

## ***Clostridium difficile* Infection (CDI)**

### **Cross-transmission minimisation bundle**

**Isolate affected patients; Stop inappropriate antibiotics; Effective infection control measures**

#### **The Bundle**

1. Isolating CDI patients in a single room with either en suite facilities, or an allocated commode, until they are at least 48 hours symptom free.
2. Reviewing antibiotic regimens and stopping inappropriate antibiotics.
3. Checking all HCWs remove PPE (gloves and aprons) after each CDI patient care activity.
4. Checking that the CDI patient's immediate environment has been cleaned today with a chlorine based solution.
5. Ensuring HCWs perform hand hygiene with liquid soap and water after leaving a CDI patient's room.

This Standard Operating Procedure overleaf is an example of one way to deploy the CDI cross-transmission minimisation bundle. You can use it as somewhere to start, but it is anticipated that locally the bundle will be used in many different ways, for example, local decisions include: when it is done, how often it is done, who does it and how the data are collected. Successful implementation of this bundle can be achieved using the SPSP rapid cycle testing methodology.

As long as the bundle criteria data are collected, and reported back then the bundle is being done. Please use this procedure as a starting point but do not consider it to be prescriptive. To confirm the bundle criteria are fixed, how you execute the procedure to complete the bundle criteria reliably is up to you and your team locally.

HPS would be delighted to assist in the sharing of good practice, please let us know of anything you have identified that could help someone else do it better quicker. [NSS.HPSInfectionControl@nhs.net](mailto:NSS.HPSInfectionControl@nhs.net)

Other tools that may help you with this bundle are found at: <http://www.hps.scot.nhs.uk/haic/ic/bundles.aspx>.

You may also wish to make contact with your SPSP coordinator regarding how to implement this bundle.

Additional CDI resources can be found at:

<http://www.elib.scot.nhs.uk/SharedSpace/hai/Pages/login.aspx?ContainerID=191900&ret=http%3a%2f%2fwww.elib.scot.nhs.uk%2fSharedSpace%2fhai%2fPages%2fIndex.aspx%3fcontainerID%3d191900>

***CDI cross-transmission minimisation bundle – Example of a Standard Operating Procedure to implement the bundle***

Statement	<p>CDI remains the commonest healthcare associated gastrointestinal infection. The latest data from the HPS <i>Clostridium difficile</i> surveillance shows an improving trend in persons aged 65 years and over, but more work is required to ensure that patients receive optimal care that reduces their risk of CDI development [<a href="http://www.hps.scot.nhs.uk/ewr/redirect.aspx?id=41927">http://www.hps.scot.nhs.uk/ewr/redirect.aspx?id=41927</a>]. Patients become susceptible to CDI when the organism colonises their gut and when their normal microbial flora becomes disturbed, for example, following antibiotic therapy. Antibiotics destroy the normal gut flora and allow the organism to flourish. Once the organism overgrows in the gut, the powerful toxin it produces destroys the lining of the gut and results in the patient developing profuse diarrhoea. CDI is the name given to a range of mild to life-threatening diseases caused by <i>Clostridium difficile</i> which includes pseudo membranous colitis and toxic megacolon.</p> <p><i>Clostridium difficile</i> poses significant problems in healthcare settings because:</p> <ul style="list-style-type: none"> <li>• The majority of patients will, as a consequence of healthcare or predisposing conditions, require antibiotics during their admission making them vulnerable to CDI.</li> <li>• The organism produces spores, which can survive for months in the environment – the organism can also survive routine cleaning and alcohol hand gel is ineffective at removing <i>Clostridium difficile</i>.</li> <li>• <i>Clostridium. difficile</i> can also survive on equipment such as baths, commodes, stethoscopes, washbowls, etc., etc. for months.</li> </ul>
Objectives	<ul style="list-style-type: none"> <li>• To minimise the risk of cross-transmission from patients with CDI in <b>OUR</b> ward</li> <li>• To demonstrate the quality of care for CDI patients in <b>OUR</b> ward</li> </ul>
Requirements	<p style="text-align: center;"><b>Before CDI Bundle procedure can be considered:</b></p> <p>A clear local policy on antibiotic use is accessible on the ward.</p> <p>Named individuals competent in performing the bundle as written.</p>

