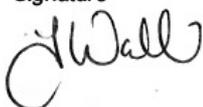


<b>Guidelines on Care Bundles in OLCHC</b>	
<i>(Including Peripheral Venous Catheter, Peripherally Inserted Central Catheter, Central Venous Catheter, Permcat, Vascath and Urinary Catheter)</i>	
<b>Version Number</b>	2
<b>Date of Issue</b>	25 <sup>th</sup> June 2014
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## 1.0 Introduction and definition

Care bundles were designed by the Institute for Healthcare Improvement in 2001 in a joint initiative with the Voluntary Hospital Association involving 13 hospitals. The goal of the initiative was to identify and improve care processes to the highest levels of reliability which would result in improved patient outcomes.

Care bundles are defined by the Institute for Health Improvement (2012) as '*a small set of evidence-based interventions for a defined patient segment/population and care setting that, when implemented together will result in significantly better patient outcomes than when implemented individually*'. Care bundles do not represent the comprehensive care required of a process, their purpose is to test a theory '*when compliance is measured for a core set of accepted elements of care for a clinical process, the necessary teamwork and cooperation required will result in high levels of sustained performance and improved outcomes*'. (IHI, 2012)

The Quality and Outcomes Framework (2012) suggests that 'the use of care bundles as a 'composite' measure of care delivery can highlight areas for further improvement. They suggest as a quality tool, the care bundle concept is '*the most systematic method of monitoring and improving the reliability and quality of healthcare*'.

A care bundle is defined as a collection of interventions that may be applied to the management of a particular set of procedures such as the insertion, care and management of venous access devices. (HPSC, 2008)

The care bundle aims to merge best practice and evidence in the management of these devices using a simple set of steps. These steps must be followed by all staff for each patient with a mechanical device in place. The steps involved have been deemed necessary, have been agreed based on best available evidence and must occur in a specified time period and place and monitored on a daily basis.

## 2.0 Bundles

- I. Peripheral Venous Catheter
- II. Peripherally Inserted Central Catheters
- III. Central Venous Catheters
- IV. Perm cath & Vascath
- V. Urinary Catheters

## 3.0 Bundle steps for all venous or central catheters

1. Assess the need for the central or peripheral line on each shift.
2. Hand hygiene is performed before and after access procedures
3. Appropriate ANTT level is used, see OLCHC ANTT Reference Guide (2013)
4. CVC/PICC site is checked and graded according to appearance, normal appearance is a tick for yes, everything else is no and an x.

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5. Dressing is replaced every 7 days or more if required using suggested transparent breathable dressing. Care is detailed in the careplan in the HCR.
6. Disinfection solution is Chlorhexidine gluconate 2% / 70% isopropyl alcohol solution >2months. Chlorhexidine 0.5% in Aqueous Solution i.e. Sterexidine 200 ® <2 months as per OLCHC Guideline on Skin Cleansing (2012).
7. Needlefree device is changed every 7 days and documented in the careplan in the HCR as recommended by the manufacturer.
8. Disinfection solution used to clean mechanical hubs is as recommended by OLCHC guideline (2012) before and after each access. (*allow to dry for at least 40 seconds or until visibly dry*).

#### 4.0 Process for PVC/CVC/PICC/Permcath/Vascath bundle. Use in conjunction with Careplan 9, 9a

##### **Care Bundles Recording Tool-Each shift- see copy Appendix 1, 2, 3, 4.**

- The most suitable site is chosen for line insertion
- The most suitable site is chosen for insertion by the clinician as per OLCHC, CVAD Guidelines for Clinicians, 2013 & OLCHC Intravenous Cannulation Guidelines (2013).
- Hand hygiene before and after all line interventions (OLCHC, 2010)
- OLCHC guide to Skin cleansing is followed unless allergy to chlorhexidine is suspected,
  1. Chlorhexidine gluconate 2% / 70% isopropyl alcohol solution >2months.
  2. Chlorhexidine 0.5% in Aqueous Solution i.e. Sterexidine 200 ® <2 months

