Guideline on the use and monitoring of intravenous unfractionated Heparin (UFH) in adults

This guidance does not override the individual responsibility of health professionals to make appropriate decision according to the circumstances of the individual patient in consultation with the patient and /or carer. Health care professionals must be prepared to justify any deviation from this guidance.

Introduction

Heparin is a commonly used anti-thrombotic agent. Most heparin used now is low- molecular weight heparin (LMWH) but unfractionated heparin (UFH) is still useful in certain situations such as severe renal failure and where rapid reversal of the anticoagulant effect is required.

This guideline has been produced to cover adult patients only and to coincide with the WAHT Heparin Prescription Chart (WR1762).

This guideline is for use by the following staff groups:

All healthcare professionals who undertake the prescription, preparation and administration of heparin therapy for adult patients.

Lead Clinician(s)

Dr D Davies	Consultant Haematologist
Mohima Akhtar	Lead Pharmacist - Stroke & Thrombosis

Approved by Pharmacy Governance Committee on: 3rd July 2024

Approved by Medicines Safety Committee on: 10th July 2024

Review Date:
This is the most current document and is to be used until a revised version is available:

Key Amendments made to this Document:

Date	Key Amendments	By:
08.02.2011	No amendments made to guideline	Dr Shafeek
09.04.2013	Minor changed made to the wording of the text and more details about screening for HIT.	Mark Crowther
19.11.2015	Document extended for 12 months as per TMC paper approved by TMC on 22nd July 2015	TMC
Oct 16	Further extension as per TMC paper approved 22nd July 2015	TMC
Oct 2017	Document reviewed with no changes	Dr S Shafeek
December 2017	Sentence added in at the request of the Coroner	
4th January 2018	Document extended for 2 years, no changes made	Dr S Shafeek
November 2019	References to NPSA removed	Keith Hinton
May 2024	Further references to NPSA removed in body of text, minor grammatical changes, altered IBW equation, CrCl used, titles added to Tables, SPC referenced in introduction, contraindications of UFH updated,	Mohima Akhtar

Contents:

Staff Competences

Any gaps in competence relating to administering heparin therapy must be addressed through training to ensure that all staff may undertake their duties safely.

Introduction

Heparin is a naturally occurring anticoagulant that works by potentiating the inhibition of coagulation factors such as thrombin and factor X (SPC found on EMC). All UK heparin is sourced from porcine tissue. The majority of heparin used is LMWH which is highly purified giving the advantage of dependable pharmacokinetics allowing for once or twice daily subcutaneous dosing. The problem with LMWH is that it can accumulate in severe renal failure (CrCl<15mL/min) and cannot be reversed quickly compared to UFH. UFH is metabolized by the reticuloendothelial system, hence can be used in renal failure, and can be rapidly reversed, therefore can be used where anticoagulation is indicated but may require immediate reversal (e.g. high bleeding risk or the perioperative period). UFH is given intravenously and has variable pharmacokinetics requiring regular dose monitoring and adjustment.

UFH has a short half-life (1-6 hours) and is affected by larger doses. Its effect can be reversed by the administration of protamine sulfate if sufficient time is available for the anticoagulant effect to wear off.

Detailed guidance on the use of LMWH can be found in the trust guideline ‘Guideline for the Management of Venous Thromboembolism (VTE) Including Management of Patients receiving low molecular weight Heparin WAHT-HAE-019’.

Indications for UFH

The main indications for UFH are:

1. UFH should be considered in patients who require full dose anticoagulation but cannot have LMWH because:
   - They have a calculated CrCl<15mLs/minute
   - They have had a major haemorrhage in the past four weeks and may require immediate reversal of anticoagulation
   - They have a condition with a high risk of thrombosis and have had a procedure with a high risk of bleeding and may require immediate reversal of anticoagulation
   - They have a condition with a high risk of thrombosis and are awaiting a procedure that requires the immediate reversal of anticoagulation
2. During haemofiltration to ensure the circuit remains patent
3. As a more dilute solution (50iu/ 5mLs) used for intravenous line flushes

Contraindications and cautions with UFH

UFH is contraindicated in patients:

