INFECTION PREVENTION & CONTROL

SURVEILLANCE
And ROOT CAUSE ANALYSIS

Initiated by: Infection Prevention & Control Team
Approved by: Infection Prevention & Control Group
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**Policy Title:** Surveillance and Root Cause Analysis

**Executive Summary:** Details of what surveillance and Root Cause Analysis is why it is required and how it is undertaken and by whom.

**Supersedes:** Acute - Surveillance Policy/Root Cause Analysis Good Practices Policy V3 2009 & Community Surveillance Policy v4 Oct 2010

**Description of Amendment(s):** Minor Wording to incorporate integration with Community Policy

**This policy will impact on:** clinical practices, employees and health & safety

**Financial Implications:** None

**Policy Area:** Infection Control Trust Wide

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**Author:** Head of Infection Prevention and Control

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**APPROVAL RECORD**

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### Appendices

- I  Letter to Consultant re MRSA Positive Patient
- II Letter to GP re MRSA Positive Patient
- II Letter to another Hospital re MRSA Positive Patient
- IV MRSA Policy (please refer to MRSA Policy, Infection Prevention Control Manual)
- V Equality Analysis (Impact assessment)
1. Introduction

1.1 Surveillance

Surveillance is an essential component of the prevention and control of infection in hospitals. It consists of the routine collection of data on infections among patients and staff, its analysis and dissemination of the resulting information to those who need to know so that appropriate action can result.

The main objectives of surveillance are:

- Direct changes in patterns of disease and organisms.
- Prevention and early detection of outbreaks in order to allow timely investigation and control.
- The assessment of infection levels over time in order to determine the need, and measure the effect of, preventative or control measures.
- To provide information for Planning Services and use of resources.
- To reduce the level of avoidable Healthcare Associated Infections and to identify high risk patients so that selective measures can be introduced.

Surveillance will assist the Infection Prevention & Control Team (IPCT) and Infection Prevention & Control Group to identify risks of infection and reinforce the need for good practice. Continuous surveillance will be undertaken as part of the routine Infection Prevention & Control programme and will be undertaken by the IPCT.

The level and type of surveillance undertaken by the Infection Prevention & Control Team will be determined by the needs of the organisation, available resources, and relevant Department of Health directives.

The Infection Prevention & Control Group will advise the Trust in relation to its required surveillance programme which will include the wider Healthcare Economy and the necessary resources to support it.

It is important to recognise that expert interpretation of surveillance results is necessary and should only be undertaken by the IPCT, Consultant Microbiologist or someone recognised by the Consultant Microbiologist to be competent.

1.2 Root Cause Analysis

Learning from experience is critical to the Trust and our staff in delivering a safe and effective service to patients. Root Cause Analysis (RCA) helps the Trust look at and to understand the underlying causes of patient safety incidents and to formulate a plan for improving safety. RCA is a retrospective review of a patient safety incident undertaken in order to identify what, how and why it happened. The analysis is then used to identify areas for change, recommendations and sustainable solutions to help minimise the re-occurrence of the incident type in the future.

2. The Process of Surveillance

The surveillance methods used by the IPCT will include the following:

- Data collection using standard case definitions
- ICNet, is the electronic surveillance system used in the Trust. It facilitates more effective surveillance and real time access to laboratory results.
- Analysis and interpretation of data.
Dissemination of information on which future action can be based by those who need to know.

**Confidentiality**

Information given to the Infection Prevention and Control Team is documented and held in strict confidence. It is shared with the Health Protection Agency and/or the Environmental Health Departments as necessary. Information presented in reports and other documents for general circulation is always free of any patient/staff identifying information.

### 2.1 Data Collection

#### Daily ‘Alert Organisms’

Specific organisms that are identified in the laboratory are electronically communicated as “alert organisms” to the Infection Prevention & Control Team via ICNet.

- Antibiotic resistant organisms
- Clostridium difficile
- Beta Haemolytic Streptococcus Groups A, C and G
- Campylobacter
- Enteric Pathogens inc. rotavirus
- Mycobacterium tuberculosis
- Mycobacterium
- Neisseria meningitides
- Viral Hepatitis
- MRSA
- GRE
- ESBL organisms

The positive microbiology results reported are actioned by the IPCT. In the hospital the relevant ward area/department will be notified by a member of the IPCT. Advice/information given and documented appropriately.

In the community a positive result will be notified to the GP responsible for the patient. If the patient was identified on ICNET as an in-patient in a Care Home, Hospice etc the IPCT would then liaise with the relevant clinicians to ensure the correct control measures and treatment were put in place. SOPs, policies and guidance are followed for each organism. The IPCT will also provide information and advice to staff, patients and relatives as appropriate.

