ISOLATION PRECAUTIONS FOR PATIENTS WITH CONFIRMED OR SUSPECTED INFECTIOUS ILLNESS POLICY

POLICY

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Author (Position & Name)	Nurse Consultant Infection Prevention and Control – Rosie Dixon	
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• **Isolation Resource Pack (Appendix A)**	Feb/ March 2018	

CONTENTS

1.0 INTRODUCTION

Sherwood Forest Hospitals NHS Foundation Trust (Trust) recognises that it has a duty of care to protect patients, staff, contractors and visitors from infection and support the need for effective systematic arrangements for surveillance, prevention and control. It is therefore committed to reducing the incidence of healthcare associated infections and more importantly, maintaining that reduction.

For many common infections and infectious disease early recognition and prompt action can reduce the spread of disease, the severity of illness and the number of people infected. Specific precautions are required to prevent the transmission of infectious microorganisms between patients, from patients to staff and from staff to patients. It is important that staff adhere to infection prevention and control policies to ensure high standards of care are applied to protect patients, staff and visitors from unnecessary exposure to infection.

The term 'isolation' is the use of infection prevention and control precautions aimed at controlling and preventing the spread of infections, there are two types of isolation:

- Source isolation: where the patient is the source of infection
- Protective isolation: where the patient requires protection i.e. they are immuno-compromised

The correct and timely placement of infectious patients (suspected or proven) into single rooms can be very effective in reducing the overall number of infected patients; it can also reduce the risk of colonisation in other patients within the clinical setting.

Appendix A – Isolation Resource Pack should be used in conjunction with this policy.

2.0 POLICY STATEMENT

This policy provides details of the standards required for isolation care, when it may be required and the rationale for its use. The policy includes guidance on indications for isolation and procedures for the infection control management of patients in isolation. Therefore protecting all patients, visitors and staff.

Isolation involves the use of practices aimed at controlling:

- The spread of pathogenic microorganisms amongst patients, visitors and staff
- The spread of infection from patients colonised/infected with microorganisms that are resistant to the usual range of antibiotics
- To protect those patients whose susceptibility to infection is increased

2.1 Objectives/ success factors

The objectives of this Policy/Guideline/procedure are:

- To ensure the spread of infection within the Trust is minimised.
- To protect patients from cross infection.
- To ensure optimal use of isolation facilities through use of risk assessment.

- To ensure patients with infections are managed safely and appropriately to minimise the risk of transmission of infection.

2.2 Scope of this Policy

This Policy includes:

- Source isolation of patients with infections.
- Modes of transmission of infection.
- Isolation facilities available at the Trust.
- The use of risk assessment to facilitate the optimal use of isolation facilities.
- Actions required ensuring effective communication relating to the patients infection status.
- Actions required if no isolation rooms available or patients' medical condition is compromised.
- Principles of isolation care to minimise the spread of infection.
- Isolation precautions based on the mode of transmission.
- Transportation of patients outside the isolation area.
- Requirements for statutory notification of infectious diseases.
- Protective isolation.

This clinical document applies to:

Staff group(s)

- all clinical staff
- all non-clinical staff when they enter a clinical environment

Clinical area(s)

- all clinical environments

Patient group(s)

- all patient groups (adult, maternity, paediatric)

Exclusions

- none

3.0 DEFINITIONS/ ABBREVIATIONS

3.1 Definitions:

Trust:	Sherwood Forest Hospitals NHS Foundation Trust
Staff:	All employers of the Trust including those managed by a third party on behalf of the Trust
Source isolation:	Isolation of a patient who is the source of the infection
Protective isolation:	The physical separation of a patient at high risk from common microorganisms carried by others. The patient requires protection i.e. they are immunocompromised (often referred to as reverse barrier nursing)
Immunocompromised:	A term applied to patients whose immune mechanisms are deficient
Neutropenia:	Refers to a neutrophil count of **$<0.5x10^9/L$**

Host:	A living organism which another organism can live and be sustained on or within
Carriage:	A person who harbours a specific organism in the absence of signs and symptoms of infection and is therefore potentially infectious to others
Carrier:	May exist in the individual as unknown (healthy, asymptomatic carrier) or during a period of convalescence. In either case the carrier state may be a short duration (transient carrier) or long term duration (chronic carrier)
Cleanable:	Capable of being cleaned easily and without damage to the fabric
Disposable:	Designed to be discarded after single use
Washable:	Capable of being washed without shrinking, fading or being damaged
Air change:	One air change occurs in a room when a quantity of air equal to the volume of the room is supplied and/or exhausted
Air change rates:	Are units of ventilation that compare the amount of air moving through a space to the volume of the space. Air change rates are calculated to determine how well a space is ventilated compare to published standards
Air changes per hour:	This is the most common unit used. This is the volume of air (usually expressed in cubic meters) exhausted or supplied every hour divided by the room volume (also usually expressed in cubic meters)
Air flow:	This is usually measured in cubic meter per second (m^3/s). This is multiplied by 60 minutes to determine the volume of air delivered per hour (in cubic feet)
HCAI:	Healthcare associated infections is any infection that arises as a result of healthcare regardless of the care setting. It includes hospital, primary and community care acquired infections
HAI	Hospital acquired infection is any infection that arises as a result of hospital care
Infection:	When organisms in or on the body have started to multiply and/or invade a part of the body where they are not normally found. The body develops a reaction leading to disease of illness i.e. abscesses, wound infections or chest infections. The host exhibits symptoms of infection for example temperature of >38°C and associated symptoms at/in the site of infection i.e. inflammation, accumulation of pus, diarrhoea
IPC:	Infection prevention and control processes to prevent and reduce to an acceptable minimum the risk of the acquisition of an infection amongst patients, healthcare workers and any others in the healthcare setting
Cohort nursing:	The separation of a group of patients with a disease or infection from patients who do not harbour the disease or the infection. Nursed in a geographically distinct area or with physical separation in the same room these patients should be cared for by a dedicated cohort of staff

