Frequency of central venous access device assessment:

- Assess central venous access devices (CVAD):
  1. Inpatients: at least once per shift for inpatients[1]
  2. Outpatient or ambulatory units: at each visit, clinic appointment, or at least weekly
  3. Home care: at each home visit, or at least weekly[2]
- Assessments can be completed earlier if any signs or symptoms of issues or complications are present.
- Patients assess their device at least daily whilst at home.[2]

Document all assessments and any subsequent actions.[1-2]

Key assessment areas:

1. Ongoing requirement
   Is the CVAD still required?

2. Dressing condition
   Is the dressing intact, clean and dry?

3. Exit site
   Is the catheter exit site/TIVAD needle site clean & free from signs of inflammation, exudate?

4. Skin
   Is the skin under the dressing intact with no signs of impairment?

5. Securement
   Is the catheter secure with no signs of migration, or TIVAD needle secure?

6. Patency
   Is each lumen or CVAD patent?

7. Closed system
   Are needleless connectors or infusions running on every lumen?

8. Needleless connectors
   Are the needleless connectors visibly clean and secure on the catheter lumen or needle extension tubing?

9. IV administration lines
   Are IV lines labelled and secured?

If the answer is ‘Yes’, no further action is required. Document. If ‘No’, refer to information below for appropriate actions.

Abbreviations:

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<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>CVAD</td>
<td>Central venous access device</td>
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<tr>
<td>TIVAD</td>
<td>Totally implanted venous access device or portacath</td>
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<td>IV</td>
<td>Intravenous</td>
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<tr>
<td>NC</td>
<td>Needleless connector</td>
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Image credit: PICC Dressing

Image permission: K. Curtis
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| **1. Ongoing Requirement** Is the CVAD still required? | • Is the CVAD being used regularly?  
• Is it being left in situ 'just in case'? | • Patients with cancer may require prolonged venous access after active treatment is completed, for example for supportive therapies, frequent or long-term blood sampling  
• Discuss with healthcare team and remove as soon as it is no longer required. [1-4] |
| **2. Dressing Condition** Is the dressing intact, clean and dry? | • Does the dressing contain blood or exudate not contained in the antimicrobial gel pad, soaking the antimicrobial disc or present in any volume if no antimicrobial materials are present under the dressing?  
• Does the dressing contain moisture, e.g. from showering, excessive perspiration?  
• Are the edges of the dressing peeling back (not small amount of feathering at the edges)?  
• When is the dressing due to be replaced? | • The skin, the body’s first line of defence, is broken at a catheter exit site or TIVAD needle puncture site. The catheter tip is located in the central circulation. Open skin is a portal for microbial entry into the body. Therefore, there is an increased risk for systemic infection when moisture is present under a CVAD dressing.  
• Blood or exudate under a dressing may provide an environment for bacterial growth and increase the risk of infection or skin irritation.  
• A peeling dressing can increase the risk of infection by exposing the catheter exit site or TIVAD needle site.  
• Replace the dressing if it contains ooze, is wet or peeling. [1-4] Do not delay. |
| **3. Exit Site** Is the catheter exit site/TIVAD needle site clean & free from signs of inflammation? | • Is the skin at the catheter exit site or the TIVAD needle junction site free from redness, exudate, tenderness/pain, warmth and swelling? | Complete a complete assessment for the cause/s – infection, dermatitis, mechanical injury, possible causative agents, and discuss with medical team. [5] |
| **4. Skin** Is the skin under the dressing intact with no signs of impairment? | • Is the skin free from any signs or symptoms, skin irritation e.g. inflammation, dermatitis (contact, allergic or irritative), mechanical injury or infection? | Refer to eviQ Skin Impairment Management Algorithm for details. |
| **5. Securement** Is the catheter or TIVAD needle secure? | • Is the catheter secure under the dressing without obvious signs of migration?  
• Is the TIVAD needle flush against the skin? | • Avoid sutures. [2] Sutures are potentially used for emergent insertions of CICCs / CVCs.  
• Sterile adhesive strips are not adequate for catheter securement. [2]  
• Apply catheter securement under the dressing and close to the exit site as per local policy.  
• Use engineered securement devices e.g. subcutaneous or adhesive, tissue adhesive. [2]  
• Before insertion of a TIVAD needle, assess the individual patient for the most appropriate length of TIVAD needle required. A too-long needle will not sit flush with the skin increasing the risk of dislodgement and a too-short needle may not reach the bottom of the TIVAD body and be located in the rubber septum (occluding flow). [1-2]  
• Use dressings with added securement features. [3] |
| **6. Patency** Is each lumen or CVAD patent? | • Has each lumen been assessed for aspiration ability and injection ability or has continuous therapy running?  
• Are the IV administration pumps alarming regularly? | Prompt assessment and prompt and appropriate interventions for any signs of reduced patency are required to reduce the risk of complete occlusions. [2,6]  
• Refer to the eviQ Patency Management Algorithm for details. |
## Nine core central venous access device assessments

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<td><strong>7. Closed System</strong>&lt;br&gt;Are needleless connectors or infusions running on every lumen?</td>
<td>• Are the needleless connectors on the multilumen catheters bonded?</td>
<td>• A closed CVAD system reduces the risk of infection.(^7)</td>
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<td><strong>8. Needleless Connectors</strong>&lt;br&gt;Are the needleless connectors visibly clean and secure on the catheter lumen or needle extension tubing?</td>
<td>• Are the needleless connectors visibly free from blood internally, in the luer connection to the catheter hub and on the septum?&lt;br&gt;• Are the needleless connectors secure on the catheter lumen/s or TIVAD needle extension tubing?&lt;br&gt;• When are the needleless connectors due to be changed?</td>
<td>• NCs are the greatest risk of microbial contamination after a CVAD is inserted which may lead to systemic infection.(^8) A NC is a portal for microorganisms.&lt;br&gt;• NCs are disinfected with an antiseptic swab and allowed to fully air dry before access with a syringe or IV line every time, for every CVAD and for every patient.(^1-4)Recommended times for scrubbing and drying vary according to the type of antiseptic and NC design.(^2)Alcoholic CHG is commonly used, and drying time is 20 seconds after a 15 second scrub.(^9)&lt;br&gt;• Consider use of passive disinfection caps.(^1)&lt;br&gt;• Replace a NC that cannot be flushed to remove all visible blood from the inside or there is visible blood in the luer attachment area.&lt;br&gt;• Check NCs have been adequately applied to the catheter hub or TIVAD needle extension tubing to prevent dislodgement. Do not apply NC too tightly as this may increase the risk of catheter hub damage / splitting on removal.</td>
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<td><strong>9. IV Administration Lines</strong>&lt;br&gt;Are IV lines labelled and secured?</td>
<td>• Is each line labelled as per the National Standard for User-applied Labelling of Injectable Medicines, Fluids and Lines?(^10)&lt;br&gt;• Are the IV administration lines secured to the patient to prevent drag and pulling on the CVAD dressing and accidental dislodgement?&lt;br&gt;• When are the IV administration lines due to be changed?</td>
<td>• Label ‘CENTRAL VENOUS’ or ‘intraVENOUS’ and type of specialist infusion as required as per the National Standard for User-applied Labelling of Injectable Medicines, Fluids and Lines.&lt;br&gt;• Attach all IV administration lines to the patient e.g. with adhesive tape onto clothing, via a cloth tape around the lines and around the patient’s neck. Refer to local policy.</td>
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### References