

## Document Control

<b>Title</b>			
<b>Therapeutic Venesection Standard Operating Procedure</b>			
<b>Author</b>		<b>Author's job title</b>	
		Haematology Support Nurse Haematology Clinical Nurse Specialist	
<b>Directorate</b>		<b>Department</b>	<b>Team/Specialty</b>
Clinical Support & Specialist Services		Clinical Haematology	Haematology
<b>Version</b>	<b>Date Issued</b>	<b>Status</b>	<b>Comment / Changes / Approval</b>
0.1	August 2016	Draft	Initial version for consultation
1.0	June 2017	FINAL	Approved Haematology Governance
1.1	Dec 2020	Revision	Revised version for consultation Additional appendices.
2.0	May 2021	Final	Section 7 – equipment added:- <ul style="list-style-type: none"> <li>• Baxter Cannula transfer pack.</li> <li>• 20g or 18g cannula or suitable cannula.</li> </ul> Section 8 Procedure <ul style="list-style-type: none"> <li>• 8.3 added</li> <li>• 8.7 added</li> <li>• 8.11 added</li> <li>• 8.14 added</li> <li>• 8.18 added</li> <li>• 8.22 additional 2 sentences</li> <li>• 8.23 additional sentence</li> <li>• 8.24 added</li> <li>• 8.25 added</li> </ul> Section 9 Potential Problems 2 <sup>nd</sup> paragraph added.  Addition of Appendix 3
<b>Main Contact</b>			
Haematology CNS Office 1 Seamoor Corridor North Devon District Hospital Raleigh Park Barnstaple, EX31 4JB		<b>Tel: Direct Dial –</b> <b>Tel: Internal –</b> <b>Email:</b>	
<b>Lead Director</b>			
Director of Nursing			
<b>Document Class</b>		<b>Target Audience</b>	
Standard Operating Procedure		Seamoor Unit Staff	
<b>Distribution List</b>		<b>Distribution Method</b>	
Senior Management Seamoor unit Nursing team		Trust's internal website Email	

<b>Superseded Documents</b>		
<b>Issue Date</b> May 2021	<b>Review Date</b> May 2024	<b>Review Cycle</b> Three years
<b>Consulted with the following stakeholders: (list all)</b> <ul style="list-style-type: none"> <li>• Head of Learning &amp; Development</li> <li>• All users of this document</li> </ul>		<b>Contact responsible for implementation and monitoring compliance:</b> Haematology CNS <b>Education/ training will be provided by:</b> Haematology CNS
<b>Approval and Review Process</b> <ul style="list-style-type: none"> <li>• Haematology Governance</li> </ul>		
<b>Local Archive Reference</b> G:\Cancer services <b>Local Path</b> Haematology- Haematology Nurses - Policies <b>Filename</b> Venesection SOP 2020 V 1.2		
<b>Policy categories for Trust's internal website (Bob)</b> Cancer services		<b>Tags for Trust's internal website (Bob)</b> Venesection
<b>Any revision to an NHSLA document requires the agreement of the Senior Governance Manager (Compliance)</b>		

---

## CONTENTS

---

<b>Document Control</b> .....	<b>1</b>
<b>1. Background</b> .....	<b>4</b>
<b>2. Purpose</b> .....	<b>4</b>
<b>3. Definition of Terms</b> .....	<b>4</b>
<b>4. Indications</b> .....	<b>5</b>
<b>5. Scope</b> .....	<b>5</b>
<b>6. Location</b> .....	<b>6</b>
<b>7. Equipment</b> .....	<b>6</b>
<b>8. Procedure</b> .....	<b>6</b>
<b>9. Potential Problems</b> .....	<b>9</b>
<b>10. References</b> .....	<b>9</b>
<b>11. Associated Documentation</b> .....	<b>9</b>
<b>Appendix 1</b> .....	<b>10</b>
<b>Appendix 2: Venesection target communication</b> .....	<b>11</b>
<b>Appendix 3: ASSESSMENT OF CLINICAL COMPETENCY</b> .....	<b>13</b>

## 1. Background

1.1. Therapeutic venesection of 500ml of blood from adults may be required in the following circumstances:-

- Control of Polycythemia Rubra Vera (PRV)
- Management of Haemochromatosis
- Treatment of Porphyria Cutanea Tarda
- Treatment of transfusion related Iron overload.