- With heparin allergy or allergy to any excipients in the heparin solution
- After major trauma or undergoing surgery of the brain, spinal cord or the eye, in procedures at sites where there is a risk of bleeding, and in patients undergoing lumbar puncture or regional anaesthetic block.
- Who have active bleeding or haemophilia or severe liver disease (including oesophageal varices) or purpura or severe hypertension or active tuberculosis and/or increased capillary permeability.
- Acute bacterial endocarditis
- Thrombocytopenia or history of heparin induced thrombocytopenia (to be discussed with haematology)

UFH should be used in caution in patients:

- Who have had recent surgery or haemorrhage
- Who have a history of bleeding disorders or at risk of bleeding
- Elderly
- Severe hypertension

Pre-administration checks

- Indication for anticoagulation detailed in notes with risk/benefits of using UFH noted
- Discussion with patient/relative documented in notes
- Check normal drug prescription chart for other anticoagulants, antiplatelet agents and non-steroidal anti-inflammatories. Under normal circumstances the co-administration of these drugs is contra-indicated
- Document on the medication chart that a separate heparin prescription chart is in use
- Complete all the patient details on the adult intravenous heparin treatment chart WR1762 (Appendix 1)
- Check coagulation screen and document baseline Activated Partial Thromboplastin Time ratio (APTTr) on intravenous heparin treatment chart (WR1762, appendix 1). Discuss with clinical haematology if PT or APTTr are abnormal
- Full blood count (particularly platelet count). Discuss with clinical haematology if platelet count $<100x10^9$/L.
- U & E's and LFT's
- Document patient's weight (kg) on intravenous heparin treatment chart (WR1762, appendix 1), medication chart and on Sunrise

Doses are based on ideal body weight- if the patient is obese use this equation:

Men (IBW):	50kg + (2.3kg x number of inches over 5 feet)
Women (IBW):	45.5kg + (2.3kg x number of inches over 5 feet)

Heparin syringe

Only those qualified to give intravenous infusions should make up the heparin syringe, this should be checked by another qualified administrator and signed on the prescription chart.

A 50ml syringe should be used to draw up 40mls of 1000 units/ml strength of heparin (40,000 units).

Only heparin of 1000 units/ml strength should be stocked on wards for intravenous infusions to avoid errors.

Each syringe should be discarded after 24 hours regardless of any remaining solution.

Loading dose

UFH requires a loading bolus. **Heparin sodium 5000 units intravenously over 5 minutes is the standard loading dose. Higher dose of 10,000 units may be required for severe pulmonary embolism.** The prescriber must use the designated loading dose box on the adult intravenous heparin chart (WR1762, appendix 1) to prescribe this. The person administering the loading dose must have it checked and sign in the box that it has been given.

(NB-Any additional loading doses that may be required must be prescribed on the stat dose section of the in-patient medicine chart)

Maintenance dose

Once the loading dose has been given the maintenance infusion must be started. The dose is 18units/kg/hour and has been dose banded in the table below for ease of prescribing and administration. The initial rate of infusion is dependent on weight, see table 1 below (also on reverse of WR1762, appendix 1) and then altered dependent on the APTT ratio.

Weight (kg)	**Initial rate (mL/hour of heparin sodium 1000units/mL)**
41-50	0.8
51-60	1.0
61-70	1.2
71-80	1.4
>80	1.6

Table 1: Initial maintenance dose and rate of UFH based on weight

The initial rate required should be prescribed on the '**Continuation infusion'** section of WR1762. Complete the time the 1st APTT ratio should be checked (6 hours from start of continuation infusion).
Date, time and sign the prescription. The person administering the infusion must have the rate checked and sign the chart.

Monitoring

- Do not take sample blood from the drip arm
- Measure the APTTr (aiming for range between 1.5 – 2.5) every six hours initially (unless instructed otherwise in the table below) and after any rate change

Once APTTr is stable (i.e. at least two results within range) daily monitoring is appropriate

- APTTr is monitored by sending a sodium citrate (light blue top) tube to haematology
- All patients receiving unfractionated heparin should have their platelet count measured every second day between days 4-14
- U&Es - heparin may cause hyperkalaemia
- Long term (>1 month treatment) 2-3 % patients develop osteoporosis and vertebral fractures, which may be a long term complication (heparin decreases osteoblast and increases osteoclast activity). Monitor for back pain

Dose adjustment

Adjust the rate of infusion in accordance with the schedule in table 2 below. All dose adjustments must be prescribed and signed for on the chart. Any changes to the rate must be done by a trained member of staff and checked by a second and signed that it has been done.

