GUIDANCE ON INFECTION CONTROL IN THE BUILT ENVIRONMENT

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**Named Responsible Officer:**

- Infection Prevention and Control Lead
- Infection Control Committee

**Approved by**

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- Infection Control Policy 16

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NHS Wirral

Guidance on Infection Control in the Built Environment

Introduction

“If the burden of healthcare-associated infection is to be reduced, it is imperative that architects, designers and builders be partners with healthcare staff and infection control teams when planning new facilities or renovating older buildings”


Design and maintenance of the environment is essential for high standards of infection prevention in the healthcare setting. NHS Wirral has a duty under the Health and Social Care Act 2008 Code of Practice for the NHS in the prevention and control of healthcare associated infections and related guidance to provide and maintain a clean and appropriate environment which facilitates the prevention and control of HCAI. This includes ensuring that premises providing healthcare are fit and suitable for the purpose they are being used for.

Guidance aim

To provide guidance on the prevention of cross infection to those involved and responsible for the planning, design and maintenance of new and refurbished healthcare facilities and to provide a guide to best practice in existing healthcare premises.

Guidance outcome

Healthcare facilities will be built/refurbished to provide an environment which are fit for purpose and reduces potential of cross infection from the built environment.

Target group

All PCT clinical services and support services.

Shared as best practice with Independent General Practices and Independent Dental Practices.
Specific responsibilities

Chief Executive

The Chief Executive has overall responsibility for ensuring infection prevention and control is a core part of the Trusts governance and patient safety programmes.

Board

The Board has collective responsibility for ensuring assurance that appropriate and effective policies are in place to minimise the risks of healthcare associated infections.

Director of Infection Prevention and Control

It is the responsibility of the Director of Infection Prevention and Control to oversee the development and implementation of infection prevention and control policies and guidance.

Infection Prevention and Control Team

It is the responsibility of the Infection Prevention and Control Team to provide advice on infection control requirements in new builds and refurbishments for NHS Wirral and commissioned services.

Project Managers

Project managers are responsible for ensuring that new builds or refurbishments meet the standards in this guidance and involve the infection and control team in all stages of the project.

Cross reference related PCT policies

Hand Decontamination Policy
Cleaning and Disinfection Policy
Sterilization of Re-usable Medical Devices (Dental Services) Policy

Evidence to support policy

National Resource for Infection Control. Clinical Practice. Settings Estates and Facilities
www nbric.org.uk
Background

The healthcare environment is a secondary reservoir for organisms and has the potential for infecting patients. The range and complexity of healthcare has increased within primary care. Procedures once only conducted in secondary care are now commonplace within primary care premises, this brings the increased risk of cross infection and the need for ensuring the environment meets standards for prevention of infection in areas such as:

- Ancillary room requirements and configuration
- Hand decontamination facilities
- Fixtures, fittings and furniture
- Surfaces – ceilings, worktops, floors
- Heating and ventilation
- Plumbing
- Waste Management
- Cleaning Schedules

Omissions in best practice may lead to limitations in use of clinical facilities.

Infection Control Risk Management

An Infection Control risk assessment must be completed and shared with the Infection Prevention and Control Team prior to the planning of new services. Refer to Infection Control Policy No 1

Planning Process

It is recommended that the Infection Prevention and Control Team are involved at the initial planning and approval meetings at the design stage of a project.

Handwashing facilities

Appropriate standard: Health Technical Memorandum (HTM) 64 Sanitary Assemblies TSO 2006 (Appendix A)

Sinks: Clinical

A minimum of 1 handwash basin is required in each treatment room. The basin should be sited close to where clinical procedures are carried out, easily accessible and not sited behind curtain rails, trolleys or chairs.

Handwash basins must not be used for any other purpose. Basins must be designed and suitable for that purpose i.e. not domestic or hotel design.
Features:

- Large enough and with curved sides to contain and reduce splashes and allow staff to perform accepted hand hygiene techniques.
- Taps should enable the user to turn them off without contaminating hands i.e. elbow operated or sensor. Swan neck taps should be avoided as they do not empty fully after use.
- Spray taps are not recommended (H&S Legionella)
- Water must be at a temperature safe for handwashing (thermostatic valves may be required).
- The tap outflow should not point directly into the basin outlet.
- Basins should be sealed to the wall or far enough away to allow effective cleaning.
- Walls behind and around taps should be protected with a waterproof splashback to prevent damage and allow cleaning.
- Basins should not have a plug or be able to take a plug.
- Avoid overflows as these cannot be cleaned and can harbour contamination.

Hand decontamination agents should be wall mounted at an appropriate height near the sink.

- Liquid soap and alcohol hand rub should be healthcare grade
- Liquid dispensers must not be refillable but capable of taking disposable cartridges.
- Paper towels should be available for hand drying and sited by the hand wash basin. Re-usable towels or hot air dryers are not acceptable in a healthcare environment.
- A separate foot operated waste bin must be sited by each basin containing a non hazardous waste bag. Size should be determined by the expected frequency of activity in the room. Open waste bins are not acceptable.

