Harrogate and District NHS
NHS Foundation Trust

Clinically Assisted Hydration in Palliative Care

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1	May 2016	New Guideline based on Saint Michael's Hospice Clinically Assisted Hydration Nov 2015.	**May 2018**
2	September 2017	Updated due to changes to the Community Care Teams	**September 2019**
3	September 2019	Reviewed and recommended fluid switched from 0.9% Sodium Chloride to 0.18% Sodium Chloride and 4% Glucose	**September 2021**

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INTRODUCTION

This guideline covers Harrogate and District NHS Foundation Trust (HDFT) (hospital and community setting) and is based on Saint Michael's Hospice Guidelines for Clinically Assisted Hydration (2017). Clinically assisted hydration (CAH) is the term used for the medical provision of fluid non-orally. This guideline supports the use of subcutaneous fluids in palliative and end of life care. It has been written in response to the following:

- 'One Chance to Get it Right', the document produced by the Leadership Alliance for the Care of Dying People in June 2014 in response to the independent Liverpool Care Pathway (LCP) review in July 2013
- NICE guidelines for the care of dying adults in the last days of life (December 2015)
- NICE guidelines: Intravenous fluid therapy in adults in hospital, December 2013 (updated May 2017)

There is considerable debate and opinion about the benefits and burdens of CAH in the last days of life. Very few patients admitted to a hospice inpatient setting in the UK will receive intravenous or subcutaneous fluids despite the fact that most are, or become unable to maintain a pre morbid adequate fluid intake. Whilst considered controversial by some, this is standard care in the UK with the underlying ethos of palliative care to regard dying as a normal process and its intention to neither hasten nor postpone death. However, there is a lack of good research evidence to support either the giving or withholding of parenteral fluids in this situation. The evidence around symptom management is also limited.

It should be noted that the LCP review panel found that most of the critical submissions it received from families included concerns around hydration and nutrition. The finding that these issues are of such concern to patients and families at the end of life is not new. These issues should be specifically discussed as part of every patient's individualised care. Fluids are commonly regarded as basic care and a fundamental human need, synonymous with life, compassion, care and nurture so it can be seen why the lack of provision of CAH causes distress. Additionally some families may perceive dehydration to be the direct cause of suffering and death. Whilst no reference in the response is made to CAH, it is reinforced that it is the clinical team's duty to ensure that hydration is being provided that meets the patient's needs.

Palliative care is ever evolving, now providing care for patients who have a terminal illness of any diagnosis, at any stage in their illness and appropriate treatment is determined by the patient alongside the clinical team. Therefore CAH is increasing in frequency as we care for more patients who are not imminently dying or who wish to pursue a more aggressive treatment if their clinical team agrees that it is neither

futile nor detrimental to their health. CAH is a medical treatment and therefore cannot be demanded by patient or family if considered futile.

It is assumed, therefore, that health care professionals will use professional knowledge, ethical standards and clinical judgment appropriate to their role in applying the use of CAH in the management of patient care.

1. AIM

The aim of this guideline is to provide a framework to ensure that patients who require the CAH receive safe and effective care.

2. PRE-REQUISITE QUALIFICATIONS/EXPERIENCE

This guideline applies to all nurses with a valid NMC registration, working with adults in hospital and community settings and working within the NMC Code (2015): Professional standards of practice and behaviour for nurses and midwives. It applies to those who have undertaken the required training and are competent to administer fluids via the subcutaneous route. Registered Nurses who have previously undertaken this role outside HDFT may continue to practice with the approval of their line manager, as long as they can provide evidence of previously approved training and assessment and can submit evidence of continuing competence.

2.1. Education and Training

All nurses undertaking this role must attend CAH training (unless previously trained outside HDFT – see above) before undertaking this procedure.

2.2. Assessment of Competence

HDFT nurses are required to demonstrate competence by assessment against the criteria specified on the competency checklist (Appendix 2). The assessor must be a registered nurse who has completed training and is competent in the administration of subcutaneous fluids. The nurse should maintain evidence of their competence and practice in their own professional profile and ensure they attend refresher training when required to ensure competence.

