



Family Nursing  
& Home Care

**Adult Administration of Subcutaneous  
Fluids Policy and Procedure**

**July 2020**

## Document Profile

<b>Document Registration</b>	Added following ratification
<b>Type</b>	Policy and Procedure
<b>Title</b>	Adult Administration of Subcutaneous Fluids Policy and Procedure
<b>Author</b>	Louise Hamilton
<b>Category</b> clinical / corporate / education / Health & Safety / HR / Info Governance	Clinical
<b>Description</b>	Policy and procedure for the Administration of Subcutaneous Fluids in Adults in a Community Setting
<b>Approval Route</b>	Organisation Governance Approval Group
<b>Approved by</b>	Bronwen Whittaker
<b>Date approved</b>	20 July 2020
<b>Review date</b>	20 July 2023
<b>Document Status</b>	This is a controlled document. Whilst this document may be printed, the electronic version posted on the intranet is the controlled copy. Any printed copies of this document are not controlled. As a controlled document, this document should not be saved onto local or network drives but should always be accessed from the intranet.

### Version control / changes made

Date	Version	Summary of changes made	Author
01/04/2020	2	Increased clarity regarding roles and responsibilities, indications for and principles of treatment, including end of life care. New template used, now a policy and procedure	Louise Hamilton
September 2022	2.1	1.2: Amended to encompass revised scope of practice for pre-registration student nurses, as per the Nursing and Midwifery Council "Future Nurse: Standard of proficiency for registered nurses" (2018).	Mo de Gruchy

## Contents

Document Profile .....	2
1.1 Rationale .....	5
1.2 Scope .....	5
1.3 Roles and Responsibilities .....	5
1.3.1 The Chief Executive (CEO) .....	5
1.3.2 Operational Leads .....	5
1.3.3 Team Leaders .....	6
1.3.4 All Staff .....	6
<b>2. POLICY</b> .....	6
2.1 Education and Training .....	6
3.1 Referral process .....	6
Degree of dehydration .....	7
3.3 Contra-indications for administering subcutaneous fluids .....	8
3.4 Exclusion .....	8
3.5 Sites not suitable for infusion .....	8
3.6 Suitable sites for infusion .....	8
3.7 Clinically Assisted Hydration in End of Life / Palliative .....	9
Mild dehydration treatment .....	10
Moderate dehydration treatment .....	10
Severe Dehydration .....	10
3.9 Infusion fluids .....	10
3.10 Rate of infusion .....	11
3.11 Site monitoring and care .....	11
3.11.1 Care at home .....	11
3.11.2 Nursing Home care .....	13
3.11.3 For End of Life / Palliative care .....	13
3.12 FNHC visits .....	13
3.13 Oral Hygiene .....	13
3.14 Procedure for Subcutaneous Infusion of Fluids or Medications .....	13
<b>4. CONSULTATION PROCESS</b> .....	14
<b>5. IMPLEMENTATION PROCESS</b> .....	14
<b>6. MONITORING COMPLIANCE</b> .....	14
<b>7. EQUALITY IMPACT STATEMENT</b> .....	15

<b>8.</b>	<b>GLOSSARY OF TERMS .....</b>	<b>15</b>
<b>9.</b>	<b>REFERENCES.....</b>	<b>16</b>
	Appendix 1. Rate Guidance .....	18
	Appendix 2. Subcutaneous Fluid Insertion Site Chart.....	19
	Appendix 3. Equality Impact Screening Tool .....	20

## 1. INTRODUCTION

### 1.1 Rationale

Subcutaneous infusion is a relatively safe, simple and cost effective technique, suitable for use in the community with a range of client groups (Dougherty & Lister, 2015; Bowen *et al.*, 2014). Normally this type of administration is used in patients requiring palliative care, but it is also used for patients who are mild/moderately dehydrated. Subcutaneous infusions should not be used for patients requiring rapid administration of fluids (see evidence to support procedure and contra-indications).

Subcutaneous fluids are often chosen in preference of intravenous (IV) fluids in the community. This is because of:

- simple insertion
- inexpensive procedure that can be performed at home or in the community
- patient comfort/acceptability
- reduced complications
- reduced subcutaneous fluid monitoring compared to IV

Family Nursing & Home Care (FNHC) is committed to providing high quality nursing services to all patients. This document supports the nurses undertaking the procedure, including commencing and maintaining a subcutaneous infusion once the decision has been made to begin treatment and is to be used in conjunction with professional knowledge and judgement.

