

PROTECTION ISOLATION GUIDANCE

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| Post holder responsible for Policy: | Lead Nurse/Director of Infection Prevention & Control |
| Directorate/Department responsible for Policy: | Infection Prevention & Control |
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Controlled document

This document has been created following the Royal Devon and Exeter NHS Foundation Trust Policies, Procedures, Protocols, Guidelines and Standards Policy. It should not be altered in any way without the express permission of the author or their representative.

Please *specify* standard/criterion numbers and tick ✓ other boxes as appropriate

The Strategic Directions 2007-2012 were agreed by the Board of Directors in October 2007 to support the Trust's vision "Respond, Deliver, Enable". The Key Milestones below will ensure there is a shared understanding about what needs to be delivered.

| Monitoring Information | | Strategic Directions – Key Milestones | |
|---|---|---------------------------------------|---|
| Patient Experience | | Waiting | |
| Assurance Framework | | Privacy and Dignity | |
| Monitor/Finance/Performance | | Efficiency and Effectiveness | |
| Care Quality Commission Outcomes: | 8 | Delivery of Care Closer to Home | |
| | | Infection Control | ✓ |
| NHSLA Risk Management Standards for Acute Trusts | | | |
| NHSLA CNST Maternity Clinical Risk Management Standards: | | | |
| Other (<i>please specify</i>): | | | |
| Note: This policy has been assessed for any equality, diversity or human rights implications | | | |

Contents

| | Page |
|--------------------------------------|-------------|
| 1. Introduction | 3 |
| 2. Accommodation | 3 |
| 3. Communication | 4 |
| 4. Infection control precautions | 4 |
| 5. Patient hygiene | 4 |
| 6. Diet | 5 |
| 7. Flowers | 5 |
| 8. Psychological impact of isolation | 5 |
| 9. Staff illness | 6 |
| 10. Visitors | 6 |
| 11. Ward rounds | 6 |
| References | 7 |

1. Introduction

The purpose of protective isolation is to provide a safe environment for patients who have an increased susceptibility to infection because they have a compromised immune system or extensive skin loss due to burns or other trauma.

Generally these patients are most at risk from their own resident flora (endogenous infection) but must also be protected from the risk of cross infection (exogenous infection).

The most common reason for placing a patient in protective isolation is if the blood neutrophil count falls, or is expected to fall, below $0.5 \times 10^9/L$. Although immunosuppression may occur for many reasons, including organ transplants, extensive burns, some genetic disorders and infection with HIV, it is commonly encountered in cancer services. This is due to high-dose chemotherapy and occurs particularly in patients with haematological malignancies who are given bone marrow or stem cell transplants. These patients may also receive prophylactic antifungals and/or antibiotics to reduce the risk of endogenous infection.

The decision to institute protective isolation is made by the clinician caring for the patient or on the advice of the Infection Prevention and Control Team (IPCT), Haematologist or Oncologist.

2. Accommodation

Although there is conflicting evidence regarding the value of single room isolation for most immunocompromised patients, it may be that a single room helps to reinforce the need for rigorous attention to standard infection control precautions. Also immunocompromised individuals should never be placed in the same room or adjacent to people with a known infection. Therefore ideally patients should be nursed in a single room, preferably with en-suite facilities and the door should be kept closed.

Ideally neutropenic patients should be nursed in isolation rooms with HEPA filtered air at positive pressure as this may help to reduce exposure to airborne infections, particularly *Aspergillus*. This is especially relevant when refurbishment, building or demolition works are in progress nearby. In order for the system to work effectively windows and doors must be kept shut at all times. Single rooms with positive pressure ventilation will usually have an ante-room. For maximum effect, only one of the doors in the ante-room should be open at any time when entering or leaving the cubicle.

NB A highly susceptible patient may become infected and therefore potentially a hazard to other patients on the ward such that source isolation is **also** required. In this situation the positive pressure ventilation should be switched off and neutral pressure maintained until the patient is no longer infectious.

3. Communication

- Explain the rationale for isolation to the patient and, where possible the duration of isolation anticipated.
- Place the appropriate isolation card on the door to the room.
- Record in the patient notes that isolation has been commenced and the reason why.
- Revise the nursing care plan.

4. Infection Control Precautions

Standard infection control precautions must be applied when providing care to neutropenic or other severely immunosuppressed patients, in particular:

4.1 Hand Hygiene

Strict attention must be paid to hand decontamination in accordance with the Trust Hand Hygiene Policy and the World Health Organisation '5 Moments' for Hand Hygiene.

4.2 Protective Clothing

Disposable, single use plastic aprons should be worn for all clinical procedures to provide a protective barrier that will minimise the risk of transmission of micro-organisms to the patient. Non-sterile gloves must be worn for contact with body fluids as per standard infection control precautions.

