POLICY / PROCEDURE INFORMATION (Policy no CS0014)	
Subject	**Administration of Medication Policy for Nottinghamshire Hospice GRACE Unit** *(This policy is subject to periodic review and will be amended according to service development needs)*
Applicable to	All clinical staff employed by Nottinghamshire Hospice in the GRACE Unit
Target Audience	This policy applies to all clinical staff at Nottinghamshire Hospice, including bank and agency staff, involved in any medication management within the GRACE Unit.
Date issued	July 2021
Next review date	July 2024
Lead responsible for Policy	Director of Care Services
Policy reviewed by	Palliative Care Practice Lead Trustee
Notified to (when)	Quality and Safety Group July 2021
Authorised by (when)	Quality and Safety Group July 2021
CQC Standard if applicable	Safe – S4
Links to other Hospice Policies	Administration of Medication Policy for Nottinghamshire Hospice - Hospice in your Home Services. CS008 Mental Capacity Act Policy CS007 Disciplinary Policy and Procedure HR00024 Reporting of Incident and Accidents Policy. OP002 Resuscitation and DNACPR Policy CS002 Consent Policy CS009 Infection Control Policy CS001
Links to related policies/guidance	CQC Regulations for Services and Managers. Regulations for service providers and managers | Care Quality Commission (cqc.org.uk) Professional Guidance on the Safe and Secure Handling of Medicines - Royal Pharmaceutical Society (RPS) (2018) Professional guidance on the safe and secure handling of medicines (rpharms.com)

	Professional Guidance on the Administration of Medicines in Healthcare Settings - (RPS) (2019) Admin of Meds prof guidance.pdf (rpharms.com) The Code - Nursing and Midwifery Council (NMC): (2020) https://www.nmc.org.uk/standards/code/ Medicines Management - Royal College of Nursing (2020) https://www.rcn.org.uk/-/media/royal-college-of-nursing/documents/publications/2020/january/009-018.pdf?la=en Medicines Matters - A guide to mechanisms for the prescribing, supply and administration of medicines (in England) – Specialist Pharmacy Service (SPS) (2018) Medicine Matters - September 2018 (sps.nhs.uk) Copy of a Patient Information Leaflets, contact the pharmacist or go to: http://www.medicines.org.uk/emc/
Summary	This document sets out Nottinghamshire Hospice's policy on the administration of medication. It aims to: • Ensure safe and effective systems for the administration of drugs to our patients throughout our community services. • Ensure that all staff involved in administration of drugs are competent and appropriately trained to undertake these tasks • Provide a sensitive response to medication errors through a comprehensive review and assessment process taking full account of the context and circumstances surrounding the incident to facilitate a no blame culture of learning. • Ensure the health and wellbeing of patients and staff.
This policy replaces	CS008

VERSION CONTROL		
Status	**Date**	**Reviewed date**
Original policy written by Betsie Van Niekerk, Hospice Physician	May 2014	May 2016
Policy reviewed by Donna Payne, Director of Operations	Aug 2016	
Policy reviewed by Jo Polkey, Director of Care Services	Feb 2017	
Approval via Quality and Safety Group	Feb 2017	
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Policy reviewed by Kate Martin, Palliative Care Practice Lead	March 2021	
Approval via Quality and Safety Group Published on website	July 2021	July 2024

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1. INTRODUCTION

This document sets out Nottinghamshire Hospice's policy on the administration of medication in the GRACE unit. It aims to:

- Ensure safe and effective systems for the administration of drugs to our patients attending the GRACE unit.
- Ensure that all staff involved in administration of drugs are competent and appropriately trained to undertake these tasks
- Provide a sensitive response to medication errors through a comprehensive review and assessment process taking full account of the context and circumstances surrounding the incident to facilitate a no blame culture of learning.
- Ensure the health and wellbeing of patients and staff.

2. POLICY SCOPE

This policy applies to all clinical staff involved in any form of medication administration or management at Nottinghamshire Hospice GRACE Unit.

All Registered Nurses are personally accountable for their own Professional practice and awareness of the contents of this policy. It is the overall responsibility of the Director of Care Services to ensure that this policy is implemented.

All patients will be encouraged to self-medicate but in exceptional circumstances medicines can be administered by a Registered Nurse.

3. LEGISLATION

3.1 Health and social Care Act 2008 (Regulated Activities) Regulations 2014.

Care Quality Commission (CQC) are required to regulate and inspect the hospice services to ensure that it meets its statutory responsibilities to provide people with safe, effective and high-quality care, and to encourage them to improve.
Fundamental standards are used by the CQC to ensure that the care a person receives does not fall below these standards for Regulated Activities.
The services are inspected under the Key Lines of Enquiry (KLOE) to ensure that they are

- Safe
- Effective
- Caring
- Responsive
- Well led

Regulation 12:
Medication management falls within Regulation 12 (Health and Social Care Act 2008): The intention of this regulation is to prevent people from receiving unsafe care and treatment and prevent avoidable harm or risk of harm. Providers must assess the risks to people's health and safety during any care or treatment and make sure that staff have the qualifications, competence, skills and experience to keep people safe.

3.2 Mental Capacity Act (MCA 2005) and Consent to treatment.

Regulation 11:
Care and treatment of service users must only be provided with the consent of the relevant person. Where a person lacks mental capacity to make a decision, or give consent, staff must act in accordance with the Mental Capacity Act 2005. Discussions about consent must be

held in a way that meets peoples communication needs. This may include the use of different formats or languages and may involve others such as a speech language therapist or independent advocate. Consent may be implied and include non-verbal communication such as sign language or by someone rolling up their sleeve to have their blood pressure taken or offering their hand when asked if they would like help to move. Consent must be treated as a process that continues throughout the duration of care and treatment, recognising that it may be withheld and/or withdrawn at any time.