Sinks: non clinical
Handwash basins are required in all toilets, catering areas and cleaners utility rooms.

Sinks: Cleaning
Appropriate standard: Health Building Note (HBN) 4 and 36.

A deep sink is acceptable only in dirty utility rooms for the decontamination of reusable items (not surgical instruments). For guidance on decontamination areas refer to ICP8 (Dental areas only).

Sinks for the disposal of used cleaning water (slop hoppers) should be at a low level to allow safe emptying of the bucket to prevent splashing and taking account of safe lifting loads. (For leg ulcer treatment areas refer to section on leg ulcer treatment rooms).
General Environment

All surfaces, fixtures, fittings, furniture and equipment should be designed or selected bearing in mind easy cleaning and durability in a healthcare environment.

Flooring:
Flooring in clinical areas should be smooth, water resistant, non slip and easily cleaned. Joints must have welded sealed joints. Carpets are not recommended in any clinical or associated area.
Flooring should have coved skirting to at least 20cm to enable effective cleaning and reduce dust contamination of ledges.

Points to consider:
• Is the room to be used by multiple services?
• Will any procedures be performed in the room?
• Could spills occur on carpets in waiting areas? i.e. drinks, body fluids (blood from a nose bleed, vomit, spilt urine sample), if so can the carpet be cleaned or will it tolerate a chlorine based disinfectant?
• Do cleaners have to pull wheeled buckets over carpeted areas?

Walls:
Walls should be smooth and impervious and finished with a wipeable finish. Antibacterial finishes are not required.

Ceiling:
Avoid ceilings with removable tiles in treatment rooms as these harbour dust which can be dislodged on removal.

Windows:
Window sills should not be provided.

Heating and Ventilation systems:
Guidance on ventilation for health care premises is contained in HTM 03-01, Specialised Ventilation in healthcare premises DH 2007. Services should seek advice from the Estates Department were required

Pipework running externally along a wall can easily trap dust and is difficult to clean. Pipework in clinical areas should be encased to allow and facilitate cleaning.

Radiators, if used, should be placed high enough on a wall to enable cleaners to clean the area underneath.

Heating and ventilation grilles should be easily removable to be cleaned in a deep sink; this function should be included in the cleaning schedule.
Ceiling or wall mounted air conditioning cassettes/units get very dusty and can be difficult to clean; this must be taken into account when considered for clinical areas. If ventilation is required air movement must flow from any clean areas to less clean areas for extraction.

**Lighting:**
Lighting units should be fully sealed for ease of cleaning.

Cleaning of directional lighting should be included in the cleaning schedule.

**Soft furnishings:**
All upholstery should be water/stain resistant and capable of withstanding disinfection with a chlorine based disinfectant. Vinyl is preferable.

Chairs/treatment chairs/couches with rips or tears are no longer impervious to contamination and should be replaced.

**Privacy curtains:**
If privacy curtains are required around examination couches/chairs they must be either-

- Disposable
- Or
- Washable at 71°C for 3 minutes or 65°C for 10 minutes.

Cleaning of curtain tracks must be included in the cleaning schedule.

Points to consider:
- Washable curtains should be changed and washed at 6 monthly intervals or if requested by the infection prevention and control team. A suitable laundry facility must be available (i.e. not a domestic washing machine) Staff must not be allowed to take curtains home to wash.
- A second set of curtains will be required when in use curtain/s are being washed.
- Removal and replacement of both washable and disposable curtains will need to be included in the cleaning schedule and contract.

**Window curtains/blinds:**
Curtains are not suitable in clinical areas. If blinds are required these should be vertical style with fabric which is washable.

**Work surfaces:**
Surfaces should be easy to clean. Any joints must be butt jointed. Jointing strips must never be used. Adequate storage should be provided to ensure the work surfaces are kept clear.
Staff kitchens:
Drink making equipment must never be sited in clinical areas. Kitchens must be sited away from the clinical and dirty utility areas.

Points to consider:
• Is a staff kitchen required?

Play areas/Children’s waiting areas:
Porous or fabric toys/furniture materials should be avoided as they cannot be decontaminated.

Water coolers:
Plumbed in water coolers should be used rather than bottled ones.

Clinical rooms

Example layouts of rooms in Primary Care can be found on the Department of Health Primary and Social Care Premises web site - www.pcc.nhs.uk

In line with Wirral Health’s Decontamination Strategy surgical instruments used for minor surgery, nursing procedures or podiatric surgery or treatment which require sterilisation will be either single use or returned to an external accredited CSSD. Dental services only are allowed to reprocess surgical instruments in Benchtop Steam Sterilisers.

Generic Consultation rooms:
These are rooms where consultation and examination of patients occur but no treatments are performed. Approximate size 18-20m²

• Clinical handwash basin with liquid soap and paper hand towels
• Wipeable finish chairs and examination couch.
• Vinyl is preferable for floors however if carpet is used in these rooms it should be suitable for healthcare environments and withstand frequent washing.