Once inserted the line is xrayed in theatre for correct position if required as per OLCHC CVAD Guidelines for Clinicians
- Lines are flushed and heparinised as prescribed.
- Appropriate transparent dressing is applied once skin is cleaned and dried
- Care Bundle recording tool will be completed by the staff member caring for the infant/child on a per shift basis.
- This requires self declaration by staff.
- To have 100% compliance all fields must answer a yes.
- This document includes the date, time and line day (that is the numbers of days the line is in situ).
- Indicate the date of insertion in the field required on document 1.
- All fields in this document must be completed.
- Once the staff member caring for the child has completed the care bundle his/her initials and NMBI number must be detailed.
- Document 1 Care Bundles Recording tool must be used until the CVC is removed.
- When the CVC is removed the date of removal must be inserted into the required field. Discontinue the document in the usual way; a line is drawn through the document with the initials and date, the document can then be filed in the HCR.

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## 5.0 **Process for Urinary Catheter Care Bundle**, *Use in conjunction with Careplan 29 Urology*

- Consider the need for the urinary catheter and discuss with team as appropriate
- Remove urinary catheter as soon as possible to reduce the risk of infection.
- Hand hygiene before and after all catheter interventions.
- Use appropriate ANTT level.
- Use appropriate sterile/non sterile gloves as per OLCHC Urinary Catheter Guidelines (2013).
- Perform all care as required, meatal, catheter care, drainage bag care as per OLCHC guidelines on Urinary Catheter Care (2013).
- Record intake and output as required.

## 6.0 **Calculating the elements of compliance for all care bundles**

### Examples

*There are 8 basic elements (with the exception of the Urinary catheter bundle which has seven-14.2%) each element equates to 12.5% (rounded accordingly)*

<b>Elements of the Bundle not passed</b>	<b>% Compliant</b>
1	88%
2	75%
3	63%
4	50%
5	38%
6	25%
7	13%
8	0%

### **Document 2. CVC Care Bundle Surveillance- for laboratory use**

- The senior nurse/CNM will carry out a review of all children with a CVC on a daily basis.
- The date and bed number are detailed.
- All fields detailed on the surveillance sheet must be completed.
- A yes to all fields in document 1 indicates 100% compliance.
- The surveillance record is returned to the surveillance scientist.
- Any areas of non compliance must be managed locally with staff, CNMs and ADNs as required. An action plan can be managed locally to address any concerns.
- A field will be created in the documentation audit to capture the care bundle as a completed care process.

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## 7.0 References

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- An Bord Altranais (2002) *Recording Clinical Practice. Guidance to Nurse and Midwives*. ABA: Dublin
- Epic (2007) *National Evidence Based Guidelines for Preventing Healthcare Associated Infections in NHS Hospitals in England*. UK .
- Health Protection Surveillance Centre, (2008) *Peripheral Vascular Care Bundles*, [www.hpsc.ie](http://www.hpsc.ie)
- HIQA (2012) *National Standards for the Prevention and Control of Healthcare associated infection*. HIQA, Ireland
- Institute for Healthcare Improvement (2012) *Using care Bundles to Improve Health Care Quality*, IHI, Cambridge, UK.
- OLCHC (2010) *Guidelines on Hand Hygiene*. Our Lady's Children's Hospital, Crumlin, Dublin
- OLCHC (2013) *Aseptic Non Touch Technique a Reference Guide*, OLCHC, Dublin Ireland.
- OLCHC (2013) *Central Venous Access Device guidelines for clinical staff*, OLCHC, Dublin, Ireland.
- OLCHC (2013) *Intravenous Cannulation Guidelines for Clinical staff*, OLCHC, Dublin, Ireland.
- OLCHC (2012) Careplan 29 Urology, Care of a child with a urinary catheter, OLCHC, Dublin.
- OLCHC (2012) Careplan 9, 9a, 9b Care of a Child with a Central or Venous Access Device in situ, OLCHC