3.3 Other relevant Legislation.

Misuse of Drugs Regulations 2001
Human Rights Act 1998

4. LEGAL LIABILITY

Nottinghamshire Hospice will generally assume vicarious liability for the acts of its staff, including bank, agency staff and those on honorary contract. However, it is incumbent on staff to ensure that they:

- Have undergone any appropriate training and assessment of competence identified as necessary under the terms of this policy or their professional body.
- Have been fully authorised by their line manager to undertake the activity.
- Fully comply with the terms of any relevant Hospice policies and/or procedures at all times
- Only depart from any relevant Hospice's guidelines when such a departure in the judgment of the responsible clinician it is fully appropriate and justifiable; such decision to be fully recorded in the patient's notes.

5. RESPONSIBILITIES

5.1. Board of Trustees

Trustees are responsible for ensuring adequate resources are made available to facilitate effective medicines management.

5.2. Quality and Safety Group (Trustee led)

On behalf of the Board of Trustee this group is tasked with;

- Monitoring standards in relation to medicine management and providing quality assurance to the Trustee Board.
- Ensuring any issues relating to medicine management have been handled effectively and are appropriately monitored.
- Reviewing trends, analysis and discussing any concerns regarding medication errors.
- Reporting back to the Trustee board

The terms of reference for this group are agreed with the Trustee Board.

5.3. Chief Executive Officer

Has overall statutory responsibility for the safe and secure handling of medicines and the appointment of a Controlled Drugs Accountable Officer. The day to day management of this is devolved to the Director of Care Services who is also the Registered Manager.

5.4. Director of Care

Has the responsibility for ensuring the hospice has the necessary clinical policies and procedures in place for the safe management of medicines
The responsibility for the role of Controlled Drugs Accountable Officer.

6. ACCOUNTABILITY FOR REGISTERED NURSES

Registered Nurses (RN) are required to follow the Royal Pharmaceutical Society (RPS) Professional Guidance on the Administration of Medicines in Healthcare Settings (2019) and the Royal College of Nursing (RCN) Medicines Management – An Overview for Nursing (2020)

The guidance is aimed at registered healthcare professionals; the principles can be applied in any healthcare setting in line with principles of best practice.

Registered healthcare professionals who administer medicines are accountable for their actions, non-actions and omissions, and should exercise professionalism and professional judgement at all times.

Registered Nurses administering medicines should ensure they are appropriately trained, assessed as competent and meet relevant professional and regulatory standards and guidance.

All staff involved in administration of drugs should ensure they are familiar with and comply with this policy.

Prior to administering a medication the RN must:

- be certain of the identity of the patient to whom the medicine is to be administered.
- check that the patient is not allergic to the medicine before administering it and has no new allergies identified prior to each administration.
- know the therapeutic uses of the medicine to be administered, its normal dosage, side effects, precautions and contra-indications.
- be aware of the patient's care plan; consider patients' mental capacity and ability to consent.
- check that the prescription or the label on medicine dispensed is clearly written and unambiguous. Any ambiguities or concerns should be raised with the prescriber or a pharmacy professional without delay.
- check the expiry date (where it exists) of the medicine to be administered.
- check that the dose has not been administered by someone else e.g. a carer.
- make a clear, accurate and immediate record of all medicine administered, intentionally withheld or refused by the patient, ensuring the signature is clear and legible.
- Where medication is not given, the reason for not doing so must be recorded.
- RNs may administer with a single signature (without a second check) any Controlled Drugs (CD), prescription only medicine (POM), general sales list (GSL) or pharmacy (P) medication where they feel competent to do so. Where a complex calculation is required a second check where possible is advised.
- Ensure that appropriate Personal Protective Equipment is being worn.

7. RISK MANAGEMENT

Risk assessment should be carried out in accordance with the hospice risk management policy to determine the potential risks to patients and staff.

In addition to the acknowledged side effects of medicines and drug reactions in some patients, some drugs if misused have additional inherent risk to staff handling them e.g. CD transdermal patches. If applicable a COSHH assessment will also be required.

An adverse drug reaction should always be reported immediately, to ensure that the appropriate action is taken. The patient's GP should always be informed and a serious adverse reaction should be reported via the Yellow Card Reporting Scheme. https://yellowcard.mhra.gov.uk

Anaphylaxis is unlikely to occur within the medicines administered by the Hospice Registered Nurses however should this happen a first aid and 999 response should be made subject to severity.

Safety alerts from the MHRA/CAS (Medicines and Healthcare products Regulatory Agency/ Central Alerting system) are monitored and disseminated appropriately to staff for action.

The Director of Care Services must review information on medication errors and produce quarterly report for the Quality and Safety Group this will include trends and analysis and discuss any concerns regarding medication errors.

8. MEDICINE PROCUREMENT

Nottinghamshire Hospice does not retain stock of prescribed medicines. This includes oxygen which is not stored on site unless specifically identified on a named person basis. There is an external oxygen storage area if required.

9. HOMELY REMEDIES

A homely remedy is non-prescription medicine that is available on the General Sales List in community pharmacies. They can be used in a care environment for the short-term management of minor, self-limiting conditions such as headaches, cold symptoms, cough, mild diarrhoea or occasional pain.

Nottinghamshire Hospice does have a unit-based small, homely remedy supply of paracetamol for administration by registered nurses.

10. ADMINSTRATION OF MEDICATION

All patients will be encouraged to look after and administer their own medication whilst at the GRACE unit. Self-administration of medication is considered by Nottinghamshire Hospice to be an important aspect of retaining ownership of a patients care. Patients who take responsibility for their own medication can increase independence, confidence and compliance. The Nursing and Midwifery Council supports and welcomes the self administration of medication within safe, secure parameters.

An Assessment of Medication Administration (Appendix 1) will be carried out at initial appointment or attendance at the unit by a Registered Nurse in conjunction with the patient and stored in the patient's records on SystmOne. It will be reviewed at a minimum of three months.

RNs are responsible for the initial and continued assessment of patients who self-administer and must recognise and act upon changes in a patient's condition that may affect their ability to self-administer. Healthcare Assistants (HCAs) and Therapy Assistants (TA) working in the hospice cannot administer medications, but they can assist or prompt a patient to take their medications. Assisting a patient is defined by 'lending a helping hand' where someone has capacity and needs the physical help to assist them to take the medication. A prompt will be when someone requires reminding that their medication is due. (Further information can be found in the HCA handbook).