Isolation of patients:	The aim of patient isolation or single room care is to contain and prevent the spread of potential or known pathogenic or epidemiologically important organisms in order to reduce the risk of transmission of infection to and from patients, visitors or staff
Cross infection:	The transfer of organisms from one person to another, this may or may not lead to illness or disease
Colonisation:	The presence of organisms in or on the body (including wounds) but without any sign of illness or disease (has not initiated a response). The body is colonised with many organisms the majority of which cause no harm and some are actually beneficial
Communicable disease:	Infection which is capable of spreading from person to person. Spread of infection is usually spread by one of the following means: 1) Direct contact: with contaminated blood, or body secretions particularly by staff hands that have become contaminated by body or body contact, and by transfusion of contaminated blood 2) Indirect contact: through equipment such as razors, needles, other equipment such as bedpans, commodes, beds 3) Airborne: contaminated skin scales, aerosol spread via droplets from coughing and sneezing 4) Vectors: third parties such as cockroaches, fleas, flies, mosquitoes can carry infectious agents

3.2 Abbreviations:

ACH	Air changes per hour
CFM	cubic feet per minute
HCAI	Healthcare Associated Infection
HAI	Hospital Acquired Infections
HBN	Health Building Note
IPCT	Infection Prevention and Control Team
DIPC	Director of Infection Prevention and Control
IPCD	Infection Prevention and Control Doctor
IPCN	Infection Prevention and Control Nurse
IPCC	Infection Prevention and Control Committee
IDU	Infection Disease Unit
TB	Tuberculosis
MDRTB	Multi-drug resistant tuberculosis
MSSA	Meticillin sensitive *Staphylococcus aureus*
MRSA	Meticillin resistant *Staphylococcus aureus*
C diff	*Clostridium difficile*
COSHH	Control of Substances Hazardous to Health
BBV	Blood Borne Virus
PPE	Personal Protective Equipment
CNH	Central Nottinghamshire Hospital Plc
SFS	Skanska Facilities Services
CCDC	Consultant in Communicable Disease Control
PPL	Positively Pressurised Lobby

GRE	Glycopeptide resistant enterococcus
VRE	Vancomycine resistant enterococcus
CRE	Carbapenem resistant enterobacteriaceae
DH	Department of Health
NaDCC	Sodium Dichloroisocyanurate
CVC	Central venous catheter
PICC	Peripherally inserted central catheter
NOID	Notification of infectious diseases

4.0 ROLES AND RESPONSIBILITIES

All staff must take responsibility for the areas in which they work to ensure appropriate isolation practices are implemented when required to reduce and prevent HCAI.

4.1 Trust Board

The Trust board has acknowledged the significance of Infection Prevention and Control (IPC) and the potential risk that infections can poses. Overall responsibility for IPC is designated to the Director of Infection Prevention and Control (DIPC). The DIPC reports directly to the Trust board on a regular basis

4.2 Chief Executive

The Chief Executive is ultimately responsible for ensuring that there are effective arrangements for infection prevention and control.

4.3 Director of Infection Prevention and Control

The Director of Infection Prevention and Control (DIPC) has Trust wide responsibility for the development of strategies and policies for the management of infection prevention and control.

4.4 Infection Prevention and Control Team

The Infection Prevention & Control Team The Director of Infection Prevention and Control leads Infection Prevention & Control Team (IPCT)
The IPCTare responsible for providing expert advice in accordance with this policy, for supporting staff in its implementation, and assisting with risk assessment where complex decisions are required. They are also responsible for ensuring this policy remains consistent with the evidence-base for safe practice, and for reviewing the policy on a regular basis.

4.5 Chief Operating Officer

They will ensure that the divisions has well developed clinical governance forum which monitors the application of this policy.

4.6 Divisional Management Teams are responsible for ensuring that sufficient monitoring implementation of this policy and for ensuring action is taken when staff fail to comply with the policy.

4.7 Site Management Teams

Duty Nurse Managers and Bed Managers are responsible for ensuring patients are placed in accordance with this policy, and for escalating any situations where safe placement cannot be achieved.

Silver On-call and the Gold On-call are responsible for providing senior and executive leadership to ensure implementation of this policy, and for ensuring infection risks are fully considered and documented when complex decisions need to be made regarding capacity and patient flow.

4.8 Matrons are responsible for ensuring that all staff accountable to them are aware of this policy and adhere to its statement. They will actively promote and support all current infection prevention and control measures.