## 2. Purpose

2.1. The Standard Operating Procedure (SOP) has been written to:

- Identify the procedure for the assessment and delivery of Therapeutic Venesection within the Seamoor Unit, other NDDH wards and NDDH community hospitals.
- Improve personal care for the patient and reduce the risks associated with poor Therapeutic Venesection care.

## 3. Definition of Terms

3.1. **Polycythemia Rubra Vera.** Is an acquired disorder of the bone marrow that causes the overproduction of red blood cells. It is a rare disease that occurs more frequently in men than women, and rarely in patients under 40 years old. It is not known what causes polycythemia vera

3.2. **Haemochromatosis** is a genetic disorder of iron metabolism very common in those of Celtic, Anglo and Northern European descent. Absorption of iron through the intestine is uncontrolled even when body saturation levels have been reached - the excess iron is very toxic to body organs. The consequences do not occur until this has been happening for several years.

3.3. **Porphyria Cutanea Tarda** - The porphyrias are a group of diseases in which there is a defect somewhere in the complex chain of chemical steps that are required for the synthesis of the molecule known as haem. The lack of this enzyme causes a build-up of porphyrins in the blood and skin. These react with light, making the skin fragile and easily blistered. Some people are born with the condition, but in the majority it appears later in life, having been caused by a toxin

- 3.4. Transfusion related Iron overload** - For previously heavily transfused patients who as a result have an elevated ferritin level which could affect long term health. This group of patients must now have normal bone marrow function. e.g. post Bone Marrow Transplantation or intensive treatment for Acute Leukaemia's.

## 4. Indications

- 4.1. PRV** - venesection is used to lower the haematocrit levels to between 0.45 - 0.47 and reduce the risk of thrombosis. Initially this may necessitate weekly venesections in order to bring the haematocrit down to a safe level. Subsequently less frequent venesections will maintain a satisfactory haematocrit. Progress is monitored with a blood count prior to each procedure.
- 4.2. Haemachromatosis** - venesection is used to reduce the excessive iron levels. Normal levels are dependent on the patient, some patients target range is a Ferritin of below 50 and others are between 50 – 100, if the patient's Ferritin is at 75 or above they should be offered a venesection. It may take weekly venesections for up to 2 years to reduce levels to normal. Progress is monitored with a blood count prior to each procedure, when the Ferritin is stable the levels can be checked every 3 months.
- 4.3. Porphyria Cutanea Tarda** - venesection is used to reduce ferritin levels and reduce the photosensitive blistering skin rash. Weekly to fortnightly venesections will be required, a blood count prior to each procedure and a ferritin check every 3 months.
- 4.4. Transfusion related iron overload** – The frequency of venesections and target ferritin level will be determined on an individual basis by the consultant managing the patient.

## 5. Scope

- 5.1.** This Standard Operating Procedure (SOP) relates to the following staff groups who may be involved in the assessment and delivery of Therapeutic Venesection on the unit:
- Registered nurses
  - Health Care Assistants
- 5.2.** Registered nurses and health care assistants who are competent in Therapeutic Venesection by the Haematology Department should assess the patients need for Therapeutic Venesection and make an informed decision as to whether a referral to the Haematology department is necessary.

## 6. Location

- 6.1. This Standard Operating Procedure Therapeutic Venesection can be implemented in the Seamoor Unit and other wards at NDDH, it can also be implemented within the NDHT community hospitals.
- 6.2. Staff undertaking this procedure must be able to demonstrate continued competence as per the organisations policy on assessing and maintaining competence.