When a patient has been assessed as competent to self-administer they can:

- Use one of the medication lockers to store their medicines or
- Keep their medication with them.

When a patient uses a medication locker they will retain the locker key and place it in the locker when removing their drugs before leaving at the end of the day.

Where a patient who is attending the GRACE unit has been assessed as unsuitable for self-administration of medication (e.g. lack of mental capacity, reduced physical function) a RN will be responsible for storage and administration of medication for the duration of the patient's visit.

- The RN will accept the medication on arrival and place it in a locker or CD cupboard. The RN will be responsible for the key to the locker and record the locker number and patient name on the white

board.
- The RN will document administration of each medication, including time and dose, on SystmOne.

When controlled drugs (CD's) require storage on the GRACE unit for administration during a patient's visit by a RN; the RN will hold responsibility for the controlled drug cupboard keys throughout the duration of the shift. Controlled drugs in the hospice will be stored in the double-locked Controlled Drug cupboard. At no point should the drugs be left unattended unless they are locked in the CD cupboard. The RN will accept the drugs at the time of arrival and will be recorded into the register on a named patient basis, on a single page per drug. The RN is responsible for returning the controlled drug to the patient before they leave the GRACE unit. If the patient lacks mental capacity to take charge of their medication, it will be handed to the escort taking the patient home/or carer.

The date must be recorded on the container for all creams, gels and eye/ear drops when first opened and applied. Such medicines should be discarded four weeks from being first opened, unless otherwise advised on the dispensing label.

Hospice staff should never crush medication before administration unless specially advised to because it may not be covered by the drug manufacturer's license.

11. TRANSCRIBING OF MEDICATION

Transcribing is the copying of previously prescribed medicine details to enable their administration. It is not expected that this practice will occur within the GRACE unit.

12. SECURITY

Medicines will remain the property and responsibility of the patient.

In exceptional circumstances staff can accept responsibility for the safe keeping of medicines while a patient is being transferred to and from the hospice or on the GRACE unit as described in section 10.

13. ADMINISTRATION OF MEDICATION VIA A SYRINGE DRIVER

The use of a portable battery-operated syringe driver for subcutaneous medications is a now well-established technique in palliative care. The McKinley T34 is the syringe driver used in Nottinghamshire. Any other make of syringe driver should be reported to the Registered Nurse.

***It is unlikely but possible that there will be patients attending the GRACE unit with a syringe driver*.**

GRACE unit staff cannot set up, alter or reload a syringe pump. This must always be carried out by a District Nurse (DN). The RN can act as the second person for these processes if they are suitably trained.

Where a patient attends the GRACE unit with a syringe driver staff will:
- Monitor the needle site and to identify any problems promptly and inform the RN as soon as possible.
- Monitor the battery but will need to contact the DN to replace and restart the pump if it is indicated.
- Monitor if the line is blocked or kinked and not delivering the medication appropriately or on time.

Any issues relating to the syringe driver will be referred through to the District Nursing team. Further information relating to syringe pumps can be found in Appendix 2.

14. LONG TERM OXYGEN THERAPY (LTOT)

Oxygen is classed as a drug and requires prescribing in all but emergency situations. Oxygen is prescribed on a Home Oxygen Order Form (HOOF) by a specialist practitioner and is supplied by BOC Healthcare.

Failure to administer oxygen correctly can result in serious harm to the patient. All patients who require supplementary oxygen receive therapy that is appropriate to their clinical condition and in line with national guidance (Thorax, BTS Guidelines for LTOT June 2015, Vol.70, Supplement 1).

If a patient is identified that they require LTOT to attend the GRACE unit the Assessor will:

- Ascertain whether the patient has ambulatory oxygen equipment and/or a portable oxygen concentrator.
- Check SystmOne for the HOOF form to establish the current prescription of Oxygen (L/min) and the duration it is required for from the prescriber.

If the patient does not have portable oxygen equipment then the assessor would need to call the Integrated Respiratory Team on 0115 883 3622 and arrange an assessment for this prior to booking the patient an appointment at the GRACE Clinic.

- Patients are responsible for attending with their own supply of oxygen for a visit to the GRACE unit.
- Oxygen therapy should be recorded on SystmOne as part of the care given for the visit to the GRACE unit.
- The documentation should include the amount of oxygen (L/min) and the duration it was administered for during their time on the GRACE Unit.

15. COVERT ADMINISTRATION OF MEDICATION

Covert administration is when medicines are administered in a disguised format. The medicines could be hidden in food, drink or through a feeding tube without the knowledge or consent of the person receiving them. As a result, the person is unknowingly taking a medicine.

The Hospice would only support covert administration of medication following specific advice of a General Practitioner/Non-medical prescriber where the person has been deemed not to have capacity and this is clearly documented within the persons medical and nursing records including a risk assessment and mental capacity assessment.

Every person has the right to refuse their medicine, even if that refusal appears ill-judged to staff who are caring for them.

Covert administration is only likely to be necessary or appropriate where:
“a person actively refuses medication that is deemed essential to their health and wellbeing and the said person lacks the capacity to understand the consequences of their refusal”. Such capacity is determined by the Mental Health Capacity Act 2005 and must have been agreed at a MDT meeting.

Covert administration of medicines should be a last resort. You must make reasonable efforts to give medicines in the normal manner. You should also consider alternative methods of administration. This could include, for example, liquid rather than solid dose forms.

16. STORAGE OF MEDICATION IN A FRIDGE

Some medicines must be stored in a refrigerator as indicated on the packaging, or Patient Information Leaflet (PIL) supplied with medication.

If medication needs to be refrigerated (e.g. insulin), ideally there should be a separate, secure, lockable fridge that is only used for medicines.

At present the hospice does not have a medicines fridge. This position will be reviewed if the need for a medicine fridge changes.

