Nottinghamshire Hospice
adding life to days

POLICY/PROCEDURE INFORMATION (Policy no CS033)	
Subject	**Syringe Driver Policy CS033** *(This policy is non-contractual and is subject to periodic review and will be amended according to service development needs).*
Applicable to	All clinical staff of Nottinghamshire Hospice
Target Audience	Others such as agents, consultants and other representatives of Nottinghamshire Hospice may be required to comply with the policy as a condition of appointment.
Date issued	16 Jan 2024
Next review date	16 Jan 2027
Lead responsible for Policy	Director of Care
Policy reviewed by	RN Lead Trainer (Syringe Driver)
Notified to (when)	Quality and Safety Committee 16 Jan 2024
Authorised by (when)	Quality and Safety Committee 16 Jan 2024
CQC Standard if applicable	Safe
Links to other Hospice Policies	Administration of Medication Policy CS008 Reporting Incidents and Accidents Policy OP002 Infection Prevention and Control Policy CS001 Safe Sharps and Blood Borne Virus Policy CS021
Links to external policies	This policy has been adapted from the Nottingham CityCare BD BodyGuard T Syringe Pump Policy v1
Summary	This Policy provides guidance, instruction, and guidelines for the safe use of the BD BodyGuard T syringe driver within the context of symptom control management.
This policy replaces	T34 Syringe Pump Policy

IMPORTANT NOTICE

Staff should refer to the Hospice website or Policies and Procedures folder on the 'N' drive for the most up to date Policy. If the review date of this document has expired it is still valid for 3 months. After that staff should seek advice from their clinical lead or manager.

VERSION CONTROL		
Status	**Date**	**Reviewed date**
Original policy written by City Care NHS Trust		
Policy reviewed by Be Jackson RN (Syringe Driver Trainer)	November 2023	
Policy notified to Quality and Safety Committee	16 Jan 2024	
Policy ratified by Quality and Safety Committee	16 Jan 2024	16 Jan 2027
Updated control sheet and published on website	Jan 2024	

INDEX

APPENDICES

1.	**Introduction** Palliative care patients often present with multiple symptoms that can necessitate the need to use several drug treatments or they become unable to take oral medications. In these circumstances medication may be given to the patients via intravenous means and via a syringe pump Ambulatory syringe drivers are widely used in palliative care and have revolutionised our ability to care for patients at home. The use of a syringe driver has many advantages for symptom control. It ensures a steady infusion of drugs, with reliable absorption, and allows combinations of drugs to be administered parenterally in a manner that is more convenient, portable, and less invasive than the intravenous route. It also avoids the need for repeated painful injections. (Thomas and Barclay 2015) The BD BodyGuard T battery-operated (9V PP3 code 6LR61) syringe driver is used across Nottingham CityCare Partnership (NCCP). This syringe driver is small and has a large LCD display which provides error messages and context sensitive instructions. The device includes history logging, mechanical interlocks with the syringe and provision of alarms during incorrect operation thus complying with IEC 60601-2-24 standards. The BD BodyGuard T is calibrated in ml/hour.
2.	**Policy Statement** Nottinghamshire Hospice staff check and respond to problems with syringe drivers while caring for patients at the hospice or in the community. Hospice Registered Nurses (RNs) are able to act as a second checker in setting up a syringe driver with community or district nursing staff as the primary checker. Healthcare assistants cannot set up, alter or reload a syringe driver, but can conduct monitoring checks and contact district nurses for help if there are problems once they have received training during their induction and shadow shifts in monitoring syringe drivers.