*Clostridium difficile* Infection (CDI) bundle  
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Requirements	<p style="text-align: center;"><b>Prior to starting the CDI Bundle Procedure</b></p> <p>Personal Protective Equipment (PPE): Gloves &amp; plastic apron.</p> <p>NB Always perform the bundle on the same day of the week at the same time of the week. Once a week is recommended. It can be completed more frequently if deemed necessary.</p>
Procedure	<ol style="list-style-type: none"> <li>1. Collect a bundle sheet and complete the identification boxes.</li> <li>2. Identify from the nurse in charge, all the patients who are CDI positive and have not been symptom free for 48 hours. Confirm whether or not each of these patients is in a single room with en suite facilities or own commode. Record this on the bundle data collection sheet.</li> <li>3. Proceed to the prescription sheets and notes of the identified CDI patients and check whether they are on appropriate antibiotics, i.e. there is daily documentation of the continuing need for all antibiotics and the relevant CDI treatment antibiotics are prescribed. (NB all notes and prescriptions should be kept outside isolation rooms.) Record findings on the bundle sheet.</li> <li>4. Perform hand hygiene and don PPE prior to entering the CDI patient's room</li> <li>5. Proceed to introduce yourself to the CDI patient and explain that you are checking that all care is being carried out correctly (NB leave your documentation outside the room).             <ol style="list-style-type: none"> <li>a. Check that patient is isolated in a single room with en suite facilities/commode</li> <li>b. Check that patient is not &gt;48 hours symptom free</li> <li>c. Ask if the patient's room has been cleaned today.</li> </ol> </li> <li>6. Thank the patient, leave the patient's room, remove PPE, wash hands and then record findings on the bundle checklist.</li> <li>7. Observe or ask for peer-observed evidence of removal of gloves and apron following care of CDI patients</li> <li>8. Observe or ask for peer-observed evidence of hand washing after removal of PPE.</li> <li>9. Observe or ask for peer-observed evidence of patients' rooms being cleaned with a chlorine based solution.</li> <li>10. Record actions/findings on the bundle sheet and if necessary record on the patient's notes</li> </ol>

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	11. Inform medical/nursing staff of any unexpected findings...
After care	Complete form and give it to _____ Discuss results with nurse in charge. Discuss and display the data when it has been returned. Keep Bundle forms for XX time

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Ward		Named individual performing/overall responsible for completion bundle		Date bundle completed
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<b>Bundle Criterion</b>	<b><i>Patient 1</i></b> √ or X	<b><i>Patient 2</i></b> √ or X	<b><i>Patient 3</i></b> √ or X	<b><i>Patient 4</i></b> √ or X	<b><i>Patient 5</i></b> √ or X	<b><i>Patient 6</i></b> √ or X	<b><i>Patient 7</i></b> √ or X
1. Isolating CDI patients in a single room with either en suite facilities, or an allocated commode, until they are at least 48 hours symptom free.							
2. Reviewing antibiotic regimens and stop inappropriate antibiotics.							
3. Checking all HCWs remove PPE (gloves and aprons) after each CDI patient care activity (gloves and aprons).							
4. Checking that the patient's immediate environment has been cleaned today with chlorine based solution.							
5. Ensuring HCWs perform hand hygiene with liquid soap and water after leaving a CDI patient's room.							

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Summary Table of <i>CDI</i> bundle findings	No.	%	Comment (if required)
A) Total number CDI patients in the ward today who are less than 48 hours symptom free.		----	
B) How many of these patients are isolated with en suite facilities or own commode			= B divided by A X 100
C) How many of these CDI patients were on appropriate antibiotics			= C divided by A X 100
D) Of the HCWs that came out of CDI patients' rooms how many were peer-observed as removing their PPE immediately			= D divided by the number of HCWs observed X 100
E) How many of the CDI patients' environments have been cleaned today with chlorine based solution.			= E divided by A X 100
F) Of the HCWs that were observed how many washed their hands immediately after removing PPE			= F divided by the number of HCWs observed X 100
<b>All or None Assessment – Was care of patients with <i>CDI</i> optimal today?</b>			
If the shaded columns scores were 100%, the care today was optimal. _____			

Signature of person completing the bundle: .....