3. GUIDELINES FOR THE ADMINISTRATION OF CLINICALLY ASSISTED HYDRATION IN PALLIATIVE CARE

3.1. Indications for use of clinically assisted hydration

The administration of CAH can provide a method of symptom control for palliative patients who are unable to take, or absorb adequate oral fluids and who require a constant therapeutic infusion. It is also a relatively safe, reliable and cost effective method and is suitable for the use in community.

The decision to administer CAH needs to be taken by the multidisciplinary team - in consultation with the patient and their carers - and when other methods of administration e.g. oral have been discounted.

CAH is most likely to be given in the following circumstances in palliative care:

- Patients who are unable to take adequate fluids orally and are thirsty and have a persistent dry mouth despite exemplary mouth care
- Patients who have excessive fluid loss with acute dehydration from a reversible cause when felt to be clinically appropriate e.g. profuse infective diarrhoea in a patient who is not dying
- Patients who are mildly or moderately dehydrated, usually indicated by urea and electrolyte imbalance, or as part of the treatment of hypercalcaemia
- Patients who have capacity and make an informed choice for CAH
- Patients who want life prolonging treatment when swallowing is compromised due to a local cause whilst a more permanent route is explored
- Those with delirium where dehydration or opioid toxicity is felt to be a cause
- In patients who are clearly dying, and when a trial of fluids at either the patient or family's request could be considered if the lack of fluids is felt to be causing considerable distress despite discussion of the evidence and if it is not detrimental to the patient's health. However it should be remembered that CAH is a medical treatment and if considered futile cannot be demanded. It may be worth seeking a second opinion or suggesting MDT discussion if a clinician feels this treatment is futile but a family feel strongly that it should be offered

3.2. Choice of route

The subcutaneous route may be preferable to intravenous in a palliative care setting, except in the following circumstances:

- The volume of fluid required is more than can be safely given subcutaneously (usually 1-2 litres in 24 hours)

- There is already intravenous access via a cannula /Hickman /PICC line or planned access by one of these routes to enable intravenous medication to be given
- Potassium replacement is required

The advantages of the subcutaneous route over the intravenous route in palliative care include:

- Subcutaneous fluids are less likely to cause fluid overload or pulmonary oedema
- Insertion of subcutaneous cannula may be less distressing to the patient
- Subcutaneous fluids do not cause thrombophlebitis
- Subcutaneous fluids have not been shown to cause septicemia or systemic infection
- Subcutaneous fluids can be set up and administered by nurses in almost any setting

Subcutaneous fluids should not be considered in the following circumstances:

- Patients needing rapid administration of fluids e.g. shock, circulatory failure, severe dehydration
- Patients who express a wish for more active medical management e.g. intravenous fluids
- Patients with clotting disorders
- Patients who have problems with fluid overload, e.g. congestive cardiac failure, marked oedema or renal failure
- Patients where precise control of fluid balance is clinically important
- Patients who require more than 2 litres of fluid in a 24 hour period
- Patients with severe electrolyte disturbance.

3.3 Volume of fluid

Daily fluid volume requirements should be calculated using the guidance below

- 25-30 ml/kg/day normal population (obese patients use ideal body weight)
- 20-25ml/kg/day if older, frail, renal imp, cardiac failure, malnourished

Palliative patients can be malnourished and frail. In addition they often have low albumin levels and increased levels of Anti Diuretic Hormone (ADH) with a tendency to retain water. Therefore, unless there is good reason, they should not be given more than 20ml/kg/day including oral intake of fluid/medications etc. Lesser volumes are acceptable if the aim of treatment is not simply replacing daily volume requirements e.g. treatment of a dry mouth, or if there are signs of fluid overload and a more cautious approach is required.

Within research literature the volume of subcutaneous fluids given is often 1.5 – 2L/day using varying rates. There are small studies that report patients who have tolerated boluses up to 500ml/hr.

3.4 Choice of fluid

Parenteral fluids should be tailored to the clinical indication for which they are required, the route they will be given and the individual patient. The fluid given should be that which is nearest to meeting the patient's electrolyte requirements within the volume required.

Routine maintenance requirements of electrolytes are 1mmol/kg/day of each of sodium, potassium and chloride. E.g. a 60kg patient requires 60mmol sodium/day. The electrolyte composition of various fluids is contained in the table below. With the volumes usually required in palliative care, and a reduced range of fluids with evidence for prescribing subcutaneously it is rarely possible to use an exact match. In most situations the use of 0.18% sodium chloride and 4% glucose will provide a reasonable choice.