3.	**Scope** This policy is aimed at all Hospice staff who provide care for patients with a syringe driver**.**
4.	**Purpose** This Policy provides guidance, instruction, and guidelines for the safe use of the BD BodyGuard T syringe driver within the context of symptom control management. It ensures all relevant clinical staff are aware of their responsibility when using the BD BodyGuard T. The BD BodyGuard T syringe driver will be used following protocols and procedures that are in line with all relevant policies to promote safe working practices.
5.	**Definitions** **Butterfly:** This is the needle and giving (winged infusion) set used to deliver the medications into the subcutaneous layer. It is secured to the skin with a clear adhesive dressing. **Controlled Drug (CD):** Any substance or medicinal product specified in parts 1, 2 and 3 of Schedule 2 and 3 of the Misuse of Drugs Act 1971. **Core Four Medications**: These are the four drugs commonly prescribed in the Anticipatory Supply of Palliative Care Medications for Adults Policy. **CSCI**: *Continuous Sub-Cutaneous Infusion* is an infusion that is administered over 24 hours by a syringe pump. **ASS1/DNS1/DNS1 AP:** Prescription Record Sheet for administration of medication within NCCP **DNS 1 SP:** Patient specific direction, or authorisation to administer, specifically written for syringe driver palliative care medicines. **NUH:** Nottingham University Hospital **PRN:** This is the recognised term for a when required medication

	RN: Registered Nurse **RDA 2** NCCP Record of Drug administration (RDA) form used to record the administration of medicines. RDA 2 is used for injections. **Saf-T-Intima:** This is a metal free injection system to deliver subcutaneous medications, used to reduce site reactions and for those patients who have nickel allergies. Direction of use the same as butterfly (above). **Subcutaneous (SC):** refers to situated or applied under the skin. **Syringe Driver:** Small ambulatory device designed to deliver symptom control medications via the subcutaneous route over a 24-hour period. **TTO**: To Take Out. Medications given to patients on discharge from hospital.
6.	**Responsibilities** **Director of Care** Is responsible for implementing and disseminating the policy to all clinical staff. **Registered Nurse Leads** Ensure: • that all appropriate RNs have access and awareness of the updates to this policy. • that all new RNs recruited to the Hospice attend syringe driver training delivered in house. • that all staff have 2 yearly updates provided by staff who have undertaken additional training (Train the Trainer) and keep a record of this within their base **Registered Nurses** All RNs have a responsibility to attend initial training and 2 yearly updates and maintain their competency in relation to syringe drivers.

7.	**Risk Management (Indications and Contra-Indications/ Hazards)** All RNs who are involved with administration of medication using the BD BodyGuard T must have attended the new starter training session (facilitated by the Community Supportive and Palliative Care Service) or by Nottinghamshire Hospice in-house trainer. A certificate of attendance and learning workbook will be given at this time. These workbooks contain competency frameworks to be completed out in practice (see Section 10). All registered healthcare professionals are accountable for their actions and omissions as per Nursing and Midwifery Council, The code: Standards of conduct, performance and ethics for nurses and midwives (2015). All infection control precautions should be followed as per the Infection Prevention and Control Policy CS001. Safe disposal of sharps as per the Safe Sharps and Blood Borne Virus Policy CS021. As with any procedure involving injections there is a potential risk of sharps injuries, the Infection Prevention and Control Policy CS001 outlines actions to be taken in this scenario. Safe disposal of controlled drugs non-controlled drugs and as per the Administration of Medication Policy CS008. The setup of a syringe driver **must** be completed by two community RNs, or one community RN and one hospice RN, who must be up to date and competent to use the BD BodyGuard T syringe driver. As with all medication administration there is a risk of anaphylaxis. If this situation were to arise staff should dial 999 immediately and ask for an ambulance. Monitoring of the syringe driver should be done 3 times on a hospice at home night shift, or twice on a day shift. This check should include checking secure attachment of the syringe driver to the patient, that the syringe driver is running to the schedule it should be (i.e. the amount remaining is appropriate for the time remaining), and that the battery is over 60%. If there are any problems identified,