## 7. Equipment

- Baxter PL146 Transfer pack with 16G needle.
- Baxter Cannula transfer pack.
- 20g or 18g cannula or suitable cannula.
- Medi swabs
- Sphygmomanometer
- Gauze
- Tape
- Relevant blood bottles for Full blood count and Ferritin (if necessary).
- Sharps bin

## 8. Procedure

- 8.1. This procedure may be performed by Registered Nurses and Senior Healthcare Assistants who have undertaken the venepuncture competency and who are performing within their competency level.
- 8.2. Review the patient's notes or EPRO, to find the consultants request for frequency of venesections and what maintenance levels are required, these will depend on what condition the patient is being treated for.
- 8.3. Ensure the patients Venesection target communication sheet is up to date.
- 8.4. Check the most recent blood test results to ensure the levels require intervention blood results must be within the last 2 weeks. Assess the condition of the patient, any past medical history including any previous reactions during venesection as they may need fluid replacement during and after the procedure, or medications which could affect the procedure e.g. Beta Blockers.
- 8.5. Provide information and obtain consent from the patient.
- 8.6. Check patients' identity against the notes.

- 8.7.** Position the patient on a bed or couch with their arm extended straight and supported on a pillow. Record all vital signs as a baseline.
- 8.8.** Into a clean tray open the venesection pack with the 16g needle and clamp both clamps. Snap the valve at the opening to the sampling pouch. If a cannula is needed, select an appropriate vein and cannula and open the cannula and cannula venesection pack into a clean tray.
- 8.9.** Apply sphygmomanometer cuff to arm which will be used, and inflate to 40-60mmHg
- 8.10.** Select large stable vein suitable for 16G needle generally the Median basilica or cephalic veins in the antecubital fossa.
- 8.11.** Apply Tetracaine Gel 4% (Ametop®) if necessary for 30 mins as prescribed by the haematology team.
- 8.12.** Clean the area using mediwipe and allow to dry. Insert the needle or cannula and secure to the patients arm in 2 places with tape. The tape must not be covering the entry site or touching the needle, it must be placed on the plastic bit of the 16g needle or plastic bit of the cannula. When using the 16g needle blood flow is often best if the needle is rotated immediately after insertion, so that the bevel faces down.
- 8.13.** Failed venepuncture - the wide bore needle requires good access, a relaxed patient and nurse, a comfortable extended arm and distended vein. A warm pack may help to distend the vein if needed.
- 8.14.** When using a cannula, if blood flow is slow or stops 20ml syringes can be used to collect and discard of the blood. 50ml syringes must not be used as they can cause wrist and hand injuries.
- 8.15.** Open the blue clamp and allow sufficient blood to flow into the specimen pouch to fill full blood count and Ferritin blood bottles. Then close the blue clamp. When using a cannula either use the vacutainer on the bag or a vacutainer adapted for syringes to collect blood samples.
- 8.16.** Unclamp the white clamp to allow blood to flow into the collection bag. The bag should be lowered to 30-60cms below the patients arm this will allow the blood to flow using gravity. The procedure should take about 10 minutes. The bag should be hung onto the salter weighing scales to accurately assess the flow of blood letting. Also to measure the amount of blood removed.