Incidences of some of these infections/conditions will be investigated and notified to the CCDC by the IPCT and appropriate action taken following instructions.

### 2.2 Meticillin Resistant Staphylococcus aureus (MRSA)

A defined interest queue on the laboratory computer will list all MRSA results from microbiology. The information is cross referenced by the Infection Prevention & Control Team via ICNet:

a) Newly identified MRSA positive patients.

- If patient is an in-patient then an ‘alert’ is immediately put on the CRIS bed management system.
Patient details to be faxed to MPI so computer records can be updated, MPI also contact ward requesting “Alert” on patients notes
- Letter to consultant if patient identified to be out patient (Appendix I)
- Letter to GP if patient identified as community (Appendix II)
- Letter to Consultant or Infection Prevention & Control Team if patient from or receiving care/ treatment at another hospital (Appendix III)
- If hospital in-patient the ward will be contacted and the MRSA policy followed (Appendix IV)
- Ward will be asked to mark the patient’s notes with an Alert sticker and enter MRSA on inside front cover.

b) Previously positive MRSA patients within the MDGH and CWMH
- Records to be updated with current location and swab results recorded
- Ward/department to be contact by the IPCT to establish that patients’ MRSA status is known and that appropriate action has been taken. MRSA policy to be followed (Appendix IV)

The above is undertaken and co-ordinated by the Infection Prevention & Control Team and any subsequent, relevant advice will be recorded on ICNet.

2.3 Incident Reporting in Relation to Infection Control

In line with the Trust’s incident reporting and risk management strategy for both clinical and non-clinical reporting, staff are required to report adverse events/incidents in relation to Infection Prevention & Control policy and practice. The aim of this is to improve Infection Prevention & Control practice in relation to patient care and the safety of patients, visitors and staff.

2.4 Analysis and Interpretation of Data

The data collected will be reviewed by the IPCT and appropriate action instigated directly with relevant ward/department and or clinician.

A Consultant Microbiologist will always be available for advice and support.

2.5 Identified Problems

If a problem is identified through surveillance a member of the IPCT or Consultant Microbiologist will telephone or visit the area to give direct advice or support.

2.6 Out of ‘NORMAL WORKING HOURS’

Newly identified alert organisms - advice can be sought from the Consultant Microbiologist on-call via the hospital switchboard.

In all other instances the relevant infection Prevention and Control policy must be followed

2.7 Selective Surveillance

In order to identify ‘problem areas’ or in line with Department of Health directives, which might require specific action, the Consultant Microbiologist will undertake ‘selective surveillance’.
2.8 Surgical Site Surveillance

The Trust undertakes SSI in relation to

- Total Hip Replacement
- Repair of neck of femur
- Large Bowel

2.9 Recommendations and Results of Surveillance (Non-Analytical)

Recommendations and overall results of surveillance undertaken are reported to the Infection Prevention & Control Group on a quarterly basis and overall annually in the Director of Infection Prevention & Control’s Annual Report. The Infection Prevention & Control Group reports directly to the Safety, Quality and Standards (SQS) Committee which reports to the Trust Board.

2.10 Non-Laboratory Surveillance

Acute
Ward staff and medical staff are required as per the policy for Recognition, Notification and Management of an Outbreak of Communicable Disease within a Hospital, and to notify the Infection Prevention & Control Team of two or more cases of a hospital acquired infectious condition.

Community
Within the community the policy for Cheshire & Merseyside Joint Communicable Disease & Infectious Disease Incident/Outbreak Plan must be followed.

3. Root Cause Analysis

The RCA is intended to look at the patient journey when there has been any significant episode that requires investigation via RCA e.g. MRSA Bacteraemia. This will include their placement throughout the hospital, procedures undertaken, records of their care and any other influencing factors. Within the community setting review of any GP or care intervention e.g. District nurse care, will be reviewed.

The relevant Senior Sister/Care Home manager or deputy will lead the RCA process, with the full support of the IPCT. Prior to the meeting an ICN and the ward Sister/home manager (or designated deputy) will independently review the patient notes so that the RCA has the basis to begin its investigation. The review of the patient’s notes should identify any relevant issues, episodes and also review the accuracy of documentation e.g. invasive devices, antibiotic treatment.