	hospice staff should call the district nurses to inform them. Checks can be recorded on the syringe driver chart or in the evaluation in the District Nursing notes. In administering and checking of any medication individuals must exercise their professional judgment and apply their knowledge and skill in each given situation. Staff should follow guidance in the Administration of Medication Policy CS008 for the use of Controlled Drugs. Patients and/or carers may become distressed at the time the syringe driver is initially set up, and it may cause increased anxiety that death is near so clear effective communication and use of patient information leaflet (Appendix 3) is necessary to explain the purpose of the syringe driver. Where English is not the first language of the patient and or carer it is essential that the reason for the syringe driver being set up is communicated and understood. This may require the use of the local interpreting service. It is best practice that all patients who have these medications are risk assessed for the safety of use of these medications in their own home. As with all medications supplied in a patients' residence, they may be open to abuse. It is vital that a risk assessment is completed so that lock boxes can be used if required. This information must be shared with colleagues, it should be shared in the patient's notes and documented on SystmOne. Follow guidance in the Administration of Medication Policy CS008. Refer to the Administration of Medication Policy CS008 to fulfil the requirements regarding the use of controlled drugs. The syringe driver **must** have an up-to-date service date label. RNs are responsible for ensuring all syringe drivers have an up-to-date service, it is advisable to send them for servicing (Key Health Solutions) as per sticker on syringe driver) a few weeks prior to the expiry date. Hospice nurses should communicate this to the community nurses who can arrange a service and replacement device if necessary. Care and management of the syringe driver should be followed to ensure it is kept away from direct heat or sunlight; this includes electric blankets.

	In the event of an incident, an incident form must be completed on Vantage. If the incident relates to the device, then it must be returned to Key Health Solutions informing them of the reason. An incident may include: • administration of incorrect medication, dose and /or diluent • infusions completing ahead of time or carrying on beyond intended time of completion • device not alarming • any other incident or near miss which may compromise patient safety or comfort.
8.	**Indications for Use** **Indications for using subcutaneous injections:** When the oral route is unavailable to patients the subcutaneous (SC) route is the preferred method of drug administration. Intravenous (IV) injections should be avoided because they are invasive and no more effective than the subcutaneous route. Intramuscular (IM) injections should be avoided, as they are painful, particularly in the cachexic patient. The SC route should not only be reserved for use in a dying patient. Consider this route for the treatment of pain and/or other symptoms when other routes of administration are inappropriate. Listed below are possible reasons why the SC route could be used: • Persistent nausea and vomiting • Dysphagia • Mouth/throat/oesophageal lesions • Intestinal obstruction • Malabsorption of oral medication • Poorly controlled symptoms with oral medication

- Profound weakness when patients are unable to swallow oral medication.
- Semi-comatose or comatose patients

Indications for starting a continuous subcutaneous infusion (CSCI)

NICE (2015) Care of Dying Adults in the Last Days of Life, advise that a syringe driver be used to deliver medications for continuous symptom control if more than 2 or 3 PRN doses are given within 24 hours. Clinical judgement should also be used when deciding to start a CSCI considering the advantages below. The BD BodyGuard T should not be considered as 'a last resort', but as an important alternative route of drug administration in certain circumstances. Indications for starting subcutaneous medications are listed above, however there are additional advantages for starting a CSCI, which include:

- Increased patient comfort, avoiding the need for repeated injections
- Patient preference
- Suitable for patients who are drowsy, comatose, or semi-comatose
- Avoids the administration of excessive tablets
- Control of multiple symptoms with a combination of drugs
- Plasma drug levels are maintained preventing peaks and troughs, which can occur with intermittent injections or oral medication
- Administered over 24 hours, which reduces the number of times drugs are administered. Therefore, opportunities for drug errors are reduced, it is also less time consuming and more cost effective for nursing staff
- Saf–T infusion sets can be left in for 7 days if no redness/ inflammation, therefore less patient distress, and reduced demands on nursing resources
- Infusion timing accurate and drug calculations simplified as delivered over a 24-hour period