17. MEDICATION ERROR

Hospice staff that make an error must take any action to prevent any potential harm to the patient and report as soon as possible and document their actions.

17.1. Immediate Actions

The welfare of the patient is paramount and an assessment of the patient's condition must be undertaken immediately to determine any actions needed to maintain patients' life and comfort.

If appropriate seek advice as needed from Line Manager, GP, DN or Pharmacist regarding the possible impact of medication error.

The error must be reported immediately to the lead GRACE unit clinician and the individual's Line Manager.

The patient and or their carer must be told about what has happened and the action being taken as soon as it is reasonable to do so. Duty of Candor must be considered based on the error.

Ensure the incident is fully documented in the patient records on SystmOne and the GP is made aware.

17.2. Medium Term Actions

Individual to complete an incident report form, providing as much information as possible, this could include a copy of any relevant charts.

The Line Manager must ensure the incident report form is completed and escalated as appropriate e.g. to the Director of Care. It is essential this is carried out expediently to allow for a timely investigation in the event of the more serious events.

The Director of Care and HR Manager will discuss the need to suspend those involved from administering medicines if there is a risk of further incidents or harm to the patients or staff.

The Director of Care will decide the level of investigation and who the investigating officer is. Investigations will be a systematic review of the root causes of the error with the staff involved using the Root Cause Analysis checklist and Critical Incident Reflective Exercise for Medication Errors (Appendix 6 & 7)

Following investigation, a report will be produced for the Director of Care to review and determine the next steps.

- Any learning will be shared with the individual staff member, wider hospice clinical team and cascaded to the DN service if appropriate.
- Any agreed actions will be reviewed and learning monitored as part of the supervision process confirming positive change.
- Hospice staff who have acted inappropriately will be managed in accordance with the Hospices performance management and disciplinary process.
- All drug incidents will be included in the bi monthly reporting to the Quality and Safety Group.

- This policy will be reviewed for any ambiguity or error and updated as necessary.

18. EDUCATION AND TRAINING

All Registered Nurses are personably accountable for their own practice and therefore need to ensure they are competent to administer medication in accordance with the **Professional guidance on the administration of medicines in healthcare settings**, co-produced by the Royal Pharmaceutical Society (RPS) and Royal College of Nursing (RCN).

All Registered Nurses will be expected to undertake an annual assessment of medication management. This will include a calculation test. Confirmation that all RNs have completed this assessment will be presented to the Quality and Safety Group annually.
Syringe pump training is also mandatory for RN's every 2 years.
Administration of medication via an enteral feeding tube should only be performed by RN's who have undertaken appropriate training to be deemed competent.
HCA's in Hospice at Home are provided with guidance on their role in supervising and assisting with medicines as part of their induction and update training.

Where staff are not found capable of competent medication management relevant actions will be discussed between the individual and their line manager and if necessary managed through the Capability Policy and Procedure.

19. AUDIT AND REVIEW

Compliance with this policy will be monitored through the incident reporting system and through reports of training and assessment completion.

The Quality and Safety Group will receive a bi-monthly report for all medication errors. Lessons learnt and best practice identified in this report will be shared across the organisation.

20. RELATED NATIONAL DOCUMENTS AND REFERENCES

1. Department of Health Misuse of drugs legislation website (2016) https://www.health-ni.gov.uk/articles/misuse-drugs-legislations
2. National Patient Safety Agency (NPSA) Safety in doses: medication safety incidences in the NHS (2007). NRLS | 0486 | Safety in doses PSO report (vctms.co.uk)
3. NMC Standards for Medicines Management (2020) https://www.nmc.org.uk/standards/
4. Royal Pharmaceutical Society: Professional Guidance on the Administration of Medicines in Healthcare Settings. January 2019.
5. http://www.medicines.org.uk/emc/ accessed 20/6/2015
6. British Thoracic Society Guidelines on LTOT Guideline update: The British Thoracic Society Guidelines on home oxygen use in adults | Thorax (bmj.com)
7. British Association for Parenteral and Enteral Nutrition. Accessed May 2018www.bapen.org.uk
8. Quality statement 6: Covert medicines administration | Medicines management in care homes | Quality standards | NICE

