

OPEN PIVC DEVICE TASK ANALYSIS

Consumables Required:	<ul style="list-style-type: none"> - Alcohol hand rub - Blood collection tray with sharps bin - 70% alcohol wipes - Non-sterile gloves - Disposable tourniquet - Cleansing swab (70% alcohol and 2% chlorhexidine) - Pre-prepared saline flush (10ml syringe) - Single-port extension tubing set - 20G Cannula/IV Catheter - Gauze - IV Dressing - Clinical waste bin
------------------------------	---

	Task	Operational Definition
1	Perform hand hygiene with gel	<ol style="list-style-type: none"> 1. Participant applies alcohol gel to the palm of one hand and rubs both palms together so that gel is evenly distributed. 2. Rubs the back of each hand with the palm of the other hand with fingers interlaced. 3. Rubs palm to palm with fingers interlaced. 4. Rubs with back of fingers to opposing palms with fingers interlocked for each hand. 5. Encloses the thumb of one hand within a fist of the other and rotates for both hands consecutively. 6. Rubs tips of fingers in opposite palm in a circular motion for each hand. 7. Rubs each wrist with opposite hand using a circular motion. <p>(See Appendix 1).</p>
2	Clean tray	Participant cleans the entire surface of the tray with a 70% alcohol wipe and disposes of the wipe in general waste.
3	Open equipment	Participant places tourniquet and unopened cleansing swab in the tray. Participant opens the packets of the following pieces of equipment and leaves the equipment resting inside the sterile pack when placed in the tray: pre-prepared saline flush, single-port extension tubing set, gauze, 20G cannula and IV dressing.
4	Perform hand hygiene with gel	<ol style="list-style-type: none"> 1. Participant applies alcohol gel to the palm of one hand and rubs both palms together so that gel is evenly distributed. 2. Rubs the back of each hand with the palm of the other hand with fingers interlaced. 3. Rubs palm to palm with fingers interlaced. 4. Rubs with back of fingers to opposing palms with fingers interlocked for each hand. 5. Encloses the thumb of one hand within a fist of the other and rotates for both hands consecutively. 6. Rubs tips of fingers in opposite palm in a circular motion for each hand. 7. Rubs each wrist with opposite hand using a circular motion. <p>(See Appendix 1).</p>
5	Apply gloves	Participant puts a non-sterile glove on each hand.
6	Apply tourniquet	Participant applies the tourniquet around the patient's arm about 4 inches/10 centimeters above the proposed site. The tourniquet is applied by facing the white side towards the patient's arm, pulling on both ends of the tourniquet to fully extend the elastic strap and securing the tourniquet tightly around the patient's arm using the velcroed area.

7	Palpate suitable vein	<p>Participant gently examines the veins within the antecubital fossa/dorsum of hand by touch to select an appropriate vein (springy/bouncy) for cannulation.</p> <p>Note regarding vein selection:</p> <ol style="list-style-type: none"> 1. Feel rather than look, ideally choose a long, straight vein that feels bouncy rather than the one that is most visible. 2. Start with distal veins and work proximally. 3. Where possible, insert the cannula in the non-dominant side for patient's convenience.
8	Cleanse skin	<p>Participant opens a cleansing swab and uses it to clean the entirety of the cannulation site. Participant scrubs repeatedly downwards and then repeatedly across to create a + pattern. Participant disposes of the swab in general waste.</p>
9	Relax tourniquet and allow to dry	<p>Participants loosens the tourniquet by releasing the Velcro hold but leaving the tourniquet resting in position around the patient's arm and waits 30 seconds to allow the alcohol to dry.</p>
10	Unlock saline flush	<p>While waiting for the alcohol to dry, participant faces the tip of the pre-prepared saline syringe upwards, and applies pressure to the plunger with the cap still in place until a "click" is felt. Participant then untwists the cap of the syringe approximately $\frac{1}{4}$ of a turn and expels excess air by pressing the plunger until liquid has reached the tip of the syringe and no visible air is present.</p>
11	Connects extension tubing	<p>Participant connects the pre-prepared saline flush to the orange tip of the extension tubing, ensuring the sterile cap at the opposing end remains attached.</p>
12	Flush extension tubing	<p>Ensuring the clamp on the tubing is open, participant flushes 2mls of saline through the tubing and then closes the clamp by sliding the tubing to the more narrow side of the clamp.</p>
13	Return syringe and attached tubing to packaging	<p>Participant leaves the pre-prepared saline flush attached to the extension tubing and returns the extension tubing to its packaging with the pre-prepared saline flush attached.</p>
14	Re-apply tourniquet	<p>Participant re-applies tourniquet by facing the white side towards the patient's arm, pulling on both ends of the tourniquet to fully extend the elastic strap and securing the tourniquet tightly around the patient's arm using the velcroed area.</p>
15	Insert cannula bevel up	<p>Participant removes the needle cover and inserts the cannula needle into the selected vein at approximately a 30 degree angle (20 – 40 degrees range is acceptable) with the bevel (the slanted, extended opening at the tip of the needle) facing upwards.</p>
16	Release tourniquet upon flashback	<p>Upon the appearance of flashback (blood in the cannula), participant undoes the tourniquet and removes it from the patient's forearm.</p> <p>If flashback is not observed upon insertion of the cannula needle, participant trials the gentle advancement and retraction of the needle. If flashback is still not observed, participant should remove the cannula completely and try again with a new cannula at an alternative site. The cannula should never be fully removed and re-inserted into the skin.</p>
17	Place gauze underneath insertion point	<p>Participant places a piece of gauze underneath the chosen needle insertion point to absorb any blood spillage that may occur.</p>
18	Advance cannula and withdraw stylet	<p>Participant lowers the angle of the device slightly towards the skin and advances the cannula by very gently pushing forward the cannula until the hub is touching the skin and withdrawing the stylet at the same time. Participant places pressure on the cannula through the skin at the hub with a finger of their non-dominant hand to stop blood leakage.</p>
19	Connect extension	<p>With the other hand, the participant quickly removes the sterile cap from the extension tubing ensuring the port is not contaminated in the process. Participant connects the extension tubing to the cannula hub with a push and twist. The participant maintains pressure on the cannula with the finger of the other hand until the connection between the hub and the extension tubing cap is secured.</p> <p>Any blood that escapes from the cannula prior to connection will be absorbed by the gauze</p>

