PERFORMANCE ASSURANCE PROCESS FOR KEY PERFORMANCE INDICATORS FOR HCAI AMR IN ACUTE HOSPITALS

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Developed By:	Antimicrobial Resistance and Infection Control Team		
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Version	Date Approved	Changes	Section No.:
01	August 2016	New policy developed	Not applicable
02	January 2018	Policy updated	Not applicable
03	June 2018	Responsibility for Implementation	Not applicable
04	July 2018	Updated RCA forms	Appendix C

Issued by M Cormican (MCRN 011105) National Lead HCAI & AMR (10/08/18)

RESIST
Antimicrobial Resistance and Infection Control Team

Introduction

Healthcare associated infections (HCAI) and antimicrobial resistance are key patient safety issues for the Health Service Executive. In relation to HCAIs a number of Key Performance Indicators (KPIs) have been developed. In addition, the Health Protection Surveillance Centre (HPSC) collects surveillance information on key pathogens and report regularly on trends.

Surveillance systems are in place in acute hospitals to facilitate the collection and management of KPIs. Work is planned to address surveillance systems for non-acute settings and thus a system for monitoring KPIs in these settings.

In 2017, three KPIs were identified for inclusion in National Service Plan and additional KPIs were identified for scoping/ testing with the intention of adding to the suite in 2018.

KPIs on HCAI in 2017 National Service Plan

Health Care Associated Infections (HCAI)	*Target*
% compliance of hospital staff with the World Health Organisation's (WHO) 5 moments of hand hygiene using the national hand hygiene audit tool	90%
Rate of new cases of Hospital acquired *Staphylococcus. aureus* bloodstream infection	< 1/10,000 Bed days used
Rate of new cases of Hospital acquired *C. difficile* infection	< 2/10,000 Bed days used

KPIs on HCAI in 2018 National Service Plan

Health Care Associated Infections (HCAI)	*Target*
Rate of new cases of Hospital acquired *Staphylococcus. aureus* bloodstream infection	< 1/10,000 Bed days used
Rate of new cases of Hospital acquired *C. difficile* infection	< 2/10,000 Bed days used
No. of New cases of CPE	N/A
% of acute hospitals implementing the requirements for screening of patients with CPE guidelines	100%
% of acute hospitals implementing the national policy on restricted anti-microbial agents	100%

In addition the HSE Business Intelligence Unit started collecting data in 2017 relating to the number of newly detected patients with CPE positive results, number of swabs taken for CPE and Meropenem dispensing.

A performance assurance process has been developed for KPI reporting, management and escalation in the acute hospital setting and is outlined below.

Infection Prevention & Control/ Antimicrobial Surveillance (ICP/AMS) Proposed Governance

Core Hospital IPC/AMS Team:
- Microbiologist (Lead)
- Infection Control Nurse(s)
- Antimicrobial pharmacist
- Surveillance scientist
- Administrative support
- Others as appropriate

Hospital Infection Control Team core Functions/TOR
- Provide guidance and support on surveillance and management of HCAI and antimicrobial stewardship
- Collate data for HCAI KPIs for local evaluation, action and reporting
- Escalate issues in line with *Procedure for Outbreaks/incidents/situations for HCAI*

Core Hospital IPC/AMS Committee
- GM/CEO (Chair)
- Clinical Director
- Director of Nursing
- Consultant Microbiologist(s)
- Infection Control Nurses
- Antimicrobial pharmacist
- Surveillance scientist.
- Specialist in Public Health Medicine
- CHO Rep.
- QPS Lead
- Others (estates, cleaning)

Hospital IPC/AMS Committee Functions/TOR
- *Review surveillance reports on major HCAI and AMR issues*
- *Approve annual IPC and Antimicrobial Stewardship plans and reports*
- Provide guidance *and support to CEO and team on surveillance and management of HCAI and antimicrobial stewardship*
- Review and advise on IPC and stewardship gaps
- Escalate issues in line with *Procedure for Outbreaks/incidents/situations for HCAI*

Hospital Group IPC/AMS Committee
- CEO (Chair)
- Group Clinical Director
- Group Director of Nursing
- Chair of each Hospital **IPC/AMS** Committee
- Consultant Microbiologist(s)
- Infection Control Nurses
- Antimicrobial pharmacist
- Surveillance scientist.
- Specialist in Public Health Medicine/CHO Rep.
- QPS Lead
- Others (estates, cleaning)