4.9 Ward Sisters/ Charge nurses /Departmental Leader

They are responsible for ensuring implementation within their area, and for ensuring all staff who work within the area adhere to the principles at all times

4.10 Infection Prevention and Control Link Representatives

Infection Prevention and Control Link Representatives will disseminate all relevant infection prevention and control information to staff within their own work environment.

4.11 Occupational Health

The Trust Occupational Health Department is responsible for:

- Ensuring that any staff that either have an infectious disease or have been exposed to a communicable disease are managed effectively and any risks reduced.

4.12 Clinical Team

Clinical teams are responsible for the prompt notification of infectious diseases to the Public Health England (PHE) when appropriate.

4.13 All Staff

All staff working on Trust premises, including contractors' staff, agency and locum staff are responsible for adhering to this policy.

4.14 Strategic Planning and Commercial Development Directorate

Strategic Planning and Commercial Development Directorate along with Central Nottinghamshire Hospital Plc (CNH) and Skanska Facilities Services (SFS) are responsible for ensuring the on-going maintenance of the ventilation systems and the general environment of the isolation rooms and side rooms used for the purpose of isolation.

4.15 Medirest

Medirest, as the Trust cleaning contractors are responsible for:
Ensuring that all healthcare cleaners have the knowledge and skills required to undertake daily and isolation cleaning of single rooms used for isolation purposes
Ensuring that all Medirest staff comply with this policy

5.0 APPROVAL

This policy is required under the Health and Social Care Act 2008 (2015) approved and ratified via the Infection Prevention and Control Committee

6.0 DOCUMENT REQUIREMENTS

To ensure there is a robust framework in place for the prevention and control of infection, the Trust has adopted the following key approaches:

1) To identify patients presenting with colonisation, infection or infectious disease that may be a risk to others
2) To ensure that patients at high risk of infections due to immunosuppression or neutropaenia are appropriately isolated and protected to minimise the acquisition of such infections.

- Microorganisms, (e.g. bacteria, viruses, fungi) can cause a range of infections. In most cases the spread of these microorganisms can be reduced by the basic principles of infection control. **STANDARD PRECAUTIONS** are the basic principles of infection control that should be applied to all patients at all times.
- For some pathogens, e.g. those spread by airborne, droplet or contact route, it is necessary to take additional precautions to minimise the risk of transmission. The spread of these pathogens in hospital can be reduced by the physical **isolation** of patients at risk (**protective** isolation) or those with infections (**source** isolation). This policy predominantly focuses on Source Isolation.
- The trust is fortunate to have a comparatively high number of isolation rooms which makes the process of accessing risk more straightforward.
- The physical isolation of patients alone, without additional infection control precautions, is not sufficient enough to minimise the spread of microorganisms. Basic principles of isolation care and implementation of transmission-based precautions should be implemented in order to minimise the risk of transmission of microorganisms to both patients and healthcare workers.

6.1 Legislation in place

The importance of minimising the risk of infection and the control of hazardous practices is clearly laid out in several regulations:

- **Health and Safety at Work Act 1974:** the Trust has a legal duty to protect the health of employees who may be affected by their work. The Trust must ensure that employees are aware of the risks in their workplace and are familiar with the safety measures and procedures in place

- **Control of Substances Hazardous to Health (COSHH) Regulations 2002:** specific legislation on biological hazards such as blood borne viruses (BBV) is contained in the COSHH Regulations. Employers have a legal duty to assess the risk of infection to employees and others affected by their work

- **Management of Health and Safety at Work Regulations 1999:** the employer has a legal duty to ensure so far as is reasonably practicable the health of their employees at work, and a duty not to expose health risk to any non-employees who may be affected by the work

- **Health and Social and Social Care Act 2012:** requires healthcare providers to plan and implement control measures within their organisation to ensure that the risk of acquiring a healthcare associated infection (HCAI) is kept as low as possible

6.2 Admission of patients with suspected or confirmed infection

The isolation resource pack (Appendix A) should be used in conjunction with this isolation policy. The pack provides guidance for clinical staff, site co-ordinators and on call-mangers, to assist with the admission and patient flow for patients admitted with confirmed or suspected infectious illnesses.

The Infection Prevention and Control Team (IPCT) will liaise via email communication with the site co-ordinators (Monday – Friday) informing them of all suspected and/or confirmed colonised/infected inpatients within the Trust, this will assist the site co-ordinators in managing admissions, movement and transfer of patients. The IPCT will attend the capacity and flow meetings from the 1st October till the 31st March, to update the meeting of any outbreak situation in the local community and within the Trust.

Standard precautions must be applied to the management of all patients' regardless of their infectious status, it is vital that a risk assessment is completed on the infectious status, the following must be considered when conducting this assessment:

- Patients presenting with symptoms for example rashes, coughing and expectorating, diarrhoea and vomiting and pyrexia of unknown origin: clinicians should consider the possibility of infection
- Previous hospital admission, and frequent hospital admissions increases a patients risk of acquiring an infection
- Questioning the patient or look through the patients case notes, Patient Administration System (PAS) for previous infection status
- Has the patient travelled abroad recently?

Determine if the patient has a history of infectious colonisation/illness known to the Trust, this can be done by the following methods:

- Where ever possible ask the patient, or their relatives
- Check PAS for an ALERT flag
- Check the patient medical notes for an ALERT sticker

It is imperative that the receiving ward is notified of any infectious conditions that the patient may have, so that they can ensure that the most appropriate infection control measures are implemented. As well as the patients MRSA screening status, all patients admitted as an emergency must have a full MRSA screen obtained within 24 hours of admission (Refer to IPC 24a).