### Appendix 1. Care Bundles Recording Tool-Each shift

Please use this document in conjunction with Guidelines on Carebundles in OLCHC (2014), Careplan 9, CVAD Guidelines (2012), ANTT Guidance (2013), IV Cannulation Guidelines OLCHC (2012).  
 One document can be used for up to three PVCs. Details of line insertion dates on the IV Pink sheet

	Date																									
	Line	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	
1. Assess the need for PVC on each shift ✕ <i>Please tick</i>																										
2. Hand hygiene is performed before and after all line maintenance/access procedures. Appropriate ANTT Level is used. <i>Please tick</i>																										
3. Check cannula is secure and site clean. Dressing change if required <i>Please tick</i>																										
4. Check site for infiltration, infection or dislodgement <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <i>Consider the following when observing the PVC site</i> <ul style="list-style-type: none"> <li>Normal appearance</li> <li>Redness</li> <li>Redness, tenderness</li> <li>Redness, tenderness and discharge</li> <li>Other (temperature, bleeding)</li> </ul> </div> <i>Please tick if site normal or X if not</i>																										
5. Ensure patency of the PVC is maintained by flushing with NACL or continuous infusion <i>Please tick</i>																										
6. Consider resite after 72 hours <i>Please tick</i>																										
7. Alcohol hub decontamination is performed before and after each hub access. (Use OLCHC approved disinfection wipe) <i>Please tick</i>																										
8. There is no obvious constriction above the PVC site <i>Please tick</i>																										
<b>Initials</b>																										
<b>NMBI PIN</b>																										

- At the beginning of each shift complete the care bundle above.
- ✕ Under 'Assess the need for CVC' if line not in use always place an x in the box and acknowledge the reason on the surveillance sheet
- If non compliant with bundle re-evaluation may be required following nursing care.  
 Use a ✓ in the boxes provided for a yes and X for no  
 Patient Name.....  
 HCR no.....  
 Ward .....

### Appendix 2. Care Bundles Recording Tool-Each shift

<b>Peripherally Inserted Central Catheter</b> Use in conjunction with OLCHC (2013) Guidelines for Clinical Staff on Central Venous Access Devices & Careplan 9, 9a, 9b Tick ✓ each element of care bundle. To be 100% compliant all boxes must be ticked.												
	<b>Date:</b>											
	<b>Time</b>											
<b>Date PICC Inserted:</b> ____ / ____ / 20__	<b>Line Day</b>											
<b>Date PICC Removed:</b> ____ / ____ / 20__												
<b>Reason for line removal:</b>												
1. Assess the need for PICC on each shift* <i>if TPN in progress ? whether Enteral feeding/medications can commence</i> <i>Can oral medications be commenced</i> <span style="float: right;"><i>Please tick</i></span>												
2. Hand hygiene is performed before and after all line maintenance/access procedures. <span style="float: right;"><i>Please tick</i></span>												
3. Appropriate ANTT Level is used <span style="float: right;"><i>Please tick</i></span>  <b>ANTT Level 2:</b> accessing if 'breaking' the line <b>ANTT Level 3:</b> accessing via a needle free device												
4. PICC site intact <span style="float: right;"><i>Please tick if site normal or X if not</i></span> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <i>Consider the following when observing the PICC site</i> <ul style="list-style-type: none"> <li>Normal appearance</li> <li>Redness</li> <li>Redness, tenderness</li> <li>Redness, tenderness and discharge</li> <li>Other (temperature, bleeding)</li> </ul> </div>												
2. Dressing replaced within 7 days or more often if required <i>(sterile transparent semi permeable dressing Veni-gard®/IV 3000). Change every 7 days)</i> <span style="float: right;"><i>Please tick</i></span>												
3. Disinfection solution is used to clean the insertion site during dressing changes. <i>(&lt; 2 months corrected gestational age 0.5% Chlorohexidine in aqueous solution or older 2% Chlorohexidine in 70% alcohol)</i> <span style="float: right;"><i>Please tick</i></span>												
4. Change needle free device weekly <span style="float: right;"><i>Please tick</i></span> <i>(Check date when needelfree change is due)</i>												
5. Alcohol hub decontamination is performed before and after each hub access. <i>(Use OLCHC approved disinfection wipe)</i> <span style="float: right;"><i>Please tick</i></span>												
<b>Initials</b>												
<b>NMBI PIN</b>												