### 1.2 Scope

This policy applies to all staff involved in the insertion and ongoing care and maintenance of subcutaneous fluids in adult patients. This includes Nurses who have the support of FNHC and their respective managers in the undertaking of this practice. It identifies both the insertion procedure for subcutaneous cannulas and ongoing care management principles that must be adhered to within FNHC.

Pre-registration student nurses who have undergone theory and have had the opportunity to practice in a simulated environment can partake in these skills under the direct and constant supervision of a registered nurse.

### 1.3 Roles and Responsibilities

#### 1.3.1 *The Chief Executive (CEO)*

The CEO has overall responsibility for effective management of risk within the organisation. As Accountable officer, the CEO is responsible for the effectiveness of the organisation's systems of internal controls.

#### 1.3.2 *Operational Leads*

Operational leads have responsibilities for ensuring that the required structures and resources are in place to enable effective care for patients requiring subcutaneous fluids.

### *1.3.3 Team Leaders*

Team Leaders have responsibility to ensure that all staff are aware of this policy and to encourage and monitor compliance with it and its related guidelines, protocols and procedures.

### *1.3.4 All Staff*

All staff involved in subcutaneous fluids management have a responsibility to adhere to this policy and its related protocols, guidelines and procedures and to identify and address any learning needs they may have in relation to it.

## **2. POLICY**

Replacement therapy should only be considered for patients with acute infection and / or poor fluid intake with signs and symptoms of dehydration.

All patients at risk or diagnosed with dehydration at any level require regular review with the following daily observations / investigation:

- Urea and Electrolytes
- Full Blood Count
- Weight if possible
- NEWS 2 and A-E clinical assessment

Subcutaneous hydration is not adequate to correct severe dehydration or electrolyte imbalance; such patients will continue to need inpatient services for thorough assessment and treatment. Relatively small amounts of fluid are administered using this method, i.e. one or two litres of fluid in twenty four hours. This can be administered during FNHC nursing working hours only, unless the patient is in a nursing home and those staff are competent to manage overnight.

### **2.1 Education and Training**

The organisation will provide training to all relevant staff who will be involved in the administration of subcutaneous fluids. It is the individual nurse's responsibility to constantly review their competence and keep their knowledge and skills updated.

All new Clinical and Home Care staff recruited to Family Nursing & Home Care must be made aware of this document if relevant to their role and must be informed about how to access a copy.

## **3. PROCEDURE**

### **3.1 Referral process**

Referral of patients for the administration of subcutaneous fluids must be made by a medical professional (GP or hospital doctor) or non-medical prescriber with the appropriate competency in this area of prescribing.

Patients must be assessed on an individual basis to ascertain if they are willing and able to comply with the treatment and are therefore suitable for treatment in the community.

***If the patient lives alone and / or does not have regular family / carer support, it is not advisable to provide artificial hydration and the patient may need to be admitted into hospital for treatment.***

### 3.2 Indications for administration of subcutaneous fluids

#### Degree of dehydration

The following guide should be used to assess degree of dehydration:

EGFR decrease or Urea and creatinine increase from baseline	Degree of dehydration
10%-20%	<b>MILD</b>
20%-40%	<b>MODERATE</b>
>40%	<b>SEVERE</b>

(EGFR – Estimated Glomerular Filtration Rate)

Signs and symptoms of dehydration:

- poor oral intake over the previous 48 hours of less than 1 litre per day
- dry mucous membranes
- dry chapped lips
- dry, loose skin with lack of elasticity
- CRT greater than 2 (this can be prolonged in the elderly) (Pickard et al 2011)
- sunken features especially eyes
- clammy hands and feet
- headaches
- light headiness
- dizziness
- tiredness
- decreased urine output
- concentrated dark urine with strong odour
- tachycardia
- 'amber' systolic BP (As defined in NEWS2)

Consideration for administration should be symptom led but blood tests for urea and electrolytes will be done to confirm appropriateness of subcutaneous administration.

