# Bundle for preventing infection when inserting and maintaining a Peripheral Vascular Catheter (PVC)

## Statement

PVC related bloodstream infections can occur if insertion and maintenance care is sub-optimal. Healthcare workers, therefore, have a duty to patients to optimise PVC care in order to prevent patient harm

## Objectives

* To optimise peripheral vascular catheter care and thereby minimise the risk of bloodstream infection
* To be able to demonstrate quality peripheral vascular catheter care

NHS boards should decide how to implement this bundle including: when to complete it, how often it is completed, who completes it, where the data are collected and how results are fed back. Consideration should be given to the appropriate elements of the [Excellence in Care Framework](https://www.healthcareimprovementscotland.org/our_work/patient_safety/excellence_in_care.aspx).

PVC Insertion

**N.B. The featured elements do not in any way preclude compliance with Standard Infection Control Precautions (SICPs) as per the** [**NIPCM**](https://www.nipcm.hps.scot.nhs.uk/)**.**

|  |  |  |
| --- | --- | --- |
| **Department:** | **Date:** | **Staff name:** |

| **Inserting a PVC** | Patient 1 | | Example | |
| --- | --- | --- | --- | --- |
| 1. Ensure that a PVC is clinically indicated for this patient. | Yes | No | Yes | No |
| 2. Hand hygiene has been performed immediately before PVC insertion, before and after palpation and before donning and after removing PPE. | Yes | No | Yes | No |
| 3. Skin is cleansed with a single-use antiseptic containing 2% chlorhexidine in 70% isopropyl alcohol and left to dry according to manufacturer’s instructions before insertion. If chlorhexidine gluconate is contraindicated, then povidone-iodine in alcohol or 70% alcohol may be used. For paediatrics and neonates please follow local policies for the most appropriate antiseptic. Manufacturers’ drying times must be followed. | Yes | No | Yes | No |
| 4. Aseptic technique is maintained throughout the insertion procedure; i.e. key parts and key sites are not touched. If key parts (e.g. syringe tip) or key sites (e.g. insertion site) are likely to be touched, sterile gloves should be used. | Yes | No | Yes | No |
| 5. The catheter site is covered with a sterile transparent semi permeable dressing. Sterile gauze dressings may be used if there is bleeding/oozing. Gauze dressings must be replaced with a sterile, transparent semipermeable dressing as soon as possible. | Yes | No | Yes | No |
| **Totals** |  |  | 4 | 1 |

PVC Maintenance

|  |  |  |
| --- | --- | --- |
| **Department:** | **Date:** | **Staff name:** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Maintaining an inserted PVC | Patient 1 | | Patient 2 | | Patient 3 | | Patient4 | | Patient 5 | |
| 1. The clinical need for the PVC has been reviewed and recorded today including the need for intravenous therapy such as antibiotics, which have been switched to oral if possible. | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| 2. The PVC site has been assessed; PVC has been removed if clinically indicated i.e., there are signs of inflammation or phlebitis, or it is no longer needed. | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| 3. The PVC dressing is intact and skin integrity is not compromised. | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| 4. Hand hygiene is performed immediately before accessing the line/site and aseptic technique is used for the care and maintenance of the PVC e.g., dressing change (ask if no observations). | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| 5. The access hub has been cleaned for at least 15 seconds with a single-use antiseptic containing 2% chlorhexidine gluconate in 70% isopropyl alcohol and allowed to dry before accessing “scrub the hub”. (ask if no observations) If chlorhexidine gluconate is contraindicated, then povidone-iodine in alcohol or 70% alcohol may be used. For paediatrics and neonates please follow local policies for the most appropriate antiseptic. Manufacturers’ drying times must be followed. | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| **Totals** |  |  |  |  |  |  |  |  |  |  |

Compliance Reporting

**Summary Table of Peripheral Vascular Catheter insertion bundle**

Percentage compliance = total number of criteria achieved

total number of criteria X 100

**Example: 4**

**5 X 100 = 80%**

**Summary Table of Peripheral Vascular Catheter maintenance bundle**

| Category | Maintenance criteria | Total | Calculation for percentage compliance | Percentage compliance | Percentage non-compliance |
| --- | --- | --- | --- | --- | --- |
| A | Total number of patients. |  |  |  |  |
| B | Total number of patients that the clinical need for the PVC has been reviewed and recorded today including the need for intravenous therapy such as antibiotics, which have been switched to oral if possible. |  | Total for B  Total for A X 100 |  |  |
| C | Total number of patients the PVC site has been assessed; PVC has been removed if clinically indicated i.e., there are signs of inflammation or phlebitis, or it is no longer needed. |  | Total for C  Total for A X 100 |  |  |
| D | Total number of patients whose PVC dressing is intact and skin integrity is not compromised. |  | Total for D  Total for A X 100 |  |  |
| E | Hand hygiene is performed immediately before accessing the line/site and aseptic technique is used for the care and maintenance of the PVC e.g., dressing change (ask if no observations). |  | Total for E  Total for A X 100 |  |  |
| F | Total number of patients whose PVC access hub has been cleaned for at least 15 seconds with a single-use antiseptic containing 2% chlorhexidine gluconate in 70% isopropyl alcohol before accessing “scrub the hub” (ask if no observations) If chlorhexidine gluconate is contraindicated, then povidone-iodine in alcohol or 70% alcohol may be used. For paediatrics and neonates please follow local policies for the most appropriate antiseptic. Manufacturers’ drying times must be followed. |  | Total for F  Total for A X 100 |  |  |

Action Plan