To ensure that the RCA is robust it is essential that the appropriate staff who have cared for and have responsibility for the patient participate in the RCA. The ward or care facility where the patient was located at the time of the incident e.g. MRSA bacteraemia, will take responsibility for the action plan formulated at the RCA meeting. It is essential that the action points identified are implemented and reviewed and any deficits rectified e.g. implementation of further training, change in clinical practice etc.
The staff who should attend the RCA meeting as a minimum should include the following:

- Consultant Microbiologist
- Consultant/GP of Patient
- Infection Control Nurse
- Junior medical staff involved in patient care (in hosp)
- Ward Sister/Care facility manager
- Patient’s Named Nurse (in hosp)
- Business Unit Matron (in hosp)
- Lead Nurse/DN from Community
- Any other significant staff member identified.

As far as practicable the information gathering and first review meeting will take place within a 24 – 48 but must be done within 5 working days after the bacteraemia is identified, within the hospital and 10 days in the community.

Following the review meeting an action plan and further meetings will be scheduled as required.

In cases of MRSA bacteraemia the Chief Executive Officer for the Trust, SHA and PCT will be notified by the Director of Infection Prevention and Control (DIPC) of the bacteraemia.

In the hospital in order to ensure that there is a robust reporting line, the ward manager will present the details of the incident and the RCA outcome at the next available Business Unit SQS meeting. In addition any MRSA bacteraemia RCA’s will be reported on StEIS.

That Infection Prevention and Control Group will undertake to ensure that they receive regular updates on the progress of the action plan and support the ward, division, Trust and care facility in making the appropriate changes to ensure that risk to future patients is minimised.

Following the meeting the IPCT secretary will circulate the notes and action plan. If required an ICN will attend the SQS meeting to support the ward manager and answer any questions the meeting may have in regard to the RCA and action plan. In addition to the staff mentioned above the notes of the meeting and action plan will be circulated for information to:

- Business Unit Associate Director
- Business Unit Clinical Lead
- Any other significant staff member identified at the RCA meeting
Legislation, Guidance and References


Department of Health and Social Care Act 2010 – Code of Practice for the Prevention and Control of Health Care Associated infection


National Patient Safety Agency Root Cause Analysis

Dear

Re:

This patient has recently been found to be colonised or infected with Meticillin resistant staph aureus (MRSA). In most cases this finding is of minor significance but if the patient requires admission, they may need to be placed in a side room and if returning to a clinic they should be seen at the end of the list.

If you feel there is a clinical infection when you next see your patient, you may wish to prescribe treatment, and I would be happy to discuss the options available.

If there is no evidence of infection but the patient is at risk of serious infection or is likely to be admitted to hospital again in the near future, decontamination could be attempted. The Infection Prevention & Control Nurse Specialists would be pleased to advise (01625 661769 or 661597).

I would be grateful if you could flag the patient's notes as MRSA positive. The patient should be informed of their MRSA status and an information leaflet sent or given to them to help explain what this means to them. If you wish to discuss this patient's management with regard to their MRSA status, please do not hesitate to contact me.

Yours sincerely

Consultant Microbiologist

Enc
Dear

Re:

This patient has recently been found to be colonised or infected with Meticillin resistant Staph aureus (MRSA). In most cases this finding is of minor significance but may require your opinion.

If you feel this is a clinical infection, please phone me to discuss suitable antibiotic therapy.

If there is no evidence of infection but the patient is at risk of serious infection or is likely to be admitted to a hospital in the near future, decontamination could be attempted. The Infection Prevention & Control Nurse Specialists would be pleased to advise (01625 661769 or 661597).

If neither of these options are appropriate, I would be grateful if you could flag the patient's notes as MRSA positive and pass on the information in the event of future admission to a hospital. The patient should be informed of their MRSA status and an information leaflet sent or given to them. If this patient is a resident in a Nursing Home, it is advisable to notify them of the patient’s MRSA status. Also, please warn any District Nurses or Health Visitors involved in the case.

Yours sincerely

Consultant Microbiologist
Dear

Re:

I am writing to inform you that this patient, who is in or has recently been in your care, has been found to be MRSA positive. The relevance of this finding will of course depend on clinical circumstances. Whether or not action is necessary, I would be very grateful if you could ensure this is recorded in the patient’s notes for future reference. *I would advise that the patient be informed of their MRSA status and an information leaflet, if available, sent of given to them to help explain what this means to them.*

If you require any further information, please do not hesitate to contact me on the above extension or the Infection Prevention & Control Nurse Specialists on 01625 661769 or 661597.