Composition of commonly used crystalloids

Content	Plasma	Sodium chloride 0.9%*	Sodium chloride 0.18%/ 4% glucose[a]	0.45% NaCl/ 4% glucose[a]	5% glucose[a]	Hartmann's	Lactated Ringer's (USP)	Ringer's acetate	Alternative balanced solutions for resuscitation**	Alternative balanced solutions for maintenance**
Na^+ (mmol/l)	135–145	154	31	77	0	131	130	130	140	40
Cl^- (mmol/l)	95–105	154	31	77	0	111	109	112	98	40
$[Na^+]:[Cl^-]$ ratio	1.28–1.45:1	1:1	1:1	1:1	-	1.18:1	1.19:1	1.16:1	1.43:1	1:1
K^+ (mmol/l)	3.5–5.3	*	*	*	*	5	4	5	5	13
HCO_3^- / Bicarbonate	24–32	0	0	0	0	29 (lactate)	28 (lactate)	27 (acetate)	27 (acetate) 23 (gluconate)	16 (acetate)
Ca^{2+} (mmol/l)	2.2–2.6	0	0	0	0	2	1.4	1	0	0
Mg^{2+} (mmol/l)	0.8–1.2	0		0		0	0	1	1.5	1.5
Glucose (mmol/ l)	3.5–5.5	0	222 (40 g)	222 (40 g)	278 (50 g)	0	0	0	0	222 (40 g)
pH	7.35–7.45	4.5–7.0	4.5		3.5–5.5	5.0–7.0	6–7.5	6–8	4.0–8.0	4.5–7.0
Osmolarity (mOsm/l)	275–295	308	284		278	278	273	276	295	389

* These solutions are available with differing quantities of potassium already added, and the potassium-containing versions are usually more appropriate for meeting maintenance needs.
** Alternative balanced solutions are available commercially under different brand names and composition may vary by preparation.
[a] The term dextrose refers to the dextro-rotatory isomer of glucose that can be metabolised and is the only form used in IV fluids. However IV fluid bags are often labelled as glucose so only this term should be used. Traditionally hospitals bought a small range of fluids combining saline (0.18-0.9%) with glucose but several recent NICE/NPSA documents have recommended specific combinations, which are now purchased to enable guidelines to be followed. Glucose–saline combinations now come in 5 different concentrations, and the addition of variable potassium content expands the pre-mixed range to 13 different products. Prescribers must therefore specify the concentration of each component; the term dextrose-saline (or abbreviation D/S) is meaningless without these details. What is specified also impacts significantly on the cost of the product.
Note: Weight-based potassium prescriptions should be rounded to the nearest common fluids available (for example, a 67 kg person should have fluids containing 20 mmol and 40 mmol of potassium in a 24-hour period). Potassium should not be added to intravenous fluid bags as this is dangerous.

Source: This table was drafted based on the consensus decision of the members of the Guideline Development Group.

'Intravenous fluid therapy in adults in hospital', NICE clinical guideline 174 (December 2013. Last update December 2016)

Fluids that should not be given by subcutaneous infusion include:

- Colloids
- Blood or blood products
- Total parental nutrition (TPN)
- Solutions with added medication e.g. zoledronic acid

- Glucose solutions > 5%
- Solutions containing potassium due to limited safety information. If potassium supplementation is required the intravenous route is preferable. Ready-mixed infusion solutions containing potassium are not licensed for subcutaneous administration