Hospital Group IPC/AMS Committee functions/ TOR:
- *Review surveillance reports on major HCAI and AMR issues from each hospital*
- *Approve annual IPC and Antimicrobial Stewardship plans and reports*
- Provide guidance *and support to CEO and team on surveillance and management of HCAI and antimicrobial stewardship*
- Review and advise on IPC and stewardship gaps
- Escalate issues in line with *Procedure for Outbreaks/incidents/situations for HCAI*

HCAI Performance Assurance Group
- National Lead for HCAI/AMR
- BIU
- H &Wb Public Health
- H&Wb Planning and Performance Staff
- AHD Planning and Performance GM
- QPS

HCAI Performance Assurance Group core TOR:
- *Review Hospital Group and Hospital data and commentaries & follow up re. same*
- *Produce National HCAI commentary/ exceptions report for NPOG*
- *Provide support, and issue guidance*

Acute Hospitals Division SMT

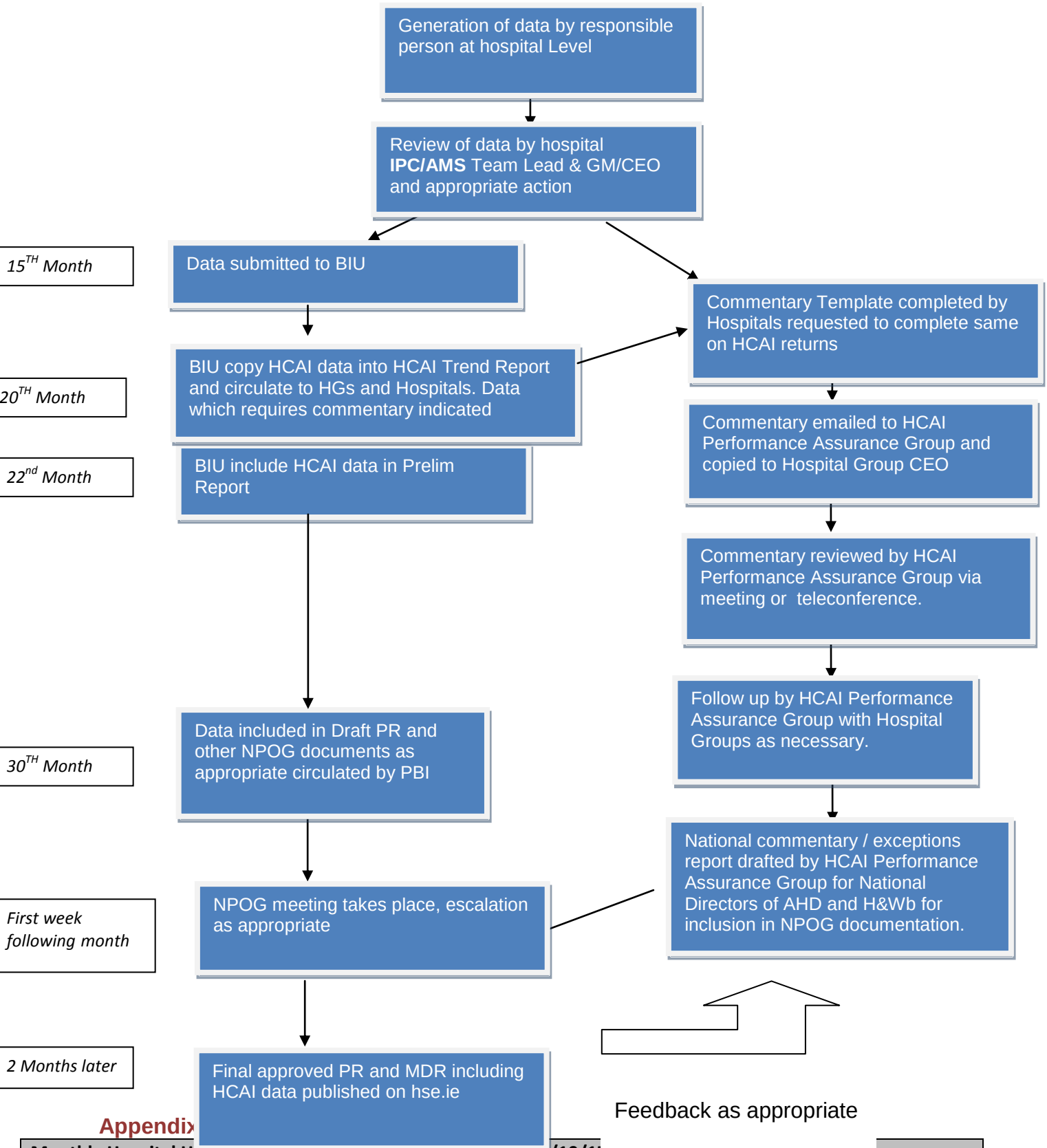
Health and Wellbeing Division SMT

NPOG /DDG/HCAI/AMR Implementation Team

National Directors:
- Co-chair National Steering Group for HCAI/AMS
- Liaise with NPOG and oversee improvement plans as appropriate

Acute Hospital and Health and Wellbeing Divisions 2017Process for hospital reporting of following HCAI metrics:

- Number and rate of new cases of hospital acquired *Staphylococcus aureus* bloodstream infection
- Number and rate of new cases of hospital acquired new cases of *C. difficile* infection



Appendix

Monthly Hospital HCAI Commentary Template : Version 4 20/10/17	
Name of Hospital	

Hospital Group		
Month and Year data relates to		
	***Staphylococcus aureus* bloodstream infection**	***C. difficile* associated diarrhoea (CDAD)**
Number of cases and rate of new cases this month		
Has a root cause analysis (RCA) been performed by the primary consultant responsible for the patient with support from the IPC team for each case? (If the answer to the above is no please explain why not)		
Did any of the patients die before discharge or completion of this report? (If the answer is positive: was the case assessed to determine if the death was attributable to infection and what was the outcome of the assessment?)		
Is there evidence of an outbreak (person to person transmission)		
List main factors identified on RCA		
What proportion of cases were related to central venous catheters?		N/A
What proportion of cases were related to peripheral intravenous catheters?		N/A
Have any issues been identified in relation to toilet facilities, commodes, bed pans, bed pan washers	N/A	
