Infection Control

mediplacements
placing people *first*

Introduction

The prevention and control of infection is an integral part of the role of all health care personnel. Healthcare Associated Infections (HCAIs) affect an estimated one in ten NHS hospital patients each year (DoH 2003). These infections can also delay discharge home by up to 11 days. For the NHS in England this represents a loss of 3.6 million bed days, with a projected cost of £1 billion a year.

A National Audit Office report provides evidence that infection prevention and control is a cornerstone of good clinical practice and quality patient care (NAO 2000) and that further improvements could be made (NAO 2004).

Determining the impact of hand hygiene alone on infection rates is complex but the best international evidence suggests reductions ranging from around 10 to 50% can be achieved. The National Audit Office estimates that around 30% of HCAIs are preventable (NAO 2000).

Everyone Involved in providing healthcare should adhere to the principals of infection control.

These falls into three main areas:

- hand hygiene
- the use of personal protective equipment
- the safe use and disposal of sharps.

Adequate supplies of liquid soap, hand rub, towels and sharps containers should be made available wherever care is delivered. Should you find that this is not the case you must bring it to the attention of your line manager.

Hand Hygiene

When working in patient areas, all wrist and hand jewellery (with the exception of a plane gold band) must be removed. Cuts and abrasions must be covered with waterproof dressings. Fingernails should be kept short, clean and free from nail polish. False nails and extensions must not be worn.

When

- Hands must be decontaminated immediately before each and every episode of direct patient contact or care and after any activity or contact that could potentially result in hands becoming contaminated.

- Hands that are visibly soiled, or potentially grossly contaminated with dirt or organic material, must be washed with liquid soap and water.

- Hands must be decontaminated, preferably with an alcohol-based handrub unless hands are visibly soiled, between caring for different patients and between different care activities for the same patient.

- Hands should be washed before and after any activity that could have dirtied your hands, even if they look clean, such as after going to the toilet and before and after preparing food.

- When caring for more than one person, wash your hands in between looking after each person.

Washing

Before regular hand decontamination begins, an effective hand washing technique involves the following stages: preparation, washing and rinsing, and drying.

- **Preparation** requires wetting hands under tepid running water before applying liquid soap or an antimicrobial preparation.

- **The hand wash** solution must come into contact with all of the surfaces of the hand. The hands must be **rubbed together** vigorously for a minimum of 10–15 seconds, paying particular attention to the tips of the fingers, the thumbs and the areas between the fingers.

- Hands should be **rinsed** thoroughly.

- **Dried** with good quality paper towels.

How

Hand rub

When decontaminating hands using an alcohol handrub:

- Hands should be free from dirt and organic material.
- The handrub solution must come into contact with all surfaces of the hand.
- The hands must be rubbed together vigorously, paying particular attention to the tips of the fingers, the thumbs and the areas between the fingers, until the solution has evaporated and the hands are dry.

Hand care

- An emollient hand cream should be applied regularly to protect skin from the drying effects of regular hand decontamination.
- If a particular soap, antimicrobial hand wash or alcohol product causes skin irritation an occupational health team should be consulted.

Use of Personal Protective Equipment

Selection of protective equipment should be based on an assessment of the risk of transmission of micro organisms to the patient, and the risk of contamination of the healthcare practitioner's clothing and skin by patients' blood, body fluids, secretions or excretions.

Gloves

Gloves must be worn for:

- invasive procedures,
- contact with sterile sites and
- contact with non-intact skin or mucous membranes,
- all activities that have been assessed as carrying a risk of exposure to:
  blood, body fluids, secretions, excretions,
  sharp or contaminated instruments.

And must be

- worn as single-use items.
- put on immediately before an episode of patient contact and removed as soon as the activity is completed.
- changed between caring for different patients, and between different care or treatment activities for the same patient.
- disposed of as clinical waste and hands decontaminated after the gloves have been removed.
- acceptable to healthcare personnel and that conform to European Community (CE) standards must be available.

Disposable plastic aprons

Should be worn

- when there is a risk that clothing may be exposed to blood, body fluids, secretions or excretions, with the exception of sweat.
- when nursing infected patients in isolation and where there is a risk that clothing may be exposed to blood, body fluids, secretions or excretions, with the exception of sweat.
- as single-use items, for one procedure or episode of patient care, and then discarded and disposed of as clinical waste.

Full-body fluid-repellent gowns

- must be worn where there is a risk of extensive splashing of blood, body fluids, secretions or excretions, with the exception of sweat, onto the skin or
- clothing of healthcare practitioners (for example when assisting with childbirth).

Face masks and eye protection

- must be worn where there is a risk of blood, body fluids, secretions or excretions splashing into the face and eyes.

Respiratory protective equipment

- for example a particulate filter mask, must be used when clinically indicated.

Care of your uniform

On-site changing facilities must be used. Where these are not available, you must cover your uniform and travel directly to your place of work from home and vice versa. A clean uniform must be used for every shift.

When laundering your uniform you must::

- Wash separate from other items in a washing machine according to manufacturers' instructions.
- Dry quickly or tumble dry and iron

Safe use and disposal of sharps

- Sharps must not be passed directly from hand to hand.
- Sharps handling should be kept to a minimum.

- Needles must **not** be recapped, bent, broken or disassembled before use or disposal.

- Used sharps must be discarded into a sharps container, (conforming to UN3291 and BS 7320 standards) at the point of use by the user.

- Sharps containers must not be filled above the mark that indicates that they are full.
- Sharps containers in public areas must be located in a safe position, and must not be placed on the floor. They must be disposed of by the licensed route in accordance with local policy.

- Needle safety devices must be used where there are clear indications that they will provide safer systems of working for healthcare personnel.

- If a needlestick injury occurs you should immediately:
  - Encourage the wound to bleed
  - Wash under running water
  - Cover with a waterproof dressing
  - Report to the nurse in charge of the clinical area, follow local policy

MRSA

MRSA stands for methicillin-resistant Staphylococcus aureus, which is a common skin bacterium that is resistant to a range of antibiotics. About one in three of us carries the Staphylococcus aureus (SA) bacteria without developing an infection.

If SA bacteria get into the body through a break in the skin, they can cause infections such as boils, an abscess or impetigo. If they get into the bloodstream they can cause more serious infections, such as blood poisoning.

MRSA will not normally infect a healthy person. Although it is possible for people outside hospital to become infected, MRSA infections are most common in people who are already in hospital. This is because:

- they often have an entry point for the bacteria to get into their body, such as a surgical wound or a catheter,
- they tend to be older, sicker and weaker than the general population, which makes them more vulnerable to infection, and
- they are surrounded by a large number of other patients and staff, so the bacteria can spread easily (through direct contact with other patients or staff, or via contaminated surfaces).

Healthcare staff, patients and hospital visitors can take simple hygiene measures, such as regular hand washing, to help prevent the spread of MRSA and stop infection.

C Difficile

C. diff does not cause any problems in healthy people. However, some antibiotics that are used to treat other health conditions can interfere with the balance of 'good' bacteria in the gut. When this happens, C. diff bacteria can multiply and cause symptoms such as diarrhoea and fever.

As C. diff infections are usually caused by antibiotics, most cases usually happen in a healthcare environment, such as a hospital or care home. Older people are most at risk from infection, with the majority of cases (80%) occurring in people over 65.

Most people with a C. diff infection make a full recovery. However, in rare cases, the infection can be fatal.

In most cases, C. diff infections can be prevented by following good hygiene practices in healthcare environments.

On the commencement of your placement please make yourself aware of arrangements made within your department.