3.5 Prescribing

1. An appropriately qualified medical practitioner or registered independent prescriber is responsible for prescribing the fluids. A multi-disciplinary discussion and agreement that CAH is in the patient's best interests should be held prior to these being commenced. The Palliative Care Team is available for advice/consultation if required.
2. A recent urea and electrolyte result may aid decision making for CAH and whether intravenous fluids may be more appropriate. If normal urea and electrolyte results and patient is not clinically dehydrated then explanations about the use and limitations of CAH may avoid false expectations for patients and families.
3. Nurses must check that medication has been legally prescribed before administration.
4. A risk assessment should be undertaken prior to prescribing
5. A patient who requires subcutaneous fluids at home should have someone staying with them at all times.
6. Up to two litres of fluid a day may be administered subcutaneously i.e. maximum rate is 1 litre over 12 hrs. If the patient is able to take oral fluids, then one litre subcutaneously over 24 hours may be sufficient.
7. Subcutaneous fluids should be administered using gravity only; mechanical devices should not be used. (RCN 2005).
8. A Harrogate and District Foundation Trust Fluid Replacement Therapy Chart (WHZ066) should be used to prescribe on the fluid replacement page stating that fluids should be administered subcutaneously. See appendix 4. Fluids cannot be prescribed on an FP10.
9. A subcutaneous fluid site monitoring sheet should be used to monitor administration and the site of the cannula. See appendix 3.
10. Fluids can be administered continuously or over smaller periods of time if more convenient for the patient.

3.6 Equipment required for the administration of subcutaneous fluids

For insertion of saf-t-intima and the administration of subcutaneous fluids:

1. Fluid Replacement Therapy Chart (WHZ066) available via the Community Care Team (CCT) based at Crimple Court, Hornbeam Park or will be supplied with patient if discharged from HDFT on CAH
2. Subcutaneous fluid site monitoring sheet (see Appendix 3) also available via CCT or will be supplied with patient if discharged from HDFT on CAH

3. Prescribed infusion fluid (e.g. 0.18% Sodium Chloride and 4% Glucose) available via HDFT inpatient pharmacy department. Call in advance to order and they will ensure the fluid is available to collect. If the patient is being discharged from HDFT a box of fluid will be supplied on discharge containing 12 bags of fluid.
4. Saf-T-Intima subcutaneous cannula
5. Standard intravenous administration giving set available via the CCT
6. A semi-permeable transparent adhesive film dressing
7. Sharps container
8. Single use disposable non-sterile gloves
9. Single use disposable apron
10. Bionector
11. Stand for the administration of fluids available via CCT
12. 2% Chlorhexidine/70% alcohol impregnated wipe
13. Water for injection

For the removal of cannula:

1. Single use disposable non-sterile gloves
2. Single use disposable apron
3. Suitable sterile dressing
4. Sharps container

3.7 Preparing the patient and family

Explain the procedure, indications and aims of CAH to the patient and/or relatives. The discussion and reasoning should be clearly documented along with any plan to review and monitor e.g. blood tests if required.

3.8 Skin site selection and insertion of Saf-T-Intima

The best sites to use for subcutaneous infusion of fluids are the lateral aspects of the upper arms and thighs, the anterior chest below the clavicle and occasionally, the back or abdomen (Graham 2006).

Areas which should **not** be used are:-

- Lymphoedematous limbs, e.g. avoid arms on the same side as previous breast/axillary surgery. A cannula breaches skin integrity, thus increasing the risk of infection in a limb which is already susceptible
- The abdomen when distended by ascites or abdominal disease
- Sites over bony prominences. The amount of subcutaneous tissue will be diminished, impairing the rate of absorption

- Previously irradiated skin area. Radiotherapy can cause sclerosis of small blood vessels, thus reducing skin perfusion
- Sites near a joint; excessive movement may cause cannula displacement and patient discomfort

Sites should be rotated and giving sets changed every 5 days or before if any signs of site reaction to minimise tissue damage (see monitoring section).

If the patient is having CAH for longer than 5 days the patient should be reviewed by their GP / PCT who may arrange to check urea and electrolytes to avoid over hydration.

3.9 Siting the subcutaneous cannula (Saf-T-Intima)

1. Explain and discuss the procedure with the patient/family to obtain informed consent
2. Wash hands with soap and water or alcohol hand rub and assemble required equipment
3. Expose the chosen site for infusion
4. Clean site for a minimum of 30 seconds with a 2% Chlorhexidine/70% alcohol impregnated wipe and allow to dry naturally
5. Hold the wings on the Saf-T-Intima between the thumb and ring finger extending the tubing straight whilst holding the 'Y' port in the same hand. 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
6. Grasp pebbled side of wings of the Saf-T-Intima pinching wings firmly together to lock the needle in place
7. Insert the Saf-T-Intima needle subcutaneously up to a 45 degree angle
8. Open the wings flat against the skin (pebble side down)
9. Apply transparent dressing over the insertion site and the wings of the cannula
10. Apply firm fingertip pressure over the wings of the cannula (avoiding the centre where the needle retracts) and simultaneously grasp the pebbled end of the white shield and pull in a **straight** continuous motion until the needle has fully withdrawn into the cylinder
11. Gently remove the cylinder from the cannula port (if it has not released spontaneously) exposing the adaptor with the rubber bung
12. Place the needle shield in the sharps container
13. If blood appears in the line on insertion of the needle, withdraw immediately and repeat the process at another site with a new cannula
14. Prime the Saf-T-Intima with 0.2 ml of water for injection