Yours sincerely

Consultant Microbiologist
Equality Analysis (Impact assessment)

What is being assessed? Name of the policy, procedure, proposal, strategy or service:
Surveillance Policy / Root Cause Analysis

Details of person responsible for completing the assessment:
- Chris McGinley
- Head of Infection Prevention and Control
- Infection Prevention and Control

State main purpose or aim of the policy, procedure, proposal, strategy or service:
(usually the first paragraph of what you are writing. Also include details of legislation, guidance, regulations etc which have shaped or informed the document)

Details of what surveillance and Root Cause Analysis is why it is required and how it is undertaken and by whom.

2. Consideration of Data and Research
To carry out the equality analysis you will need to consider information about the people who use the service and the staff that provide it.
2.1 Give details of RELEVANT information available that gives you an understanding of who will be affected by this document
The population of Cheshire as at the 2005 mid year figures (Cohesia Report 2008) is 684,400.

**Age:**
17.8% (30,500) of the population in Cheshire East is over 65 compared with 15.9% nationally. This results in a high “old age” dependency ratio, i.e. low numbers of working-age people supporting a high non-working dependant older population. The percentage of “older” or “frail” old is also considerably higher, with 2.3% (8,200) persons 85 and over compared to 2.1% nationally.

Cheshire East has the fastest growing older population in the North West. By 2016, the population aged 65+ will increase by 29.0% (8,845) and the population aged 85+ by 41.5% (3,403).

This will have an impact on the number of patients being managed by ECT and the complexity of the health and social care issues that the older person is experiencing. In addition the staffing profile of ECT will change to include an increasing number of staff over 65 in the workforce.

**Race:**
The 2005 mid year estimate (Cohesia Report 2008) show that the majority of the population in Cheshire (94.6%) is White British, with 5.4% non White British. The Cheshire 2007-10 Local Area Agreement identified that minority ethnic communities account for around 3% of the population. Issues for BME communities include lack of knowledge of services, access to services, access to translation/interpretation, cultural differences, family values. Many people from BME communities experience poverty, poor housing and unemployment which make it difficult for them to lead healthier lives. 4180 migrant workers registered in Cheshire in 2006/07 and comparison to the mid year population estimates for Cheshire in 2005 strongly suggests that Cheshire’s migrant worker population is larger than every individual BME group other than the White-Other White group.

**Disability:**
There are over 10 million disabled people in Britain, of whom 5 million are over state pension age. Nearly 1 in 5 people of working age (7 million, or 18.6%) in Great Britain have a disability.

**Gypsies and travellers** – at the last count (July 2006) the highest number was recorded in the Borough of Congleton (125). 42% of gypsies and travellers report limiting long term illness compared to 18% of the settled population, with an average life expectancy 10-12 years less than settled population. 18% of gypsy and traveller mothers have experienced the death of a child compared to 1% in the settled population.

**Dementia**
Approximately six in 100 people aged over 65 develop dementia and this rises to around 20 in 100 people aged 85 or over. Dementia affects 750,000 people in the UK.

**Carers**
Around 6 million people (11 per cent of the population aged 5+) provided unpaid care in the UK in April 2001. While 45% of carers were aged between 45 and 64, a number of the very young and very old also provided care. By 2037, it is anticipated that the number of carers will increase to 9 million.

**Gender**
On average in Cheshire, 49% of the population are male and 51% are female

**Transgender:** No local data available, national trends show:
1/12,000 males, transgender from male to female
1/33,000 females, transgender from female to male

Specific issues around access to services, specific services for men or women, and ‘single sex’ facilities. In terms of the transgender population, GIRES (Gender Identity Research and Education Society ) gives an estimate of 600 per 100,000. If these figures were applied to the Cheshire East community based on the
2005 mid year estimates, there may be around 2,100 trans people in the area.

**Religion/Belief**
In the Cheshire East area the 2001 census showed:
- Christian - 80%
- Buddhists - 0.16%
- Hindu - 0.15%
- Jewish - 0.12%
- Muslim - 0.36%
- Sikh - 0.05%
- Other religion - 0.15%
- No religion - 11.84%
- Not stated - 6.67%

The Muslim population has the highest levels of ill health amongst faith groups – this includes higher smoking rates amongst men and higher rates of coronary heart disease and diabetes.

**Sexual Orientation**
Lesbians, gay men and bi sexual people (LGB) make up to 5-7% of the UK population (Dept of Trade and Industry, 2003). 13% of Gay men and 31% Lesbian women are parents (Morgan and Bell, First Out: Report of the findings of Beyond the Barriers national survey of LGB people)

The experience and health needs of gay men and women will differ. However, both groups are likely to experience discrimination, higher levels of mental ill health and barriers to accessing health care

National Health Inequalities data shows that lesbian, gay, bisexual and transgender (LGBT) people are significantly more likely to smoke, to have higher levels of alcohol use and to have used a range of recreational drugs than heterosexual people. They are also at greater risk of deliberate self-harm. Although most LGBT people do not experience poor mental health, research suggests that some are at higher risk of mental health disorder, suicidal behaviour and substance misuse.