- 8.17.** Slow blood flow - check needle siting (revolving the needle so the bevel is not lodged on the inner surface of the vein is effective.) Check the sphygmomanometer cuff is still inflated, If no flow check the clamps on the tube and, check that the valve is broken to the specimen pouch. Blood flow may also be hindered by valves in the vein, pulling the needle or cannula slightly may restart blood flow.
- 8.18.** Monitor the flow and the patient as peripheral flow can sometimes be painful for patients. The procedure should take no longer than 20 minutes, after 20 minutes the procedure should be stopped and the patient brought back on a different day.
- 8.19.** Maintain the pressure of the cuff at 40-60mmHg to maintain good flow. Blood from patients with PRV may be more viscous than normal blood and therefore slower to flow and more likely to clot.
- 8.20.** When the bag is filled with approx. 400-500mls of blood using the Salter weighing scales the bag is clamped, the sphygmomanometer cuff is deflated and the needle is removed and light but constant pressure is applied to the venepuncture site using gauze.
- 8.21.** Patient may feel faint during or after the procedure - always carry out the procedure with the patient on a bed or couch, occasionally the volume of blood removed with each venesection may need to be reduced, the patient may need to have Intra-venous fluid replacement during the procedure and/or a more prolonged rest period post procedure.
- 8.22.** The needle is pulled back into the light blue guard from which it cannot be removed to prevent needle stick injury. The cannula should be removed while the bag is attached, unless the patient is experiencing problems (see section 9) then the cannula must stay in situ and the bag removed. All must be placed into a yellow lidded sharps bin as soon as removed.
- 8.23.** The patient should remain on the bed for 5 to 10 minutes following the procedure and their vital signs recorded again with any changes acted upon as needed.
- 8.24.** Observations should be recorded in the patient's notes which have been taken prior to and following the procedure, along with venepuncture site, volume of blood removed and any ill effects
- 8.25.** Dispose of all equipment as per hospital policy, label all blood bottles, and arrange next appointment. If the patients bloods are stable, ensure they have a blood form to have bloods taken before their next appointment.
- 8.26.** The patient should then sit in a chair for a tea, coffee or soft drink and for a packet of biscuits.



- 8.27.** Check the venepuncture site for signs of bleeding; a large bore needle and much used veins can lead to leaking.
- 8.28.** The patient should be allowed home only when the nursing staff are satisfied that there are no after effects. e.g. feeling faint.
- 8.29.** The patients should be advised against strenuous activity and alcohol intake for the rest of the day. Advise the patient to stay well hydrated throughout the rest of the day.
- 8.30.** Documentation.

## 9. Potential Problems

If the patient faints during the procedure, terminate the venesection and call for help, tip the head of the bed or couch down until symptoms subside. Record a full set of observations. Contact medical staff if required.

Late faints – This is defined as faints occurring after the patient has left the building 30mins + after venesection. With medical staff, reconsider the role of further venesections.

Slow blood flow, ensure the patient has had plenty to drink prior to the procedure as this will help to increase blood flow. If after 3 attempts the procedure was not a success the patient should be bought back after a week, to allow for bruising to heal, to try again. Advise the patient to drink plenty in the time leading up to the venesection.

## 10. References

- Baxter Healthcare [www.baxterhealthcare.co.uk](http://www.baxterhealthcare.co.uk)
- medline plus [www.nlm.nih.gov](http://www.nlm.nih.gov)
- medic8 [www.medic8.com](http://www.medic8.com)
- netdoctor [www.netdoctor.co.uk](http://www.netdoctor.co.uk)