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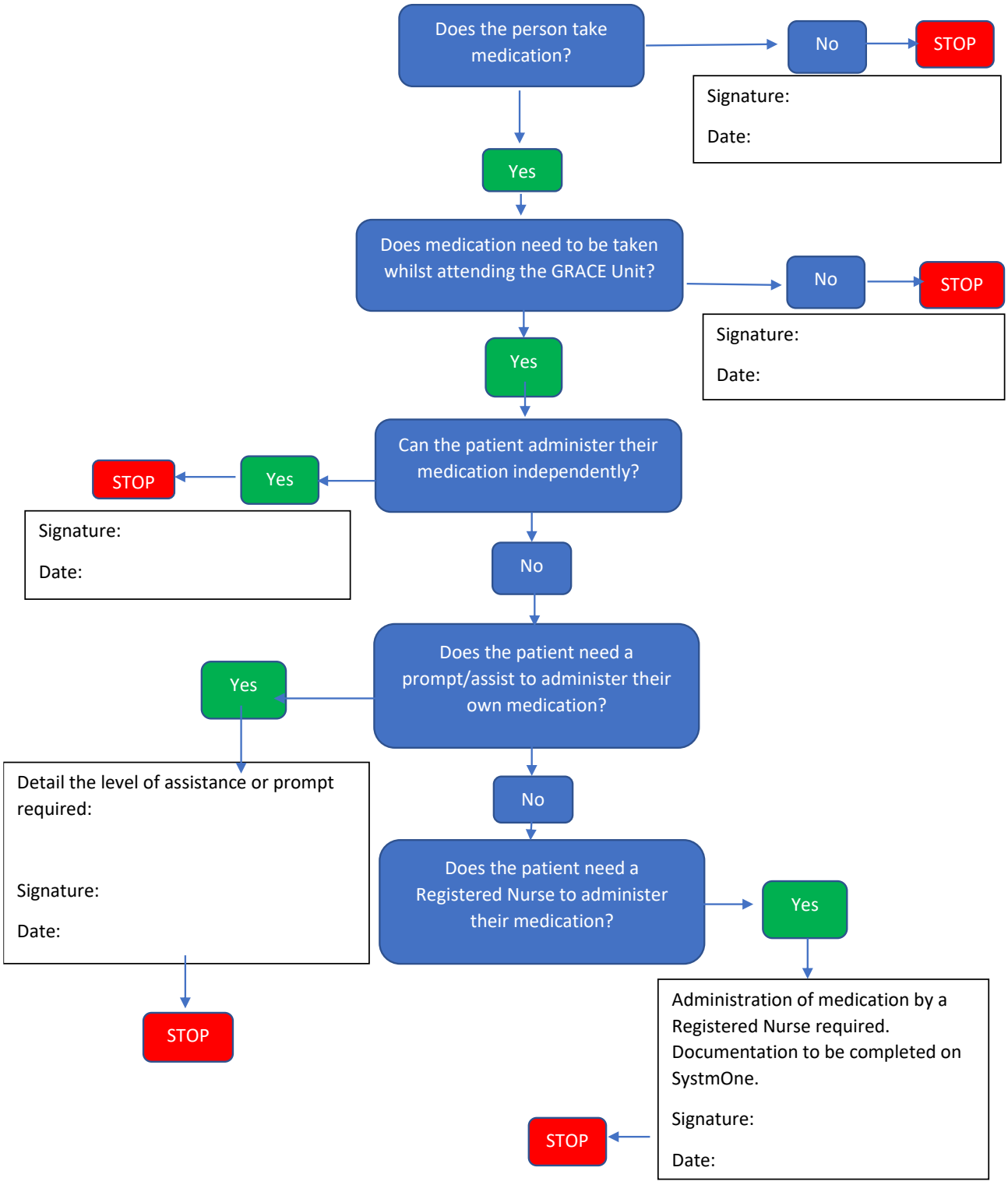
Assessment for Administration of Medication within GRACE Unit



Appendix 2

ADMINISTRATION OF MEDICATION VIA SYRINGE DRIVER

Indication for Use of a Syringe Driver:

When the oral administration is no longer suitable 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 following are accepted reasons for considering CSCI administration:

- Persistent nausea and vomiting
- Dysphagia
- Mouth/throat/oesophageal lesions
- Intestinal obstruction
- Malabsorption of oral medication
- Poorly controlled symptoms with oral medication due to dose limiting side effects e.g. nausea and drowsiness
- Profound weakness when patients are unable to swallow oral medication.
- Semi-comatose or comatose patients

Advantages of continuous SC administration

There are a number of advantages of SC administration for patients these are:

- Avoids the need for repeated injections.
- Suitable for patients who are drowsy, comatose or semi-comatose.
- Avoids the administration of excessive tablets.
- Can use a combination of drugs for the control of multiple symptoms.
- Easier to maintain plasma drug levels preventing peaks and troughs, which can occur with intermittent injections or oral medication.
- Mobility and independence can be maintained as the pump is portable, lightweight and compact (Dickman et al, 2005).
- Administered over 24 hours, which reduces the number of times drugs are administered.
- Winged infusion sets can be left in for 72 hours or longer (maximum 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.

Disadvantages of continuous SC administration

Using SC administration is a positive experience for most patients however some patients can experience negative effects. Staff should look for and monitor the following:

- Possible inflammation or irritation at infusion site
- Possible SC site leakage
- Possible allergic reaction to either needle or medication or dressing (rare occurrence)
- Patient and carer fear that a syringe pump is the last resort (Evans and Palmer, 1998)
- Patient may become psychologically dependent on the device

Management of potential hazards

The McKinley T34 must NOT be immersed in water.

Maintenance and cleaning should be in accordance with the manufacturer's guidance, no alcohol based wipes to be used to clean the pump.

Report McKinley T34 syringe pump failure to the District Nursing Service ASAP to ensure the device can be returned to the MESU immediately.

Combination of Drugs
If a combination of drugs is prescribed, compatibility should be checked before commencing the syringe driver for the first time.

Many combinations have been successfully used in clinical practice that does not have supporting laboratory data and are now accepted practice.

Regular monitoring of the infusion and its contents is necessary to detect clouding, incompatibility, crystallisation or colour change.

A maximum of 4 drugs should be used in one syringe. The core four drugs from the Anticipatory Prescribing policy are all compatible and all 4 can be used if clinical needs dictate.

Symptom management

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 hospice staff must assess and administer any prescribed PRN medication to manage the symptoms until the pump reaches its therapeutic level.

Drug Administration Using the McKinley T34 Syringe Pump

See Instructions for use of the McKinley T34 (Appendix 11)

Responsibility of individual practitioners

Nottinghamshire Hospice advises that Syringe Drivers are initiated by the District Nursing Service with Registered Nurses employed at the Hospice acting as the second signatory only.

It is the responsibility of each individual practitioner who administers the medications via the syringe pump to ensure that any medications prescribed are suitable for use in the syringe pump. It is also important to be aware of:

- Compatibilities with other drugs and diluent.
- Exposure to direct sunlight as this can initiate a chemical reaction which can result in distortion in colour of the contents of the syringe.
- Infusions via a syringe pump should not exceed 24 hours.
- Avoiding high concentrations of single or combinations of drugs.
- The need for visual checks of the contents of the syringe and line for any evidence of precipitation, cloudiness or crystallization. Should this happen the infusion should be stopped and an incident form completed.
- The need to check the condition of the injection site for signs of redness, swelling, or bleeding. With any signs of reaction the needle should be changed at once.

It is important for hospice staff (RN and HCA) to record in the patient's care records any advice provided to them, stating the time and by whom.