Has the primary consultant and the relevant senior nurse reviewed their own hand hygiene practice and that of their team?		
Has the General Manager/CEO and relevant Clinical and Nursing Director(s) convened a meeting to review the factors identified as contributing to this relatively high rate in the RCAs and to plan a response		
List actions planned by the General Manager/CEO and Relevant Clinical and Nursing Director(s)		
Have the incidence(s) of hospital acquired infection above been reported in National Incident Management System		
Name of Person completing commentary		
Name Hospital General Manager/CEO to whom this commentary was copied and approved for forwarding to HCAI Performance Assurance Group.		

Appendix B

Draft Detailed Terms of Reference Hospital Group IPC/AMS Committee

Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

DRAFT TERMS OF REFERENCE HOSPITAL GROUP INFECTION PREVENTION & CONTROL / ANTIMICROBIAL STEWARDSHIP COMMITTEE

Name of Document:	Terms of Reference
Reference number:	1.1
Date:	14/08/2017
Author:	
Approved by:	✓ Chief Executive
Date approved:	
Date of review:	

Index:

4. **Accountability and reporting**
5. **Suggested agenda items**
6. **Outputs and performance monitoring**

Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

1. Purpose of the committee

Health care associated infection (HCAI) refers to infection that occurs during the process of health care delivery. A significant proportion of HCAI can be prevented by following certain practices including correct performance of hand hygiene, cleaning, immunisation and early detection and management of infection.

Antimicrobial resistance (AMR)[1] refers to the growing problem of bacteria that are resistant to antibiotics. When such bacteria cause infection they can be difficult to treat because some or many of the antibiotics we rely on may not be effective. The problem of AMR is related to overuse of antibiotics.

HCAI and AMR are connected because health care facilities often use a lot of antibiotics and AMR bacteria can spread from person to person in a health care facility through hands, equipment and surfaces.

The purpose of the committee is to support the Chief Executive in fulfilling her/his responsibility for prevention and control of health care associated infection and antimicrobial resistance in the Hospital Group. This work of the committee should encompass all aspects of healthcare delivery associated with the Hospital Group encompassing both services delivered directly through HSE employees and facilities and those delivered by individuals or agencies contracted to the HSE.