	• Mobility and independence can be maintained as the device can be carried around **Disadvantages of continuous SC administration** • Possible inflammation or irritation at infusion site • Possible SC site leakage • Possible allergic reaction to either needle or medication (rare occurrence) • Patient and carer fear that a syringe driver may hasten death (Thomas and Barclay 2015) • Patient may become psychologically dependent on the device • Initial cost of device • Training and maintaining competencies of staff • Lack of flexibility if more than one drug is being administered • Lack of reliable compatibility data for some drug mixtures
9.	**Medications** **Drugs Commonly Used for Continuous Subcutaneous Administration** • Morphine (CD) • Midazolam (CD) • Levomepromazine • Hyoscine Butylbromide (Buscopan) • Diamorphine (CD) • Oxycodone (CD) • Cyclizine

- Metoclopramide
- Fentanyl (CD)

Converting oral medication doses to subcutaneous

Dose conversions vary between patients and monitoring during conversion is required to avoid insufficient or excessive dosing. For guidelines for drug conversions please refer to the latest versions of the Palliative Care Formulary or Palliative Care Pocketbook (5). Further advice can be obtained from the City Care Palliative Care team on 0115 8834787 or Hayward House 0115 9691169 Ext 57079 (out of hours – 07595 285014).

Compatibilities

All core four Anticipatory Prescription medications (Morphine Sulphate, Levomepromazine, Hyoscine Butylbromide, Midazolam) can be mixed, if necessary, for infusion over 24 hours.

For advice or if there appears to be any problem with the prescription mixture, please contact the patient's GP/out of hours provider, the Community Supportive and Palliative Care Service **0115 8834787**, Medicines Management **0115 8833114** or Hayward House **0115 9691169 Ext 57079** for advice.

Diluent

Water for Injection should be used as the recommended diluent, as there is reduced risk of incompatibility.

For full guidance on volumes see Appendix 1 and the table below.

Dilution of syringe driver contents reduces:

- The risk of drug incompatibility
- Injections site reactions

If the patient develops a problem with site reactions, please contact Community Supportive and Palliative Care Service on **0115 8834787** or Hayward House **0115 9691169** Ext **57079** for advice.

Completing DNS1-SP

The GP or non-medical prescriber must complete the DNS1 SP (Appendix 1), the Authorisation to Administer form which has been developed solely for use with syringe driver prescriptions. Guidance on the completion of this form is contained within the NCCP Controlled Drugs Policy and Standard Operating Procedures.

All prescriptions must be written to be administered over a 24-hour period.

All drugs to be administered in one syringe should be written together in one box.
The dose of Controlled Drugs must be written in words and figures for clarity.

The clinical appropriateness of the prescription should be reviewed every 24hours by the nurse and if necessary, the dosage should be adjusted by the prescribing clinician.

There may be a signed DNS1 SP completed on SystmOne, but this hasn't been placed in the patient's residence. The nurse can administer the medication if the drugs are in the property and the nurse has sight of the signed copy DNS1 SP on SystmOne. The nurse must be confident that this is the latest instruction. A paper copy of the signed DNS1 SP should be put into the house at the earliest opportunity.

The NUH discharge summary TTO can be used to administer medications, including a syringe driver, using the following guidance:

- Hospital discharge summary TTO list can be used as an authorisation to administer for the duration of supply of medicines from hospital, for the medicines supplied by hospital, for a maximum of 14 days.
    - A suitable DNS1 (DNS1, DNS1 AP, DNS1 SP) should be arranged as soon as possible before the supply of medicines from hospital runs out.

- Before using the hospital discharge summary TTO list as an authorisation to administer, check:
    - it is signed by a doctor, electronic signature is fine but there must be a specific name there, not generic name (e.g., “A Doctor” or “A Locum”)
    - the full list of medicines, as they may not be grouped as you expect (e.g., anticipatory medicines or syringe driver medicines may not be grouped together)
    - discuss with GP if patient is clinically unwell or has deteriorated unexpectedly
    - If patient has had new medicines prescribed, check with prescriber or pharmacist that medicines do not interact.

