

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

**Version 1, July 2012**

This document has been adapted from the *Clostridium difficile* Infection (CDI) Trigger Tool produced by Health Protection Scotland (HPS) and Our Lady of Lourdes Hospital Drogheda

**We gratefully acknowledge their permission to use their documents.**

<b>Ward/Clinical Area</b>	
<b>Date Trigger Tool Commenced</b>	
<b>Date Trigger Tool Closed</b>	
<b>Person closing the CDI Trigger</b>	

## What is a CDI trigger?

A CDI trigger is

- A point at which the clinical team on a ward/unit in conjunction with the infection prevention and control team (IPCT\*) investigate if infection control systems on that ward/unit are making patients more vulnerable to CDI.
- Is usually set by the IPCT using local CDI surveillance data for that healthcare facility.
- Means that the number of new CDI cases over a defined period of time in a specific ward/unit area has increased and may be of concern.

A CDI trigger should be set for all clinical areas (including long term care facilities) and all staff should be aware of what the trigger is. For example a healthcare facility could have two separate triggers, one for the entire facility and the other for a particular ward/unit.

A trigger may be reached as a consequence of either natural variation in the number of CDI cases or because of a breakdown in infection control systems (e.g., poor hand hygiene compliance, suboptimal environmental decontamination) or poor antimicrobial prescribing on that ward/unit/hospital.

Only by investigating CDI triggers can it be determined if errors are present and systems should be changed. A trigger is not synonymous with the term outbreak. A trigger is a more sensitive point at which the IPCT becomes concerned that there may be the possibility of deteriorations in systems causing an increase in cases and decides intervention is necessary to ensure patient safety.

*\*Members of the IPCT may include clinical microbiologists, infection prevention and control nurse specialists, antimicrobial pharmacist, surveillance & laboratory scientists*

### Objectives for the CDI Trigger Tool:

- To determine if the CDI trigger is real or the results of natural variation in the number of CDI cases
- To promptly identify and rectify any areas that require improvement in the care of patients, the environment or in antimicrobial prescribing that are making patients more vulnerable to CDI or increasing the risk of *C. difficile* cross-infection
- To create a culture and systems that minimise the risk of patient susceptibility to CDI and cross-infection

Responsible person	Actions
Clinical Nurse manager	<ul style="list-style-type: none"><li>• Identify clinical triggers and report them to the IPCT and clinical staff</li><li>• Lead and complete the clinical actions if this trigger is considered real</li><li>• Report confirmed triggers as per local reporting systems</li><li>• Report using Risk Management Reporting systems</li><li>• Ensure that there are sufficient competent staff on the ward</li></ul>
Clinicians	<ul style="list-style-type: none"><li>• Confirm that the clinical care of patients with CDI is compliant with local/national guidance,</li><li>• Report to IPCT directly if they have concerns regarding infection control and CDI prevention</li><li>• Review antimicrobial prescribing</li></ul>
Infection Prevention & Control Team (IPCT)	<ul style="list-style-type: none"><li>• Set triggers and identify through local surveillance when a trigger occurs</li><li>• Work with the clinical nurse manager and clinicians to complete this trigger tool</li><li>• Identify if CDI triggers are due to system errors or natural variation in conjunction with ward/unit staff</li></ul>
Antimicrobial pharmacist in conjunction with clinical microbiologist	<ul style="list-style-type: none"><li>• Review the antibiotic regimens of all patients in the ward ensuring it is consistent with local policy</li><li>• Provide recommendations for prescribing to reduce the risk of CDI to patients</li><li>• Report the trigger to the Antimicrobial Stewardship / Drugs &amp; Therapeutics Committee</li></ul>
General Manager	<ul style="list-style-type: none"><li>• Ensure the ward team has the resources to provide a safe patient environment</li></ul>

**Assessment of the CDI trigger – To be completed by the IPCT**

Location (i.e. clinical area)	
What is the trigger threshold for this ward/unit?	
What is the number of CDI cases prompting this trigger?  (This could be higher than the threshold if more than 1 case is identified on the same day)  ...refer to statistical process control or run charts...	
Confirm the CDI trigger is real: 1. Is the number correct? (i.e., had <i>C. difficile</i> been acquired in other areas or in the community) 2. Any recent change in the patient population?	