6.3 When to contact the Infection Prevention and Control Team

The IPCT **must** be informed about:

- Individual patients needing isolation, where a side room is not deemed appropriate for the patient, for instance it is detrimental to the patient's condition i.e. confusion, risk of falls, psychological effect etc
- Infectious patients and/or staff where contact tracing will be required i.e.

pulmonary tuberculosis (TB)
- Potential outbreaks so that advice about appropriate isolation of patients can be given
- Where side rooms are not available for patients requiring isolation
- When patients are required to be cared for in the bespoke isolation room (side room with the lobby and separate ventilation) rather than a standard side room
- Any individual who is at an increased risk of acquiring an infection i.e. those with neutropaenic
- Patients with diarrhoea when there is no other medical reason for their diarrhoea

6.4 Incident reporting

Where there is concern about risk of infection, and lack of available side rooms, or patients are not isolated promptly an incident form must be completed. Any issues arising in relation to the use of cleaning solutions must also be reported.

6.5 Notification of Infectious Diseases

The isolation resource pack (Appendix A) identifies notifiable diseases and these should be initially by phone followed by sending the notification form to the Consultant in Communicable Disease Control (CCDC) at the Public Health England (PHE), East Midlands ,Seaton House, City Link, London Road, Nottingham,NG2 4LA. Telephone number 0344 225 4524. (option 1) . The notification of infectious diseases (NOID) form can be obtained via the Trust Infection Prevention and Control web page

6.6 Risk assessment

The decision to isolate a patient must be made following a risk assessment, this may involve the Consultant in charge of the patient, the IPCT, Ward staff and the patient themselves and/or their family. Advice on the implementation of isolation procedures may be obtained from the IPCT. If full consultation cannot be promptly made and there is an element of concern following risk assessment the patient must be isolated until advice can be sought. If any patient's clinical condition is deemed such that isolation would compromise their safety, consultation must be made with the IPCT to ensure a full risk assessment is made. When considering a patient for isolation a number of factors must be considered, these include:

- The mode of transmission of the microorganism
- Evidence for hospital spread e.g. infectivity of the microorganism
- Significant antibiotic resistance or limited treatment options e.g. MRSA
- High susceptibility of other patients e.g. immuno-compromised

To enable simple and effective risk assessment this policy describes two risk assessment tools:

- Primary isolation risk assessment tool (Refer to resource pack)
- Secondary formal isolation risk assessment tool (Refer to resource pack)

6.6.1 Primary isolation risk assessment tool

The primary isolation risk assessment tool is used as a guide for admitting patients into the designated isolation beds, the guide is traffic lighted for ease of interpretation and must be used in conjunction with a full assessment of the risk factors. This risk assessment must be repeated at least daily to ensure the isolation facility is still

required or to inform decisions into isolation priorities when there are other patients posing greater risk. The risk assessment must be recorded in the medical and nursing records.

6.6.2 Secondary formal isolation risk assessment tool

A formal tool for performing a risk assessment for isolation may prove useful in identifying bed allocation, if resources are limited, it can be used for complex cases or when the primary risk assessment tool has not provided a satisfactory solution. The risk assessment system is based on the infective microorganism, its resistance profile, risk and mode of spread and patient characteristics (Jeanes and Rae (Lewisham isolation priority system)). This is based on the current knowledge of the pathogenic potential and the mechanisms of transmission of many infections seen in hospitals in the UK; it enables a pragmatic decision about isolation by considering:

- Advisory Committee on Dangerous Pathogens (ACDP) classification
- Route of transmission and dispersal characteristics of patient
- Evidence for transmission
- Prevalence of infection in the hospital
- Antibiotic resistance
- Susceptibility of other patients
- Dispersal characteristics of patients i.e. skin shedding, productive cough

6.6.3 Very high risk patients

Some patients will be considered to be very high risk; these include patients with symptoms of plague, viral haemorrhagic fever, patients from the sub-Sahara area of Africa, potential SARS, multi-drug resistant TB. Consult **immediately** with duty Consultant Microbiologist and the IPCT.

6.7 Information available to patients

Patients and visitors play an important part in infection prevention and control management. To enable them to do so; they must be supplied with the appropriate information and support. The Trust utilises a number of methods for this including, information available on the internet, information provided by the Infection Prevention and Control team (IPCT), patient and visitors information leaflets, which can be located on the Trust Infection Prevention and Control web page.

6.8 Mode of transmission

The main emphasis for successful isolation procedures is on hand washing and the use of personal protective equipment (PPE). The need for isolation is determined by the method of transmission of the disease and influenced by the availability of facilities. Transmission of a microorganisms resulting in colonisation or infection requires a susceptible host, and a route for transmission to occur between the two.

6.8.1 Contact transmission

Contact transmission is the most frequent route of spread of hospital acquired infections (HAI). It may occur either directly via the hands of carers, or patient to patient, or indirectly via equipment, or other inanimate objects (fomites).

6.8.2 Droplet transmission

Occurs when respiratory droplets carrying infectious agents travel over short distance (up to 3 feet), directly from the respiratory tract of an infectious individual, to the mucosal surface of a susceptible individual. Coughing, sneezing or talking generates respiratory droplets. Droplets may also settle on horizontal surfaces and can cause indirect contact transmission via individual's hands.