Minor Surgery Room:
This room is for the treatment of minor procedures i.e. curettage, cautery, cryotherapy, joint injections, minor excisions. Approximate size 18-20m².

• Clinical handwash basin
• Storage cupboards for clean and sterile equipment.
• Access to a dirty utility room.

Enhanced Surgery Room:
This room is for enhanced minor surgical procedures i.e. vasectomy’s, carpel tunnel, complex excisions. Approximate size 18-20m².

• Direct access to clean and dirty utilities
• Limited essential equipment and furniture.
• Clinical handwash basin
• Enough space to allow access to all sides of the treatment couch during treatment.
• Appropriate ventilation to ensure the comfort of operator and patient, ventilation must flow from the clean area to dirty area. Windows must never be used for ventilation in these rooms.

**Nurse Treatment rooms:**
This room is for nurse consultations, injections and aseptic procedures. Approximate size 15m$^2$

• Clinical handwash basin
• Storage cupboards for clean and sterile equipment.
• Access to a dirty utility room.

**Leg Ulcer Clinics:**
Rooms intended for the treatment of leg ulcers must have direct access to specially designed dirty utility room with:

• A door separating the two areas
• Impervious non slip floor with floor coving
• A floor level sluice
• Low level taps for filling of buckets separate from the floor sluice
• Wall racking for the drainage and stacking of disinfected leg buckets.
• A hand wash basin.

The dirty utility must not be used for the storage of clean/sterile dressings/bandages.

Rooms without these facilities will not be suitable for soaking of patients legs prior to redressing.

If the room is to be used for other patient treatment consideration must be taken on the scheduling and level of cleaning required as leg ulcer care can cause environmental contamination of potential pathogens.

Access to a dirty utility will be required if other nurse treatments will be conducted in the treatment room.

Room size will be determined by the number of patients intended to be treated at the same time. Approximate minimum size for treatment room 15m$^2$ and utility 9m$^2$.

**Dental:**
Approximate size 15m$^2$

• Clinical handwash basin
• Dental practice requires direct access to clean and dirty decontamination rooms. Full descriptions can be found in ICP8 Sterilization of Re-usable
Podiatry:
Approximate size 15m$^2$
- Clinical handwash basin
- Close access to a dirty utility room

Physiotherapy:
Room size will be determined by the range of treatments/activities to be provided.
- Clinical handwash basin
- Access to a dirty utility room
- Contact the Infection Prevention and Control Team for guidance on requirements for specific practices or treatments.

Endoscopy:
Contact the Infection Prevention and Control Team for specific guidance on endoscopy facilities.

Ancillary Rooms

It is advised that a workflow analysis is conducted to identify current or proposed flows of clean and dirty materials, waste disposal and storage of clean areas to determine the final requirement and position of ancillary rooms.

Clean Utility:
This room is for the storage of drugs and lotions, storage of clean and sterile supplies and PPE. There should be direct access to an enhanced surgery room. Approximate size 9-15m$^2$.
- Clinical handwash basin
- Storage cupboards.

Dirty Utility:
This room is for the decontamination of equipment, testing of urines (see Specimen W.C.), disposal of liquid waste and cupboard storage of PPE and cleaning products. Approximate size 9-15m$^2$.
- Clinical handwash basin
- Worksurfaces
- Deep sided stainless steel sink with drainer.
- Storage cupboards.

Specimen W.C:
If a specimen W.C. is included it requires direct access to a dirty utility (i.e. a hatch) for testing and to reduce the carriage of body fluids in the health care environment. Approximate size 4.5-5m$^2$
Cleaners store:
A room must be provided with enough space to clean and store equipment and supplies.

High level shelving is required for clean supplies and low level shelving to allow inverted draining of colour coded cleaning buckets and wall hanging for the drying of colour coded mops and cloths.

A slop hopper, deep sink and handwash basin will be required

Points to consider:

- Is the room sited in the most appropriate area of the building i.e. close to clinical areas
- If the building is on two levels will two cleaners rooms be required or will the cleaner need to transport cleaning materials between floors – is there a lift?

Room size will be determined by the number of rooms to be cleaned and amount of equipment stored. Approximate size up to 15m²

Waste Disposal:

Healthcare waste should be stored in a secure, cleanable area away from patient flow areas, preferably external and used for that purpose only.

For advice contact NHS Wirral Environment and Energy Project Manager, Capital Projects and Premises Management.

Staff changing facilities:
These are required in new builds to enable staff to change into uniforms if appropriate or change contaminated clothing following a blood or body fluid spill. Access to a shower is required. Cleaning of the area and regular running of the shower head needs to be included in the cleaning schedule (Health and Safety Executive Legionella Approved Code of Practice)

Archiving

Hard and/or electronic copies of previous versions of this document will be held by the Infection Prevention & Control team for the retention period required under current NHS guidance.
References


Primary and Social Care Premises www.pcc.nhs.uk

DH2009. HTM 01-05: Decontamination in primary care dental practices. Guidance DH Crown Copyright

List of those consulted in drafting process

Infection Prevention & Control Committee
Appendix A Clinical Handwash basin.