15. If necessary secure cannula tubing with a small strip of tape just above the Y connection (when sited on a limb, secure to the front of the limb to aid comfort)
16. Change the rubber bungs for Bionector adaptors. Document the siting and date of insertion on the invasive devices connection record
17. Wash and dry hands thoroughly and use alcohol hand rub in accordance with Infection Control Policy

3.10 Practical considerations for setting up the subcutaneous fluid infusion

- CAH should ideally be prescribed and commenced in normal working hours. The on-call team or OOH service should not be expected to make a decision to commence subcutaneous fluids. If it is likely the patient will require subcutaneous fluids then a decision should ideally be made within normal working hours and communicated to the out of hours team. OOH teams should only prescribe CAH if this decision cannot wait until the next working day
- If CAH is in place overnight and/or on a weekend then the on-call team or OOH service and the Out of Hours Nursing Service should be informed to ensure continuity of care
- If the fluids are likely to be administered for a period of time in the community setting, a family member can be taught how to monitor and discontinue the infusion especially if this is not going to occur in normal working hours
- The patient may be in hospital and need to continue subcutaneous fluids following discharge or may start subcutaneous fluids to address their needs in their 'home' setting. This could be a residential or nursing home, or the patient's own home. If this is required adequate communication and preparation time should be arranged with the GP and CCT to support a safe, effective discharge. This is especially necessary if training of community or nursing home staff involved in the patients care is required
- If continuing overnight in community, medical and nursing advice can be sought if required from the Out of Hours GP service, Out of Hours Nursing Service or Saint Michaels Hospice inpatient unit
- Registered nurses are responsible for the administration of subcutaneous fluids and will support and guide the non-registered staff

It is recognised that there will be differing levels of competence in any given care setting, particularly where subcutaneous fluids have not been used and are being newly introduced or used infrequently. The decision to administer subcutaneous fluids in a community setting should only be made AFTER all of the following are assured and in place:

- An ongoing commitment to prescribe, monitor and review subcutaneous fluids for as long as they are appropriate is given by the patient's GP or the PCT
- A clear clinical decision is recorded and committed to by medical staff
- Fluids are sourced and ordered through HDFT pharmacy on the production of a fluid replacement therapy chart prescription form (WHZ066)
- Suitably competent personnel are available to administer and monitor the infusion and evaluate the process or training has been completed to enable this to proceed
- Equipment for the administration of subcutaneous fluids including drip stand and giving sets are ordered and collected from CCT base at Crimple Court, Hornbeam Park.

3.11 Recommended subcutaneous infusion rates and calculating drop rate

Subcutaneous fluid is infused by gravity and there is no need for a pump to regulate administration.

To set up a manually controlled drip accurately by eye, you need to be able to count the number of drops per minute, which will equate to the amount prescribed. The formula for calculation is:

$$\textbf{RATE} = \frac{\textbf{VOLUME (IN DROPS)}}{\textbf{TIME (IN MINUTES)}}$$

To calculate the volume in drops, you need to know how many drops of the fluid ordered are contained in one millilitre (ml). You should find this information on the packaging of the administration set.

The volume in mls is then multiplied by the number of drops per ml to give the volume in drops. Similarly to find the rate in minutes, you need to change the hours into minutes, by multiplying by 60Hutton (1998).

Two common sizes are 20 drops per ml and 15 drops per ml.

Examples:

$$\frac{1000\text{mls (volume of infusion)} \times \textbf{20 (drops)}}{12\text{ (hrs)} \times 60\text{ (mins)}} = \frac{20{,}000}{720} = 28\ \textbf{drops}$$

$$\frac{1000\text{mls (volume of infusion)} \times \textbf{15 (drops)}}{12\text{ (hrs)} \times 60\text{ (mins)}} = \frac{15{,}000}{720} = 21\ \textbf{drops}$$

NB. Since we are trying to work out a number of drops, it is sensible to round up to a whole number.