- At the beginning of each shift complete the care bundle above.
- \*Under ' Assess the need for PICC ' if line not in use always place an x in the box and acknowledge the reason on the surveillance sheet
- If non compliant with bundle re-evaluation may be required following nursing care.
- Use a ✓ in the boxes provided for a yes. An X for no

Patient Name.....  
 HCR no.....  
 Ward .....

### Appendix 3 Care Bundles Recording Tool-Each shift

<b>Central Venous Catheter</b> Use in conjunction with OLCHC (2013) Guidelines for Clinical Staff on Central Venous Access Devices & Careplan 9, 9a, 9b Tick ✓ each element of care bundle. To be 100% compliant all boxes must be ticked.												
	<b>Date:</b>											
	<b>Time</b>											
<b>Date CVC Inserted:</b> ___ / ___ / 20__	<b>Line Day</b>											
<b>Date CVC Removed:</b> ___ / ___ / 20__												
<b>Reason for line removal:</b>												
1. Assess the need for CVC on each shift ✘ if TPN in progress ? whether Enteral feeding/medications can commence Can oral medications be commenced <span style="float: right;">Please tick</span>												
2. Hand hygiene is performed before and after all line maintenance/access procedures. <span style="float: right;">Please tick</span>												
3. Appropriate ANTT Level is used <span style="float: right;">Please tick</span>  ANTT Level 2: accessing if 'breaking' the line ANTT Level 3: accessing via a needle free device												
4. CVC site intact <span style="float: right;">Please tick if site normal or X if not</span> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;">                         Consider the following when observing the CVC site                          a. Normal appearance                          b. Redness                          c. Redness, tenderness                          d. Redness, tenderness &amp; discharge                          e. Other (temperature, bleeding)                     </div>												
5. Dressing replaced within 7 days or more often if required (sterile transparent semi permeable dressing Veni-gard®/IV 3000). Change every 7 days) <span style="float: right;">Please tick</span>												
6. Disinfection solution is used to clean the insertion site during dressing changes. (< 2 months corrected gestational age 0.5% Chlorohexidine in aqueous solution or older 2% Chlorohexidine in 70% alcohol) <span style="float: right;">Please tick</span>												
7. Change needle free device weekly (Check date when needlefree change is due) <span style="float: right;">Please tick</span>												
8. Alcohol hub decontamination is performed before and after each hub access.(Use OLCHC approved disinfection wipe) <span style="float: right;">Please tick</span>												
<b>Initials</b>												
<b>NMBI PIN</b>												

- At the beginning of each shift complete the care bundle above.
- ✘ Under ' Assess the need for CVC ' if line not in use always place an x in the box and acknowledge the reason on the surveillance sheet.
- If non compliant with bundle re-evaluation may be required following nursing care.
- Use a ✓ in the boxes provided for a yes. An X for no

Patient Name.....  
 HCR no.....  
 Ward .....