### **3.3 Contra-indications for administering subcutaneous fluids**

- severe dehydration
- poor tissue perfusion
- shock
- cardiac failure
- pre-renal or renal failure
- low platelet or clotting disorders
- low serum albumin
- existing fluid overload
- marked / pitting oedema
- risk assess patients who live alone
- the patient requests not to have an invasive procedure
- the sum of the burden of parenteral hydration outweighs the likely benefits
- the patient is moribund for reasons other than dehydration

### **3.4 Exclusion**

- patients under 18
- patients that require s/c fluids overnight
- patients that live alone
- severe dehydration

### **3.5 Sites not suitable for infusion**

Areas with poor subcutaneous tissue volume, where movement can dislodge the needle or areas where absorption may be impaired should be avoided (Radcliffe, 2017). Other unsuitable sites include:

- skin which has been irradiated
- where there is evidence of existing rash
- peripheral limbs, e.g. below knee or elbow
- bony prominences
- lack of subcutaneous tissue
- lateral aspects of upper arm or thigh
- mastectomy sites
- oedematous tissue
- close to stoma or PEG site

### **3.6 Suitable sites for infusion**

Subcutaneous tissue tends to diminish peripherally and increase in central areas as part of the ageing process therefore in elderly patients the abdomen, scapula or thighs



are the prime sites for administration of S/C fluids (see appendix 2). All sites suitable for infusion are:

- abdomen
- upper chest (avoid soft breast tissue)
- anterior aspect of upper arm (deltoid) or thigh
- back, usually below shoulder blades
- thighs

Consider using the deltoid or scapular areas in confused patients to reduce the risk that they will pull the needle out.

### **3.7 Clinically Assisted Hydration in End of Life / Palliative**

Discuss the risks and benefits of clinically assisted hydration with the dying person and those important to them. Advise them that, for someone who is in the last days of life:

- clinically assisted hydration may relieve distressing symptoms or signs related to dehydration, but may cause other problems
- it is uncertain if giving clinically assisted hydration will prolong life, extend the dying process or not giving it will hasten death

Ensure that any concerns raised by the dying person or those important to them are addressed before starting clinically assisted hydration.

When considering this for a dying person, use an individualised approach and take into account:

- whether they have expressed a preference for or against clinically assisted hydration or have any cultural, spiritual or religious beliefs that might affect this documented in an advance statement or an advance decision to refuse treatment
- their level of consciousness
- any swallowing difficulties
- their level of thirst
- the risk of pulmonary oedema
- whether even temporary recovery is possible

Consider a therapeutic trial of clinically assisted hydration if the person has distressing symptoms or signs that could be associated with dehydration, such as thirst or delirium, and oral hydration is inadequate (NICE, 2015).

### 3.8 Treatment

#### Mild dehydration treatment

- ☐ Oral rehydration 1.2 -2 litres minimum daily unless contra indicates by other co-morbidities
- ☐ Document fluid balance accurately – input and output
- ☐ Daily completion of fluid / food balance chart and NEWS2 as appropriate to minor treatment
- ☐ U & E's and EGFR daily unless otherwise indicated by prescribing clinician

#### Moderate dehydration treatment

- ☐ Administer a maximum of 1 litre subcutaneous normal saline over 12 hours
- ☐ Encourage oral fluids to a total of 2 litres over 24 hours
- ☐ If sodium > 150 admit to acute setting for consideration of 5% dextrose
- ☐ Daily U & E's, eGFR, WCF and NEWS2
- ☐ If no improvement after 48 hours in renal function treat as severe dehydration and consider admission to acute hospital

#### Severe Dehydration

Patient requires intravenous fluids, admission should be arranged and review by medical team to rule out other causes of acute kidney injury.

### 3.9 Infusion fluids

Intravenous fluids prescribed for sub-cutaneous infusion are prescribed 'off label'. This should be communicated to patients / relatives when gaining consent for the procedure. Liability for prescribing an 'off label' product sits with the prescriber and the dispenser or supplier (RPS, 2020). Other fluids may be prescribed, however Sodium Chloride 0.9% or Glucose 5% (BNF, 2014) is usually the fluid of choice to be infused. The prescription should be checked and any concerns raised with the prescriber immediately and prior to administration.

