Introduction

Venesection or phlebotomy is the needle puncture of a vein for the purpose of drawing blood. Venesection removes a quantity of venous circulating blood (usually 450 - 500mLs) as a therapeutic treatment for clients with polycythaemia vera, haemochromatosis or porphyria cutanea tarda.

Venesection may only be conducted in Primary Health Care remote health centres when:
- A Medical Officer’s order is obtained with the frequency and the amount of blood to be removed
- The procedure is conducted in a room with emergency equipment and the client is on an emergency bed
- Staff member performing procedure is practicing within their scope of professional practice

Venesection contraindications
- Client is unwell on the day
- Client blood levels for haematocrit or ferritin are below prescribed target
- Venesection on a limb with temporary or permanent venous catheters
- Venesection on a limb with arterio venous grafts / shunts / fistulas
- Venesection on a limb affected by lymphedema

Possible complications
- Haematoma
- Hypovolaemia
- Vasovagal syncope
- Phlebitis
- If client becomes tachycardic, hypotensive, restless or clammy, stop procedure and review client and contact RMP for management

Procedure preparation
- Valid and signed medical practitioner request form – client name, date of birth, HRN, blood volume to be venesected
- Confirm client identity
- Check the client is adequately hydrated and has recently eaten
- Explain the procedure
- Obtain valid consent (intranet)
- Position client in semi fowlers position on emergency bed
- Collect equipment and prepare for procedure

Equipment needed
- Blood pressure monitor
- Personal Protection Equipment (PPE) - gloves and goggles
- Electronic scales to weigh blood bag (calibrated infant scales will suffice)
- Blood donor bag with integrated 18G needle and needle guard attached, tubing loosely tied in 3 places
- Tourniquet
- Chlorhexidine 2% in alcohol 70% wipes
- Gauze squares
- Adhesive surgical tape
- Stress ball or soft rolled bandage
- Large (10L) Sharps container
- If blood pathology required – blood collection tubes, Vacutainer® tube guide with luer adaptor, signed pathology request form, kidney dish to hold everything

Note: 500mL of whole blood weighs approx. 600g
<table>
<thead>
<tr>
<th>Procedure</th>
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<tr>
<td>- <strong>Perform hand hygiene</strong> (intranet)</td>
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<tr>
<td>- Perform and record baseline observations – blood pressure, pulse and hydration status</td>
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<td>- If client is hypotensive or has signs and symptoms of dehydration, notify RMP and delay venesection until resolved. IV rehydration therapy may be required.</td>
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<td>- Apply tourniquet and ensure arterial flow is not compromised, locate and select a large palpable vein, avoiding any well used areas if at all possible. Release tourniquet tension until just prior to venepuncture.</td>
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<tr>
<td>- <strong>Perform hand hygiene</strong> (intranet)</td>
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<td>- Don PPE</td>
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<td>- Place plastic backed absorbent sheet under client elbow</td>
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<tr>
<td>- Place plastic backed absorbent sheet on electronic scales located approximately 30cm below client level</td>
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<td>- Clip on needle guard between needle and access port of blood bag tubing</td>
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<td>- Prepare site using chlorhexidine 2% in alcohol 70% wipes</td>
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<tr>
<td>- Apply tourniquet</td>
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<tr>
<td>- Insert integral needle of blood donor bag into chosen vein</td>
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<td>- When correctly positioned in vein, secure with 2 strips of adhesive surgical tape – 1 over tubing and 1 over needle insertion site</td>
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<tr>
<td>- Place blood donor bag onto scales and note combined weight of bag and sheet</td>
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<tr>
<td>- Release tourniquet slightly</td>
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<td>- Venesection should take 10-20 minutes</td>
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<td>- Check frequently that blood flow into bag continues at an even slow pace - if blood is flowing too quickly, release the tourniquet or raise the blood bag closer to the client body level, if it is flowing too slowly, increase the pressure to obtain a faster flow or lower the blood bag level or have client open and close their fist. The bag must never be placed higher than the needle</td>
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<td>- If necessary instruct client to gently squeeze a stress ball or soft rolled bandage in hand of arm undergoing venesection</td>
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<td>- <strong>Do not leave client while venesection is underway</strong></td>
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<td>- Complete five (5) minutely check of BP and pulse and monitor client tolerance of procedure and assess for signs and symptoms of hypovolaemic shock and record results</td>
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<tr>
<td>- Release tourniquet or cuff when bag is at ordered weight, allowing for weight of blood bag</td>
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<td>- If pathology bloods are required, take blood from sampling port, insert Vacutainer® tube guide with luer adaptor into sidearm of the tubing before clamping. Do not remove tube guide after specimen collection, but discard with whole of tubing and bag. See the Remote Health Atlas Pathology webpage and Venepuncture for Blood Specimen Collection Health Services Procedure (intranet) for further information.</td>
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<tr>
<td>- At conclusion of venesection, remove adhesive surgical tape from client skin</td>
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<td>- Apply a folded cotton gauze square to insertion site</td>
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<td>- Remove needle from vein and sheath with needle guard by pulling needle into it to remove sharps risk</td>
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<tr>
<td>- Ask client to apply pressure over insertion site with folded gauze square for a few minutes</td>
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<tr>
<td>- Hold needle higher than blood bag to allow blood to drain from tubing into bag</td>
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<tr>
<td>- Tighten knots in tubing</td>
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- Place the full sealed venesection bag & tubing into a yellow biohazard waste bag and then a new sharps container*
- Apply fresh folded cotton gauze square over venesection site and secure with adhesive surgical tape
- Apply firm bandage and instruct client to remove bandage in 1 hour
- Discard plastic backed sheets
- Perform hand hygiene (intranet)
- Instruct client to remain lying / sitting for 30 minutes post procedure
- Offer client a large drink and light snack
- Perform and record blood pressure and pulse observations 30 minutes post procedure, if satisfactory client may leave centre
- Encourage client to remain well hydrated for next six (6) hours. Advise client to avoid heavy lifting with the venesection arm and any strenuous exercise for 24 hours
- Document in the client record the following information:
  ~ site of insertion
  ~ pulse, blood pressure, respirations, temperature and hydration status during and following the procedure
  ~ weight of blood collected in the bag
  ~ duration of the procedure
  ~ patients tolerance of the procedure
  ~ patient education provided

* Waste Management of Blood: Fluid blood should be managed as Clinical Waste in a remote health centre:
- where available, Medi/Turbo burners may be used to incinerate the blood, otherwise
- dispose as clinical waste in a new empty sharps container by closing lid of sharps container, store upright ready for transfer to the regional centre by the usual mode of transport used by that health centre

References

Remote Health Atlas Pathology webpage, see Section 18
Duty RMP Telephone Consultation
Consent to Treatment Health Services Guideline
Venepuncture for Blood Specimen Collection Health Services Procedure (intranet)
Hand Hygiene Hospital Network Procedure (intranet)
Australian Red Cross Blood Service website, 2015. ‘What happens on the day’.
Australian Red Cross, 13/9/2015. 3. Collect – Collecting Blood and Blood Components, ARCBS-COL-L2-144 Version: 004.
CRANAplus Clinical Procedures Manual for Rural and Remote practice
NHS, 2013, How to perform a Venesection, detailing vein selection and patient care, Royal Cornwall Hospitals
Goot K. Dr, 2013, Venesections for Hereditary Haemochromatosis, Haemochromatosis Australia.
NHS, 2011, Venesection Policy for Nurses, Northern Health and Social Care Trust
RDH, Same Day Procedure Unit, Venesection