6.8.3 Airborne transmission

Occurs by the spread of small, airborne particles containing infectious agents that remain suspended in the air and are dispersed over distances by air currents where they are then inhaled by a susceptible individual.

6.8.4 Faecal-oral transmission

The transmission of enteric bacterial infection from the gut of one person that is ingested by another resulting in infection.

6.8.5 Vector transmission

The spread of infection via a living creature.

6.8.6 Inoculation transmission

The inoculation of an infected body substance into the tissue of another.

6.8.7 Vertical transmission

The transmission of infection from mother to baby such as via placenta or breast milk.

6.9 Isolation Facilities

Source isolation can be achieved by placing patients in:

- **Single rooms** on general wards, with or without ensuite facilities. Negative pressure/ hepa-filtered ventilation would be useful for high risk disease/ organism categories, eg, SARS, Avian influenza, Multi-drug resistant TB
- **High security isolation units** are available in Sheffield for some untreatable and often fatal viral haemorrhagic diseases, e.g. Lassa Fevers, Ebola virus.
- **Strict isolation** is used for the isolation of a highly communicable disease. Patients requiring this level of isolation must be transferred as soon as possible to one of the regional Infectious Diseases Unit (IDU), which are:
  - Leicester Royal Infirmary: Infirmary Square, Leicester, Leicestershire, LE1 5WW. 0300 303 1573
  - Nottingham University Hospitals NHS Trust – City Campus, Hucknall Road, Nottingham, Nottinghamshire, NG5 1PB. 0115 969 1169
  - Sheffield Teaching Hospitals NHS Foundation Trust: based on the E-floor at the Royal Hallamshire Hospital, Glossop Road, Sheffield, S10 2JF. 0114 271 1900

- **Cohort**: When single rooms/isolation rooms are not available and where several patients with the same confirmed organism have been identified, these patients may be placed together in a bay, e.g. *Clostridium difficile* diarrhoea or Meticillin Resistant Staphylococcus Aureus (MRSA)

6.9.1 Isolation room within the Towers at King's Mill Hospital

The Department of Health (DH) in HBN -4 have set out a new approach to hospital isolation room design, incorporating a positively pressurised lobby. Air is supplied mechanically into the lobby through a central ceiling mounted supply diffuser. The design intent is for around 10 air changes per hour to be delivered to the isolation room with good mixing.
This system provides a barrier to airborne infection originating within the isolation room (equivalent to the negative style isolation rooms), and a barrier to airborne infection originating in the corridor (equivalent to the positive style isolation room).

Each ward within the Towers has a bespoke isolation room, which incorporates a lobby with hand washing facilities, a room with en-suite facilities, and separate ventilation. The door to both the room and the lobby **must** be kept closed at **all** times to enable the ventilation system to work correctly in ensuring bacteria and viruses are not able to enter the room from the external corridors via air transmission.

6.9.2 Isolation rooms within the Intensive Critical Care Unit at King's Mill Hospital

The Intensive Critical Care Unit (ICCU) has two side rooms, which has the capability of either being positively or negatively ventilated, however which ever setting is chosen is applied to both side rooms.

- Negative pressure: to be used for source isolation
- Positive pressure: to be used for protective isolation

In addition the ICCU has an isolation pod to be used only for source isolation purposes.

6.9.3 Fire precautious for negative pressure rooms

In case of a fire elsewhere in the unit, all staff must be aware that patients in negative pressure rooms are at an increased risk as smoke and fire can be drawn into the negative pressure isolation from the unit.

6.9.4 Monitoring requirements for isolation ventilation systems

The ventilation system for isolation rooms need to be frequently checked by an appropriately trained engineer for both direction of air flow and the degree of negative pressure. This is an absolute requirement under Regulation 9 of the COSHH Regulations that all local exhaust ventilation plant must be thoroughly examined and tested at least every 14 calendar months.

6.10 Categories of precautions and isolation

The different levels of precautions and isolation required to prevent the spread of infective microorganisms vary, however it is essential that isolation does **not** compromise the clinical care of the patient. There are two categories of isolation (Ayliffe 2001): Source isolation and Protective isolation, for both:

- The decision to isolate a patient must be based on the infection risk to other patients, staff and visitors
- An appropriate isolation notice is required and must be placed on the outside of the door
- Daily assessment and evaluation of the need for on-going isolation precautions must take place
- Full explanation of the nature of infection provided to the patient to minimise the risk of anxiety and depression

6.10.1 Source isolation

Source isolation is the physical separation of one patient from another, in order to prevent the spread of infection. Additional precautions must be implemented dependant on the source and mode of spread, which is indicated for conditions, which could be transmitted from one patient to another for example:

- MRSA
- *Clostridium difficile*
- Glycopeptide resistant enterococcus (GRE)
- Vancomycine resistant enterococcus (VRE)
- Carbapenem resistant enterobacteriaceae (CRE)
- Chicken Pox
- Tuberculosis (TB)
- Patients with diarrhoea and vomiting of unknown cause
- Influenza type illness
- Patients with desquamative (shedding) skin conditions can pose a high risk of infection transmission, this increased potential to transmit must be reflected in the risk assessment
- Fevers from the tropics in which an infectious cause cannot be ruled out

This is not an exhaustive list, if you think that a patient may have an infectious condition that will put others at risk, please discuss with the clinical team in the first instance, and consider discussion with the Consultant Microbiologist and the Infection Prevention and Control Team.