For patients prescribed anticipatory medicines, be aware the TTO may not contain a maximum number of doses in 24 hrs. Staff should contact the GP if more than 2-3 doses of an anticipatory medicine are required in 24 hours **or** if 2 doses one hour apart do provide symptom control.

If a patient has short admission where no meds are changed / TTOs are not issued, then can continue to use previous DNS1.

Changes to syringe driver doses on the DNS1-SP

Where the prescriber is in possession of the original DNS1-SP, the previous prescription should be crossed through with a single line strike through, and the “Stopped by / Date / Time / New prescription to start” boxes completed and signed by the prescriber.

Where the prescriber is NOT in possession of the original DNS1-SP, they may complete a new DNS1-SP form. When the new DNS1-SP is passed to the community nurse, she should take to the patient and take the following actions:

- Take old DNS1-SP form: complete the “Stopped by / Date / Time / New prescription to start” boxes with the details of the prescriber who has

made the changes and when. The nurse should sign, date and time this entry and make a reference to the clinical notes which confirm this change.

- Ensure all blank spaces on the old DNS1-SP are crossed through, with a note to indicate a new DNS1-SP form was started on dd/mm/yyyy by Dr *** and this DNS1-SP form is to be archived.

- Archive the old DNS1-SP at the back of the patient's community nursing notes.

- Ensure new DNS1-SP is placed in current section of patient's notes. Add a note to this form to indicate it was started on dd/mm/yyyy and replaces the previous DNS1-SP valid from dd/mm/yyyy to dd/mm/yyyy. Nurse to sign/date/time this note.

Symptom management prior to set up of syringe pump

For many patients, the setting up of a syringe driver is a response to unrelieved symptoms. Following **initial** set-up of the pump it takes 4-6 hours for drugs to reach therapeutic blood levels. Therefore, if the patient is experiencing unrelieved symptoms during this time, consider the use of a PRN breakthrough dose of the prescribed medication to promote comfort.

Any additional 'as required' medications must be given via a separate subcutaneous cannula and the line should be flushed with at least 0.2mls water for injection to ensure the whole dose is administered.

Syringe selection

The BD BodyGuard T syringe driver has been designed to be used with most makes and sizes of syringes. Within CityCare the procedure is to use 20ml or 30ml BD Plastipak luer lock syringes, no other make of syringe should be used. This provides sufficient dilution to reduce the risk of adverse site reactions and incompatibility, without providing too large a volume for comfortable administration.

If the medication to be administered add up to a total of more than 10ml before

dilution, then it will be necessary to use a 30ml syringe

Total volume of prescribed medication (undiluted)	Size of BD Plastipak Syringe	Total volume of prescribed medication and diluent
Up to 10 mls	20 ml syringe	Make up to 17mls with diluent e.g. water for injection
10 – 15 mls	30 ml syringe	Make up to 22mls with diluent e.g. water for injection

10. Training, Support and Competencies

All staff using the BD BodyGuard T syringe driver must be personally competent and accountable in the use and operation of this device. New staff must have attended a BD BodyGuard T driver new starter training session, provided by the Community Supportive and Palliative Care Service before they start to use the device. Existing staff must have undertaken the update training delivered by the hospice trainer. This must include the use of the BD BodyGuard T as an infusion device and information on the clinical implications for use.

- It is the responsibility of each member of staff to complete the 'BD BodyGuard T Theory and Practical Skill Learning Workbook' self-competency document at the time of the training and when fully competent complete the document accordingly.
- A copy of this document must be kept by the staff member and a copy be taken to the human resources department, where a register of staff trained and competent to use the device will be held.
- Staff must attend update training to maintain their competency annually. This will be provided by trained trainers within the hospice. The Community Supportive and Palliative Care Service will arrange with Nottinghamshire Hospice and CME the initial training to enable the trainers to achieve this and provide the relevant documentation to complete this update.

