



## Example of a Peripheral Vascular Catheter Maintenance Care Bundle

**Updated September 2014**

This bundle has been adapted with permission from the a peripheral vascular catheter care bundle produced by Health Protection Scotland in 2008<sup>1</sup> and published as part of the 2009 National Guidelines for the Prevention of Intravascular Catheter-related Infection in Ireland.<sup>2</sup> Health Protection Scotland subsequently updated their peripheral vascular catheter care bundle in 2012.<sup>3</sup> The elements of the care bundle and the standard operating procedure below were updated as part of the 2014 update of the 2009 National Guidelines for the Prevention of Intravascular Catheter-related Infection in Ireland.<sup>2</sup>

This document illustrates one way to use the peripheral vascular catheter care bundle but it can and should be used flexibly. Therefore, healthcare facilities may want to use it in different ways. For example, only some of the elements may be included (we would recommend at least three) or additional elements added (for example, you may wish to link this bundle with your IV to oral antibiotic switch policy). Other local decisions include: when undertaken, how often, who is responsible, and how the data are collected. This proposal can be used as a starting point and should not be considered to be prescriptive.

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<sup>1</sup> <http://www.hps.scot.nhs.uk/haic/ic/PVCCareBundle.aspx>

<sup>2</sup> HSE Health Protection Surveillance Centre. Prevention of Intravascular Catheter-related Infection in Ireland SARI Prevention of Intravascular Catheter-related Infection Sub-Committee, December 2009, Updated February 2010. ISBN 978-0-9551236-6-5  
<http://www.hpsc.ie/A-Z/Hepatitis/GuidanceforRenalUnits/File,4115,en.pdf>

<sup>3</sup> <http://www.documents.hps.scot.nhs.uk/hai/infection-control/evidence-for-care-bundles/literature-reviews/pvc-maintenance-review.pdf>

## Peripheral Vascular Catheter Care Bundle

*Aim: To Reduce the Incidence of Peripheral Vascular Cannula Related Infection*

**Don't put them in.  
Get them out.  
Look after them properly.**

### The Bundle

1. Check the clinical indication why the peripheral vascular catheter is *in situ* – is it still required?
2. Remove peripheral vascular catheters where there is extravasation or inflammation
3. Check the peripheral vascular catheter dressings are intact
4. Check there is a record that the peripheral vascular catheter insertion site has been visually inspected at least twice daily (on every shift) for evidence of complications
5. Perform hand hygiene before and after all peripheral vascular catheter procedures

<b>Example of a Peripheral Vascular Catheter Maintenance Care Bundle – Standard Operating Procedure</b>	
<b>Objectives: complications</b>	<p><b>1. To optimise peripheral vascular catheter care in OUR ward and reduce as far as possible any infectious complications</b></p> <p><b>2. To be able to demonstrate quality peripheral vascular catheter care in OUR ward</b></p>
Requirements	<p><b>Before the Peripheral Vascular Catheter Bundle Procedure can be Considered:</b></p> <ul style="list-style-type: none"> <li>• Measurement of compliance with the care bundle should be performed as part of a ward/unit/directorate quality improvement programme for infection prevention and results used to monitor the effect of this programme.</li> <li>• Relevant clinical teams (consultants and NCHDs), director of nursing and nurse team should be involved in designing/adapting the bundle, deciding how frequently and who will monitor compliance and how often and how results will be fed back to relevant staff.</li> </ul> <p><b>Prior to starting the Peripheral Vascular Catheter Bundle Procedure:</b> Personal Protective Equipment (PPE): Gloves, plastic apron (if appropriate as per local infection prevention and control policy)</p>
Procedure	<ol style="list-style-type: none"> <li>1. Perform hand hygiene as per the 5 moments of hand hygiene.<sup>4</sup> Collect a data collection form (if using a paper collection method).</li> <li>2. Proceed to the first patient and introduce yourself. Explain that you are checking all peripheral vascular catheters to see if any need removal.</li> <li>3. If it is not obvious ask ‘Do you have any needles or drips?’ If the answer is ‘no’ move on to the next patient and go back to step 2. If the answer is ‘yes’ proceed to step 4.</li> <li>4. Maintaining the patient’s privacy, ask to see the peripheral vascular catheter insertion site – complete the bundle questions. <ul style="list-style-type: none"> <li>• Is the peripheral vascular catheter in use?<sup>5</sup> If so, select “yes”. If the catheter is <i>in situ</i> but not in use and not required, remove it aseptically as outlined in your local infection control guidelines (or discuss with medical team if unsure) and select “no” to this question</li> <li>• Use Visual Infusion Phlebitis score to assess for extra-vasation or inflammation. Extra-vasation may still be detected even if there is a sterile gauze dressing over the insertion site, however, <b>NEVER</b> remove a dressing just to view an</li> </ul> </li> </ol>

<sup>4</sup> [www.hse.ie/handhygiene](http://www.hse.ie/handhygiene)

<sup>5</sup> For example: current IV therapy (medication or infusion), peripheral vascular catheter required for planned clinical procedure (radiology, transfusion etc) or vascular access required due to unstable condition.