6.10.2 Protective isolation

Protective isolation sometimes referred to as reverse barrier nursing is the physical separation of a patient at high risk from common microorganisms carried by others. The aim of protective isolation is to prevent the transmission of infection to an immunocompromised patient.

The requirements for protective isolation are:

- The bespoke isolation room, with a ventilation system to prevent any potential airborne pathogens entering or leaving the room
- En-suite toilet and washing facilities
- Anteroom to allow hand hygiene and application of PPE

6.11 Basic room preparation for source/protective isolation

In addition to the standard equipment in an isolation room the following dedicated equipment should be provided inside the room:

- Designated medical equipment i.e. stethoscope, dynamap, thermometer, drip stand, volumetric pump, commode (if en-suite not available)

- Wherever possible disposable equipment should be used
- Appropriate hand hygiene products
- Clinical waste bin, clinical waste must not be stored in the room once removed from the waste bin
- For protective isolation, clinical waste must be removed upon generation and not stored in the room
- Sharp container, of appropriate size for the disposal of sharps
- Alginate linen bag, used/soiled linen must not be stored in the room
- Electric fans must not be used, these trap dust and microorganisms on the grill, which provides a potential reservoir for pathogenic microorganisms

Outside single room used for isolation, or in the lobby of the isolation room, or on the entrance to cohorting bay:

- Wall mounted disposable gloves and plastic aprons (PPE)
- Isolation sign displayed on the door
- Appropriate hand hygiene products
- Charts and patients records, to reduce the risk of contamination

6.12 Infection prevention and control precautions

Infection precautions are the practices adopted by all staff when potentially coming into contact with any patient's blood or body fluids. The use of personal protective equipment (PPE) is an important principle of isolation care.

Transmission-based precautions, in addition to standard precautions, should be implemented for patients in Source isolation. The choice and use of PPE should be based on how pathogens are spread in order to minimise that spread to both other patients and the healthcare worker.

In order to determine what PPE is required, it is important to determine the mode of transmission of the pathogen and the required precautions for that pathogen

- **Hand hygiene:** hand washing before and after contact with the patient is the single most important measure in preventing the spread of infection. (refer to ICP 17)
- **Personal protective equipment (PPE):** Please wear on entry to isolation rooms and remove before exiting **(**refer to ICP 09). If sterile gloves are required for procedural purposes
- **Mask:** Masks should only be worn if the procedure or patients infection requires it.
- **Removing PPE:** make sure that neither the environment outside of the isolation room, not other persons can be contaminated from the use of PPE
- **Patient's personal hygiene**: must be of a high standard, to prevent skin colonisation or infection.
- **Equipment:** where ever possible equipment should be single patient use or single use, where this is not possible equipment must be thoroughly clean with a Clinell® Universal wipe before being taken into the room
- **Laundry:** nightwear and bed linen must be changed daily and when soiled. Linen must be disposed of at the point of use. (refer to ICP 10)
- **Waste:** clinical waste must be placed into a clinical waste bag inside the room, the bag must be sealed and labelled in the room prior to being removed and taken to the ward waste hold
- **Patient charts/notes:** patient's charts and notes must be kept outside of the isolation room/area

- **Cutlery and crockery:** the use of disposable cutlery or crockery is not required. Patients can use normal cutlery and crockery, the risk of cross infection from these is minimal if they have been thoroughly washed in a dish washer (thermal disinfection). **They must not be washed by hand**
- **Visitors**: must be instructed to wash their hands on entering the room
- **Cleaning of source isolation rooms:** A high standard of cleanliness as a daily minimum must be maintained by damp dusting, for the duration of the isolation using the micro-fibre system must continue to be used. A Sanicol® is used in conjunction with the micro-fibre system for all surfaces.

6.13 Extra precautions for Neutropaenic patients:

- **ANTT:** staff must use a strict aseptic non-touch technique (ANTT) when performing any necessary invasive procedures.
- **Staff:** staff with infections i.e. coughs, colds, sore throats or 'cold sores' must be excluded from nursing these patients. Refer to occupational health for advice.

6.14 Contact/enteric precautions

Contact/enteric precautions are used in situations where the mode of transfer of the infecting microorganism is via:

- Blood-to-blood contact e.g. hepatitis
- Faecal-oral (enteric) route e.g. viral gastroenteritis. *C. difficile* and other enteric pathogens
- Contact, usually via the hands, skin, mucous membranes or wounds e.g. MRSA, VRE

The isolation resource pack (Appendix A) provides guidance as to what should be isolated first.

A **single room** is preferred, but not always required for this level, advice from the IPCT should be requested

Cohorting in open bays may be considered for patients who have the same pathogen; cohort nursing can be effective in controlling the spread of infection as long as full standard precautions and isolation precautions are used.