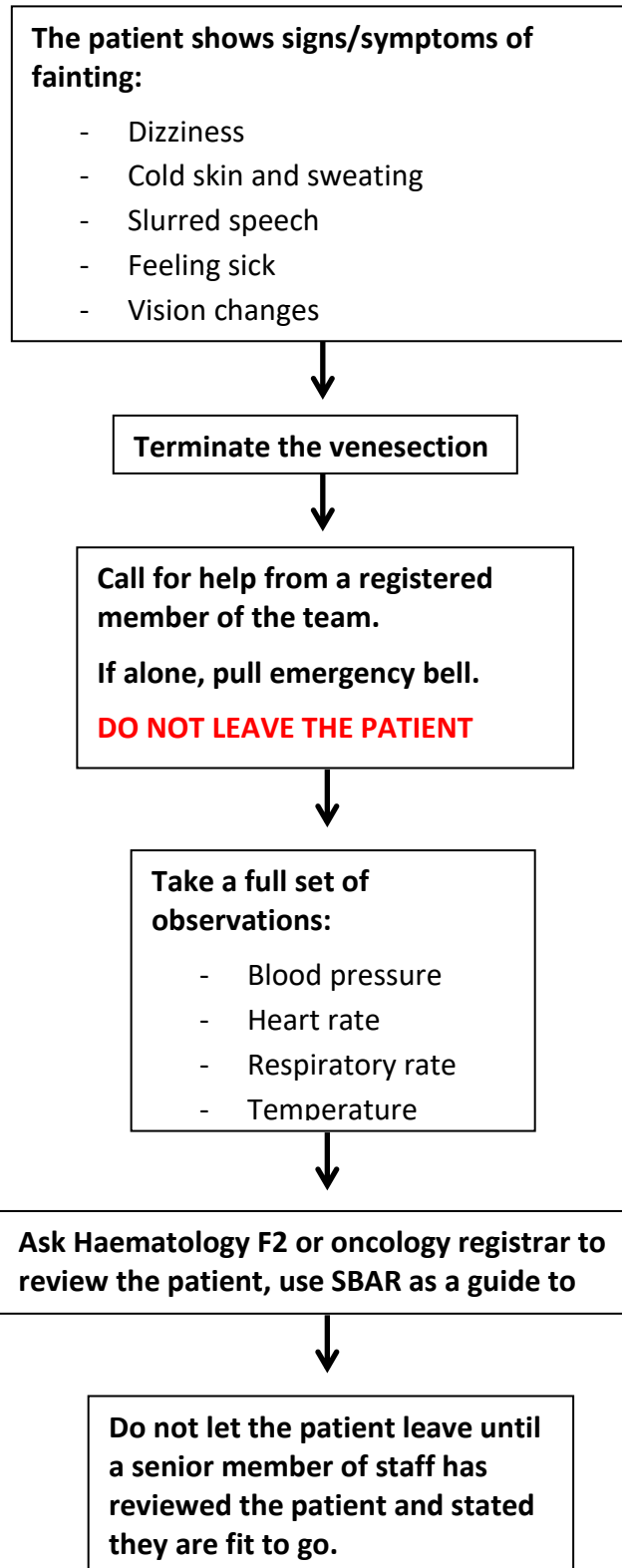
## 11. Associated Documentation

### 11.1. Northern Devon Healthcare NHS Trust Policies for :

- Venesection Policy
- Venesection workbook
- Venesection competency

## Appendix 1

### Patient fainting escalation:



## Appendix 2: Venesection target communication

**Diagnosis:** .....

**Consultant:** .....

**For patients requiring regular venesections:**

Details on this communication paperwork may change, therefore this document should be used in conjunction with advice from the Haematology team.

Demographic Label
-------------------

**Target HCT/ Ferritin:** .....

Date	Current HB	Current HCT/ Ferritin	Pre Obs taken ?	Bloods taken ?	Post obs taken ?	Fluid replacement needed?	Next apt booked?	Comments

Date	Current HB	Current HCT/ Ferritin	Pre Obs taken ?	Bloods taken ?	Post obs taken ?	Fluid replacement needed?	Next apt booked?	Comments

## Appendix 3

### ASSESSMENT OF CLINICAL COMPETENCY

#### Competency:

Procedure for Therapeutic Venesection

Aim and Objectives:	The practitioner is able to demonstrate supporting knowledge, understanding and has been observed as competent at Undertaking the Procedure for Therapeutic Venesection
Training Prerequisite:	Prior to this assessment, the practitioner has successfully completed the following: <ul style="list-style-type: none"> <li>- Adequate shadowing of competency assessed practitioner (Minimum of 10 patients)</li> <li>- Completed shadowing framework and bring to assessment</li> <li>- Read and understood SOP for therapeutic Venesections</li> <li>- Venepuncture eLearning on STAR</li> <li>- Practical session booked via STAR</li> <li>- Venepuncture and or Cannulation competency completion</li> </ul>
Your responsibility:	All staff should ensure that they keep their knowledge and skills up to date by accessing up to date information through local policies, standard operating procedures and guidance. It is the responsibility of the individual to work within their own sphere of competence relevant to their job role and to follow their Code of Conduct/Standards of Proficiency
Employee Signature/print name: .....  Date: .....	