**Situation Report - To be completed by IPCT in conjunction with clinical nurse manager**

Today, how many patients on this ward have CDI (i.e. are symptomatic and have had a <i>C. difficile</i> toxin positive test)?	
Today, how many other patients who have symptoms that could be CDI are on the ward/unit?	
In the last 30 days have there been any deaths associated with CDI on this ward?	
Who is the lead ICT member for this trigger?	
Who is the Charge Nurse for the ward area?	
Is this an outbreak?	Yes / No
Is there a requirement to report to Public health?	Yes / No
Is the CDI trigger confirmed?	Yes / No
If the CDI trigger is not confirmed - explain why - sign to say the trigger is not real - STOP here	

Day 0

Date / / 10

The date the trigger was identified

<b>Immediate Clinical Actions - Initial Actions once Trigger is Confirmed as real</b>
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Are all the patients with CDI isolated in single rooms with en suite facilities and a clinical hand basin?	Yes No <b>If no, why not</b>
If there are no single rooms available: Has a risk assessment been performed to ensure there are no available options for single room placement?	Yes No <b>If no, why not</b>
Are all the patients with CDI cohort nursed, with en suite facilities or individual commode?	Yes No <b>If no, why not</b>
Are the doors to all isolation rooms/cohort areas kept closed? <i>A risk assessment should be performed to confirm the safety of keeping doors closed</i>	Yes No If no, close doors if possible
Have faecal specimens been sent from patients who have symptoms suggestive of CDI?	Yes No <b>If not, send specimens</b>
Are there daily clinical assessments recorded for all patients with CDI to assess for severe CDI?	Yes No <b>If no, ask for severity assessments to be completed now.</b>
Has the clinical microbiologist been contacted to request <i>C. difficile</i> typing in the case of a) severe disease, b) Suspected outbreak?	Yes No
Have all patients with symptoms (i.e., potentially infectious diarrhoea) been assessed for their need for CDI specific antibiotic treatment <b>today</b> ?	Yes No
Consider closing the ward or bay area to admissions if: <ol style="list-style-type: none"> <li>1. Patients with CDI cannot be safely separated from patients who do not have CDI</li> <li>2. There are inadequate facilities/environment to ensure the safety of patients.</li> <li>3. There is insufficient staff to provide a safe patient environment.</li> </ol>	State the outcome of any closure or restriction of ward routines
If the ward/unit is closed, consider allocating staff specifically to care for the CDI patients.	Yes No <b>If no, why not</b>
Avoid unnecessary transfer of patient with CDI out of the ward/unit unless medically necessary. If necessary, <i>prior</i> to the patients transfer inform the receiving department of the infection control precautions required (and document this).	
Comments:	

Day 0     Date   /   / 10

**Immediate Infection Control Check of Equipment, Environment and Practices**  
**To be completed by the ward/unit clinical nurse manager in conjunction with the IPCT**

