	

Workshop Learning Outcomes

Following successful completion of this training you will be able to:

- Describe how the device is to be used safely and effectively in the clinical area
- Explain the criteria for selecting and managing the infusion device, associated disposables and accessories for any given therapy or location
- Show skill in setting up, managing and troubleshooting the device

Reflection

Engaging in reflective practice is associated with the improvement in the quality of care, stimulating personal and professional growth, and closing the gap between theory and practice. Several models of reflective practice are available, for example, Gibbs Reflective Cycle (1988), John's Model for Structured Reflection (2000) or Rolfe's Framework for Reflective Practice – this model uses three simple questions to reflect on a situation: 'What, so what, and now what?' Rolfe considers the final stage as the one that can make the greatest contribution to practice.

RCN website, 2015. Available from http://www.rcn.org.uk

BD I 1030 Eskdale Road, Winnersh Triangle, Wokingham, RG41 5TS

bd.com/uk/infusion

Appendix 7

Equality Impact Analysis <u>Screening Tool</u> – Written Policy or Guidance –

	- Is there a potential or actual negative impact associated with this policy on people or individuals who share a 'protected characteristic'? i.e. does this policy directly or indirectly discriminate? - Can this policy be used to promote equality between people who share a protected characteristic and people who do not	**NOTES** Changes / additions / further information or advice needed
RACE	Neutral. No positive or negative impact associated with this policy.	
SEX **(I.E. MALE / FEMALE)**	Neutral. No positive or negative impact associated with this policy.	
GENDER REASSIGNMENT	Neutral. No positive or negative impact associated with this policy.	
DISABILITY(including consideration of the impact on carers of a disabled person)	Positive. This policy highlights the necessity for working within own personal limitations, therefore including the needs of disabled staff. It identifies the need for environmental risk factors to be taken into account when within a community / residential home seting. Individual patient assessment takes into account the needs of disabled patients.	
RELIGION OR BELIEF	Neutral. No positive or negative impact associated with this policy.	
SEXUAL ORIENTATION	Neutral. No positive or negative impact associated with this policy.	

AGE	Neutral. No positive or negative impact associated with this policy.	
PREGNANCY or MATERNITY	Neutral. No positive or negative impact associated with this policy.	
	Does this Written Policy or Guidance impact on the following areas?	**NOTES** Changes / additions / further information or advice needed.
HUMAN RIGHTS i.e. **Fairness** **Respect** **Equality** **Dignity** **Autonomy**	Positive. This policy promotes the need for assessment of individual patient needs.	
SOCIAL DEPRIVATION / TACKLING HEALTH INEQUALITY	Positive. This policy includes information regarding equipment specifically for the end of life pathway patients.	

ACTION

Have you identified any action that is required in addition to any changes made to the policy during policy development? Please note in brief below for reference.

ACTION	LEAD	DEADLINE