Drugs Commonly Used For Continuous Subcutaneous Administration

- Morphine (CD)
- Midazolam (CD)
- Levomepromazine
- Hyoscine Butylbromide (Buscopan)
- Diamorphine (CD)
- Oxycodone (CD)
- Cyclizine

- Metoclopramide

It is advisable to refer to the Palliative Care Formulary 5 or Palliative Care Pocket Book 3 for suggested doses or alternative medications or contact: Hayward House on 0115 9691169 ext 57079

Diluent

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

Greater dilution of syringe pump contents reduces the risk of drug incompatibility and injections site reactions

If the patient develops a problem with site reactions please contact End of Life care team on 0115 8834787 or Hayward House 0115 9691169 Ext 57079 for advice

Prescription

The prescription form, DNS1 SP must be viewed when medications are being administered via a syringe pump.

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

Controlled drugs must be written in words and figures for clarity.

It is recommended that the drugs from the policy for the Anticipatory Supply of Palliative Care Medications for Adults are supplied for any additional bolus 'as required' medications.

The syringe pump contents should be reviewed and titrated if any additional PRN medications are regularly administered.

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

Troubleshooting the McKinley T34

The syringe pump has a series of alarms and alerts. The display will always indicate the problem and prompt what action is required.

Hospice staff should check and inform patients/carers of the alerts/alarms and the actions they need to take and who to contact (See Table 1) and McKinley T34 Syringe Pump Monitoring Form (Appendix 13)

There are two alert modes indicated by an intermittent alarms and the pump will continue to deliver the infusion

- Low battery - indicated by two beeps and two minutes silence which will start when there is approximately 30 minutes of battery life remaining.
- Program nearly complete – indicated by three beeps and two minutes silence this will start with around 15 minutes of infusion remaining

There is a continuous intermittent alarm that will continue until the YES key is pressed (to mute the alarm) or the problem is rectified. The pump will stop infusing and the red LED will be visible until the alarm fault is rectified. Table 1 below shows the types of alarms and the actions required to rectify the problem.

Hospice staff as part of their induction will be provided with the contact numbers for the local DN teams and other relevant healthcare professionals.

Table 1: Alarm Displays and Actions

Alarm	Possible Cause	Action

Syringe empty	Actuator has reached minimum travel position	End of program – switch off pump Load new infusion as soon as possible
Occlusion	Patient cannula/line blocked, kinked or clamped	Remove occlusion and resume infusion If occlusion then a new cannula/line must be used If clamp in situ then remove
Syringe Displaced	Syringe has been displaced or removed	Check that syringe is seated correctly and resume infusion
Pump paused too long	Pump left or no keys depressed for 2 minutes	Start infusion, continue programming or switch off
Near End Program	15 minutes left to end of infusion	Prepare to change syringe or switch off
End Program	Infusion complete	Switch pump off and commence new infusion as soon as possible
Low Battery	Battery almost depleted (30 minutes left)	Prepare to change battery as soon as possible
End Battery	Battery depleted	Change battery

Appendix 3

MCKINLEY T34 SYRINGE DRIVER MONITORING FORM

SET UP			
Patients Name	**Date of Birth** / /	Prescription Number	
Date:	Syringe Pump Asset Number : *Please check pump service date*		

MONITORING

Date	Time	Syringe Change Volume		Line Primed	Battery Status (%)	Infusion Rate (mls/hr)	VTBI	VI	Time remaining	Appearance of line, contents	Site Condition	2 spare batteries in situ	Action	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

Appendix 4

ADMINISTRATION OF MEDICATION VIA AN ENTERAL TUBE

The practice of administering drugs via enteral feeding tubes has become more prevalent and the range of enteral feeding tubes and medicines has increased in recent years. Enteral feeding tubes are designed to provide access to the lumen of the stomach or jejunum to bypass any dysfunction or obstruction, reduce discomfort or remove the need for patients to actively eat. A RN must be deemed competent with the care and management of an an enteral tube in order to adminste ra drug via this route.

The lumen of a narrow enteral tube has the potential to occlude and once occluded can be difficult to unblock, which may result in the tube needing to be replaced in hospital.

Some enteral tubes are not designed for long-term feeding or medicine administration. It is therefore important when caring for a patient with an enteral feeding tube to know the type of material the tube is made of and any restrictions in its use.

Documentation must clearly state the type of tube and the abbreviation used should be standardized to avoid confusion, for example ‘nasogastric tube’ (NG) or Percutaneous Endoscopic Gastrostomy tube (PEG) or nasojejunal (NJ).

It is important to know where the tip of the enteral feeding tube lies and therefore where the medication will be administered and absorbed. The position of the tip may affect the type of prescribed feed and medication that can be used and the absorption of some drugs.

The route stated on the patient’s SystmOne care record must match the type of enteral tube; any discrepancies must be raised and discussed to gain clarity, before any drug is administered.

Hospice staff must never assume that a drug can be given via a feeding tube, they must always check.

> *NB: In order for the drug to be absorbed correctly and be effective in managing symptoms it must be delivered to the correct part of the gastrointestinal tract. For example, digoxin is primarily absorbed in the stomach; therefore administering digoxin via a jejunal tube may significantly reduce the rate of absorption.*

Hospice staff must check if a liquid drug preparation is suitable for enteral tube administration.

> *NB: Not all liquid preparation are safe for administration via a enteral tube.*

Hospice staff must monitor the impact on the patient after administration of medication and communication any side effects to the prescriber.

> *NB: The osmolality of some drugs may be high (causing fluid to be drawn into the gastrointestinal tract) and some preparations contain sorbitol. Both of these may cause diarrhoea and impact on drug absorption. If the drugs do not appear to be working or the patient experiences diarrhoea, the pharmacist and dietitian should review the patient’s medicines and feeding regime.*

Hospice staff must follow administration guidelines carefully because enteral feeds may bind with some drugs and stop their absorption. For example, it is important to stop the enteral feed for two hours before phenytoin is administered via an enteral feeding tube and for two hours afterwards.

Before and after administration, the tube should be flushed with water to prevent the drug sticking in the tube, binding to the feed and dramatically reducing effectiveness.