<b>Soap and water</b> must be used for all hand decontamination when caring for all symptomatic patients with CDI. Do not use alcohol based hand rub alone.	<i>Confirm</i>
<b>Personal protective equipment (PPE)</b> , disposable gloves and plastic aprons must be used by all staff when entering a cohort area or isolation room.	
<b>PPE is removed and hands are washed</b> before and after leaving cohort area or isolation room.	
Clean and then disinfect <b>all commodes, toilets including isolation areas</b> with 1000ppm available chlorine.	
Establish a <b>cleaning regimen of the cohort/isolation</b> area and all equipment in the area (detergent and 1000ppm available chlorine).	
Clean and then disinfect all <b>frequently touched surfaces</b> environmental throughout the ward with 1000ppm available chlorine.	
Establish twice daily decontamination of all frequently touched environmental sites surfaces which include cleaning and then disinfect with 1000ppm available chlorine	
Dedicate care equipment for the specific use of patients with CDI, e.g. blood pressure cuffs, stethoscopes and thermometers.	
Declutter the ward and clinical environment	
Consider the possibility of airborne dissemination of <i>C. difficile</i> spores (e.g., by the use of fans or other activities that increase air turbulence). Remove fans if considered a risk	
Consider allocating staff to specifically care for the isolated/cohorted patients with CDI	
If ward is closed to admissions, place a notice on ward door.	

**Immediate patient care assessment - To be completed by the clinical nurse manager**

<b>All patients with CDI:</b>	<i>Confirm done</i>
<ul style="list-style-type: none"> <li>Have an up to date stool chart (e.g., Bristol Stool Chart)</li> </ul>	
<ul style="list-style-type: none"> <li>Have had their medication reviewed by their medical team: specifically a review of antibiotic, proton pump inhibitor and laxative therapy and unnecessary agents are stopped</li> </ul>	
<ul style="list-style-type: none"> <li>Are on appropriate CDI specific antimicrobial therapy with daily assessment of CDI severity</li> </ul>	
<ul style="list-style-type: none"> <li>Have been clinically reviewed today – including surgical referral if symptoms suggestive of severe CDI</li> </ul>	
<ul style="list-style-type: none"> <li>Have been informed that they have CDI</li> </ul>	
<ul style="list-style-type: none"> <li>Have been given an information leaflet</li> </ul>	
<ul style="list-style-type: none"> <li>Understand the infection control measures to prevent cross infection</li> </ul>	
<ul style="list-style-type: none"> <li>Have been shown how to perform hand hygiene</li> </ul>	

Day 0

Date //

**Immediate Patient Antibiotic Assessment - Antibiotic pharmacist in conjunction with clinical microbiologist**

Review all antibiotic prescription charts for compliance with local antibiotic policy	
Discuss results with clinical staff	
Comment on the use of antibiotics on this ward/area	

**Immediate Knowledge and Communications Check  
- Clinical Nurse Manager in conjunction with IPCT**

Inform all clinical staff on duty that there is a CDI trigger on this ward.	
Inform all members of staff on the ward - including domestic staff - of the situation, the organism, how it is spread in the ward environment and what they need to do to further reduce risk to patients, themselves and co-workers and to monitor for deterioration in the situation.	
Identify any learning gaps in ward staff – antimicrobial prescribing, care of patients with CDI, infection control to prevent CDI.	
Ask all members of the clinical team to consider their practice and identify any actions or inactions that could have contributed to the increased number of CDI cases, and discuss this with the clinical leads, clinical director or the IPCT.	
Inform the following people of the CDI trigger. All consultants with patients on the ward Risk manager Antimicrobial pharmacist Bed manager ADON/Operational Services manager Clinical director Local management as specified in local governance reporting procedure (e.g., general manager / CEO, communications manager etc)	
The relatives of patients with CDI are informed of the situation as appropriate	
<b>Visitors</b>	
Depending on the size of the situation, give consideration to restricting the number of visitors	