Heparin Infusion Schedule	
APTT ratio	**Infusion rate change**
<1.2	Give IV bolus 5000units and increase rate by 0.4mL/hour. Repeat APTT after 4hours
1.2-1.4	Increase rate by 0.2mL/hour
1.5-2.5	No change
2.6-3.0	Reduce rate by 0.1mL/hour
3.1-4.0	Reduce rate by 0.2mL/hour
4.1-5.0	Reduce rate by 0.3mL/hour
>5	Stop infusion for 1 hour then reduce rate by 0.5mL/hour. Repeat APTT after 4 hours

Table 2: Dose and rate adjustments of UFH based on APTTr

Treatment of bleeding or over dosage

Because of its short half-life the effect of UFH only lasts for a couple of hours. For minor bleeding the infusion can be stopped and appropriate local measures taken.

For major bleeding, or rapid reversal, the infusion can be stopped and protamine sulfate administered. Protamine sulfate should also be considered in large over dosages of UFH. Protamine sulfate is given at a dose of 1mg per 100 units of heparin administered in the previous four hours up to a maximum dose of 50mg. Protamine sulfate is given as a slow intravenous injection with a rate not exceeding 5mg/minute. The APTTr should be rechecked 10 minutes after the administration of protamine sulfate and if still prolonged consideration given to further doses. Clinical haematology advice should be sought if necessary.

Cautions with protamine sulfate - allergic reactions are increased if previously exposed to protamine. These patients include those who have previously undergone procedures such as coronary angioplasty or cardio-pulmonary by-pass which may include use of protamine, diabetics who have been treated with protamine insulin, patients allergic to fish and men who have had a vasectomy or are infertile and may have antibodies to protamine.

Heparin-induced thrombocytopenia (HIT)

This is immunologically mediated thrombocytopenia which is uncommon but can be life threatening. IgG antibodies are formed in response to heparin therapy, which form immune complexes and trigger platelet aggregation causing vascular thrombosis and microvascular occlusion.

All patients who are to receive any form of heparin should have a baseline platelet count performed.

HIT should be considered in any patient who develops the following while receiving heparin:

- Confirmed or suspected new thrombosis (either arterial or venous)
- A falling platelet count
- Confirmed or suspected extension of previous thrombus
- Skin reaction at injection site (erythema and/or skin necrosis)
- Anaphylactic reaction to heparin/fondaparinux
- Adrenal haemorrhage

Patients with suspected HIT should have a '4T' score performed, see table 3 below.

Delayed onset HIT should be considered if there is new thrombosis occurring up to 40 days after stopping heparin therapy. Delayed onset HIT is rare and further investigations should be discussed with a haematologist.

Active monitoring of platelet count should be performed in the following situations:

- All patients receiving unfractionated heparin should have their platelet count measured every second day between days 4-14.

'4T' scoring system

	Score = 2	Score = 1	Score = 0
Thrombocytopenia Compare the highest platelet count within the sequence of declining platelet counts with the lowest count to determine the % of platelet fall. (Select only 1 option)	>50% platelet fall AND a nadir of ≥20 AND no surgery within the preceding 3 days.	>50% platelet fall BUT surgery within the preceding 3 days OR Any combination of platelet fall and nadir that does not fit criteria for Score 2 or Score 0 (e.g. 30-50% platelet fall or nadir 10-19)	<30% platelet fall OR Any platelet fall with nadir <10
Timing (of platelet count fall or thrombosis or appearance of skin lesions) Day 0 = first day of most recent heparin exposure (Select only 1 option)	Platelet fall day 5-10 after start of heparin Platelet fall within 1 day of start of heparin AND exposure to heparin within the past 5-30 days	Consistent with platelet fall day 5-10 but not clear (e.g. missing counts) Platelet fall within 1 day of start of heparin AND exposure to heparin in the past 31-100 days Platelet fall after day 10	Platelet fall ≤ day 4 without exposure to heparin in the past 100 days