Hospice staff should never add drugs directly to a feed container unless specially instructed to do as this can lead to contamination and can destabilise the feed or the drug and lead to chemical interactions.

Hospice staff should never crush medication before administration unless specially advised to because it may not be covered by the drug manufacturer’s license.

Hospice Staff are recommended to follow the British Association for Parenteral and Enteral Nutrition (BAPEN) guidelines. Medications (bapen.org.uk)

PROCEDURE FOR DRUG ADMINISTRATION VIA AN ENTERAL FEEDING TUBE	
Preparation before administration of any medicines	
ACTION	**RATIONALE**
Wash hands and wear gloves and apron including mask if appropriate.	To reduce the risk of cross infection
Check the site and re-secure and re-fix any tape holding the enteral feeding tube in position if loose;	To reduce the risk of the line falling or being pulled out accidently
Close any ports on the enteral tube to ensure there is an airtight seal. Check if a connector is needed to join the syringe to the tube, such as a PEG tube connector	To reduce the risk of air entering the tube and drugs leaking out during procedure To ensure a correct fit and reduce the risk of spillage & contamination
Check the position of the tube as described in the care plan. NB; The position of a PEG or jejunostomy can be assessed by checking that the length of tube outside the body remains constant and the suture remains intact. Confirm that the patient is not experiencing undue pain or discomfort	To ensure the tube is in the correct position and reduce the risk of medicine being administered into the wrong place, thus reducing their effect on symptom management. To minimise risk of harm to the patient as it is possible To ensure patient comfort
Flush with 30–50ml of water using a 50ml oral, enteral or catheter-tipped syringe. Do not use syringes designed for intravenous use.	To check the enteral feeding tube is patent Oral, enteral and catheter-tipped syringes are not compatible with intravenous devices and their use reduces the risk of the drug being accidentally administered via the intravenous route.
If the tube is blocked, attempt to unblock it without using excessive force. If unsuccessful seek specialist advice.	Excessive force may cause the enteral tube to split The enteral tube may need to be replaced
Administering the drug via an enteral feeding tube	
Check prescription for the drug dose, route and site of administration.	To ensure that the patient gets the right drug, the right dose, by the right rout at the right time.
Prepare the required dose of the liquid drug into an appropriate syringe and sufficient water for flushing and place the syringe in a clean receiver.	Being prepared avoids stopping administration before completion
Tablets must only be crushed under the guidance of a prescriber or pharmacist. Crush and dissolve tablets in accordance with direction provided NB: A tablet-crushing syringe (available from the pharmacy) or pestle and mortar can be used. Crushed tablets can be added to 30ml of water and dissolved.	To ensure the patient gets the right therapeutic dose Pharmacists advise on best ways to crush medicines to ensure the integrity of drug is maintained. Dissolving in water prevents the medicine sticking to the sides of the enteral tube

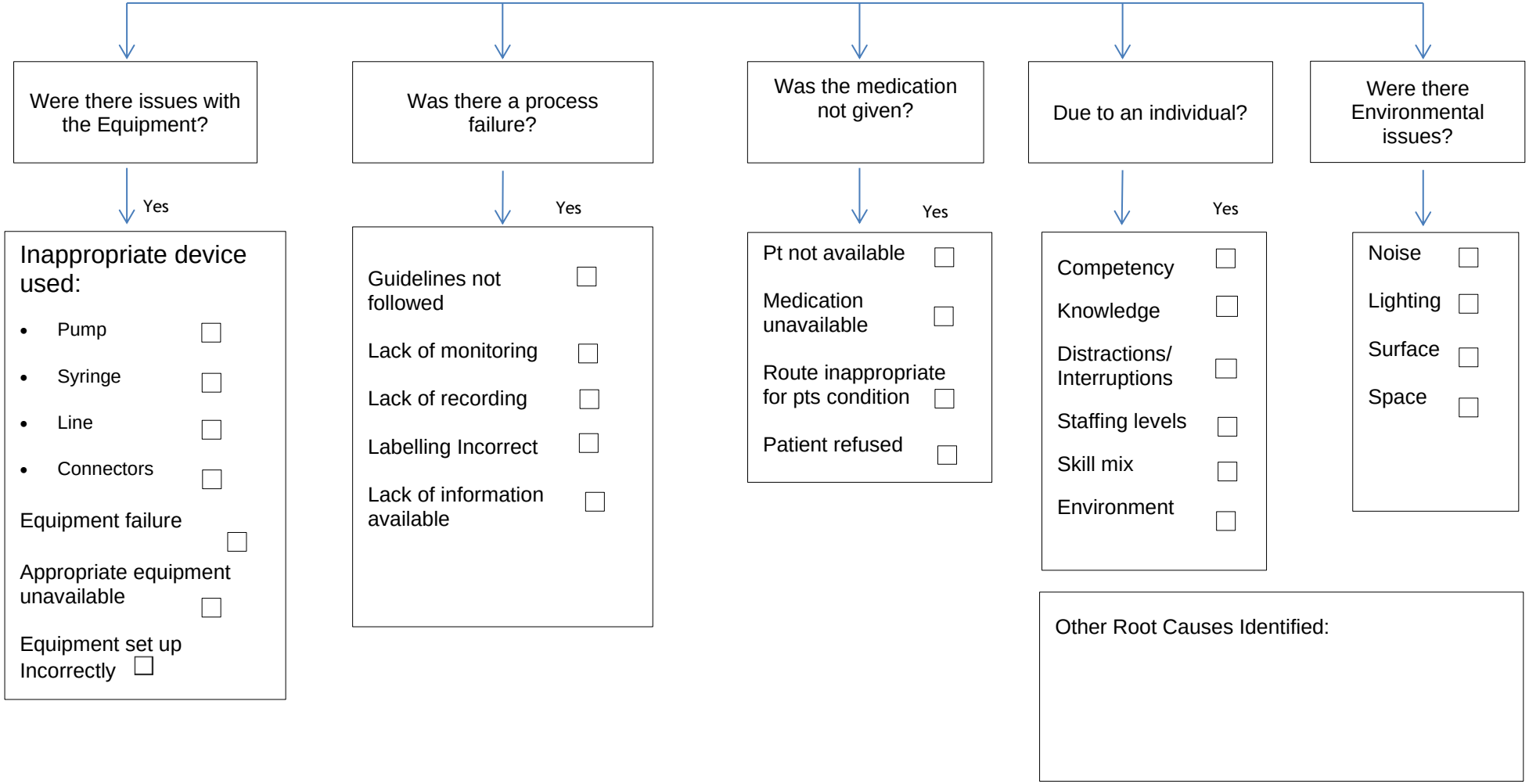
Tubes should be flushed before, during (especially if the suspension is thick, for example lactulose), and after drug administration Always check if patients with renal and cardiac disease, are on restricted fluid levels	To prevent interactions between the drugs and feed and to stop thick suspension blocking the tube. Patients with renal function often have their fluid restricted to reduce effort on the heart and kidneys.
Check the patient's identity. Attach the syringe to a port on the enteral feeding tube. Ensure there is an airtight connection between the syringe and enteral tube, and administer the flush and drugs.	To ensure you ah the right person To ensure good techniques and reduce the risk of spillages and contamination.
Before finishing check that the connector is clean and dry	Prevents bacteria growing dirt around the connector and to check the connection is closed.