Fluids can be prescribed on an in-patient medication administration record chart, or FNHC Medication Record and Authorisation Sheet.

Fluids are administered via a **Saf-T-Intima 24G cannula** and free flow gravity giving set (RCN, 2016).

An infusion pump is not to be used.

***Nurses should not add any medication to bags for subcutaneous fluids.***

### **3.10 Rate of infusion**

Recommended infusion rates: Usual rate only 1ml per minute per site. Formulas to calculate the rate may be found in Appendix 1. Rate Guidelines

A maximum volume of 2000 ml can be given over a 24 hour period continuously or intermittently, with a maximum bolus dose of 500ml over 1 hour (Ratcliffe, 2017).

### **3.11 Site monitoring and care**

#### ***3.11.1 Care at home***

Subcutaneous fluids can only be administered during the working hours of the Team responsible for the patient's care. If the infusion is not finished by the end of the working day then it should be taken down and recommenced the next morning.

Patients remaining under the care of FNHC will have the cannula site and infusion rate checked at each visit, using the chart in appendix 2. Changing the infusion site can help to reduce side-effects (Dougherty & Lister, 2015). Observe for signs of:

- pain / tenderness
- redness
- inflammation / oedema
- leakage of fluid
- bleeding / bruising
- abscess formation
- fluid overload

Patient's family/carers will be instructed by the nursing team how to monitor the cannula site and what to do in the event of the needle being displaced. This site should be observed a minimum of every 4 hours.

For regular infusions, rotate the cannula site every 2 to 7 days to prevent scarring and hardening of subcutaneous tissue (RCN, 2016). The giving set should be changed each time the fluids are administered and all site changes documented on the patient's EMIS record and fluid insertion site chart (appendix 7.2).

The patient should be checked at each visit for signs of pulmonary oedema. Patients with symptoms of pulmonary oedema should be escalated to the senior nurse on shift,

Advanced Nurse Practitioner, medical doctor or telephone 999 depending on severity of symptoms.

Signs often associated with pulmonary oedema could include:

- extreme shortness of breath and difficulty breathing
- bubbly, wheezing, or gasping sound when trying to breath
- anxiety, restlessness or a sense of apprehensions
- cough that produces frothy sputum that may be tinged with blood
- excessive sweating
- blue, grey or pale colouration to skin
- rapid irregular heartbeat or palpitations
- rapid weight gain and fluid retention
- loss of appetite
- fatigue
- headache
- severe drop in blood pressure
- ankle, leg and abdominal swelling

The patient should be checked at each visit for signs of dehydration. Worsening symptoms of dehydration despite receiving subcutaneous fluids should be escalated to the senior nurse on shift, Advanced Nurse Practitioner, medical doctor or telephone 999 depending on severity of symptoms.

Signs often associated with dehydration are:

- poor oral intake over the previous 48 hours of less than 1 litre per day
- dry mucous membranes
- dry chapped lips
- dry, loose skin with lack of elasticity
- CRT greater than 2 (this can be prolonged in the elderly) (Pickard et al 2011)
- sunken features especially eyes
- clammy hands and feet
- headaches
- light headiness
- dizziness
- tiredness

- decreased urine output
- concentrated dark urine with strong odour
- tachycardia
- 'amber' systolic BP (as defined in NEWS2)

### *3.11.2 Nursing Home care*

Patients remaining under the care of FNHC will have the cannula site, infusion rate, signs of pulmonary oedema and dehydration checked at each visit. Nursing Home registered nursing staff will be responsible for checking the infusion site and the infusion rate for patients in their care outside of these visits. Nursing Home registered nursing staff can manage the subcutaneous fluids overnight if competent to do so.

### *3.11.3 For End of Life / Palliative care*

For people being started on clinically assisted hydration:

- monitor at least every 12 hours for changes in the symptoms or signs of dehydration, and of any evidence of benefit or harm
- continue with clinically assisted hydration if there are signs of clinical benefit
- reduce or stop clinically assisted hydration if there are signs of possible harm to the dying person, such as fluid overload, or if they no longer want it

## **3.12 FNHC visits**

Minimum frequency of visits are twice daily, initiating and completing the daily fluid requirement, but frequency may be increased based on patient clinical need.