Thrombosis (or other clinical sequelae) (Select only 1 option)	Confirmed new thrombosis (venous or arterial) Skin necrosis at injection site Anaphylactoid reaction to IV heparin bolus Adrenal haemorrhage	Recurrent venous thrombosis in patient receiving therapeutic anticoagulants Suspected thrombosis (awaiting confirmation on imaging) Erythematous lesions at unfractionated heparin injection sites	Thrombosis not suspected
Other causes for thrombocytopenia (Select only 1 option)	No alternative explanation for platelet fall is evident.	Possible other cause is evident: Sepsis without proven microbial source Thrombocytopenia associated with initiation of ventilator	Probable other cause is present: Within 72h of surgery Confirmed bacteraemia/ fungaemia Chemotherapy or radiation within the past 20 days DIC due to a non-HIT cause Post transfusion purpura Thrombotic thrombocytopenia Purpura Platelet count <20 and given a drug implicated in drug induced immune thrombocytopenia purpura Non-necrotising skin lesions at LMWH injection sites

Table 3: '4T' scoring system for HIT

If the patient scores:-

Score 0-3 – Low probability of HIT, no further investigations required, heparin treatment can continue. Patient should be rescored if clinical situation changes.

Score 4-5 – Intermediate probability of HIT - heparin should be stopped, no further heparin should be given (including heparin flushes for lines). Alternative anticoagulant should be started only if there is thrombosis. The patient should have a HIT test performed.

Score 6-8 – High probability of HIT - heparin should be stopped, no further heparin should be given (including heparin flushes for lines) and an alternative anticoagulant started. The patient should have a HIT test performed.

Intermediate and high probability cases should be discussed with the on-call haematologist, the balance of thrombosis and bleeding can then be assessed.

Heparin for flushing lines

Intravenous lines are often flushed with a weak heparin solution (10iu/ml). This is either comes in 50iu/ 5ml ampules for intermittent line flushes or is made up by adding heparin to a bag of normal saline. Both these must be prescribed on a standard drug chart, and their use signed for. Weak heparin solutions should be kept separately from standard heparin to avoid the accidental flushing using neat heparin. Although the dose of the heparin is small systemic effects can occur.

References

- Baglin T, Barrowcliffe TW, Cohen A Greaves M. Guidelines on the use and monitoring of heparin. Br J Haematol: 90; 1-7
- Davidson S, Keeling D, Watson H. The management of heparin induced thrombocytopenia. Br J Haematol: 133; 3. 259-269

MONITORING TOOL

This should include realistic goals, timeframes and measurable outcomes.

Key control:	Checks to be carried out to confirm compliance with the policy:	How often the check will be carried out:	Responsible for carrying out the check:	Results of check reported to: *(Responsible for also ensuring actions are developed to address any areas of non- compliance)*	Frequency of reporting:
WHAT?	**HOW?**	**WHEN?**	**WHO?**	**WHERE?**	**WHEN?**
All patients who are started on treatment dose UFH should have the UFH prescribed on WR1762	Review of prescribing	Every prescription	Prescriber, nursing staff, pharmacist	Deviations from guideline recommendations may be reported via DATIX	Each time a reportable issue arises
All patients who are started on treatment dose of UFH should have their APTTr measured every six hours, until stable then daily	Review of monitoring	Every Prescription	Prescriber, nursing staff	Deviations from guideline recommendations may be reported via DATIX	Each time a reportable issue arises
APTTr will be within safe limits if not appropriate action taken	Review of monitoring	Every Prescription	Prescriber, nursing staff	Deviations from guideline recommendations may be reported via DATIX	Each time a reportable issue arises

CONTRIBUTION LIST

Key individuals involved in developing the document

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Surgical specialties CDs/Matrons Medical CDs/Matrons Radiology CD Pharmacy CD Emergency Department CD/Matrons Anaesthetics CD/Matron	

Circulated to the chair of the following committee's / groups for comments

Name	Committee / group
Medicines Safety Committee	

Appendix 1

ADULT INTRAVENOUS HEPARIN TREATMENT CHART

Worcestershire NHS
Acute Hospitals NHS Trust

ADDRESSOGRAPH

Name.....