Appendix 5

Nottinghamshire Hospice
adding life to days

ROOT CAUSE ANALYSIS CHECKLIST FOR MEDICATION ADMINISTRATION ERRORS

Please use this checklist to undertake a systematic review of the error: It will help pinpoint where things went wrong and identify areas for action/improvement

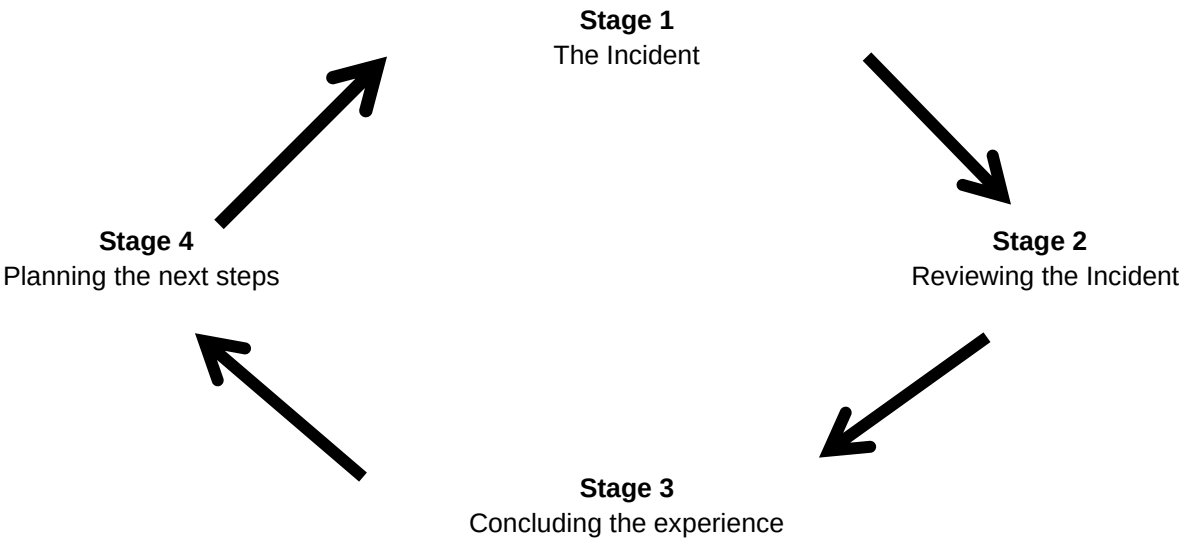


Appendix 6

CRITICAL INCIDENT REFLECTIVE EXERCISE FOR MEDICATION ERRORS

This document has been developed to enable practitioners to have a process of learning from incidences that they have been involved in. You can complete this form in conjunction with your manager and the reflection and learning can be used in supervision and appraisals.

The Learning Cycle



The Incident Reflective Exercise is in three parts:

Part A: You write a factual statement about the incident on Nottinghamshire Hospice's incident forms available from the Director of Care. This procedure will follow the incident process of Nottinghamshire Hospice.

Part B: Not Compulsory – It is an informal learning exercise for practitioners to reflect on the incident and to discuss any issues with their line manager.

Part C: Is an action plan that arises from the incident and can be kept as part of practitioners' appraisal documentation to be reviewed and used in supervision and appraisal meetings as appropriate.

Part B: Reflection on the Incident Not compulsory (To help the individual reflect on the incident, how practice can be improved and lessons learned)

Write a reflective account of the events leading up to, during and after the incident

Reflecting on the incident:

- What was I trying to achieve? Why did I act as I did?
- What internal/external factors influenced my actions?
- What sources of knowledge did or should have influenced my actions?
- What were my feelings at the time?
- What are my feelings now? Are there differences? Why?
- What were the effects of what I did or did not do?
- What 'good' emerged from the situation e.g. self/others?
- What troubles me now (if anything)?
- What would I have done differently/better?

(Write your reflection here)

Date you completed the reflection:
……

(Continue on another sheet if necessary)

Part C Action Plan arising out of the incident (not compulsory)

List your learning points from the incident, with an action plan of what you need to concentrate on or do differently as a result Looking to the future: • What needs to happen to alter the situation? • What are you going to do about the situation? • What might happen if you decide not alter anything? • What information do you need to face a similar situation again? • What are your best ways of getting further information about the situation should it arise again? • Have I taken effective action to support myself and others as a result of this experience? • Identify anything that may hinder your action plan and how you can tackle this.
(Write your learning points here)

Learning Need	**Actions to address learning Need**	**Progress review**

Name of person completing the form:		**Signature:**		**Date:**
Name of person reviewing the Form:		**Signature:**		**Date:**