	• For support or any queries when using this device please contact the Community Supportive and Palliative Care Service.
11.	**Monitoring** The monitoring of compliance to this document is the responsibility of the clinical lead to ensure all registered nurses have up to date competencies in the use of the BD BodyGuard T. Any incident regarding the BD BodyGuard T syringe driver must have an incident form completed via Vantage. If appropriate an investigation will be carried out into the incident and it will be discussed at the fortnightly Incident Review Meeting. Serious incident root cause analysis reports and actions plans in relation to BD Bodyguard T syringe driver (for example any incident involving medication issues) are monitored by the Quality and Safety Committee until all identified actions have been completed. All incidents are monitored quarterly at the Quality and Safety Committee to track trends and learning.
12.	**Equality Impact Assessment (EIA)** An EIA has been completed concluding at the screening stage.
13.	**References** 1. CME BD BodyGuard T Syringe Pump System Operating Manual. 2. NICE (2015) Care of Dying Adults in the Last Days of Life 3. Thomas, T. and Barclay, S. (2015) Continuous subcutaneous infusion in palliative care: a review of current practice. International Journal of Palliative Nursing 21(2) 60-64 4. Twycross, R. and Wilcock, A and Howard P (2020) Palliative Care Formulary (7th ed) palliativedrugs.com Ltd: Nottingham

	5. Palliative Care Pocketbook Nottingham and Nottinghamshire ICS EOL Programme Board 2023

Appendix 1

Subcutaneous Syringe Pump Prescription Record DNS1 SP

PRESCRIBER: EXACT DOSAGES should be prescribed in syringe driver, no ranges permissible. The medication(s) that the patient requires in the syringe pump should be written in the same prescription box.
If the prescription changes, cross out completely and re-prescribe in the next prescription box.
The first line diluent is water for injection.
ADMINISTRATOR: All medications prescribed must be administered. A separate syringe driver monitoring form must be used.
If prescribed medication adds up to<10mL use a 20mL Luer lock BD Plastipak syringe, making up to 17mL.
If prescribed medication adds up to >10mL use a 30mL Luer lock BD Plastipak syringe, making up to 22ML.
For specialist advice please contact, Community Palliative Care Team (0115) 8834787 or Hayward House on (0115) 9691169 Ext 57079 if:

- **There is a doubt regarding the compatibility of a mixture**
- **The patient develops a site reaction**
- **If total volume of medication is greater than 15mls**

Information regarding the compatibility of mixtures of drugs in the syringe can be obtained from the latest version of the Palliative Care Formulary or at www.palliativedrugs.com

Patients Name: …….. DRUG ALLERGIES:
Date of Birth: ……..
NHS Number: …….
(or affix patient sticker)

USE NEW PRESCRIPTION BOX WHEN DOSE OR MEDICATION IS CHANGED

Prescription Number 1		Include all drugs prescribed in one pump	**Prescription Number 2**		Include all drugs prescribed in one pump
MEDICATION		DOSE	MEDICATION		DOSE
DILUENT		DURATION **24 Hours**	DILUENT		DURATION **24 Hours**
PRESCRIBERS NAME AND SIGNATURE		DATE	PRESCRIBERS NAME AND SIGNATURE		DATE
STOPPED BY	DATE TIME	NEW PRESRIPTION TO START (circle) ASAP or WHEN NEXT DUE	STOPPED BY	DATE TIME	NEW PRESRIPTION TO START (circle) ASAP or WHEN NEXT DUE

Please monitor PRN usage over the last 24 hours to determine if an increase is required.
Please see the links below for Symptom Management Guidance
https://www.nottsapc.nhs.uk/media/1345/palliative-care-pocktebook.pdf
end_of_life_care_guidance.pdf (nottsapc.nhs.uk)