<b>Policies and Procedures:</b>	<b>Date policy read by practitioner and initials</b>
NDHT Standard Infection Control Precautions Policy	
NDHT Performance of Therapeutic Venesection Standard Operating Procedure / Policy	
NDHT Performance of Venepuncture Standard Operating Procedure	
NDHT Performance of Cannulation Standard Operating Procedure	
NDHT Waste Management Policy	
NDHT Management of Inoculation Injuries Policy	

NDHT Aseptic Techniques Policy	
NDHT Consent Policy	
NDHT Patient Identification Policy	

### Competency Statement:

The practitioner has been observed as competent in the task of a undertaking a Therapeutic Venesection on the date/s recorded below

<b>Underpinning knowledge and understanding required:</b>	<b>Date of assessment and assessor initials</b>
What should you check before undertaking the therapeutic Venesection?	
What solution should be used to prepare the skin prior to the procedure?	
What techniques may be used to increase vein prominence? (Name 2 suitable techniques)	
Which 3 veins in the ante-cubital fossa are suitable for venesection from?	
Which veins are suitable in the hand to cannulate if the ante-cubital fossa isn't suitable?	
At what pressure should the sphygmomanometer cuff be applied?	
Where a Therapeutic Venesection should be carried out? Please specify why?	
What are the possible side effects and potential problems with withdrawing blood rapidly from a patient?	
Demonstrates an understanding of the relevant National and Local policies (listed above)	

### Assessment of competency:

<b>Performance Criteria</b>	<b>Date of assessment and assessor initials</b>
Determines the individuals need for Therapeutic Venesection and challenges inappropriate requests	
Seeks clinical advice and support from an appropriate colleague when events or risks are beyond their level of competence	
Obtains informed consent, offering appropriate information regarding the procedure. If unable to gain consent to consider Mental Capacity Assessment and best interest decision	
Follows guidance in SOP & policy to safely carry out procedure	

Assessment of the patient, including: <ul style="list-style-type: none"> <li>• Blood results</li> <li>• Patient notes</li> <li>• Clinical indication (therapeutic range)</li> <li>• Blood pressure</li> <li>• Physical condition e.g. infection ?any recent infection</li> </ul>	
Identifies all potential risks or complications associated with venepuncture, canulation and venesection. State action to be taken to minimise each of the above, and what action to take if they should occur.	
Demonstrates knowledge of following in relation to venesection: <ul style="list-style-type: none"> <li>• Range of blood tests required – diagnosis</li> <li>• Ability to select and prepare the appropriate equipment required</li> <li>• Safe and correct disposal of equipment</li> <li>• Frequency of Venesection</li> </ul>	
Demonstrates the ability to identify a suitable vein for a safe venesection procedure	
Demonstrates correct technique in skin cleansing, safe needle insertion and connection to appropriate equipment.	
Understands the need for obtaining correct volume/weight of blood for procedure	
Applies appropriate dressing over venesection site following the procedure	
Demonstrates the correct labelling of samples and the relevant forms.	
Assesses patient's condition during procedure.	
Follows up with clinical observations - BP	
Advises patient of immediate follow up care	
Records information correctly in patients' documentation including reporting effectively any adverse reaction recognised.	

---

## Signatures on Completion:

Signature of Practitioner:	
Print name:	Position:
Department/Team:	Date:
Signature of Assessor:	
Print name:	Position:
Department/Team:	Date:

On completion of this document: The original copy should be retained by the employee for their portfolio; one copy should be retained in the area specific competency log folder in your workplace and one copy sent to workforce development for logging on STAR.