## **3.13 Oral Hygiene**

Care for oral hygiene needs to be negotiated and planned based on assessment of individual need. A dry mouth is often caused by mouth breathing and medication, and may not be alleviated by artificial hydration (Bowen *et al.*, 2014). Regular oral care to maintain a moist, comfortable mouth and alleviate any thirst is an essential part of care.

## **3.14 Procedure for Subcutaneous Infusion of Fluids or Medications**

The procedure for 'Subcutaneous infusion of fluids or medications' is accessed via clinical skills.net

[https://www.clinicalskills.net/sites/default/files/atoms/files/ADULTS-SUBCUTANEOUS-INFUSION-OF-FLUIDS\\_P1-P6.pdf](https://www.clinicalskills.net/sites/default/files/atoms/files/ADULTS-SUBCUTANEOUS-INFUSION-OF-FLUIDS_P1-P6.pdf)

#### 4. CONSULTATION PROCESS

Name	Title	Date
Clare Stewart	Op Lead Out of Hours Services	11 <sup>th</sup> March 2020
Tia Hall	Op Lead Adult Services	11 <sup>th</sup> March 2020
Suzanne Watson	Clinical Lead RRRT	11 <sup>th</sup> March 2020
Glyn Davies	Deputy Sr RRRT	11 <sup>th</sup> March 2020
Richard Deer	Deputy Sr RRRT	11 <sup>th</sup> March 2020
Rachel Hand	Sr RRRT	11 <sup>th</sup> March 2020
Alissa Collins	Deputy Sr RRRT	11 <sup>th</sup> March 2020
Maggie Stokes	Deputy Sr RRRT	11 <sup>th</sup> March 2020
Jo Hanby	Team Leader Adult Services	11 <sup>th</sup> March 2020
Julia Foley	Team Leader Adult Services	11 <sup>th</sup> March 2020
Jessica Clark	Team Leader Adult Services	11 <sup>th</sup> March 2020
Angela Stewart	Team Leader Adult Services	11 <sup>th</sup> March 2020
Elspeth Snowie	Clinical Effectiveness Facilitator	11 <sup>th</sup> March 2020

#### 5. IMPLEMENTATION PROCESS

Action	Responsible Person	Planned timeline
Email to all staff	Secretary/Administration Assistant (Quality and Governance Team)	Within 2 weeks following ratification
Policy to be placed on organisation's Procedural Document Library	Secretary/Administration Assistant (Quality and Governance Team)	Within 2 weeks following ratification
Staff to sign up to documents if relevant	Operational Leads/Departmental Senior Manager	Within 1 month following ratification

#### 6. MONITORING COMPLIANCE

Compliance with policy will be identified through audits and clinical supervision.

Incident and near miss reporting will inform learning and potential reviews associated with medicines management.

The policy / procedure requirements will be achieved through the monitoring and maintaining of competence and compliance.

## 7. EQUALITY IMPACT STATEMENT

A statement to show that the document does not discriminate against disadvantaged or vulnerable people

Family Nursing & Home Care is committed to ensuring that, as far as is reasonably practicable, the way services are provided to the public and the way staff are treated reflects their individual needs and does not discriminate against individuals or groups on any grounds.

This policy document forms part of a commitment to create a positive culture of respect for all individuals including staff, patients, their families and carers as well as community partners. The intention is to identify, remove or minimise discriminatory practice in the areas of race, disability, gender, sexual orientation, age and 'religion, belief, faith and spirituality' as well as to promote positive practice and value the diversity of all individuals and communities.

The Family Nursing & Home Care values underpin everything done in the name of the organisation. They are manifest in the behaviours employees display. The organisation is committed to promoting a culture founded on these values.

### **Always:**

- ✓ Putting patients first
- ✓ Keeping people safe
- ✓ Have courage and commitment to do the right thing
- ✓ Be accountable, take responsibility and own your actions
- ✓ Listen actively
- ✓ Check for understanding when you communicate
- ✓ Be respectful and treat people with dignity
- ✓ Work as a team

This policy should be read and implemented with the Organisational Values in mind at all times.

See completed Equality Impact Screening Tool in appendix 3.

## 8. GLOSSARY OF TERMS

**Airway to Exposure (A-E)** is a systematic clinical examination tool.

**Estimated Glomerular Filtration Rate (eGFR)** is a blood test that calculated kidney function based on a patient's serum creatinine level, age, sex and race.