Hosp No:

NHS No:

D.O.B..... Male Female

ALLERGIES/ADVERSE DRUG REACTIONS

NONE KNOWN ☐ Signature:

DATE	DRUG/FOOD/OTHER	REACTION DETAILS

CONSULTANT:	WARD:		WEIGHT: ..... KG

INITIAL LOADING DOSE

Heparin Sodium 5000 units to be given intravenously over 5 minutes as a stat dose

Prescribed by:		Date:	Time:
Given by:	Checked by:	Date:	Time:

CONTINUATION INFUSION

Heparin Sodium 40,000 units in 40mls to be given by intravenous infusion via a syringe pump.

Initial rate ..... ml/hr. Check APTT ratio 6 hours after commencing infusion.

Prescribed by:	Date:	Time:

SYRINGE MUST BE CHANGED EVERY 24 HOURS REGARDLESS OF DOSE

Date	APTT ratio	Time	Infusion Rate ml/hour	Rate		Syringe Preparation	
				Set by SIGN	Checked by SIGN	Prepared by SIGN	Checked by SIGN
	BASELINE						

FILE IN INPATIENT SECTION OF MEDICAL NOTES

WR1762 - Version 1 - Issued:Oct 2008

ADULT INTRAVENOUS HEPARIN TREATMENT CHART

GUIDANCE FOR USE

1. Perform a Full Blood Count and coagulation screen (refer to Pathology Handbook) and document these baseline results before prescribing heparin.

2. Heparin must also be prescribed in the Regular Drugs section of the Trust Inpatient Prescription Chart, referring to this chart for prescription specifics.

DRUG (APPROVED NAME) Heparin Infusion			08:00
DOSE See IV Heparin Treatment Chart	ROUTE	DIRECTIONS	12:00
START DATE 01/06/08	SIGNATURE A. Prescriber	BLEEP 999	18:00 22:00
PHARMACY USE			

3. All Heparin Infusions must be prepared using Heparin Sodium (unfractionated Heparin) 1000 units/ml ampoules.

4. An initial IV loading dose of 5000 units should be prescribed and given over 5 minutes (by completing the preprinted prescription overleaf).

5. The continuation infusion should also be prescribed overleaf, dose and rate determined by reference to the table below (based on 18 units/kg/hour) and the time at which the initial APTT ratio should be checked should also be defined (6 hours after starting infusion).

Weight (kg)	Initial rate (ml/hour of 1000 units/ml)
41 - 50	0.8
51 - 60	1.0
61 - 70	1.2
71 - 80	1.4
> 80	1.6

5. Prepare an IV infusion 1000 units/ml i.e. 40,000 units/40mls and commence the infusion at the prescribed rate overleaf.

6. Measure the APTT ratio 6 hours after starting the infusion as above, and then adjust the rate as per the Heparin Infusion Schedule table below, to maintain the patient APTT ratio between 1.5 and 2.5

7. Once the APTT ratio is stable, the ratio can be checked daily. If the rate (dose) is changed in any respect, the ratio must be re-checked 6 hours after any change (or sooner as indicated in the heparin infusion schedule below)

HEPARIN INFUSION SCHEDULE	
APTT ratio	**Infusion Rate Change**
<1.2	IV bolus 5000 units and increase rate by 0.4ml/hour Repeat APTT after 4 hours
1.2 - 1.4	Increase rate by 0.2ml/hour
1.5 - 2.5	**No change**
2.6 - 3.0	Reduce rate by 0.1ml/hour
3.1 - 4.0	Reduce rate by 0.2ml/hour
4.1 - 5.0	Reduce rate by 0.3ml/hour
> 5	Stop for 1 hour and reduce rate by 0.5ml/hour. Repeat APTT after 4 hours

2. Greet and accurately identify the patient.

3. Introduce yourself and any colleagues involved in the procedure to the patient and/or carer.

4. Assess the patient's physical condition and their fitness for treatment and seek advice from an appropriate team member if required.