3.12 Commencing the subcutaneous infusion

1. Prepare the patient and give full explanations to gain informed consent where possible
2. Establish that the patient has no known allergies, check in the patient's records and also ask the patient/family
3. Ensure the patient is comfortable and maintain privacy and dignity
4. Check the prescription is for the correct patient and clearly states the patient's full demographic details
5. Check the name, strength and volume of the infusion fluid against the prescription chart
6. Check the expiry date of the infusion bag
7. Check the packaging is intact and inspect the container and contents in a good light for cracks or punctures
8. Inspect the fluid for discoloration, haziness and crystalline or precipitate matters
9. Calculate the correct drip rate setting using the drop calculation formula
10. Decontaminate hands
11. Apply single use disposable apron and gloves
12. Prime the administration set with the infusion fluid and connect to the Saf-T-intima via the Bionector
13. Commence the infusion and adjust the drops per minute to the correct length of time for the infusion as per prescribed rate of infusion
14. Label the administration set with the date and time of commencement and document in the patient notes, recording batch number and expiry date on the fluid replacement therapy chart
15. Clear away all equipment and dispose of clinical waste as per trust policy
16. Decontaminate hands
17. Monitor patient's general condition and continue to monitor urea and electrolytes if appropriate to do so as dictated by the GP or PCT
18. Review on an ongoing basis the appropriateness to continue, effects and sides effects and impact on symptoms
19. Discuss all findings with the patient/family to ensure they understand rationale for continuing or discontinuing CAH

3.13 Monitoring

Community - the infusion will be monitored at each nurse visit. This should be a minimum of once daily. Patients and carers will be given help and support on how to

monitor the infusion. They will be encouraged to discuss with the district nurse if they have any comments or concerns.

Hospital - In hospital, the infusion should be monitored 2 - 4 hourly.

It is important that the effectiveness of symptom control is also closely monitored and recorded.

See appendix 3 for monitoring chart.

Side effects of administration of subcutaneous fluids – if any of these occur, stop the infusion discuss the appropriateness for continuing the infusion with the GP or PCT. If the infusion is to continue re-site the Saf-T-Intima:

- Pain/tenderness
- Bruising/bleeding
- Local oedema
- Erythema
- Local inflammation or infection
- Signs of fluid overload i.e. dyspnoea, peripheral oedema
- Leakage at site
- Abscess formation

Discuss with the GP or PCT whether the infusion should continue if sites need frequent changes or consider the addition of Hyaluronidase to aid the absorption of the infusion.

Poor Absorption

Hyaluronidase is an enzyme that has a temporary and reversible depolymerising effect on the polysaccharide hyaluronic acid, which is present in the intercellular matrix of connective tissue. It can help improve absorption of subcutaneous fluids. 1500iu of Hyauronidase is dissolved in 1ml of water for injection or 0.9% sodium chloride and injected into the site before the infusion is set up, or injected into the tubing of the infusion set, about 2cm back from the needle at the start of the infusion. This should be prescribed on the Community Palliative Care Medication Administration Chart in the regular/prn medication section (WHZ061). An FP10 will be required to obtain this from a community pharmacy. 1500iu is sufficient for administration of 500-1000ml of most fluids.

4 DISSEMINATION AND IMPLEMENTATION

This procedure has been circulated to the consultation group as listed in Appendix 1. Following approval and ratification it will be available on the intranet for staff to view.

It will also be circulated via email to all GP's. Members of the Palliative Care Team, matrons and ward managers will ensure implementation of the guidelines and will educate staff on its existence as appropriate.

5 MONITORING COMPLIANCE AND EFFECTIVENESS

Competency assessments will be completed for each individual qualified nurse who will carry out this procedure.

Practice will be compared to the standards within this procedure using clinical audit.

Incidents and complaints relating to CAH should be reported on a Datix form and be reviewed to determine areas for learning.