**Erythema** the redness of the skin or mucous membranes caused by increased blood flow in superficial capillaries which occurs with any skin injury, infection, or inflammation.

**Induration** is the localised hardening of soft tissue of the body.

**National Early Warning Score 2 (NEWS2)** is a clinical observation scoring system that determines the degree of illness of a patient and prompts increased care intervention.

**Percutaneous Endoscopic Gastrostomy (PEG)** is a feeding tube placed through the abdominal wall and into the stomach.

**Subcutaneous** is the innermost layer of skin made up of fat and connective tissue.

**Urea and Electrolytes (U & E's)** is a blood test used to detect abnormalities of blood chemistry.

## 9. REFERENCES

Bowen, P., Mansfield, A. and King, H. (2014) 'Using subcutaneous fluids in end-of-life care.' *Nursing Times*. **110**(40), pp.12–14.

BNF The authority on the selection and use of medicines September 2014-March 2015 (2014). *British National Formulary*. London: BMJ Group.

Dougherty L, Lister S (editors). (2015) "Medicines management". In: *The Royal Marsden Manual of Clinical Nursing Procedures*. 9th edition. Oxford, UK: WileyBlackwell. pp: 675–787.

Elkin, M. K., Perry, A. G. and Potter, P. A. (eds) (2007) *Nursing Interventions and Clinical Skills* (4<sup>th</sup> Ed) St Louis, MO: Mosby Elsevier

National Council for Palliative Care (2007) *Artificial Nutrition and Hydration Summary Guidance*. London:NCPC.

National Institute of Clinical Excellence (NICE) (2015) *Care of dying adults in last days of life NICE guideline* [NG31]. Available at;  
<https://www.nice.org.uk/guidance/ng31/chapter/Recommendations#maintaininghydration> Accessed on; 14<sup>th</sup> February 2020.

Pickard, A., Karlen, W. and Ansermino, J. 2011) 'Capillary Refill Time: Is it still a useful clinical sign?' *Anaesthesia and Analgesia*. **113**(1) pp. 120-123.

Radcliffe C. (2017) *Guideline for the use of subcutaneous hydration in palliative care*. Birmingham, UK: Specialist Palliative Care Audit and Guidelines Group (SPAGG). Available at;  
[https://www.palliativesdrugs.com/download/180214\\_Subcutaneous\\_hydration\\_in\\_palliative\\_care\\_v2.4\\_Final.pdf](https://www.palliativesdrugs.com/download/180214_Subcutaneous_hydration_in_palliative_care_v2.4_Final.pdf) Accessed on; February 14<sup>th</sup> 2020.

Royal College of Nursing (RCN) (2016) *Standards for infusion therapy* (4th edition) London: RCN.



Royal Pharmaceutical Society (RPS) (2020) *A Competency Framework for all Prescribers*. Available at;  
<https://www.rpharms.com/Portals/0/RPS%20document%20library/Open%20access/Professional%20standards/Prescribing%20competency%20framework/prescribingcompetency-framework.pdf?ver=2019-02-13-163215-030> Accessed on; 14<sup>th</sup> February 2020.

Sasson, M. and Shvartzman, P. (2001) 'Hypodermoclysis: An alternative infusion technique.' *American Family Physician*. **64**(9).

## APPENDIX

### Appendix 1. Rate Guidance

#### Calculating Drops Per Minute

To ensure fluid is replaced at the right speed and over the correct amount of time, the following equation can be used.

To calculate the volume in drops, it is necessary to know how many drops are contained within one millilitre. This information should be available on the packaging of the administration set e.g. *CareFusion Ref NT-35-P Infusion Set* advises there are 20 drops per ml

$$\text{Volume of fluid} \times \text{drops per ml} \div \text{number of minutes} = \text{drops per minute}$$

In plain English:

Example: 1 litre over 10 hours =  $1000\text{mls} \times 20 \div (10\text{hrs} \times 60\text{mins} = 600\text{mins}) = 33.33\text{r} = 33 \text{ drops per/min}$

Example: 1 litres over 8 hours =  $1000\text{mls} \times 20 \div (8\text{hrs} \times 60\text{mins} = 480\text{mins}) = 41.6 = 42 \text{ drops per/min}$

Example: 500ml 0.9% Sodium Chloride to be infused by Hypodermoclysis over 8 hrs  
 $500 \times 20 \div (8 \times 60=480) = 20.83\text{r} = 21 \text{ dpm}$

Example: 2 litres to be infused over 12 hours = must be done in two separate sites!  
 $1000 \times 20 \div (12 \times 60= 720) = 27.77\text{r} = 28 \text{ dpm each in separate sites}$

Count drops over full minute to calculate correct rate. May take several attempts.