5. Check the drugs against the treatment plan, prescription and patient information with regard to:

- patient's identification on prescription chart and on labelled drugs;
- critical test results (including blood results);
- regimen and individual drug identification;
- name of drug;
- the drug's fitness for administration (assessed by appearance
- and condition);
- diluents and dilution volumes;
- dose;
- administration route and duration;
- expiry date/time of the drug.

6. Explain the treatment and potential side effects and their management to the patient and/or carer, and accurately answer any questions at a level and pace that is appropriate to:

- their emotional state;
- their level of understanding;
- their culture and background;
- their preferred ways of communicating;
- their needs.

7. Check that the patient and/or carer understand the treatment to be given and any potential side effects together with their management.

8. Undertake a final check of the treatment drug against the prescription and the patient's identity before administration.

9. Prepare the dose, carrying out calculations, dilutions etc in accordance with local policy.

10. Give the required drug via the prescribed route, at the prescribed rate according to local medicines administration guidelines, local control of infection and COSHH guidelines.

11. Record the administration in the patient's notes, prescription chart and patient held records, as appropriate, according to local guidelines.

12. Dispose of waste materials (sharps etc) in accordance with local guidelines.

13. Communicate with appropriate professional colleagues as required by local guidelines.

14. Recognise when you need help and seek advice and support from an appropriate source when the needs of the individual and the complexity of the case are beyond your competence and capability.

Knowledge and understanding	**You need to apply:** *Legislation, regulations and guidelines* 1. An in-depth understanding of national* and local anticoagulant guidelines and their application. 2. A working understanding of the local guidelines for patient records, their storage and confidentiality of information. 3. An in-depth understanding of the national and local prescribing guidelines. 4. A working understanding of the Guidelines on the Administration of Medicines. 5. A working understanding of local guidelines for waste and sharps handling and disposal. 6. A working understanding of risk management, patient safety principles and causes of medication errors. *Clinical knowledge* 7. A working understanding of the disease progression and the potential impact on physiological systems. 8. A working understanding of the relevance of other treatment modalities and clinical conditions. 9. An in-depth understanding of diagnosis, care plan, protocol and guidelines. 10. An in-depth understanding of the principles and practice of prescribing injectable anticoagulants. 11. An in-depth understanding of the indications and contra-indications for injectable anticoagulants. 12. An in-depth understanding of drug calculations appropriate to the prescribed injectable anticoagulant, dose dilution and length of delivery. 13. An in-depth understanding of the side effects of injectable anticoagulant medicines, and their assessment, monitoring, prevention and management. *Technical knowledge* 14. A working understanding of different venous access devices and their care. 15. A working understanding of administration by the subcutaneous route, and intravenous bolus and/or infusions. *Procedures and patient management* 16. A factual knowledge of the roles and responsibilities of other team members. 17. A working understanding of the limits of one's own knowledge and experience and the importance of not operating beyond these.

***National guidance**	Guidance produced nationally includes: Baglin T et al. Guidelines on oral anticoagulation (warfarin): third edition - 2005 update. *British Journal of Haematology*. 2005; 132: 277-285. Available at: www.bcshguidelines.com National Patient Safety Agency. *Patient Safety Alert – Actions that can make anticoagulant therapy safer*. (2007). Available at: www.npsa.nhs.uk/health/alerts British National Formulary. 52nd and subsequent editions.

Supporting Document 1 - Equality Impact Assessment Tool

To be completed by the key document author and included as an appendix to key document when submitted to the appropriate committee for consideration and approval.

Please complete assessment form on next page;

NHS Worcestershire Acute Hospitals NHS Trust

Herefordshire & Worcestershire STP - Equality Impact Assessment (EIA) Form
Please read EIA guidelines when completing this form

Section 1 - Name of Organisation (please tick)

Herefordshire & Worcestershire STP		Herefordshire Council		Herefordshire CCG	
Worcestershire Acute Hospitals NHS Trust	✓	Worcestershire County Council		Worcestershire CCGs	
Worcestershire Health and Care NHS Trust		Wye Valley NHS Trust		Other (please state)	

Name of Lead for Activity	Mohima Akhtar	

Details of individuals completing this assessment	**Name**	**Job title**	**e-mail contact**
	Mohima Akhtar	Pharmacist	Mohima.akhtar1@nhs.net
Date assessment completed	05/06/2024		