4.3 Decontamination of Equipment

Disposable equipment should be used whenever possible. Non-disposable equipment must be cleaned before and after use in accordance with the decontamination policy. Wherever possible equipment should be allocated for the sole use of the patient during their admission.

4.4 Decontamination of the Environment

It is important that the room is kept as clean as possible. The room must be cleaned prior to the admission of a patient and thereafter at least as often as other patient areas, using standard daily cleaning procedures. Protective isolation rooms should be cleaned before other patient areas. Cloths must be disposable, and a freshly laundered or new disposable mop head used. Any parts of the environment that are damaged e.g. plasterwork, bathroom sealant and cannot be cleaned effectively must be reported to the ward matron and to Estates for urgent attention.

5. Patient Hygiene

Most infections are endogenous so measures to contain the body's normal flora are important. These include good personal hygiene, regular mouth care, and supportive care to maintain the integrity of skin and mucous membranes.

- Patients should preferably have en suite toilet and showering facilities. If this is not possible a commode or toilet should be allocated for their sole use.

- Patients can shower or bath in shared facilities as long as these areas are thoroughly cleaned immediately prior to use.
- Patients personal hygiene needs must be assessed on a daily basis and assistance given where required to maintain an acceptable level of cleanliness. Particular care needs to be given to the perianal area which is heavily colonised with bacteria. Immunocompromised patients frequently suffer irritation or infection of this area. It is felt that this can be exacerbated by the use of soap which may irritate the mucous membranes. Therefore the use of warm water alone is recommended (Lindell & Olsson 1989).
- Disposable cloths rather than flannels must be used and towels must be changed daily.

6. Diet

The immunocompromised patient is at increased risk of food-borne illness and the acquisition of harmful microorganisms from some food. Therefore immunocompromised individuals are advised to avoid certain high risk foods for example soft cheeses and foods made with raw eggs. For further information please refer to local dietary guidelines for neutropenic patients compiled by the Department of Nutrition & Dietetics.

Immunocompromised patients can safely drink tap water drawn from a rising main, however, this water could potentially become colonised by organisms, particularly gram-negative bacteria found in the plughole of sinks and overflow outlets. Gram-negative bacteria may represent a particular risk for neutropenic individuals, therefore care must be taken when filling jugs to prevent contamination of the water from these sources. The water must **not** be drawn from sinks located within ensuite facilities as these sinks are more likely to harbour gram-negative bacteria. Water should be sourced from the mains tap in the ward kitchen. The tap should be run for 2 minutes before use and water jugs should be re-filled twice daily.

Commercially available non-carbonated bottle water may contain large numbers of gram-negative bacteria and therefore should be avoided. Carbonated bottled water is considerably safer than non-carbonated because of the low pH of these products, the low pH can however result in poor patient acceptability in patients with chemotherapy associated mucositis.

7. Flowers

Flowers and plants have not been directly linked to infection in immunocompromised patients, however, they could potentially be a reservoir for gram negative bacteria or fungal spores. Therefore pot plants are inappropriate. If fresh flowers are to be kept in the room the water must be changed daily - not in the cubicle wash basin.

8. Psychological Effect of Isolation

Many studies have shown the detrimental effect of isolation on patients' psychological well-being (Gammon 1998, Knowles 1993). Some patients may find it

beneficial to leave their isolation room for short periods of time or for mobilisation purposes. Patients can leave their isolation rooms for short periods as long as they avoid contact with crowds, other patients or people with infections. This may be easier to achieve during quieter periods on the ward, such as rest periods. This must be carefully explained to patients who may find it confusing.

9. Staff Illness

Particular caution is required when working with immunocompromised patients and therefore staff with upper-respiratory tract infections or oral-facial herpes simplex should be excluded from direct contact with these patients.

10. Visitors

The patient may receive visitors. However, visitors should report to a member of staff before entering the room so that precautions can be explained and any infections in the visitor which might be dangerous to the patient can be identified. Visitors must be excluded if they have any form of transmissible infection.

The efficiency of the ventilation system will be severely compromised by large numbers of visitors. Numbers should be restricted to no more than two at a time.

Coats and jackets should be removed before entering the room. It is not necessary for visitors to wear protective clothing, unless they are performing assistance with personal care, when a disposable plastic apron should be worn. Visitors must be advised of the importance of hand hygiene before entering the room.

11. Ward Rounds

Members of staff should be bare below the elbows with hands decontaminated on entering the room using soap and water or alcohol gel.

The number of people entering the isolation room should be kept to an absolute minimum.

Wherever possible, equipment such as stethoscopes or patella hammers, should be allocated to each patient for sole use throughout their stay. Where this is not possible, equipment such as patella hammers must be cleaned with a detergent impregnated wipe before and after use. Disposable single use ear-pieces should be used with auroscopes. The external surfaces of the auroscope must be cleaned before and after use with a detergent impregnated wipe.

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