- The door of the room must be kept closed based on type of infection present and its mode of transmission (this risk assessment must be carried out in consultation with the IPCT, unless the clinical need of the patient dictates otherwise
- Infection prevention/control isolation sign must be placed on the door
- Patients should not leave the room/ward area to attend other departments without prior arrangement/notification of the receiving department

6.15 Respiratory precautions

Respiratory precautions are used to prevent the transmission of infectious diseases over short distance through the air i.e. pulmonary tuberculosis, chickenpox, and influenza. A single room must be used and the door to remain closed. It may be necessary to wear full PPE including masks and visors (refer to Respiratory Infection Policy,ICP 33)

6.16 Transfer of 'infected' patients

Transfer and movement of infected patients **must be avoided wherever possible.** Patients should be admitted directly to the appropriate ward and outlying avoided. Transferring infected patients increases the exposure of others to the infection and increases the risk of transmission. It is imperative that the IPCT are informed of any transfers of patients with suspected or confirmed colonisation or infection before the event and advice sought.

- Patients who are *Clostridium difficile* positive and are symptomatic **must not be moved to any clinical setting until 72 hours symptom free and the patient has passed a normal stool** (this includes Care Homes). Unless the transfer is for emergency treatment, in these circumstances the patient must be placed immediately into a side room until 72 hours clear of symptoms and had passed a normal stool. **Any inappropriate transfers must be followed with a clinical incident report.**

As with other infection prevention and control matters, the designated Nurse-in-Charge of the ward has the responsibility to ensure that the necessary information regarding an infected/colonised patient is passed on to a senior member of staff of the receiving ward/department/hospital prior to the transfer.

Segregation of elective and emergency hospital admission must be avoided wherever possible. Specific wards at King's Mill Hospital are restricted to elective orthopaedic patients who have undergone appropriate pre-admission MRSA screening. Trauma orthopaedic admissions are not screened prior to admission and therefore must be nursed on a separate ward. However, should this prove unavoidable, then admission of emergency cases to elective wards **must** be direct to a side room with contact isolation precautions implemented. Any other speciality outliers **must** not be placed on the elective orthopaedic wards.

6.16.1 Within the Trust

Transfer to other wards must be avoided if at all possible. If transfer has to be effected then the receiving ward must be informed of the current status of the patient.

6.16.2 Visits to other departments

Visits to other departments must be kept to a minimum; if it is possible to delay an investigation without adversely affecting the patient's management this should be considered, the presence of an infectious disease must not delay urgent clinical investigations. When this is required, prior arrangements must be made with the senior staff of the department concerned. Infected patients must spend the minimum amount of time in the department. They must be sent for when the receiving departments is ready and not left in a waiting area with other patients.

6.16.3 Transfer to theatre

Pre-operatively: it is the responsibility of the ward staff or medical staff to inform theatres if a patient with a known or suspected infection is listed for operative intervention, and give details of the nature of this infection i.e. localised or systemic. **Dignity and confidentiality must be maintained at all times.** Whenever possible, the patient must be placed last on the days list or last of the session. All staff directly involved in the operation, including anaesthetist must be informed of the possible infection risk. Minimum numbers of medical staff and theatre staff must be in the operating theatre. All staff must wear standard theatre clothing and appropriate

protective clothing e.g. gloves, impermeable gowns, waterproof apron, facemask and eye protection (goggles or visor).

Post-surgery: all reusable theatre instruments and anaesthetic equipment will be checked and safely packed for return to Sterile Services Department for cleaning and sterilisation. Contaminated parts of anaesthetic equipment, which cannot be decontaminated, must be disposed of in accordance with the Waste Management Policy. If linen has been used, it must be placed in a water soluble bag (for infected linen) then to a white laundry bag in accordance with the Trust Linen Policy (Refer to ICP 10). The extent for environmental decontamination i.e. cleaning of the floor and wall will be dependent on the area of physical contamination.

6.16.4 Ambulance transportation

The ambulance service need only be notified prior to transfer if there are any specific precautions above and beyond standard, which they will be required to take.

6.16.5 Transfer to other hospitals and care facilities including Care Homes

Inter-hospital movements must be kept to a minimum. It is the responsibility of the transferring ward to inform the receiving hospital or care facility of the current status of the patient. Document in the nursing notes who has been informed.

6.16.6 Discharge of patients

The General Practitioner (GP), other Health Care and relevant social agencies involved in the patients care must be informed and advised of any precautions/treatment being undertaken as necessary. Document in the nursing notes who has been informed.

6.17 Pyrexia of unknown origin with foreign travel

Patients presenting with a fever who have returned from Sub-Saharan Africa within the last 21 days, have a negative malaria screen and in whom viral haemorrhagic fever is a clinical possibility must be considered as high risk infectious patients. Contact the IPCT and/or the on-call Consultant Microbiologist and the CCDC at PHE immediately.