		underneath.
20	Dispose of sharp correctly	The participant puts the stylet into the sharps container.
21	Clean skin	Participant removes the gauze that had been placed under the cannula and uses this to clean any blood that may be present on the patient's skin, taking care not to disrupt or remove the cannula in the process.
22	Apply Dressing	<p>Participant then applies the dressing:</p> <ol style="list-style-type: none"> 1. The smallest square piece of the dressing is first placed underneath the cannula's insertion site to suspend it off the patient's skin. 2. The "omega" shaped piece is placed on top of the cannula ensuring the site of insertion is visible through the clear window. 3. One of the long strips of the dressing is used to secure the extension tubing in place by stretching the strip across the point where the extension tubing connects to the cannula. 4. The final strip is used to secure the remaining loose tubing to the patient's skin to prevent it from swinging or becoming caught. <p>(See Appendix 2).</p>
23	Flush extension tubing	<p>Participant opens the clamp of the extension tubing and flushes with 5mls of saline using push-pause-positive-pressure. This involves the participant repeatedly applying and removing pressure to the plunger of the syringe using their thumb, creating a rapid stop-start pulsating motion.</p> <p>Participant closes the clamp of the extension tubing while maintaining hold with their thumb on the plunger syringe.</p> <p>Any resistance to saline flush detected indicates the cannula is not in the vein and it should be removed.</p>
24	Clean up	Participant removes gloves and places these and any blood stained items into clinical waste. Participant places syringe in sharps bucket. Participant places any uncontaminated waste into the general waste bin.
25	Perform hand hygiene with gel	<ol style="list-style-type: none"> 1. Participant applies alcohol gel to the palm of one hand and rubs both palms together so that gel is evenly distributed. 2. Rubs the back of each hand with the palm of the other hand with fingers interlaced. 3. Rubs palm to palm with fingers interlaced. 4. Rubs with back of fingers to opposing palms with fingers interlocked for each hand. 5. Encloses the thumb of one hand within a fist of the other and rotates for both hands consecutively. 6. Rubs tips of fingers in opposite palm in a circular motion for each hand. 7. Rubs each wrist with opposite hand using a circular motion. <p>(See Appendix 1).</p>

Appendices:

Appendix 1: How to handrub

How to Handrub?

RUB HANDS FOR HAND HYGIENE! WASH HANDS WHEN VISIBLY SOILED

⌚ Duration of the entire procedure: 20-30 seconds



World Health
Organization

Patient Safety
A World Alliance for Safer Health Care

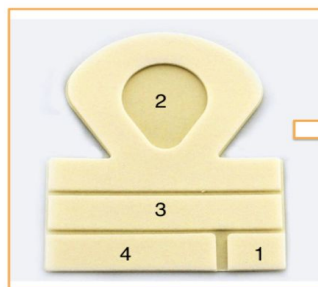
SAVE LIVES
Clean Your Hands

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this document. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use. WHO acknowledges the Hôpitaux Universitaires de Genève (HUG), in particular the members of the Infection Control Programme, for their active participation in developing this material.

May 2009

Appendix 2: How to apply a veniguard dressing

How to apply a veniguard dressing:



- 1 - Place under cannula for support where the line meets the skin.
- 2 - Place so that puncture site is clearly visible through window.
- 3 - Use to secure the attachment of the extension tubing in place.
- 4 - Use to secure the end of the tubing so as to prevent it dangling on patient's arm.