	<p>insertion site. If there is gauze dressing <i>in situ</i> – the site should be palpated through the dressing for tenderness and if patient complains of local tenderness remove dressing to view site.</p> <ul style="list-style-type: none"> <li>● Peripheral vascular catheter dressing – if not intact either replace dressing or remove the catheter (e.g., if the catheter has become dislodged because of the non-intact dressing)</li> <li>● Check if there is documentation that the insertion site has been assessed at least twice daily for signs of complications.</li> <li>● Check hand hygiene practices by using one or more of these methods: <ul style="list-style-type: none"> <li>i. Observe healthcare staff prior to accessing the peripheral vascular catheter</li> <li>ii. Ask the patient if staff undertake hand hygiene before accessing the peripheral vascular catheter</li> <li>iii. Use a buddy system.<sup>6</sup></li> </ul> </li> </ul> <p>5. Record findings on the data collection form. If necessary record in the patient’s notes.</p> <p>6. Go back and repeat steps 2-5 until all patients in the ward have been visited.</p>
After care	<p>Complete form and ensure Excel Tool is updated (if using the HPSC excel tool). Give it to: Discuss and display the data when it has been returned as outlined below.</p>

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<sup>6</sup> A ‘buddy’ can be used to verify optimal care and to act as a reminder to the nurse/doctor in charge of an individual patient. Each buddy must be prepared to observe their colleague’s care, comment on it and in turn have their own practices scrutinized

Example of a data collection form

Ward:		Date:		Name of person performing the bundle:		
Observation number	The peripheral vascular catheter is still in use	Absence of inflammation and or extra-vasation	The peripheral vascular catheter dressing is intact	There is a record that the insertion site has been assessed twice daily	Hand Hygiene before & after all peripheral vascular catheter procedures	What was done
<b>1</b>  (Circle correct answer)	Yes Continue bundle	Yes Continue bundle	Yes Continue bundle	Yes Continue bundle	Yes Continue bundle	Peripheral vascular catheter <i>left in situ</i>
	No <b>Remove catheter</b>	No <b>Remove catheter</b>	No <b>Replace dressing or Remove catheter</b>	No	No <b>Request removal</b>	Peripheral vascular catheter removed
<b>2</b>	Yes Continue bundle	Yes Continue bundle	Yes Continue bundle	Yes Continue bundle	Yes Continue bundle	Peripheral vascular catheter <i>left in situ</i>
	No <b>Remove catheter</b>	No <b>Remove catheter</b>	No <b>Replace dressing or Remove catheter</b>	No	No <b>Request removal</b>	Peripheral vascular catheter removed

Summary Table of Peripheral Vascular Catheter Bundle Findings		Comment (if required)
Total number of <i>peripheral vascular catheters in situ</i> at start of PVC Bundle		
Total number of <i>peripheral vascular catheters</i> required.		
Total number of <i>peripheral vascular catheters</i> with no extravasation or insertion site inflammation		
Total number of <i>peripheral vascular catheters</i> with intact dressing.		
Total number of <i>peripheral vascular catheters</i> with documentation of twice daily assessment for complications.		
Total number of <i>peripheral vascular catheters</i> where hand hygiene has been performed before and after all PVC procedures		
<b>All or None Table – Was Peripheral Vascular Catheter Care Today Optimal?</b>		<b><i>Tick if achieved</i></b>
100% of <i>peripheral vascular catheters in situ</i> are required.		
100% of <i>peripheral vascular catheters</i> had no evidence of extravasation or insertion site inflammation.		
100% of <i>peripheral vascular catheters</i> had appropriate and intact dressings.		
100% of <i>peripheral vascular catheters</i> had evidence of hand hygiene performed before and after procedure.		
100% of <i>peripheral vascular catheters</i> had documentation of twice daily assessment for complications.		
If all the above were achieved the <i>peripheral vascular catheters</i> care was optimal		
<b>What is your next step?</b> <ul style="list-style-type: none"> <li>- <b>Discuss results with the ward/unit/directorate team (the frequency of measuring care bundle compliance and how results will be fed back to relevant staff should be agreed from the outset as described above and be part of the ward/unit/directorate improvement plan for infection prevention and control)</b></li> <li>- <b>What improvements will you plan next – consider using the Model for Improvement to plan, test and measure changes.<sup>7</sup></b></li> </ul>		

<sup>7</sup> <http://www.ihi.org/resources/Pages/default.aspx>