CityCare
Building Healthier Communities

SET UP

Patients Name | **Date of Birth** __ __ / __ __ / __ __ __ __

Todays Date: Date in event log | Syringe Pump Asset Number :

MONITORING

Date	Time	Syringe Change Volume		Line Primed	Battery Status (%)	Infusion Rate (mls/hr)	VTBI	VI	Appearance of line/syringe contents	Site Condition	4 spare batteries in situ	Action & date Line & Saf-T changed	Signature	Checked by
		Wasted	New											

VTBI = Volume To Be Infused VI = Volume Infused
Site condition: S=Satisfactory R=Redness I=Inflammation B=Bleeding
If the contents of the syringe or line look cloudy, precipitation has occurred. STOP the infusion and refer to policy

CityCare
Building Healthier Communities

Useful Numbers

District Nurses: 0115 8838151

GP Surgery:

.....

Specialist Nurse:

.....

Hospital Consultant:

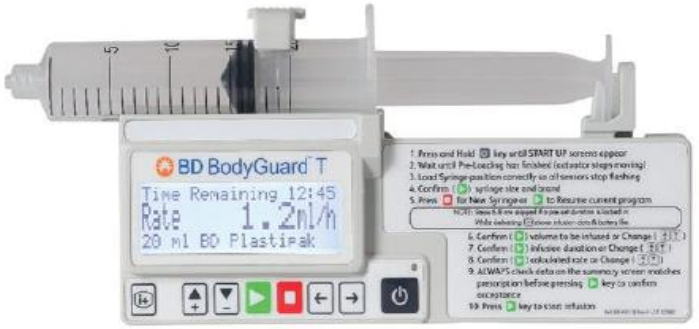
.....

Other Contacts:

.....

CityCare
Building Healthier Communities

You and your BodyGuard syringe pump Information for patients and carers



What is a syringe pump?

A syringe pump is a small, portable battery-controlled pump. It can be carried around in a locked box and pouch attached to a belt or on a shoulder. The pump is fitted with a syringe, which gives your medicines through a needle just under the skin. The medicines are absorbed into your body. 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 pump, 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 pump 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 pump.
- Starting a syringe pump is another way of giving the medicines you need; it doesn't mean that your medicines have stopped working or aren't strong enough

Who will look after my syringe pump?

If you are at home, the district 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.

If you are in a care home, then 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 contact your district nurse or GP if you are being treated at home, or if you are being treated in a care home, let your staff know:

- 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 from the skin around the needle site.
- The needle becomes displaced.

How do I know that my syringe pump is working?

With the Bodyguard syringe pump the light above the 'ON/OFF' button will flash green about every 30 seconds. If it turns red, there is a problem with the pump – contact your nurse as soon as possible.

Living with your syringe pump

- The medicines in the syringe pump will be absorbed into your body throughout a 24-hour period, to aim to control your symptoms. Any adjustments to the medicines will be made by your GP or district nurse or by the hospital or hospice staff. Do not interfere with the syringe or the pump yourself.
- **You must keep the syringe pump 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 pump to be sure that your medicines are being given correctly.
- The pump should not be exposed to direct sunlight and should be kept in the bag provided.
- The syringe pump should not be exposed to extremes of heat. Avoid placing the syringe pump next to a heat pad, electric blanket, or hot water bottle. It should not be put under bedding.
- You can go out and about with the syringe pump as it can be carried in the bag supplied. Please note: you should ask your doctor if your medicine in the syringe pump allows you to drive.
- 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 pump as it may affect the way the pump works. Try to keep mobile phones that are switched on about an arm's length away.
- Sometimes it is necessary to take some additional medicines even though your syringe pump 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 district nurse or GP know if you have had to take any such medicines over the course of the day/previous 24 hours.
- If you are discharged from hospital the nurses at home or in the care home will swap you onto a syringe pump used in their area. It will continue to deliver your medication under the skin over a 24 hour period.