### Appendix 4. Care Bundles Recording Tool-Each shift

<b>PERMCATH/VASCATH Catheter</b> Use in conjunction with OLCHC (2013) Guidelines for Clinical Staff on Central Venous Access Devices & Careplan 9, 9a, 9b Tick ✓ each element of care bundle. To be 100% compliant all boxes must be ticked.												
	<b>Date:</b>											
	<b>Time</b>											
<b>Date LINE Inserted:</b> ___/___/20__	<b>Line Day</b>											
<b>Date LINE Removed:</b> ___/___/20__												
<b>Reason for line removal:</b>												
1. Assess the need for LINE on each shift <i>if TPN in progress ? whether Enteral feeding/medications can commence</i> <i>Can oral medications be commenced</i> <span style="float: right;"><i>Please tick</i></span>												
2. Hand hygiene is performed before and after all line maintenance/access procedures. <span style="float: right;"><i>Please tick</i></span>												
3. Appropriate ANTT Level is used <span style="float: right;"><i>Please tick</i></span>  <b>ANTT Level 2:</b> accessing if 'breaking' the line <b>ANTT Level 3:</b> accessing via a needle free device												
4. LINE site intact <span style="float: right;"><i>Please tick if site normal or X if not</i></span> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <i>Consider the following when observing the LINE site</i> <ol style="list-style-type: none"> <li>a. Normal appearance</li> <li>b. Redness</li> <li>c. Redness, tenderness</li> <li>d. Redness, tenderness and discharge</li> <li>e. Other (temperature, bleeding)</li> </ol> </div>												
5. Dressing replaced within 7 days or more often if required <i>(sterile transparent semi permeable dressing Veni-gard®/IV 3000). Change every 7 days)</i> <span style="float: right;"><i>Please tick</i></span>												
6. Disinfection solution is used to clean the insertion site during dressing changes. <i>(&lt; 2 months corrected gestational age 0.5% Chlorohexidine in aqueous solution or older 2% Chlorohexidine in 70% alcohol)</i> <span style="float: right;"><i>Please tick</i></span>												
7. Change needle free device weekly <i>(Check date when needelfree change is due)</i> <span style="float: right;"><i>Please tick</i></span>												
8. Alcohol hub decontamination is performed before and after each hub access. <i>(Use OLCHC approved disinfection wipe)</i> <span style="float: right;"><i>Please tick</i></span>												
<b>Initials</b>												
<b>NMBI PIN</b>												

- At the beginning of each shift complete the care bundle above.
- If non compliant with bundle re-evaluation may be required following nursing care.
- Use a ✓ in the boxes provided for a yes. An X for no

Patient Name.....  
 HCR no.....  
 Ward .....

**Appendix 5. Urinary Catheter . Care Bundles Recording Tool-Each shift**

<p align="center"><b>Urinary Catheter (UC) Care Bundle</b></p> <p align="center">Use in conjunction with OLCHC (2012) Urinary Catheter care Guidelines &amp; Careplan 29</p> <p align="center"><b>Tick ✓ each element of care bundle. To be 100% compliant all boxes must be ticked.</b></p> <p align="center"><b>Indwelling urinary catheters give rise to urinary tract infection. The decision to insert and remove a Urinary Catheter is a medical/surgical decision.</b></p>												
	<b>Date:</b>											
	<b>Time</b>											
<b>Date UC Inserted:</b> ___ / ___ / 20__	<b>Line Day</b>											
<b>Date UC Removed:</b> ___ / ___ / 20__												
<b>Reason for UC removal:</b>												
1. Assess the need for UC on each shift <i>Discuss catheter removal with team</i> <span style="float:right"><i>Please tick</i></span>												
2. Hand hygiene is performed before and after all maintenance/access procedures. <span style="float:right"><i>Please tick</i></span>												
3. Appropriate ANTT Level is used. Gloves should be worn by staff members accessing the urinary system. <span style="float:right"><i>Please tick</i></span>												
4. UC is continuously connected to a drainage system which is changed as per OLCHC guidelines (2012) <span style="float:right"><i>Please tick</i></span>												
5. Meatal care is performed as required as per OLCHC guidelines <span style="float:right"><i>Please tick</i></span>												
6. The drainage bag is situated below the level of the bladder and the tap not in contact with any other surface. <span style="float:right"><i>Please tick</i></span>												
7. The drainage bag is emptied and volume recorded as ordered. <span style="float:right"><i>Please tick</i></span>												
<b>Initials</b>												
<b>NMBI PIN</b>												

- At the beginning of each shift complete the care bundle above.
- If non compliant with bundle re-evaluation may be required following nursing care.
- Use a ✓ in the boxes provided for a yes. An X for no

Patient Name.....

HCR no.....

Ward .....