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7 APPENDIX 1: CONSULTATION SUMMARY

	Groups and/or individuals consulted
Those listed opposite have been consulted and comments/actions incorporated as required	Palliative Care Team
	Harrogate Locality End of Life Care Group
	Community Services Matron
	HDFT End of Life Care Operational Group
	Community Care Team Leaders
	Policy Review Group
	Clinical Risk Management Group
	Area Prescribing Committee
	Health Records Committee

8 APPENDIX 2: ASSESSMENT OF COMPETENCY DOCUMENT

Competency Statement: Can maintain patients' safety while administering subcutaneous fluids (Competency is: *the skills and ability to practice safely and effectively without the need for direct supervision. NMC)*

Name:		Job Title:
Department:		Ext Number:
Trained By:	Date:	Signature:

Method of Assessment: Self-assessment of competency in the use of medical device in relation to defined key elements and countersigned by appropriate member of staff (Key Trainer, Manager, Educator, Mentor etc).

	Competency	Achieved
1	State the clinical indications for subcutaneous fluid administration	
2	Show awareness of procedure	
3	Explain safety check prior to use	
4	Identify appropriate equipment needed for set up	
5	Demonstrate understanding of infusion rate calculation and ability to check this	
6	Demonstrate the correct procedure for initial set-up, initiating and commencing an infusion safely. Including as follows: • Prepare the fluid, attach the giving set and manually prime the line. • Review, confirm and calculate the drip rate • Connect line to patient • Start infusion • Check the infusion is running • Continual monitoring of infusion	
7	Demonstrate the awareness and understanding of infusion monitoring and documentation:	
8	Demonstrate ability to dismantle the infusion correctly on completion of infusion	
9	Is aware of the need for decontamination as per Trust's procedure	
10	Demonstrate awareness of effects and side effects of subcutaneous fluids and site reactions to check for during monitoring	
11	Will ensure correct storage and safe-keeping of equipment	

Disclaimer:

(i) Having answered YES to the above key statements and taken into account my personal assessment of my competence in the use of the medical device, I declare that I am competent to use the device safely as per the Trusts' guidelines.

OR

(ii) I require further training in the use of this equipment in order to reach a competent level of practice and will discuss these needs with my Mentor/Ward Manager/ Trainer/Equipment Controller.

I certify that …….. ……. **is competent in the administration of subcutaneous fluids**

Signed: …….. **Position:** …… **Date:** ……

9 APPENDIX 3: SUBCUTANEOUS FLUID SITE MONITORING CHART

Harrogate and District NHS
NHS Foundation Trust

SUBCUTANEOUS FLUID SITE MONITORING CHART

Allergies and Adverse Drug Reactions – (write NKDA if none)			
Medicines must NOT be administered until this section has been completed			
Medicines/Substance	Reaction	Sign (NAME)	Date
Allergy status unconfirmed. Authority to administer medicines Ceases after 24 hours		Sign (NAME)	Time & Date

Name

Address

NHS NUMBER

GP

Initial set-up **Date……..……..Time……..……** **By……..……**

Signature……

Fluid prescribed ……..……. **Volume……** **Rate ……**

Saf-t-intima Site…… **Date of last site change……**

Date								
Time								
Site Position								
Site Condition: red, tender, bruised, leakage, bleeding, pain, oedema, inflammation, swelling, If any of above consider site change.								
Respiratory tract secretions? Absent, minimal, moderate, severe If RTS present review Fluid								
Signature								

Date								
Time								
Site Position								
Site Condition: red, tender, bruised, leakage, bleeding, pain, oedema, inflammation, swelling, **If any of above consider site change.**								
Respiratory tract secretions? **Absent, minimal, moderate, severe** **If RTS present review Fluid**								
Signature								

When considering appearance please use the following guideline.

Site appears intact with no pain on palpation, redness, swelling or oozing	Continue infusion
Slight pain on palpation and/or redness, swelling or oozing to a diameter of less than 0.5cm	Continue infusion. Check site more frequently
Pain on palpation and or redness, swelling or oozing to a diameter of between 0.5cm and 2cm	Discontinue infusion. Resite if appropriate and monitor frequently until symptoms diminish
Pain on palpation and/or redness, swelling or oozing to a diameter of greater than 2cm	Discontinue infusion. Resite if appropriate and monitor frequently until symptoms diminish and apply dressing if required.