<u>Key function of the committee will include</u>

1. Develop and adopt an annual plan for HCAI & Antimicrobial Stewardship for the Hospital Group addressing at least:
   a) hand hygiene training
   b) Training in standard and contact precautions
   c) Guidelines – review and implementation of relevant national guidelines and identification of unmet guideline needs
   d) surveillance of *S. aureus* related blood stream infection
   e) surveillance of *C. difficile* related disease
   f) surveillance of Carbapenemase producing Enterobacterales (CPE) (colonisation and infection)
   g) surveillance of meropenem use and use of other critical antimicrobial agents
   h) Influenza prevention
   i) HCAI staffing
   j) Identification of quality improvement initiatives for implementation across the hospital group

2. Review progress on implementation of the annual work plan and develop an annual report to provide assurances that all appropriate measures are being taken to achieve targets set out in Hospital Group Operational Plan and by the National Clinical Lead for HCAI AMR.

3. Review reports on outbreaks and other exceptional events.

4. Advise the Chief Executive Officer on all aspects of infection prevention and control.

5. Evaluate status of HCAI and AMR issues for the risk register and escalate any risks through appropriate governance structure.

6. Review communication with national HCAI AMR team and provide quarterly reports as appropriate.

7. Any other business.

Note: For the purposes of this document the terms antimicrobial and antibiotic can be considered as essentially equivalent.

2. Composition and operation of the committee

The Chair of the committee should be the Chief Executive Officer (CEO). The Co-Chair should the Chief Operations Officer or Chief Director of Nursing or Chief Clinical Director.

The membership of the committee should whenever include

- Chief Executive Officer (Chair)
- Chief Operations Officer
- Chief Clinical Director
- Chief Director of Nursing
- Quality and Patient Safety (QPS) lead
- Specialist in Public Health Medicine
- General Manager of each acute hospital
- Consultant Microbiologist Infection Prevention and Control Lead for each hospital
- Infection Prevention & Control Nurse for each hospital
- Antimicrobial Pharmacist for each hospital
- Surveillance Scientist for each hospital
- Occupational Health Nominee
- Allied Health Professional Nominee
- Estates nominee
- Patient representative
- Representative from Education / Practice Development
- Representative from Materials Management / Supplies
- Out Patient Antimicrobial Therapy (OPAT) representative
- Consultant Infectious Disease Physician
- Member of National Team (normally the National Lead for HCAI/AMR to attend at least one meeting per year whenever possible)

3. Quorum, frequency and operation of meetings

- The quorum necessary for a meeting to proceed is as follows;
  - ✓ Chair or Co-Chair
  - ✓ A Consultant Microbiologist
  - ✓ An Infection Prevention and Control Nurse
  - ✓ An Antimicrobial Pharmacist.

A second consecutive meeting without the chairperson present is not quorate.

- In the event that a committee member is unable to attend, they are required to send apologies to the Chair prior to that meeting. It is acceptable to send a deputy (deputies nominated at beginning of year may attend), again notifying Chair in advance. The engagement of the Chief Executive Officer (Chair), Chief Operations Officer, Chief Clinical Director and Chief Director of Nursing are critical to the successful operation of the committee and each should attend at least two meetings each year.
- Meetings to be held quarterly. Additional meetings will be called by the Chair if and when required.
- The expected duration for each meeting is approximately one and half hours.

4. Accountability and reporting

The function of the committee is to review reports and to make recommendations. The Chief Executive Officer and Executive Management Team (or equivalent) is responsible for implementation of recommendations and will report on progress to the committee.

5. Suggested agenda items

- Apologies
- Approval of the minutes from the previous meeting
- Matters arising
- Updates from each Head of Service

- Review and approve annual HCAI and AMR plan which will be aligned with *Standards for Safer better Healthcare*
- Review and approve annual report on HCAI and AMR
- Updates from Subgroups
- Key Performance Indicators / Outbreaks / Incidents / Complaints
- Surveillance, audit findings and recommendations
- Implementation of HCAI Standards update
- Any other business

6. Outputs and performance monitoring

- Minutes of the committee meetings will be formally recorded and circulated to all committee members within two weeks of the meeting being held.
- Approved minutes of the meetings will be freely available to all Hospital Group staff and members of the public.

Appendix C

Sample Root cause Analysis Forms for ***Staphylococcus aureus*** **blood stream infection and *C. difficile*** infection

Staphylococcus aureus blood stream infection (BSI) Root cause analysis template:

Medical/Surgical team to complete:

Addressograph label

Responsible consultant

Date of admission

Ward

Intravascular device (IVD) associated with BSI

☐ PVC ☐ CVC ☐ Portacath ☐ PICC line ☐ Permcath

Renal dialysis patients

Suitable for AV fistula ☐ Yes ☐ No

Listed for AV fistula ☐ Yes ☐ No

Date listed

Site inserted (hand, ACF etc.)