Section 2

Activity being assessed (e.g. policy/procedure, document, service redesign, policy, strategy etc.)	**Title: Review of guideline**				
What is the aim, purpose and/or intended outcomes of this Activity?	Review guideline for up to date accuracy				
Who will be affected by the development & implementation of this activity?	✓ ✓ ❑ ❑	Service User Patient Carers Visitors	✓ ❑ ❑ ❑	Staff Communities Other _____	
Is this:	✓ Review of an existing activity ❑ New activity				

	❑ Planning to withdraw or reduce a service, activity or presence?
What information and evidence have you reviewed to help inform this assessment? (Please name sources, eg demographic information for patients / services / staff groups affected, complaints etc.	Checking clinical accuracy of information in this guideline
Summary of engagement or consultation undertaken (e.g. who and how have you engaged with, or why do you believe this is not required)	Comments and changes shared with Lead Haematologist Discussed in Haematology Governance meeting on 17/07/24
Summary of relevant findings	

Section 3

Please consider the potential impact of this activity (during development & implementation) on each of the equality groups outlined below. **Please tick one or more impact box below for each Equality Group and explain your rationale**. Please note it is possible for the potential impact to be both positive and negative within the same equality group and this should be recorded. Remember to consider the impact on e.g. staff, public, patients, carers etc. in these equality groups.

Equality Group	Potential positive impact	Potential neutral impact	Potential negative impact	Please explain your reasons for any potential positive, neutral or negative impact identified
Age		✓		
Disability		✓		
Gender Reassignment		✓		
Marriage & Civil Partnerships		✓		
Pregnancy & Maternity		✓		
Race including Traveling Communities		✓		
Religion & Belief		✓		
Sex		✓		
Sexual Orientation		✓		
Other Vulnerable and Disadvantaged Groups (e.g. carers; care leavers; homeless;		✓		

Equality Group	Potential positive impact	Potential neutral impact	Potential negative impact	Please explain your reasons for any potential positive, neutral or negative impact identified
Social/Economic deprivation, travelling communities etc.)				
Health Inequalities (any preventable, unfair & unjust differences in health status between groups, populations or individuals that arise from the unequal distribution of social, environmental & economic conditions within societies)		✓		

Section 4

What actions will you take to mitigate any potential negative impacts?	Risk identified	Actions required to reduce / eliminate negative impact	Who will lead on the action?	Timeframe
		.		
How will you monitor these actions?				
When will you review this EIA? (e.g in a service redesign, this EIA should be revisited regularly throughout the design & implementation)				

Section 5 - Please read and agree to the following Equality Statement

1. Equality Statement

1.1. All public bodies have a statutory duty under the Equality Act 2010 to set out arrangements to assess and consult on how their policies and functions impact on the 9 protected characteristics: Age; Disability; Gender Reassignment; Marriage & Civil Partnership; Pregnancy & Maternity; Race; Religion & Belief; Sex; Sexual Orientation

1.2. Our Organisations will challenge discrimination, promote equality, respect human rights, and aims to design and implement services, policies and measures that meet the diverse needs of our service, and population, ensuring that none are placed at a disadvantage over others.

1.3. All staff are expected to deliver services and provide services and care in a manner which respects the individuality of service users, patients, carers etc., and as such treat them and members of the workforce respectfully, paying due regard to the 9 protected characteristics.

Signature of person completing EIA	M Akhtar
Date signed	05/06/2024
Comments:	
Signature of person the Leader Person for this activity	
Date signed	
Comments:	

Supporting Document 2 – Financial Impact Assessment

To be completed by the key document author and attached to key document when submitted to the appropriate committee for consideration and approval.

	Title of document:	Yes/No
1.	Does the implementation of this document require any additional Capital resources	No
2.	Does the implementation of this document require additional revenue	No
3.	Does the implementation of this document require additional manpower	No
4.	Does the implementation of this document release any manpower costs through a change in practice	No
5.	Are there additional staff training costs associated with implementing this document which cannot be delivered through current training programmes or allocated training times for staff	No
	Other comments:	

If the response to any of the above is yes, please complete a business case and which is signed by your Finance Manager and Directorate Manager for consideration by the Accountable Director before progressing to the relevant committee for approval