### 2.2 Evidence of complaints on grounds of discrimination:
(Are there any complaints either from patients or staff (grievance) relating to the policy, procedure, proposal, strategy or service or its effects on different groups?)

No

### 2.3 Does the information gathered from 2.1 – 2.3 indicate any negative impact as a result of this document?

No

3. **Assessment of Impact**

Now that you have looked at the purpose, etc. of the policy, procedure, proposal, strategy or service (part 1) and looked at the data and research you have (part 2), this section asks you to assess the impact of the policy, procedure, proposal, strategy or service on each of the strands listed below.
**RACE:**
From the evidence available does the **policy, procedure, proposal, strategy or service** affect, or have the potential to affect, racial groups differently?  Yes ☑  No

**Explain your response:** If there is a patient whose first language is not English, then staff need to be aware of how to access interpretation facilities.

**GENDER (INCLUDING TRANSGENDER):**
From the evidence available does the **policy, procedure, proposal, strategy or service** affect, or have the potential to affect, different gender groups differently?  Yes ☑  No

**Explain your response:** Policy applies equally to men and women

**DISABILITY**
From the evidence available does the **policy, procedure, proposal, strategy or service** affect, or have the potential to affect, disabled people differently?  Yes ☑  No

**Explain your response:** Information given needs to be tailored to individual's needs. Eg BSL interpreter for deaf people, leaflets are pictorial for patients with limited understanding, large print for low vision etc

**AGE:**
From the evidence available does the **policy, procedure, proposal, strategy or service** affect, or have the potential to affect, age groups differently?  Yes ☑  No

**Explain your response:** Policy applies equally regardless of age

**LESBIAN, GAY, BISEXUAL:**
From the evidence available does the **policy, procedure, proposal, strategy or service** affect, or have the potential to affect, lesbian, gay or bisexual groups differently?  Yes ☑  No

**Explain your response:** Policy applies equally

**RELIGION/BELIEF:**
From the evidence available does the **policy, procedure, proposal, strategy or service** affect, or have the potential to affect, religious belief groups differently?  Yes ☑  No

**Explain your response:** Staff need to be naked below the elbows when giving clinical care regardless of religious belief as per dress code policy

**CARERS:**
From the evidence available does the **policy, procedure, proposal, strategy or service** affect, or have the potential to affect, carers differently?  Yes ☑  No

**Explain your response:** Clinical staff need to discuss the appropriate requirements for carers as these will vary dependent on the environment and level of care undertaken

**OTHER: EG Pregnant women, people in civil partnerships, human rights issues.**
From the evidence available does the **policy, procedure, proposal, strategy or service** affect, or have the potential to affect any other groups differently?  Yes ☑  No

**Explain your response:** Policy applies equally
4. Safeguarding Assessment - CHILDREN

| a. Is there a direct or indirect impact upon children? | Yes ☐ No √ |

b. If yes please describe the nature and level of the impact (consideration to be given to all children; children in a specific group or area, or individual children. As well as consideration of impact now or in the future; competing / conflicting impact between different groups of children and young people:

Parents/carers involved to ensure child’s understanding if appropriate pictures may be required

c. If no please describe why there is considered to be no impact / significant impact on children

5. Relevant consultation

Having identified key groups, how have you consulted with them to find out their views and that the made sure that the policy, procedure, proposal, strategy or service will affect them in the way that you intend? Have you spoken to staff groups, charities, national organisations etc?

Policy has been circulated to the Infection Prevention and Control Group which includes multi-disciplinary groups and a patient representative. In addition the policy has been circulated to the Children’s Safeguarding lead.

6. Approval – At this point, you should forward the template to:
   - The Trust’s Equality and Diversity Lead lynbailey@nhs.net
   - The Named Nurse for Safeguarding Children melaniebarker@nhs.net

   Equality and Diversity response: Approved
   Safeguarding Children response: Approved

7. Any actions identified: Have you identified any work which you will need to do in the future to ensure that the document has no adverse impact?

| Action | Lead | Date to be Achieved |

8. Review Date: April 2014
   Date completed: May 2012

The Trust’s Equality and Diversity Lead: [Signature]

The Named Nurse for Safeguarding Children:.............. Melanie Barker ..............