Date inserted

Facility inserted ☐ On site ☐ Other hospital

If on site – inserted in

☐ E/D ☐ ICU ☐ Theatre ☐ Radiology ☐ Unknown

☐ Ward

Insertion bundle completed? ☐ Yes ☐ No ☐ N/A

More than 1 attempt to cingulate? ☐ Yes ☐ No ☐ N/A

Patient provided with education of good hand hygiene practice? ☐ Yes ☐ No ☐ N/A

Information leaflet on IV line provided to patient post insertion? ☐ Yes ☐ No ☐ N/A

Documentation of IV maintenance bundle complete? ☐ Yes ☐ No ☐ N/A

Patient informed of device related infection?

☐ Verbally ☐ Documented in notes ☐ No indication patient has been informed

IVD required for:

Fluids ☐

Antimicrobials ☐

Drugs (non antimicrobial) ☐

Parenteral nutrition ☐

Other

IVD removed?

☐ Yes ☐ No

Date removed

Number of days in situ

During this admission how many times was the IVD accessed ? (prior to positive blood culture being take)

☐ once ☐ 2-4 times ☐ ≥ 5 times

Comments Please document any other issues at time of line insertion or maintenance not addressed

Patient Risk Factors

(Factors that relate to the patient that may have contributed to the infection – tick all that apply)

☐ Immunosuppression

☐ Recent trauma/surgery/instrumentation

Documentation of appropriate prophylaxis given? ☐ Yes ☐ No ☐ N/A

☐ Poor IV access

☐ Exfoliative skin condition

☐ Diabetes

☐ Other

☐ None Identified

Details where necessary

Complications

☐ Yes ☐ No ☐ Death Date of Death ☐☐ / ☐☐ / ☐☐

☐ Endocarditis ☐ Other

☐ Metastatic deposits

Clinical Microbiology to complete:

Collection date of 1st positive blood culture ☐☐ / ☐☐ / ☐☐

Organism identified ☐ MSSA ☐ MRSA

Prolonged bacteraemia (> 24 hours)? (No. of days)

Details of positive cultures and first negative set

Date	Source	Organism	Time to positivity	Number of bottles

If suspected IVD related BSI:

IVD removed? ☐ Yes ☐ No

Tip received for culture? ☐ Yes ☐ No

Date ☐☐ / ☐☐ / ☐☐

Result of tip culture

S. aureus infection at any other site managed in previous 90 days? ☐ Yes ☐ No

Previous MRSA colonisation (date of most recent) ☐☐ / ☐☐ / ☐☐

☐ Yes ☐ No

If Yes state site(s)

☐ Nose ☐ Groin

☐ Exit site ☐ Other

Previous attempt at decolonisation ☐ Yes ☐ No

If no, why not?

Infection prevention and control/CNM to complete:

(Factors that may have impacted on the ability of a staff member/team to perform a specific task or recognise potential infection risks – tick all that apply)

Individual

☐ Knowledge

☐ Competence

Team

☐ Verbal communication

☐ Written communication

Details where necessary

Work Environment Factors

(Factors that exist in the work environment that may have contributed to the infection – tick all that apply)

☐ Staffing levels ☐ Equipment availability

☐ Work load ☐ Equipment maintenance

☐ Skill mix

☐ Infrastructure

Details where necessary

Infection prevention and control factors

Date	Ward	Audit	Result	Comment
		Hand Hygiene		
		Environmental hygiene		

RCA findings And improvement plan

Date of RCA

IVD associated BSI ☐ Yes ☐ No

Origin of BSI
- ☐ Inpatient
- ☐ Outpatient
- ☐ Other hospital
- ☐ Other healthcare facility

Source of BSI (if not IVD)

Factors contributing to BSI if identified and improvement plan agreed upon.