Size of bags should be considered in order not to waste fluid. Air embolisms are not a problem in this process.

All calculations should be annotated in notes with clear explanation how the infusion was delivered.

## Appendix 2. Subcutaneous Fluid Insertion Site Chart

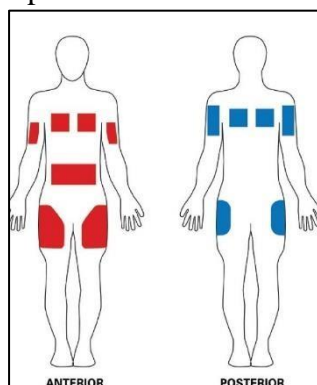
Name Address

DOB

URN

V.I.P. Score (Visual infusion phlebitis score)		
I.V. site appears healthy	0	No sign of phlebitis ■ OBSERVE CANNULA
One of the following is evident : Slight pain near the i.v. site or slight redness near the i.v.site	1	Possible first sign of phlebitis ■ OBSERVE CANNULA
Two of the following are evident: ● Pale near i.v.site ● Erythema ● Swelling	2	Early stage of phlebitis ■ RESITE CANNULA
All of the following are evident: ● Pain along path of cannula ● Erythema ● Induration	3	Medium stage of phlebitis ■ RESITE CANNULA ■ CONSIDER TREATMENT
All of the following are evident & extensive ● Pain along path of cannula ● Erythema ● Induration ● Palpable venous cord	4	Advanced stage of phlebitis or start of thrombophlebitis ■ RESITE CANNULA ■ CONSIDER TREATMENT
All of the following are evident & extensive ● Pain along path of cannula ● Erythema ● Induration ● Palpable venous cord ● pyrexia	5	Advanced stage of thrombophlebitis ■ INITIATE TREATMENT ■ RESITE CANNULA

Acceptable SC insertion sites



Observe for;

- ☐ Pain/discomfort
- ☐ Tenderness
- ☐ Erythema
- ☐ Swelling/induration
- ☐ Leakage of fluid
- ☐ Bleeding
- ☐ Infusion rate

Date	Cannula used and where on Body	VIP Score	Signature and Designation

### Appendix 3. Equality Impact Screening Tool

Stage 1 - Screening			
Title of Procedural Document: Adult Administration of Subcutaneous Fluids Guideline/Procedure			
Date of Assessment	13/05/20	Responsible Department	Rapid Response and Reablement Team
Name of person completing assessment	Louise Hamilton	Job Title	Team Lead
<b>Does the policy/function affect one group less or more favourably than another on the basis of :</b>			
	<b>Yes/No</b>	<b>Comments</b>	
<input type="checkbox"/> Age	No		
<input type="checkbox"/> Disability Learning disability; physical disability; sensory impairment and/or mental health problems e.g. dementia	No		
<input type="checkbox"/> Ethnic Origin (including hard to reach groups)	No		
<input type="checkbox"/> Gender reassignment	No		
<input type="checkbox"/> Pregnancy or Maternity	No		
<input type="checkbox"/> Race	No		
<input type="checkbox"/> Sex	No		
<input type="checkbox"/> Religion and Belief	No		
<input type="checkbox"/> Sexual Orientation	No		
<b>If the answer to all of the above questions is NO, the EIA is complete. If YES, a full impact assessment is required: go on to stage 2</b>			
Stage 2 – Full Impact Assessment			
<b>What is the impact</b>	<b>Level of Impact</b>	<b>Mitigating Actions</b> (what needs to be done to minimise / remove the impact)	<b>Responsible Officer</b>
Monitoring of Actions			
The monitoring of actions to mitigate any impact will be undertaken at the appropriate level			