CityCare Building Healthier Communities NHS

Patient NAME:
Patient NHS Number:
DOB:
Patient Address:

Record of Drug Administration (RDA 2) Injections

Drug Name
Strength
Form

Controlled Drug? Yes ☐ No ☐

- Use a separate sheet for each different drug or strength or form
- No boxes to be left blank - write "N/A" if necessary
- All clinical errors, stock discrepancies or blank spaces in previous rows, must be reported to manager immediately.
- For recording errors, original entry & correction must be clearly legible. Sign/date/time corrections. See Record Management policy.

For **Controlled Drugs**, no entry must be crossed out: Bracket, mark "*error", and add note: "*written in error, should read XX, sign/date/time". Or mark whole row in error and rewrite.

Date	Time *(24 hr clock)*	**Starting stock quantity**	**Stock received** *(use full new line)*	**Dose administered**							**Final stock quantity**	*Ensure signature record sheet completed*	
				No. of ampoules used	Dose given (mg)	Dose given (ml)	Batch number	Expiry	Route	PRN or syringe driver?		**Signature**	**Witness signature** *(Or record "N/A")*

Appendix 5

CityCare
Building Healthier Communities

SUBCUTANEOUS CANNULA

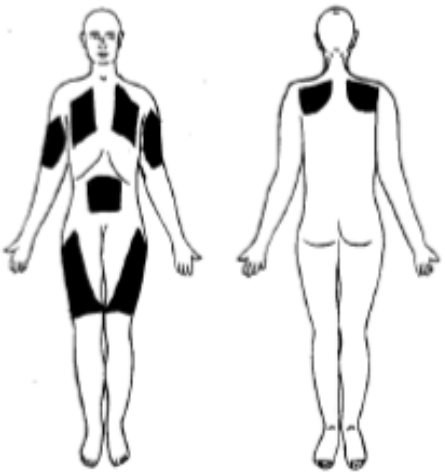


Figure 1 – Insertion sites

There are a number of sites that are suitable for the insertion of a subcutaneous cannula (Figure 1). They include:

- anterior aspect of the upper arms or anterior abdominal wall
- anterior aspect of the thigh
- the scapula if the patient is distressed and or/agitated
- anterior chest wall (least common)

Absorption from these sites through the capillary network is slower than that of the intramuscular route. It is advisable to rotate the site for placement of the subcutaneous cannula to decrease the likelihood of irritation (Dougherty and Lister 2008).

Sites not suitable for placement of subcutaneous cannulae for continuous infusion:

- skin folds and breast tissue
- directly over a tumour site
- lymphoedematous limb, any area where oedema or ascitic fluid is present
- bony prominences - there is little subcutaneous tissue and absorption reduced
- previously irradiated skin - the skin may be sclerosed and therefore have a poor blood supply
- sites near a joint - this can be uncomfortable for the patient and there is an increased risk of displacement of the cannula.
- infected, broken, or bruised skin

The Community Supportive and Palliative Care Service advises the use of Saf-T Intima butterfly needles either 22G or 24G (Appendix 6) for best practice.

CityCare
Building Healthier Communities

ORDERING INFORMATION FOR EQUIPMENT

Item	Order Code
1ml Syringe	FWC121
3ml Syringe	FWC346
5ml Syringe	FWC645
20ml Syringe	FWD018
30ml Syringe	FWC062
Red large bore needles	FTR1923 / FTR2448
Winged cannula sat-T intima (Butterfly)	FSP3559
CME/Care fusion, Infusion lines	FKA848
Transparent adhesive dressing small	ELW646
Transparent adhesive dressing large	ELW968
Moutheze	ILA 901
Denaturing kit (Box 50)	KYA021
Ampsnap	FVD029
Sharps box 0.5 litre	FSL091
Batteries (must be type 6LR61)	WPA290
Single use cloth bag	FAD124