In attendance at meeting

Name and position (Printed)	Signature

C. difficile infection (CDI) Root cause analysis template:

Medical/Surgical team to complete:

Addressograph label

Responsible consultant

Date of admission **Ward**

Date of diarrhoea onset **Ward**

Ward transfers since admission

Ward	Admission Date	Transfer Date

Antibiotic history since admission

Antibiotic (name, route)	Date commenced	Date completed	Indication	Compliance with hospital policy (Yes/No)

If antibiotics not prescribed in accordance with hospital guidelines provide details:

Pre-morbid risk factors :
(tick as appropriate)

- Age > 65yrs ☐
- Previous hospital admissions ☐
- Recent antibiotic use (previous 12 weeks) ☐
- Recently on ward/unit with other cases of CDI ☐
- Proton pump inhibitors ☐
- Laxative use ☐
- Immunosuppression ☐
- Inflammatory bowel disease ☐
- NG feeding ☐
- GI surgery ☐
- Other ☐

Evidence of severe CDI?

Clinical -	fever, rigors, abdominal pain	☐
Laboratory -	WCC >15,000 cells/uL	☐
	Rise in serum creatinine or ≥50% above baseline or > 133 µmol/L	☐
Endoscopic-	Pseudo membranous colitis	☐
Imaging -	CT evidence of colitis or ascites	☐

If yes was:

Surgical opinion sought	☐ Yes	☐ No
ICU admission required	☐ Yes	☐ No
Surgery required	☐ Yes	☐ No

Monitoring & Risk limitation

- Bristol stool chart ☐ In use ☐ Up to date
- **DAILY** clinical assessment of severity recorded in medical notes ☐ Yes ☐ No
- Medications reviewed (circle if stopped/held) ☐ Antibiotics ☐ Laxatives ☐ PPI

Treatment

Appropriate CDI treatment ☐ Yes ☐ No

(give details) Date commenced

Patient informed of CDI?

☐ Verbally ☐ Information leaflet provided ☐ Documented in notes

☐ No indication that patient was informed

Outcome
(tick as appropriate)

- Symptoms resolved ☐
- Remains symptomatic ☐
- Death – if so was CDI a contributory factor? ☐ Yes ☐ No

Clinical Microbiology to complete:

Collection date of 1st positive stool specimen

Is patient part of an outbreak/cluster of CDI? ☐ Yes ☐ No

If yes –provide details:

C. difficile ribotype (if available)

Details of stool specimens (Positive and negative)

Date -submitted	Time	Assay	Result	Result available

Result communicated to team

Date

Time

Advice given

Infection prevention and control/CNM to complete:

Date of onset of diarrhoea

Date & time isolated in single room/cohort
(circle as appropriate)

Time interval to appropriate isolation

- from symptom onset
- from confirmation of CDI

Facilities, cleaning & monitoring

Single room: En suite facilities ☐ Yes ☐ No; Dedicated clinical Hand basin ☐ Yes ☐ No

Cohort: Cohort nursed ☐ Yes ☐ No; Individual en-suite or commode ☐ Yes ☐ No

Appropriate signage ? ☐ Yes ☐ No

Door closed ? ☐ Yes ☐ No

PPE available on entering single room/cohort? ☐ Yes ☐ No

Hand Hygiene

- Are staff aware of need to wash hands with soap & water? ☐ Yes ☐ No
- Has patient been given hand hygiene leaflet? ☐ Yes ☐ No
- Has patient been shown how to perform hand hygiene? ☐ Yes ☐ No
- If unable to perform unaided is patient assisted by staff? ☐ Yes ☐ No

Does cleaning regimen include detergent and 1000ppm available chlorine? ☐ Yes ☐ No

Dedicated patient care equipment in use?
(eg. BP cuffs etc) ☐ Yes ☐ No

Is bedpan washer in working order? ☐ Yes ☐ No

C difficile sticker in chart ? ☐ Yes ☐ No

C difficile care plan in notes? ☐ Yes ☐ No

Is there a Bristol stool chart in use? ☐ Yes ☐ No

If no to any of the above – outline why?

Date	Ward	Audit	Result	Comment
		Hand Hygiene		
		Environmental hygiene (including sluice room)		
		Mattress checks		
		Antibiotic consumption		
		Antibiotic Audit		

RCA findings and improvement plan

Date of RCA

CDI meeting case definition ? ☐ Yes ☐ No

Origin of CDI

☐ Inpatient
☐ Outpatient
☐ Other hospital
☐ Other healthcare facility (list)

Case type

☐ New case of CDI
☐ Recurrent CDI
Previous positive
☐ Unknown
Number of recurrences

Factors contributing to CDI if identified and improvement plan agreed upon.

In attendance at meeting

Name and position (Printed)	Signature