Day

Date / /

**Daily CDI check by the clinical and ICT – Complete each day until CDI Trigger is resolved**

Have any <b>new patients/staff</b> been diagnosed with CDI today?	Yes/No
How many patients on the ward today have CDI? Is this an increase/decrease or unchanged from yesterday?	
How many patients have diarrhoea but do not have a <i>C. difficile</i> toxin test result?	
Is the segregation of patients with CDI in this clinical area sufficient to prevent cross-transmission?	Sufficient Insufficient
Have isolation/cohort procedures been effectively established?	Yes/No
Have the isolation/cohort areas been supplied with dedicated care equipment, e.g. blood pressure cuffs, stethoscopes and thermometers?	Yes/No
Are doors to the isolation/cohort areas kept closed (or daily closure risk assessment complete)?	Yes/No
Are contact precautions effectively established: i.e., use of PPE, soap and water hand washing?	Yes/No
Have the clinical assessments of all patients with CDI been recorded today – and as a consequence of this review appropriate referrals/actions been taken?	Yes/No
Is the unnecessary movement of patients within the isolation/cohort area restricted?	Yes/No
Is there sufficient, competent staff on the ward to provide a safe patient environment? Discuss with CNM.	Yes/No
Are all staff on the ward today aware of the status of the CDI trigger on the ward and why the restrictions in place?	Yes/No
Are any learning gaps being addressed?	Yes/No How?
Are patients on the ward aware of the situation and their CDI status?	Yes/No
Is the environment clean and free from clutter?	Yes/No
Has a routine of twice daily decontamination of frequently touched sites and surfaces with detergent and 1000 ppm available chlorine been established?	Yes/No
Is all equipment visibly clean and in a ready-for-next-patient use condition? Check labels.	Yes/No
Is the ward equipped with adequate supplies of PPE?	Yes/No
Are all commodes, including those in the isolation/cohort facilities, cleaned and decontaminated with 1000 ppm available chlorine?	Yes/No
Has antibiotic prescribing for all patients been reviewed today for alignment with local/national guidance?	Yes/No
Is the movement of staff restricted between isolation/cohort areas and other areas not affected by CDI including other wards?	Yes/No
<b>Based on the above information: (IPCT to confirm and communicate this)</b> <b>Is there any need to change to the open/closed status of the ward?</b>	
<b>Are daily CDI checks still necessary? If yes, continue with daily assessments, if no proceed to next section: Lessons Learned and Changing Systems.</b>	

**IPCT to advise on the need for any Terminal Clean Procedure. IPCT to advise need for Hydrogen peroxide vapour.**

Undertaken By \_\_\_\_\_

### Audits/ & Monitoring \*

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Complete once all investigations are concluded Clinical Nurse Manager and IPCT to complete

<b>Learning Lessons and Changing Systems</b> <b>What could have contributed to the CDI Trigger?</b> <b>Clinical Nurse Manager and IPCT to complete -</b>	
Were any deficiencies in antibiotic prescribing identified that could have contributed to patient susceptibility?	If yes, list the systems changed to rectify this and reduce the risk of recurrence?
<ul style="list-style-type: none"> <li>• Were there any deficiencies in practice that could have contributed to cross-transmission or delayed detection of this trigger, e.g.? <ul style="list-style-type: none"> <li>Delayed or non-isolation</li> <li>Delayed sending of specimens</li> <li>Inadequate contact precautions – use of PPE</li> <li>Use of alcohol based hand rub rather than soap and water</li> <li>Excess patient movement</li> </ul> </li> </ul>	If yes, list the systems changed to rectify this and reduce the risk of recurrence?
<ul style="list-style-type: none"> <li>• Were any deficiencies in the maintenance of a safe patient environment identified, e.g. <ul style="list-style-type: none"> <li>Cluttered environment</li> <li>Inadequately cleaned environment</li> <li>Inadequately cleaned equipment, commodes, washbowls</li> <li>Insufficient single-rooms to isolate all patients requiring contact precautions?</li> </ul> </li> </ul>	If yes, list the systems changed to rectify this and reduce the risk of recurrence?
Were there any other factors that could have contributed to the CDI trigger identified?	If yes, list the systems changed to rectify this and reduce the risk of recurrence?
What other preventive measures could be instigated <ul style="list-style-type: none"> <li>More regular use of a CDI checklist</li> <li>Instigating the CDI Prevention of Cross-transmission bundle</li> </ul>	
<b>Date Completed.</b> <b>Completed by IPCT</b> _____ <b>CNM</b>	