7.0 MONITORING COMPLIANCE AND EFFECTIVENESS

Minimum Requirement to be Monitored (WHAT – element of compliance or effectiveness within the document will be monitored)	Responsible Individual (WHO – is going to monitor this element)	Process for Monitoring e.g. Audit (HOW – will this element be monitored (method used))	Frequency of Monitoring (WHEN – will this element be monitored (frequency/ how often))	Responsible Individual or Committee/ Group for Review of Results (WHERE – Which individual/ committee or group will this be reported to, in what format (eg verbal, formal report etc) and by who)
Placement of patients with infections under appropriate precautions	Infection Prevention and Control Team	Via our infection surveillance system	After any major outbreak or annually	Infection Prevention and control

8.0 TRAINING AND IMPLEMENTATION

- Clinical staff to receive practical hand hygiene training on induction and every year thereafter
- Clinical staff to receive face-to-face induction training on aspects of infection prevention and control including isolation and every year thereafter

9.0 IMPACT ASSESSMENTS

- This document has been subject to an Equality Impact Assessment, see completed form at Appendix B
- This document is not subject to an Environmental Impact Assessment

10.0 EVIDENCE BASE (Relevant Legislation/ National Guidance) AND RELATED SFHFT DOCUMENTS

Evidence Base:

1. Siegel. J., Rhinehart. E., Jackson. M., Chiarello. 2007. *2007 guideline for isolation precatuions: preventing transmission of infectious agents in healthcare settings.*
American Journal Infection Control. 35:S65-164.

2. Centers for Disease Control and Prevention National Centre for Preparedness, Detection and Control of Infectious Diseases (NCPDCID); 2009 *Guideline for isolation precautions: preventing transmission of infectious agents in healthcare settings.*

3. Ayliffe G. Babb. J. Taylor. L. (2001). *Hospital acquired infection. Principles and prevention.* Arnold. London

4. Damani. N. (2003). *Manual of infection control procedures.* Greenwich Medical Meida Limited. London

5. Wilson. J. (2002). *Infection control in clinical practice.* Baillière Tindall. China

6. Cruikshank J (1992) cited in Lawrence & May 2003 Infection Control (Page 35) Churchill, Livingston

7. Department of Health. 2012. *Health and Social Care Act 2012.*

8. World Health Organisation. 2009. *Natural ventilation for infection control in healthcare settings.*

9. Department of Health. 2007. *Heating and ventilation systems. Health Technical Memorandum 03-01: specialised ventilation for healthcare premises. Part A design and validation.* London

10. Department of Health. 2007. *Heating and ventilation systems. Health Technical Memorandum 03-01: specialised ventilation for healthcare premises. Part B operational management and performance verification.* London

11. Smith. P., Bennett. G., Bradley. S., Drinka. P., Lautenbach. E., Marx. J., Mody. L., Nicolle. L., Stevenson. K. 2008. SHEA/APIC Guideline: Infection prevention and control in the long-term care facility. p. 504-535
12. http://www.apic.org/Resource_/TinyMceFileManager/Practice_Guidance/id_APIC-SHEA_GuidelineforICinLTCFs.pdf access August 2013

13. The Royal Marsden Hospital Manual of Clinical Nursing Procedures. 2011. *Chapter 3: Infection prevention and control.* p. 113-121 Blackwell Publishing Ltd

14. Department of Health. 2013. *Health Building Note 04-01 Supplement 1. Isolation facilities for infectious patients in acute settings.* London.

15. Department of Health. 2005. *In patient accommodation: Options for choice, supplement 1: isolation facilities in acute setting.*

16. Thomas. M. 2009. *Ward isolation suite basic concepts and research programme.* Specialities ventilation course work.

17. Jeanes. A., Rae. G. *Lewisham isolation priority system.* University Hospital Lewisham. London

Related SFHFT Documents:

- other relevant infection, prevention and control policies/ guidelines as applicable.

11.0 APPENDICES

Appendix A – Isolation precautions for patients with confirmed or suspected infectious illness resource pack (***hyperlinked to separate document on intranet***)
Appendix B – Equality Impact Assessment

APPENDIX B – EQUALITY IMPACT ASSESSMENT FORM (EQIA)

Name of service/policy/procedure being reviewed: Isolation Policy			
New or existing service/policy/procedure:			
Date of Assessment:			
For the service/policy/procedure and its implementation answer the questions a – c below against each characteristic (if relevant consider breaking the policy or implementation down into areas)			
Protected Characteristic	**a) Using data and supporting information, what issues, needs or barriers could the protected characteristic groups' experience? For example, are there any known health inequality or access issues to consider?**	**b) What is already in place in the policy or its implementation to address any inequalities or barriers to access including under representation at clinics, screening?**	**c) Please state any barriers that still need to be addressed and any proposed actions to eliminate inequality**
The area of policy or its implementation being assessed:			
Race and Ethnicity	None	None	None
Gender	None	None	None
Age	None	None	None
Religion	None	None	None
Disability	None	None	None
Sexuality	None	None	None
Pregnancy and Maternity	None	None	None
Gender Reassignment	None	None	None
Marriage and Civil Partnership	None	None	None
Socio-Economic Factors (i.e. living	None	None	None

in a poorer neighbourhood / social deprivation)			

What consultation with protected characteristic groups including patient groups have you carried out?

Nil

What data or information did you use in support of this EqIA?

None

As far as you are aware are there any Human Rights issues be taken into account such as arising from surveys, questionnaires, comments, concerns, complaints or compliments?

No

Level of impact

From the information provided above and following EQIA guidance document Guidance on how to complete an EIA (click here), please indicate the perceived level of impact:

Low Level of Impact

For high or medium levels of impact, please forward a copy of this form to the HR Secretaries for inclusion at the next Diversity and Inclusivity meeting.

Name of Responsible Person undertaking this assessment: Rosie Dixon

Signature: Rosie Dixon

Date: 28/2/2018