St George's Healthcare NHS
NHS Trust

Protocol for the Surveillance of Healthcare Associated Infections (HCAI)

Policy Profile			
Policy Reference:	Clin.2.0 Appendix D Clinical care protocol 8		
Version:	Version 2		
Author:	Infection Control Team		
Executive sponsor:	Director of Infection Prevention and Control		
Target audience:	All Trust Staff		
Date issued:	5 April 2012		
Review date:	December 2014		
Consultation			
Key individuals and committees consulted during drafting	Infection Control Committee	**Dates**	Dec 2011
		Dates	
		Dates	
Approval			
Approval Committee:	Infection Control Committee		
Date:	December 2011		
Ratification			
Ratification Committee:	Policy Ratification Group		
Date:	15 March 2012		

Document History			
Version	**Date**	**Review date**	**Reason for change**
V1	2007	2009	
V2	April 2012	December 2014	Reviewed and revised to take account of latest guidance.

Contents

Executive Summary

Surveillance and sharing of information is an essential component of prevention and control of infection. This protocol identifies the need for the surveillance of alert organisms and conditions within the Infection Control Team and relevant agencies. It also addresses mandatory reporting requirements of certain infections or health care associated infection events in accordance with National Guidelines. The purpose of this protocol is to set out the Healthcare Associated Infection (HCAI) surveillance and reporting arrangements for St. George's Healthcare NHS Trust.

This protocol is an appendix to the Infection Control Policy. Refer to the Infection Control Policy for information on the criteria, responsibilities and systems required to prevent and control HCAIs.

1. Introduction

Surveillance is an essential component of the prevention and control of infection in hospitals. It helps to identify risks of infection and reinforces the need for good practices. Preventing outbreaks depends on prompt recognition of one or more infections with alert organisms and instituting special control measures to reduce the risk of spread of the organism. Collection of accurate data allows comparison with other units and measurement of response to changes in practice (audit).

It consists of the routine collection of data on infections among patients or staff, its analysis and the dissemination of the resulting information so that appropriate action may take place.

2. Objectives of Surveillance

- The prevention and early detection of outbreaks.
- Timely investigation and institution of control measures.
- Assessment of infection levels over time.

3. The Process of Surveillance

The key components of surveillance are as follows: -

- Data collection using standard definitions.
- Collation of data.
- Analysis and interpretation of data.
- Dissemination of information for action by appropriate persons.

4. Alert Organism Surveillance

For a list of 'alert organisms' see appendix 1. This system is managed by the Infection Control Team and details are reported back to the Infection Control Committee. Positive microbiology reports are screened and may result in a case review and a search for other carriers or infected patients. A patient may be placed in source isolation or discharged from hospital if considered to be a risk of infection to others.
Alert organisms are reported to the Infection Control Team on a daily basis by the microbiology laboratory and signing microbiologists, who will then inform the ward. An outbreak is suspected when two or more indistinguishable organisms are isolated from different patients in the same ward or unit (see Outbreak Protocol). A record of each patient with "alert organisms" will be maintained by the infection control nurses.

A member of the Infection Control Team will visit the ward or department at least weekly when an "alert organism" has been isolated, to discuss the patient with a member of staff and give advice, as appropriate. If this is not possible regular contact by telephone should be maintained.

5. Alert Condition Surveillance

Alert conditions are medical syndromes such as diarrhoea which immediately suggest a risk of infection. It is the responsibility of the ward staff to notify the Infection Control Team if they suspect an infection which may be a risk to others. Appropriate specimens must be taken and sent promptly, properly labelled, to the laboratory. Source Isolation precautions must be instituted immediately that infection is suspected.

For a list of alert conditions see appendix 2.

Both alert organism and alert condition surveillance will operate continuously, including out-of-hours, across the whole Trust to prevent or rapidly detect outbreaks of infection. Out-of-hours the on-call medical microbiologist may be contacted via the switchboard.

6. Mandatory Surveillance

6.1 Meticillin-resistant *Staphylococcus aureus* (MRSA) bacteraemia

MRSA is an antibiotic-resistant bacteria which can cause severe and potentially life-threatening infections such as septicaemia. MRSA bacteraemia is part of national mandatory surveillance for healthcare-associated infections. The infection control team has the responsibility to report to the Health Protection Agency (HPA) under this scheme. The Chief Executive is required by the the department of health to validate the figures.

6.2 Meticillin-sensitive *Staphylococcus aureus* (MSSA) bacteraemia

MSSA is a strain of *Staphylococcus aureus* that is sensitive to meticillin and other antibiotics. It can cause disease, particularly if there is an opportunity for the bacteria to enter the body. Bacteraemias due to MSSA are important for certain patient groups, e.g. renal dialysis, where the fall in MRSA bloodstream infections has not been accompanied by a decline in bloodstream infection due to MSSA. The causes of MSSA bacteraemias require further investigation, as

many cases are not HCAIs and may involve wider public health issues with associated morbidity and mortality, and should be tackled both in the community and acute sector. National mandatory surveillance for healthcare-associated infections was extended to include MSSA bacteraemia as of January 2011. The infection control team has the responsibility to report to the Health Protection Agency (HPA) under this scheme.

6.3 ***Clostridium difficile*** **infection** *Clostridium difficile* is a cause of antibiotic-associated diarrhoea. It generally affects frail and elderly patients and it can cause severe and potentially fatal complications such as toxic megacolon. *Clostridium difficile* is included in national mandatory surveillance for healthcare-associated infections. The infection control team has the responsibility to report the total number of Clostridium difficile toxin positive results (age 2 years and older) to the HPA under this scheme. A second positive more than 28 days after the first positive is recorded as a new episode.

6.4 ***Escherichia coli*** **bacteraemia** A rod-shaped Gram-negative bacterium that normally resides in the human colon. Most strains are harmless but some are capable of causing disease, and mortality. National mandatory surveillance for healthcare-associated infections was extended to include *E. Coli* bacteraemia as of June 2011. The infection control team has the responsibility to report to the Health Protection Agency (HPA) under this scheme.

6.5 Glycopeptide-resistant *Enterococcus* (GRE) bacteraemia Glycopeptide-resistant *Enterococcus* (GRE) is a bacterium which is strongly associated with prior use of broad-spectrum antibiotics. GRE usually does not cause severe infections, but in vulnerable patients, particularly those in the intensive care unit, it can cause serious infections including bacteraemia. GRE is included in national mandatory surveillance for healthcare-associated infections. The infection control team has the responsibility to report to the HPA under this scheme.

6.6 Surgical Site Infections Surveillance Service (SSISS) for elective orthopaedic surgery

Surgical site infection following elective orthopaedic surgery is important as it could lead to infection of an implanted prosthesis. Surgical site infection following elective orthopaedic surgery is included in national mandatory surveillance for healthcare-associated infections. The national mandatory surveillance system collects a sample of data over a three month period. This system uses active follow-up of patients undergoing certain elective orthopaedic procedures. The period of follow-up is until discharge from hospital and therefore it does not detect infections which become apparent after discharge. The following procedures are included:

- Prosthetic hip joint insertion
- Prosthetic knee joint insertion
- Open reduction of long bone fractures

7. Other Targeted Surveillance

The term “targeted surveillance” refers to the collection of data on hospital acquired infections occurring in a defined sub-group of patients, such as those on

a particular ward or department, those undergoing a particular procedure or those acquiring a particular infection.

A programme of targeted surgical site infection surveillance, to include the mandatory orthopaedic module will be agreed by the Infection Control Team for each financial year. The infection control audit nurse will undertake collection of the surveillance data. A report will be presented to the Infection Control Committee, as required and will be included in the annual Infection Control report. Surveillance reports will also be circulated to all relevant individuals. However, if an increase in infections is noted during data collection rapid feedback to the clinical team must be undertaken.

8. References

Hospital Infection Control. Guidance on the control of infection in hospitals. Hospital Infection Working Group of the Department of Health and Public Health Laboratory Service (1995). Department of Health.

Appendix 1

Alert Organisms

BACTERIA	VIRUSES
Meticillin-resistant *Staphylococcus aureus* (MRSA)	**Norovirus**
Other resistant *Staphylococcus aureus*	**Rotavirus**
***Streptococcus pyogenes* (Beta Haemolytic Group A Streptococcus)**	**Adenovirus**
***Streptococcus agalactiae* (Streptococcus Group B)**	**Respiratory syncytial virus**
Penicillin-resistant *Streptococcus pneumoniae*	**Parainfluenza**
Haemophilus influenzae	**Varicella zoster**
***Legionella* spp.**	**Influenza virus**
Glycopeptide-resistant enterococci	**Rubella**
***Neisseria* spp.**	**Parvovirus**
***Clostridium* spp.**	**Measles**
***Salmonella* or *Shigella* spp**	
Campylobacter	
***Escherichia coli* O157**	
Multi-resistant Gram negative bacilli (including multi drug resistant Pseudomonas and carbapenem-resistant organisms)	
Mycobacterium Tuberculosis	

Appendix 2

Alert Conditions

Patient admitted with any infection
Post surgical sepsis
Diarrhoea and/or vomiting
Diarrhoea with blood (dysentery or colitis)
Cellulitis
Tuberculosis (chronic productive cough)
Exanthemata (acute rash illness)
Chicken pox or shingles
Mumps, measles, rubella, parvovirus
Whooping cough
Poliomyelitis
Diphtheria
Scabies and Infestation
Meningitis
Viral hepatitis
Pyrexia of unknown origin
Typhoid and paratyphoid fevers
Viral haemorrhagic fever